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The Art of Piano Technique

A Comprehensive Guide & Reference

*Principles of touch, movement, and expression, with
progressive studies and examples from the repertoire*

SCALES & ARPEGGIOS · CHORDS & DOUBLE NOTES

RHYTHM & COORDINATION · VOICING & POLYPHONY

KEYBOARD MOVEMENT · PEDALING · THE ART OF PRACTICE

REVIEW EDITION

Prepared for musical and editorial review

From Practice to Music

One guide, many musical connections

A scale book can tell you what to play. A repertoire passage makes you ask why the skill matters. This guide brings those two kinds of learning together: the repeatable patterns that develop control, and the music that gives that control a purpose.

Piano technique reaches beyond speed. It includes shaping a quiet note, releasing a chord cleanly, sustaining one voice while another moves, choosing a fingering, finding a distant key, and hearing when resonance should clear. These decisions connect physical movement with musical intention.

A comprehensive map, used selectively

The book gathers material often spread across separate studies, references, lessons, and editions. Scales and arpeggios sit beside articulation, rhythm, voicing, keyboard movement, and pedaling. Repertoire excerpts show where those skills meet. Reference sections collect patterns that are useful to revisit without repeating a full lesson for every key.

You do not need to finish every exercise before playing music you care about. Begin with a musical problem, find the relevant chapter, and choose a manageable example. Return to the piece while the connection is still clear. Equally, a balanced routine can reveal a neglected skill before it becomes an obstacle in repertoire.

Listen from the first attempt

Every note already has a sound, duration, and dynamic. Practice the intended character alongside pitch, rhythm, and fingering. A slow version may simplify the task, but it should still point toward the music you want to make.

Each developed chapter offers a purpose, an example, and something specific to hear. Use those checks to judge progress. Greater ease and a more deliberate sound matter as much as a faster metronome mark.

This review edition is still growing. Some chapters remain openings for later development, and fingerings and teaching explanations remain open to practical review. The aim is a generous, coherent companion to study: complete enough to make useful connections, and clear enough to bring back to the piano.

Keep your practice moving with Cadenza

A useful practice session leaves you with something to carry into the next one: a clearer sound, a more comfortable movement, or a note about where to begin tomorrow.

Cadenza, the companion piano journal and library, helps you keep those threads together:

- **Keep your repertoire organized** as pieces move from learning to polished, and return to music that needs attention.
- **Record your practice** with session notes, time spent, and a clear next step.
- **Explore music and technique** with a searchable repertoire library, scale and arpeggio fingerings, chord references, and Hanon exercises.

Scan the code below or visit **piano-journal.com**.



Scan to visit piano-journal.com.

You can use this book on its own. When you want a place to remember what you have learned and plan what comes next, Cadenza is there to help.

Contents and study guide

Find a topic and choose a starting point

This edition contains openings for all 81 planned chapters and ten appendices. Pages marked **chapter opening only** describe intended coverage; they do not yet contain the promised exercises. Chapters with practice material remain drafts and may contain only part of their planned scope.

- **Introduction** — Chapters 1–5
- **Part I — Finger Coordination and Control** — Chapters 6–9, including Touch and Dynamics
- **Part II — Scales** — Chapters 10–18
- **Part III — Chords and Arpeggios** — Chapters 19–25
- **Part IV — Double Notes and Octaves** — Chapters 26–30
- **Part V — Rhythm and Coordination** — Chapters 31–36
- **Part VI — Voicing and Polyphony** — Chapters 37–42
- **Part VII — Movement Across the Keyboard** — Chapters 43–48
- **Part VIII — Pedaling** — Chapters 49–55
- **Part IX — Technique in the Repertoire** — Chapters 56–64
- **Part X — Mixed Technical Studies** — Chapters 65–71
- **Part XI — Practice Programs** — Chapters 72–81
- **Appendices** — A–J

The numbered order follows the project outline. Existing examples have been retained in their corresponding chapters. Chapter titles and numbering describe the intended book; completeness is shown separately. The website's contents view links to every opening.



A practical technique guide

Why this guide exists

Piano technique is often learned a piece at a time, from many different places: a scale book, a Hanon exercise, a teacher's demonstration, a chord reference, or a difficult passage in a sonata. Each can be useful, but the pianist is left to assemble the connections and decide what to practice next.

This guide brings those strands together. Its purpose is to provide a comprehensive, practical map of the skills behind classical piano playing: finger coordination, scales and arpeggios, chords, rhythm, voicing, movement across the keyboard, and pedaling. A shared format makes it easier to move between subjects and build a balanced routine.

Begin with a musical reason

A scale is more than a sequence to memorize when you hear what it makes possible in Mozart's K.545. Broken-chord control has a clear purpose in Beethoven's *Moonlight* Sonata; independent voices become a musical conversation in Bach's Inventions. These connections help answer a useful question: what will this practice allow me to express?

Throughout the complete guide, short repertoire excerpts will introduce or illustrate technical problems. Each will identify a specific gesture to notice, connect it to an exercise, and show how to return to the music. The repertoire is a reason for the practice, not a reward postponed until every drill is mastered.

A reference and a working companion

You can follow a progression, look up a particular difficulty, or choose material to support a piece you are learning. Basic exercises establish the task; variations and longer forms develop it. Listening checks help you judge the result instead of relying only on speed or repetition counts.

The goal is not to collect the largest possible number of exercises. It is to bring the important areas of technique into one coherent guide, with enough explanation and music to make each area usable. Some topics need more pages than others. The material will determine the length.

Every sounded note already has a dynamic. Practice the written dynamic from the first slow attempts, alongside notes, rhythm, and fingering. Do not reserve it for a final expressive layer. If a passage needs temporary simplification, restore its intended sound promptly.

What you need before beginning

This is a technique guide for a pianist who has begun reading music. It does not assume advanced playing, fast sight-reading, or knowledge of every key. It does assume that you can work out a short passage slowly from the staff and connect it to the keyboard.

Reading and keyboard knowledge

You should be able to identify notes in **treble and bass clefs**, locate middle C, and follow the music from left to right through barlines. Ledger lines extend the staff. A clef tells you which pitches are written: treble does not always mean right hand, and bass does not always mean left hand. The hand labels identify who plays.

Know that sharps (♯), flats (♭), and naturals (♮) alter pitches; read the key signature and any local accidentals before playing. An **octave** leads from one note to the next note of the same name. C4 means middle C in this guide; C3 is an octave below and C5 an octave above.

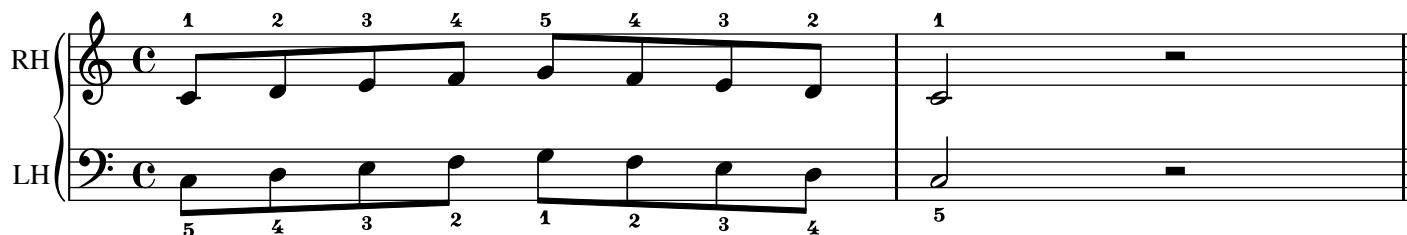
Rhythm and basic vocabulary

You need a working idea of a steady **pulse**, note and rest values, measures, and time signatures. A rest is counted silence. A chord contains notes sounded together; an arpeggio sounds its chord tones in succession. A scale is an ordered collection of pitches. You do not need to know every chord name before using the introductory examples.

If reading still takes time, learn a few notes before adding a metronome. If the symbols themselves are unfamiliar, use a beginner method or a teacher alongside this book. Technical practice is more useful when reading does not consume all your attention.

Read the exercise before playing

The short example below checks the reading assumed in the first chapters. The hands are one octave apart. Finger numbers suggest a route; they do not name pitches. Middle C is the RH starting note.



Reading check: a five-note range, a held note, and a counted rest.

1. Name each hand's starting note and locate it before sounding anything.
2. Count four quarter-note beats per measure. Each pair of eighth notes fits inside one beat.
3. Hold the second measure's half note for two beats, then count the half rest for two beats.
4. Play each hand alone. Combine them only when the notes and rhythm are clear.

Comfortable preparation

Sit where the keyboard is comfortably reachable, with room for the arms to move. Choose a stable seat and avoid holding the shoulders raised. Printed fingers are starting suggestions, not a reason to force a stretch. Stop for pain or persistent strain and seek individual guidance when a movement remains uncomfortable.

What the book will teach

The opening studies develop coordination, touches, dynamics, and useful practice habits. Later chapters connect these to scales, chords, voicing, rhythm, and repertoire. The reference appendices collect patterns for reading through at the piano. You can return to a teaching chapter when a reference pattern exposes a specific difficulty.

Progress means a more reliable musical result: a chosen dynamic, an even pulse, a connected or separated line as intended, and a repeatable fingering. Faster playing is only one possible result.

How to use this guide

The contents guide now includes every planned chapter and appendix. Begin with the overview of a relevant topic, then use its available examples. An opening-only chapter shows its intended scope; its exercise material is still forthcoming. The included 20-minute routine uses exercises already present in this edition.

The aim is a clear musical result: even notes, dependable coordination, and a chosen voice that the listener can follow. Repetition is useful when you know what you are listening for.

How to use the examples

Read the purpose, play a short section, and compare the result with the listening check. Change one variable at a time: speed, articulation, rhythm, or balance. You do not need to complete every variation in one sitting.

Finger numbers are **1 = thumb, 2 = index, 3 = middle, 4 = ring, 5 = little finger**. Numbers above the upper staff belong to the right hand; numbers below the lower staff belong to the left hand. Middle C is C4. A printed clef, rather than the hand's name, determines the register.

Tempo and metronome practice

Use a metronome as the default for scales, arpeggios, and other pulse-based exercises. First learn an unfamiliar note route and fingering without a click if needed, then add it as soon as the pattern is understood. Choose a tempo at which you can hear and correct the details. The tempo suggestions in these pages are starting experiments, not examination targets. For sixteenth-note examples, a quarter-note beat contains four notes; for eighth-note examples it contains two.

Use small, comfortable movements. Stop if playing causes pain, and do not force a stretch to preserve a printed fingering. A teacher can help adapt the exercise to your hand and current skill.

What to review

Is the music large enough at the piano? Is each page comfortably filled? Are the instructions sufficient without becoming a wall of text? Can you distinguish the fingers, voices, and rhythmic groupings without leaning forward?

This is an editorial review draft. It contains selected examples, with developing reference appendices. Page count will grow with the material; readability will not be traded for a fixed book length.

What “Technique” Actually Means

1. Start with the sound you want

Purpose: connect a technical decision to something a listener can hear. A scale can have correct notes yet be uneven; a chord can hide its melody. Technique turns those notes into a clear musical intention.

Choose a short phrase you already know. Describe its goal without naming a body part: “The melody stays audible,” “The pulse continues through the crossing,” or “The last chord arrives quietly.” This gives you a result to test before deciding how to practice.

Three questions before repeating

1. **What should I hear?** Choose one property: rhythm, connection, articulation, balance, or phrase direction.
2. **Where does it change unintentionally?** Identify a note, transition, or landing rather than declaring the whole passage difficult.
3. **What can I simplify?** Try one hand, a smaller range, fewer voices, or a slower pulse. Keep enough context to hear the transition.

Try it: play C–D–E–F–G–F–E–D–C with one hand. First aim for equal volume. Then make a gentle rise toward G and fall back to C. The notes stay the same; your technical task changes because your musical intention changes.

A map of the skills

- **Uneven crossing:** examine fingering, timing, and movement between positions.
- **Hidden melody:** compare the leading voice with the accompaniment’s volume.
- **Late landing:** check recognition of the destination and preparation time.
- **Blurred harmony:** listen to note releases and pedal clearing.
- **Rhythm lost when hands join:** check each hand’s pulse and their shared attacks.

These are starting questions, not diagnoses. A single passage can involve more than one skill, and a teacher may identify a different cause from the one you first suspect.

After working on a detail, replay the phrase with its intended articulation and shape. Improvement should survive that return. A faster isolated fragment is not yet a better phrase if its entry is late or its ending loses balance.

Checkpoint: you can name one musical goal, point to a specific difficulty, and hear whether a practice change helped. Keep that goal beside the exercise as you move through the guide.

Efficient Practice: Accuracy, Relaxation, Speed

1. Give each repetition a job

Some days, a passage seems to improve simply because we have spent time with it. On other days, the same awkward corner greets us every time. That is a useful moment to become curious: what, exactly, is making these few notes difficult?

Choose a small, audible goal. “Keep these four notes even” gives you something to listen for; “play this better” leaves too much to chance. You do not have to solve the whole passage today. One dependable connection is a worthwhile result.

If the RH thumb makes F too loud in C major, try D–E–F–G. Include the approach and the note after the crossing, so the thumb learns its place in the line.

WATCH OUT

The comfortable detour

It is tempting to begin with the bars that already sound lovely. Enjoy them—but give the awkward transition its own few minutes before another complete run-through.

A practice loop you can return to

1. **Listen once.** Play at a manageable tempo and choose one transition that needs attention.
2. **Make the task smaller.** Keep the note before the difficulty and the note after it. A landing needs an approach.
3. **Change one thing.** Slow the pulse, separate the hands, or reduce the texture. Give yourself a chance to hear which change helps.
4. **Compare.** Did the result improve? If not, try another simplification rather than asking an identical repetition to do something new.
5. **Put the music back together.** Start a little earlier and continue a little later, then return to the phrase.

Let the slow version still sound like music

Keep a pulse and a sense of direction, even when you need plenty of time between notes. If a very slow version loses the gesture entirely, try a shorter group at a manageable moving tempo, then pause to listen.

After a mistake, name a likely cause: an uncertain note, late preparation, a rushed subdivision, or a fingering that does not prepare what follows. Choose one adjustment. Three comfortable, accurate repetitions can be a useful signal to move on and retest later; they are not a promise that the passage is learned forever.

A good place to stop: when you have answered the day’s question, or when you can no longer say what the next repetition will test. Stop immediately for pain or real strain. Leave yourself a short note about the next step. Tomorrow’s practice can begin with a clear invitation rather than a fresh search.

2. Practice rhythm, accents, and short groups

Use a variation to expose a particular transition, then return to the written rhythm and articulation. Improvement in the variation alone does not establish that the original passage is secure.

Rhythm and accent

Long–short, then short–long: alternate which note gets more preparation time. Keep the same note order and fingering. Begin with a short group, and do not let the shorter value become a rushed or missed attack. The five-finger chapter supplies notated examples.

Move an accent: lightly emphasize a different note of the group on successive passes. This can reveal whether one finger always dominates. Finish without the added accents; they are a listening experiment, not a new permanent phrasing.

Short bursts

Choose a very small group whose notes and fingers are already known. Play it as one controlled gesture, stop, and listen. Begin with enough space between attempts to prepare the next start. Gradually include the approach and continuation instead of merely repeating the same isolated group faster.

A burst that ends on the wrong note, adds a bump, or leaves you unable to release comfortably needs a smaller group or slower tempo. It is not evidence that the passage is ready for continuous fast playing.

Move the tempo only when the goal survives

Make a small increase after several controlled attempts. Use the same listening test at the new tempo. If the pulse, fingering, or chosen balance becomes unreliable, return to the last useful setting and examine the transition that changed. There is no universal daily tempo increase or repetition count that suits every passage.

AT THE PIANO · GARRICK OHLSSON

When Ohlsson was preparing Chopin's Op. 10 No. 2, Olga Barabini asked him to perform the upper line and LH accompaniment first, then add the RH thumb, and later the index finger. Even this formidable pianist built the texture in layers. Try the same principle: make one layer musical before asking it to carry the whole passage. First-hand interview: The Counterpoints.

Session note: record the passage, the goal, the variation that helped, and the next starting point. “E–F even in a four-note group; reconnect tomorrow” is more useful than “scales: ten minutes.”

Building a Technique Routine

1. Give each block a job

Purpose: balance useful repetition with enough variety to keep the work relevant. A routine organizes attention; it is not an obligation to touch every technical category each day.

Choose the available time, a repertoire need, and one familiar skill to maintain. Use exercises you can evaluate; learning new notes and testing speed are different tasks.

A flexible 20-minute framework

Time	Focus	Example goal
0–5 minutes	A familiar scale or five-finger pattern	Equal pulse through one identified transition
5–10 minutes	Arpeggio, chord, or broken chord	Accurate return fingers or a coordinated chord attack
10–15 minutes	Coordination or voicing	Keep the quieter part steady while the leading part changes
15–20 minutes	Repertoire connection and review	Apply one improvement to a phrase; note the next task

The later **20-Minute Daily Routine** chapter provides a session using this edition’s existing examples. Use that as a concrete alternative to choosing every block yourself.

Adjust the allocation, not just the total

With ten minutes, select two goals and reconnect one to music. With thirty, deepen a transition or add a contrasting family. With forty-five, use distinct blocks and reassess between them; extra time need not mean longer uninterrupted repetition.

If a piece needs voicing more than velocity, give voicing the larger share. If the scale is already controlled, maintain it briefly and spend the remaining time on the task that is not. Rotate keys and specialties across sessions instead of squeezing every key and technique into one sitting.

Carry information into tomorrow

Write what improved, what remains uncertain, and what to test next time. Start the next session with that test.

Checkpoint: each block has an audible goal, a workable exercise, and a stopping point. Detailed longer schedules and multi-day rotations remain in development in the practice-program chapters.

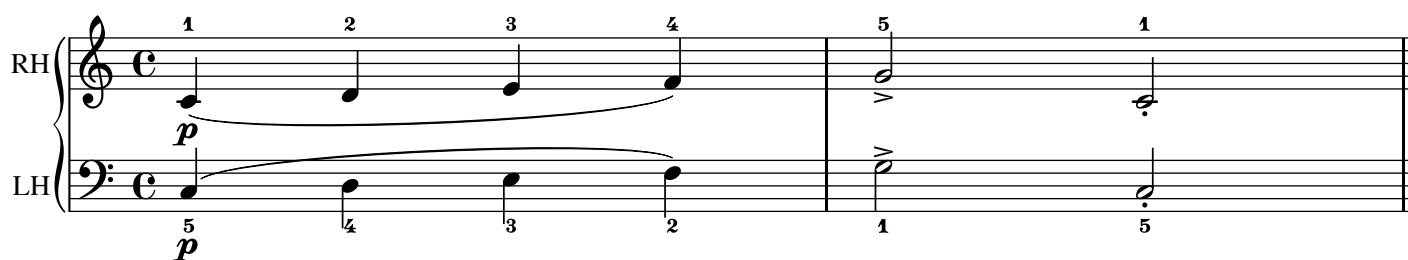
Notation, Fingering, and Practice Symbols

1. Read the instruction before choosing a finger

Purpose: make the guide's conventions clear enough that you can concentrate on playing. The printed pitches, clefs, durations, and finger numbers describe different things; check each before starting.

Finger numbers are **1 thumb, 2 index, 3 middle, 4 ring, 5 little finger** in either hand. RH and LH label the hands. A hand can read either clef, so the clef determines pitch even when it differs from the usual treble/RH and bass/LH arrangement.

Middle C is C4. C3 is an octave below and C5 an octave above. Captions give sounding ranges where useful. An **8va** line above a passage asks for an octave above the written notes until the line ends. Ledger lines extend the staff without changing the clef.



Reading example: finger numbers, a slur, soft dynamic, accent, and staccato. RH begins on C4; LH on C3.

What the markings ask for

- **Finger number:** a proposed route through the notes. A terminal finger at the top of a scale may differ from the finger used to continue through an internal tonic.
- **Slur:** treat the group as connected and shaped. Its precise musical meaning depends on context; it is not an instruction to add pedal automatically.
- **Dot above or below a note:** staccato, a separated articulation. This differs from a dot placed after the notehead, which changes duration.
- **Accent sign:** give that attack an emphasis within the phrase. In this reading example, hear the change without turning it into a harsh attack.
- **p:** soft. Dynamic markings describe the intended sound, not a fixed amount of force.

Play the example once with one hand, naming the markings. Then play it again listening for the connected first group, emphasized G, and detached final C. The written half-note values still occupy two beats each, even when the final note is released earlier for its articulation.

2. Count the duration, then plan the repetition

A tempo marking needs a beat unit. At **quarter note = 60**, there is one quarter-note beat each second. In 4/4, four such beats fill a measure; two eighth notes or four sixteenth notes fit one beat. A faster subdivision does not by itself imply a faster beat.

Written values	Duration in quarter-note beats
Whole note	4
Half note	2
Quarter note	1
Eighth note	1/2
Sixteenth note	1/4
Dotted eighth + sixteenth	$3/4 + 1/4 = 1$
Three eighth notes under a triplet 3	Together fill 1 beat

A **tie** joins adjacent notes of the same pitch into one sustained sound; do not attack the second note. A **slur** groups notes into a phrase or articulation unit and can join different pitches. Their similar curves have different jobs.

Repeats and turning points

Repeat barlines ask you to return to the corresponding repeat start, or to the beginning if no opening repeat is given. A double barline alone does not mean repeat. Follow any numbered endings in order when they appear.

The ascending-and-descending scale examples usually print their top note once. Do not add a second attack at the turn unless the notation shows one. The final longer note completes the written measure; it is part of the exercise rather than unused space.

Editorial directions

When prose asks for long–short rhythm, a displaced accent, or separate-hand practice, it names a temporary variation. Return to the printed version afterwards. Fingerings in original studies are editorial suggestions; adapted repertoire identifies its source and any added markings in the source notes.

Movement words such as “shift,” “release,” or “rotation” describe the task in context. They do not prescribe a fixed angle or require an exaggerated gesture. The detailed movement chapters remain under development.

Checkpoint: before an exercise, identify the starting register, beat unit, subdivision, first finger in each hand, and where the pattern ends or repeats.

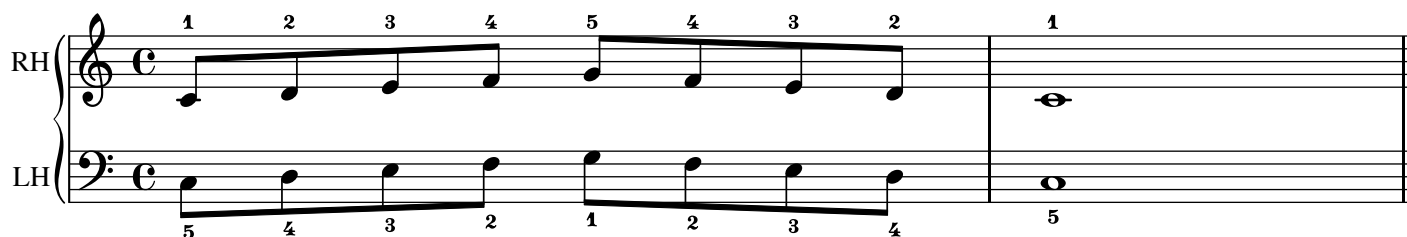


Part I — Finger Coordination and Control

Five-Finger Patterns

1. Establish a short, even phrase

Purpose: control a line within five adjacent notes before introducing thumb crossings. Begin with one hand on C–D–E–F–G. Use RH **1–2–3–4–5** upward and LH **5–4–3–2–1** upward; both return through the same route.



Five-finger C-major pattern, up and down. RH C4–G4; LH C3–G3.

Play two eighth notes per quarter-note beat at a comfortable pace. The final whole note lasts four beats. Do not repeat the top G. Begin without pedal, letting each note connect to the next without holding all five keys down.

Three passes

- Notes and fingers:** play one hand and say the names slowly. Check the printed route on the return.
- Even sound:** keep the short notes equal in duration and volume. Listen particularly around the change of direction at G.
- One phrase:** make a small rise in sound toward G and settle back to C, preserving the pulse.

Let the hand respond to the pattern rather than fixing it in a rigid shape. Do not raise unused fingers conspicuously to prove independence. The goal is control of the sounding notes while the other fingers remain available for what comes next.

Checkpoint: the summit is neither delayed nor unexpectedly louder, and the last C arrives at the expected time. Join hands only when each route is reliable separately.

Repertoire connection: choose a short neighboring-note phrase from a piece you know. Identify where the five-note preparation resembles it and where the actual phrase changes its rhythm or fingering. Transfer the listening goal, not necessarily the exercise's finger numbers.

2. Give the hands different articulations

The next exercise keeps the pitches and fingers familiar while changing the musical jobs. First connect the RH group while the LH plays separated notes. Then exchange roles. Keep both hands' attacks aligned; different note lengths do not require different tempos.

Five-finger articulation exchange: RH connected over LH detached, then the roles reverse.

Practice each line alone first. A staccato dot asks for separation, not an extra accent. Keep the detached hand soft enough to hear the other hand's connected phrase. At the final whole note in each half, both hands settle and sustain together.

Reduce the coordination task

If one hand copies the other's articulation, use just C–D–E–D at first. Stop, exchange the roles, and try again. Expand to the printed pattern when you can hear the contrast without changing the attack timing.

Accent experiment: in the even version on the previous page, lightly emphasize D on one pass and E on the next. Return to equal volume afterwards. This tests whether the intended note can lead without speeding up or permanently accenting that finger.

Checkpoint: you can identify the connected hand by listening, and the detached hand keeps the same pulse. The extra task should not obscure the note route; return to separate hands if it does.

3. Practice long–short and short–long rhythms

Dotted rhythm alternates preparation time. In the first half below, each pair is a dotted eighth followed by a sixteenth; in the second half the order reverses. Each pair still fills one quarter-note beat. The fingers and pitch order are unchanged.

The image shows two systems of musical notation for piano. The first system consists of two staves, RH (Right Hand) and LH (Left Hand), in common time (C). The RH staff has a treble clef and the LH staff has a bass clef. Both staves show a sequence of five-finger patterns. The first measure of each system contains a dotted eighth note followed by a sixteenth note, with finger numbers 1, 2, 3, 4, 5 above the notes. The second measure contains a sixteenth note followed by a dotted eighth note, with finger numbers 5, 4, 3, 2, 1 above the notes. The third measure of each system contains a single note with a finger number (3 for RH, 5 for LH) above it, indicating an explicit return. The second system follows the same pattern but with a different finger sequence (3, 2, 1, 2, 3 for RH and 5, 4, 3, 2, 1 for LH).

Five-finger rhythm pair: long–short followed by short–long, with an explicit return in each version.

Count the beat through the shorter notes. Avoid turning the short value into an indistinct flick or delaying the next beat. After one pass of each version, return to equal eighth notes and listen for a more dependable turn at G.

Transpose a five-note pattern

Begin on G and preserve the major pattern's intervals: **G–A–B–C–D**. Then try D major: **D–E–F♯–G–A**. Locate F♯ before playing; replacing it with F-natural changes the pattern. These examples retain the five-finger sequence in each hand.

For a minor-color comparison, return to C and play **C–D–E ♭ –F–G**, then descend. Only E changes. Name that difference and listen to it before trying a faster tempo.

Checkpoint: after the rhythmic variation you can restore equal notes, and after transposition you can name the altered pitch. Add only one change at a time: a new key, new rhythm, or articulation contrast.

Next: Hanon introduces longer repeating patterns and shifts of position. Keep the same habit of checking each direction, choosing one listening goal, and returning to the original version after a variation. Larger ranges are useful when the small pattern is already controlled.

Basic Piano Touches

Hear how one note joins the next

The same few notes can sing, speak lightly, or sparkle, depending on how you join and release them. This chapter gives you a chance to hear those differences without learning a new set of pitches. Touch concerns how notes begin, continue, and release, as well as their volume. Begin without pedal so you can hear the connections and gaps clearly.

The image shows three musical staves, each with a Right Hand (RH) and Left Hand (LH) part. The exercises are for Legato, Detached, and Staccato touches. Each exercise consists of a five-note figure (1-2-3-4-5) repeated three times. The Legato exercise uses slurs to connect notes. The Detached exercise uses a slur for the first four notes and a separate note for the fifth. The Staccato exercise uses dots under each note to indicate shortening the sound.

The same five-note figure: legato, detached, then staccato.

- **Legato:** connect successive sounds without unintended gaps. A slur can indicate a connected group or phrase; listen for the join rather than squeezing the keys after the sound begins.
- **Non legato (detached):** leave a small audible space between notes. The unmarked middle version is labeled detached for this exercise; unmarked notation elsewhere does not automatically demand this touch.
- **Staccato:** shorten the sound, shown here by dots. The dot does not prescribe one exact fraction of the written duration. Keep the pulse steady and let the context determine how short is appropriate.

Try one hand at a time at **mp**, as though you were giving the same short phrase three different readings. Keep tempo and dynamic unchanged as you switch touch. Release the key enough to end the sound; a large upward movement is unnecessary. Short notes can be quiet, and connected notes can be strong.

Listening check: can someone identify the three versions without seeing your hands? If the only difference is volume, listen more closely to the releases.

Portato, tenuto, and accents

The image displays three musical exercises, each consisting of a Right Hand (RH) and Left Hand (LH) staff in C major, 4/4 time. Each exercise is divided into two measures followed by a final whole note chord.

- Portato:** The first exercise is labeled 'portato'. It features a slur over a sequence of eighth notes. Fingering for RH: 1, 2, 3, 4, 5, 4, 3, 2; 1. Fingering for LH: 5, 4, 3, 2, 1, 2, 3, 4; 5. Dots are placed under each note of the slurred sequence.
- Tenuto:** The second exercise is labeled 'tenuto'. It features a short dash under each note of the sequence. Fingering for RH: 1, 2, 3, 4, 5, 4, 3, 2; 1. Fingering for LH: 5, 4, 3, 2, 1, 2, 3, 4; 5.
- Accents:** The third exercise is labeled 'accent'. It features an accent mark (>) over each note of the sequence. Fingering for RH: 1, 2, 3, 4, 5, 4, 3, 2; 1. Fingering for LH: 5, 4, 3, 2, 1, 2, 3, 4; 5.

Portato dots under a slur; tenuto dashes; accents. These versions share the same pitches and rhythm.

Portato combines a sense of grouping with gentle separation. Dots under a slur commonly suggest this touch. Try a small release between notes while hearing one phrase; it should not become a series of sharp jabs. Editions and styles vary, so the surrounding phrase matters.

Tenuto, shown by a short dash, asks for a note to be held or given appropriate weight. In this drill, sustain each note for its written duration without an unwanted gap. In repertoire it may also imply emphasis; it does not automatically mean louder or slower.

An **accent** gives a note local emphasis. It is relative to the phrase's dynamic: an accent within *p* need not sound like a whole passage at *f*. Play the accented version with a clear beginning and an immediate release of unnecessary effort.

Change one thing at a time

1. Compare legato and portato at the same dynamic.
2. Compare quiet staccato and quiet tenuto, keeping the beat unchanged.
3. Repeat the accented figure at *p*, then *mf*. Keep the emphasis local.

Let your ear lead these comparisons. You are looking for different sounds, with comfortable movement, rather than trying to hold the wrist still or strike from one prescribed joint. Later, **Independent Articulation Between the Hands** combines different touches simultaneously. Establish each touch separately first.

Dynamics and Gradual Change

Choose among four clear dynamic levels

Imagine saying the same sentence quietly, then with more presence. At the piano, you can give a familiar figure that same variety. Aim for four distinguishable sounds—**p** (soft), **mp** (moderately soft), **mf** (moderately strong), and **f** (strong)—while keeping the tempo and tone even. These are relationships within a musical context, not fixed decibel readings.

The image displays a musical score for a piano exercise, consisting of two systems of staves. The first system is for the Right Hand (RH) and Left Hand (LH), and the second system is for the Right Hand (RH) and Left Hand (LH). Each system contains four measures, each with a different dynamic marking: *p*, *mp*, *mf*, and *f*. The notes are written in a way that allows for a gradual change in dynamics across the measures. The RH part uses a treble clef and the LH part uses a bass clef. The time signature is common time (C). The notes are written in a way that allows for a gradual change in dynamics across the measures. The RH part uses a treble clef and the LH part uses a bass clef. The time signature is common time (C). The notes are written in a way that allows for a gradual change in dynamics across the measures.

Play the same figure at *p*, *mp*, *mf*, and *f*.

Use one hand first, then both. Play the four versions in order. Each should sound different from its neighbor, but the notes within each version should belong to the same level. Quiet notes must still speak; strong notes need not be harsh.

Next choose levels out of order: **mf–p–f–mp**, for example. Hear the intended sound before playing. Record an attempt and listen without watching the markings. Can you identify the four levels?

Avoid trying to make a note louder by pressing harder after it has sounded. The attack determines its initial dynamic; release unnecessary effort while retaining the written duration.

Checkpoint: you can choose any of the four levels on the first attempt, at a stable pulse and with comfortable movement. If a quiet note fails to sound, shorten the figure and practice its attack rather than simply playing everything louder.

Spread a crescendo across a long line

Crescendo means gradually louder; **diminuendo** or **decrecendo** means gradually softer. The opening and closing hairpins show these changes. Hear the destination before beginning, and leave yourself room to grow: reaching *f* too early leaves nowhere for the rest of the crescendo to go.

The musical score is for a four-octave C major scale exercise. It is written for Right Hand (RH) and Left Hand (LH) in 2/4 time. The RH part starts with a piano (*p*) dynamic and ends with a forte (*f*) dynamic, with a crescendo hairpin. The LH part starts with a piano (*p*) dynamic and ends with a piano (*p*) dynamic, with a decrescendo hairpin. The exercise is divided into four measures, each containing two octaves of the scale. Fingerings are indicated by numbers 1-5 above or below the notes. The final measure of the LH part shows a return to piano (*p*) with a decrescendo hairpin.

C major over four octaves: grow from *p* to *f* across the ascent, then return gradually to *p*.

First use a short familiar scale. Then try this four-octave version once its notes and fingers are secure. Mentally place **mp** and **mf** between the endpoints. Keep the change gradual across crossings and barlines; do not give each new thumb an accent.

Use a metronome. The tempo stays steady as the sound grows or diminishes. Practice the final quiet notes separately if they become late, uneven, or inaudible.

Reverse the contour: begin strongly, grow softer while ascending, then increase through the descent. Pitch rising does not require volume to rise. This variation separates the musical choice from the direction of the hands.

Learn a piece's dynamics from the beginning

You do not have to wait until a piece is fluent to begin shaping its sound. Every note you play already has a dynamic. When a piece specifies one, practice that sound from your first slow reading, together with its notes, rhythm, and fingering. Dynamics are part of learning the movement and the phrase, not an optional layer to add after the notes are secure.

Plan the phrase before repeating it

- Identify its starting dynamic, its destination, and where the change begins.
- Play the intended sound slowly. A quiet passage should not be learned only with heavy attacks and changed at the end.
- If a difficult join needs temporary simplification, restore the dynamic as soon as the join becomes understandable.
- If no dynamic is printed, make a provisional choice from the style, texture, and phrase. Revisit it as your understanding improves.

Listen for balance as well as volume

Both hands need not use equal strength. A melody may need to project above a softer accompaniment, even when the whole passage has one dynamic marking. Later voicing chapters develop this skill. For now, compare a balanced scale with a short melody and accompaniment from your current piece.

Practice check: take a moment after a repetition to compare the sound you imagined with the sound you heard. “The crescendo arrived too soon” gives you something to change. “Play it again” does not.

Hanon Exercises 1–20

What Hanon develops

Once a Hanon figure becomes familiar, it frees some attention for listening: did the little finger hurry, did the position change stay quiet, did both hands arrive together? Its repeating patterns give you a consistent setting for those questions. Choose a short portion and one audible goal; you need not play all twenty exercises to have a useful session.

Charles-Louis Hanon published *The Virtuoso Pianist* in 1873. Its 60 systematically sequenced exercises became a widely circulated technical supplement: short repeating figures make it easy to isolate coordination and compare an attempt with the next. The first 20 establish recurring finger patterns. Familiarity and repetition explain its practical appeal; they do not make every historical instruction necessary for every pianist. Source edition and date.

Preparation: read sixteenth notes and identify the note route in each hand. The examples here keep the hands one octave apart. Clefs reflect the original register; the hand label alone does not determine pitch.

A practical sequence

1. Name the first pattern's notes and check each hand's fingers.
2. Learn a short ascending excerpt and its descending counterpart separately.
3. Join two neighboring measures without restarting the pulse at the new position.
4. Apply one variation, then return to the original rhythm and sound.

This teaching chapter works through short examples from Nos. 1 and 2. **Appendix J contains the complete routes for Nos. 1–20**, with both directions, turning points, source fingerings, and final notes.

What the exercise can and cannot establish

Even notes within one figure do not prove that a scale crossing, a leap, or a voiced chord is secure. Use Hanon for the task it actually presents, then apply the result to a relevant musical phrase. Stop a repetition loop when it no longer has a clear listening question.

A small yielding wrist-and-arm motion can help organize two- or four-note groups. Try it slowly with a teacher if available: let the wrist respond naturally as the hand travels, rather than deliberately dipping or pumping it at every group. Keep the sound even and stop if the motion adds accents or strain. This is an optional coordination experiment, not a requirement for playing Hanon.

For a first session, choose two measures in each direction of No. 1. Later compare No. 2: a familiar visual pattern can contain a different skip or a different finger on a returning note. Keep the printed route in view until it is understood.

1. No. 1: learn the ascending pattern

Purpose: keep the opening skip and the following stepwise notes equally controlled. The first four measures below retain the original pitches. Both hands begin in bass clef, with the right hand one octave above the left.

Hanon No. 1, ascending measures 1–4 in original registers.

The opening right-hand pattern is **C–E–F–G–A–G–F–E**, fingered **1–2–3–4–5–4–3–2**. The left hand uses **5–4–3–2–1–2–3–4**. Each new measure begins one scale step higher.

Practice a small amount well

Give yourself just one measure and one hand to begin with. Choose a tempo where all eight sixteenth notes fit into two steady quarter-note beats. A quarter note around 40 is a possible starting experiment; use a slower pulse if needed.

Connect two measures. Listen especially to the last note of one measure and the first note of the next: the pattern moves, but the pulse does not restart. Then play the four measures without stopping.

Listen for: the initial skip does not create a louder second note, and fingers 4 and 5 do not rush or drag.

Avoid: holding the hand stretched open throughout the measure, lifting fingers as high as possible, or repeating without a specific listening goal. These are editorial practice suggestions, not a reproduction of Hanon's historical instructions.

Challenge: move the exercise up a half step

The image shows a musical score for Hanon No. 1, first ascending measure transposed up one semitone. The score is for Right Hand (RH) and Left Hand (LH) in 2/4 time, key of D major (two sharps). The RH part shows an ascending scale with fingerings 1, 2, 3, 4, 5, 4, 3, 2. The LH part shows a descending scale with fingerings 5, 4, 3, 2, 1, 2, 3, 4.

Hanon No. 1, first ascending measure transposed up one semitone; both hands retain the trial fingering.

A familiar exercise can feel surprisingly new just one key higher. Try any of exercises 1–20 one semitone higher, moving **every note** by the same amount. No. 1 begins D ♭ –F–G ♭ –A ♭ –B ♭ –A ♭ –G ♭ –F. Preserve its intervals and rhythm; include the descending section. Begin slowly, hands separately, with one measure. Try the original fingers first and adjust if needed. The changed black-and-white-key pattern tests how well you know the exercise beyond its familiar keyboard shape.

2. No. 1: learn the descent separately

These are measures 15–18, the beginning of the descending section. They are not the previous four measures played backward, and they do not immediately follow measure 4. Both staves now use treble clef in the source register.

Hanon No. 1, descending measures 15–18 in original registers.

The first pattern is **G–E–D–C–B–C–D–E**. RH uses **5–4–3–2–1–2–3–4**; LH uses **1–2–3–4–5–4–3–2**. Each following measure starts one scale step lower.

Change one feature at a time

- Play legato, then lightly detached, without changing the fingering.
- Alternate long–short and short–long pairs within one measure.
- Give a mild accent to the first note of each four-note group, then remove it.
- Play the left hand a little more prominently, then restore equal balance.

After each variation, come back to equal sixteenthths and listen for what has improved. A smoother join or a quieter thumb is a useful result, even if your tempo stays exactly where it was.

Ready to continue: you can play four measures in each direction with the correct notes and fingers, a steady pulse, and no accumulating tension.

Scope and source: these are two excerpts, not the complete exercise or its turnaround. Source: Hanon, *The Virtuoso Pianist*, Part I, No. 1, Mutoia transcription of Schirmer (1900). Repeated finger numbers have been filled in editorially. Attribution and adaptation details appear in the source notes.

3. No. 2: compare the opening leaps

No. 2 opens **C–E–A–G–F–G–F–E**, with a larger jump to A than the stepwise approach in No. 1. The four measures below retain the source register and rhythm.

The musical score shows four measures of Hanon No. 2. The Right Hand (RH) and Left Hand (LH) are both in 2/4 time. The RH part starts on C3 and the LH part starts on C2. The RH part has a large leap from C to E in the first measure, while the LH part is stepwise. The RH part has a larger jump to A than the stepwise approach in No. 1. The four measures below retain the source register and rhythm.

Hanon No. 2, ascending measures 1–4. RH C3 and LH C2 at the opening.

RH uses **1–2–5–4–3–4–3–2**. LH uses **5–3–1–2–3–2–3–4**. Notice that the first LH E uses 3 but the returning E uses 4. The fingering prepares different parts of the route; matching a pitch name does not require using the same finger every time.

Practice the leap and the continuation

Give the opening leap a small piece of the phrase to belong to: play C–E–A with one hand, then continue through G–F. Keep A inside the phrase rather than landing on it with a special accent. Add the return to E, then the next measure's opening D. The transition E–D should keep the same pulse as the notes within the pattern.

Listen for: the larger opening intervals and the smaller return intervals occupy equal sixteenth-note durations. If the leap interrupts the pulse, reduce the tempo or isolate the five-note group before repeating the complete excerpt.

Variation: change only the balance between hands for one pass. Then restore equal balance and check the note route again. Avoid combining a new fingering, new rhythm, and new dynamic goal on the first attempt.

4. No. 2: learn the different descending figure

Measures 15–18 begin the descending section, well after the previous excerpt ends. The first pattern is **G–D–B–C–D–C–D–E**. It is not the opening ascent reversed.

The musical score shows measures 15 through 18 of Hanon No. 2. The right hand (RH) and left hand (LH) are both in 2/4 time. The RH starts on G5 and the LH on G4. The descending figure is G–D–B–C–D–C–D–E. The RH fingering is 5-2-1-2-3-2-3-4 and the LH fingering is 1-3-5-4-3-4-3-2. The pattern is repeated in measures 16 and 17, with a final measure 18 showing a different fingering for the RH (5-2-1-2-3-2-3-4) and LH (1-3-5-4-3-4-3-2).

Hanon No. 2, descending measures 15–18. RH begins G5; LH begins G4.

RH uses **5–2–1–2–3–2–3–4**; LH uses **1–3–5–4–3–4–3–2**. In the RH, the first D uses 2 and the later Ds use 3. Let the next few notes explain the finger choice. Learn the hand's sequence together with the pitches rather than assigning one permanent finger to each key.

Practice G–D–B slowly, then attach C–D–C–D–E. Finally connect E to the next measure's F. Although the sequence of starting notes moves down through the excerpt, not every local interval points downward.

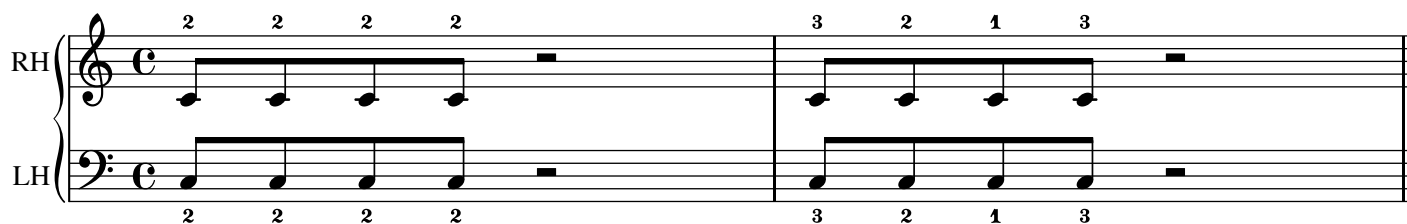
Checkpoint: you can identify the opening three notes, play their fingers without hesitation, and continue through the repeated C–D motion with a steady pulse. Compare both directions separately before attempting to learn the complete exercise from its source score.

Scope and attribution: No. 2 excerpts use the same Schirmer (1900) / Mutopia 2037 transcription as No. 1. Notes, source register, and sixteenth-note rhythm are retained; repeated pattern fingerings are completed editorially. Adapted notation is CC BY-SA 4.0. No turning-point material has been inferred between the excerpts.

Repeated Notes

1. Repeat a sound without losing the beat

A repeated note may look like the simplest thing on the page, yet each attack needs a fresh beginning. Start with a short group and listen for a clear sound each time. The key must release enough for the next note to speak; the amount and feel depend on the instrument. There is plenty to discover here before testing speed.



Repeated C: four attacks with finger 2, then four with changing fingers 3–2–1–3. Play one hand at a time first.

Each measure contains four eighth notes followed by a half rest. Count all four beats, including the silence. Use the rest to prepare the next group rather than immediately repeating as fast as possible.

Compare two routes

Play the first bar with finger 2. Listen for four distinct attacks with equal timing and volume. Then try the changing-finger bar at the same tempo. Neither route is a universal answer: choose according to the passage, tempo, articulation, and response of the piano.

With changing fingers, each new finger takes responsibility for a new attack. This differs from silent finger substitution on a held key, where the sound continues without another strike. Do not turn the printed repeated notes into tied or merely held notes.

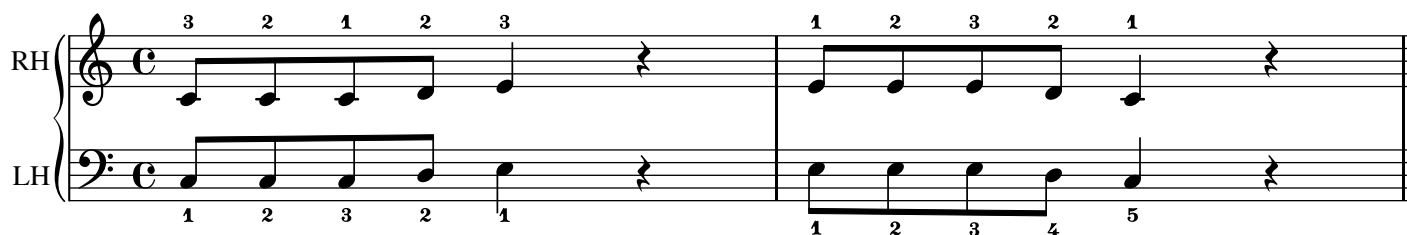
A missing attack gives you a useful clue: slow down and check the release before it. Striking harder may hide the problem without making the next repetition easier. If the different fingers create different volumes, use a softer, shorter group and listen to one transition at a time.

Checkpoint: you hear four separate, evenly timed attacks, and can stop for the full rest. Add the second hand only after each hand can reproduce that result independently.

Repertoire direction: repeated-note passages such as the Scarlatti K.141 candidate will later show how fingering interacts with surrounding notes. This original drill is preparation, not a transcription of that sonata.

2. Prepare the note after the repetition

The note after a repetition often tells you which fingering to choose. A useful route lets you leave the repeated key ready for the next part of the phrase. The following study joins three attacks on one pitch to a short line. The two hands use different routes where that makes the continuation straightforward.



Repeated-note exits: a rising line from C, then a falling line from E. Editorial hand-specific fingerings.

In the first RH group, C uses **3–2–1**, leaving **2–3** for D–E. In the LH, C uses **1–2–3**, then D–E uses **2–1**. Read the second measure separately: do not assume the first bar’s route must be repeated unchanged.

Build the transition

1. Play the final repeated note and the two moving notes, with their printed fingers.
2. Add the earlier repeated attacks, keeping the same tempo through the exit.
3. Observe the quarter rest; prepare the next starting pitch before its beat arrives.
4. Join the two measures and listen for the line continuing through the repetition.

Tempo experiment: shorten the group before raising the tempo. A brief reliable group followed by a full pause is more useful than continuing until attacks become indistinct. Reconnect it to the phrase at a manageable tempo before calling the faster version secure.

What to avoid: gripping the key between attacks, forcing a fixed wrist position, or adding an accent every time finger 1 arrives. Specific movements should serve the sound and fit the hand; they are not gestures to exaggerate from a verbal description.

Checkpoint: the moving note arrives in time and at the intended volume. If it is consistently late, give the exit its own few attempts. You may need less time repeating the starting pitch and more time learning how to leave it.

Trills, Mordents, and Turns

1. Plan a trill's entry and landing

A trill can bring a phrase to life, but it is easy to become so busy alternating notes that the arrival gets lost. Begin with a measured version so you know where you are going. The following study compares two entries around D: starting on D itself, then starting on its upper neighbor E.

The musical score consists of two systems, each with a Right Hand (RH) and Left Hand (LH) part. The first system is for a trill around D4. The RH part starts on D4 and alternates with E4 using fingers 2 and 3. The LH part starts on D4 and alternates with E4 using fingers 3 and 2. Both hands end on a long D4. The second system is for a trill around D5. The RH part starts on D5 and alternates with E5 using fingers 2 and 3. The LH part starts on D5 and alternates with E5 using fingers 3 and 2. Both hands end on a long D5. The time signature is 4/4 and the key signature is C major.

Measured trill preparation around D: principal-note entry, then upper-note entry. Both versions land on D.

These are original timing drills, not a universal realization of a trill sign. The first line ends on E before the long D; the second ends its alternation on D and explicitly reattacks the long D. Follow those written attacks rather than adding or deleting notes to make the two versions identical.

Practice one hand first. RH alternates **2–3**, LH **3–2**. Count eighth notes evenly and reach the long note at the expected beat. A clear ending is as important as a quick alternation.

Compare finger pairs in short groups

Try a few slow alternations using RH 3–4 or 4–5; in the LH put the higher-numbered finger on the lower note. Use only a small, comfortable group and stop between attempts. Give an unfamiliar pair time to become dependable. It need not match the speed or duration of your favorite pair immediately; a few comfortable, even alternations are a useful beginning.

Checkpoint: you can start the selected version intentionally and reach the final D without an extra note or a pause. Use a smaller group if the ending becomes a guess.

2. Keep the accompaniment independent

Listen beneath the busy notes as well as to them. A trill-like figure occupies part of a phrase; the other hand must still keep its written durations. Here the RH alternation is measured while the LH supplies two long bass notes. Begin without pedal so early releases remain audible.

The musical score is written for piano. The right hand (RH) is in the treble clef and the left hand (LH) is in the bass clef. The key signature has one flat (Bb) and the time signature is common time (C). The RH part consists of two measures of eighth-note alternations (D4-E4, E4-D4, D4-E4, E4-D4) with fingerings 2-3-2-3, 2-3-2-3, and 2-3-2-3. The LH part consists of two measures of whole notes (C3, C3) with fingerings 5 and 1.

Original study: measured RH alternation over a held bass, followed by a D–C landing.

Learn the RH rhythm alone. Then play the bass alone, counting four quarter-note beats for each whole note. Combine them at a slow pulse. Do not restrike the bass at each RH attack, and do not change it early to help the RH reach its landing.

From a drill to an ornament

In repertoire, inspect the principal note, its neighbors, the harmony, and the surrounding rhythm. A trill sign alone does not supply every detail of an entry, number of alternations, or ending. Consult the edition's ornament guidance and the musical context before choosing a realization.

Sections 4–5 introduce the common shorthand and historical conventions. Use them to identify questions to ask of a score, rather than as a substitute for its ornament table.

Listening check: can you hear the long bass continuing beneath the moving line? Can the RH settle on C without pulling the LH change out of time? If not, practice the last two beats and the following downbeat, then restore the beginning.

Variation: exchange the roles in a comfortable register, choosing fingers afresh for the alternating LH notes. Keep the sustained RH part quiet and steady. This is an optional adaptation, not a demand to mirror the printed fingers mechanically.

3. Learn the neighbor shapes before their shorthand

Before puzzling over a symbol, get to know the small musical gesture it might represent. These short neighbor figures give you something familiar to hear and feel when you meet the shorthand later.

An upper-neighbor figure leaves the principal note for the note above and returns; a lower-neighbor figure visits the note below. Around D in C major, these are **D–E–D** and **D–C–D**. Ornament terminology and signs must be read in their edition's context; the notes below are written explicitly to remove that ambiguity.

Upper- and lower-neighbor preparations, separated by rests. Each three-note figure occupies one quarter-note beat.

The first two notes are sixteenth notes and the return is an eighth. Count the following quarter rest instead of letting the figure consume the next beat. Rehearse the destination D first, then include the neighbor notes without adding an unintended accent.

Turns around a principal note

A turn preparation can move upper–principal–lower–principal: **E–D–C–D**. The inverted contour is **C–D–E–D**. In this drill each group occupies one beat and is followed by an explicitly reattacked half-note D and a quarter rest.

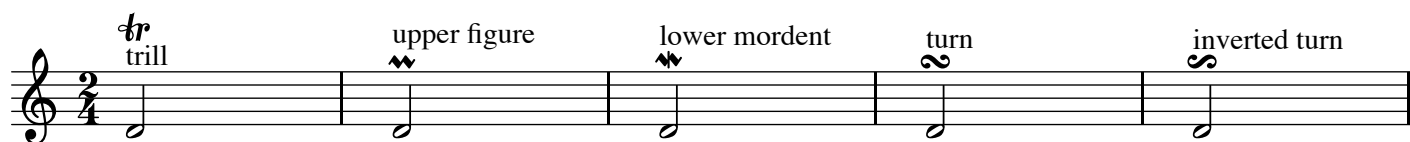
Turn preparations around D: upper-neighbor entry, then lower-neighbor entry. The following D is reattacked as written.

Keep the short group even and leave room for the following note. These measured preparations are not fixed timings for every printed turn or mordent. Placement of the sign, written accidentals, harmony, tempo, and source convention determine the musical realization.

Checkpoint: you can name the principal note and both neighbors, distinguish the two contours by ear, and arrive on time. Apply those questions to a source-reviewed repertoire example before deciding on its exact ornament timing.

4. Recognize the shorthand

Read the sign, then check the source. These descriptions identify common printed shapes; their names and realizations are not identical across centuries. D is the principal note in the examples below. The note names describe contours, not fixed rhythms.



Common ornament signs over D. The notation identifies shapes; the source determines the realization.

Trill: alternate principal and upper neighbor; context determines the entry and ending. **Uncrossed zigzag:** often an upper mordent in modern teaching (D–E–D), but may indicate an upper-note trill in Bach (E–D–E–D). **Crossed zigzag:** commonly a lower mordent (D–C–D). **Turn:** upper–principal–lower–principal; the inverted form reverses the neighbors. Historical naming and typography vary.

A sign over a note and one placed between notes need not have the same timing. A delayed turn, for example, lets the principal note sound before the ornamental group. Small written notes may specify an entry or ending more exactly than the shorthand alone.

Check accidentals near the sign as well as the key signature. An accidental above an ornament commonly modifies its upper neighbor; one below a turn commonly modifies its lower neighbor. Neither neighbor is automatically a half step away.

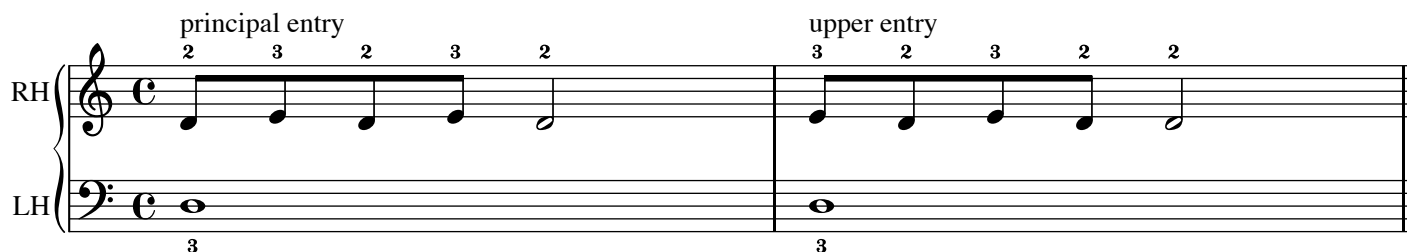
Try it: bring one ornament from your current piece to this page. Name its principal and neighboring pitches, then find the edition’s explanation before choosing the rhythm. The written-out studies earlier in this chapter give you movements to draw on, not a universal decoding chart.

5. Baroque and Classical conventions

Baroque: begin with the composer's table

For **J. S. Bach**, his ornament table in the *Clavier-Büchlein für Wilhelm Friedemann Bach* is a useful first reference. Its *Trillo* begins with the upper neighbor, whereas its *Mordant* visits the lower neighbor from the principal note. The table also includes combined ornaments; a longer or embellished sign need not be merely a faster version of the simplest one. See the Bach ornament tables reproduced by Henle.

In much late-Baroque keyboard practice, an upper-note trill begins **on the beat**, so the upper note occupies the accented instant before resolving into the alternation. Practice that coordination with the bass. This is a useful starting convention, not a rule for every Baroque composer, national style, or melodic situation. A preceding upper note, a tie, or a written preparation can change the entry.



Two measured entries with the bass on the beat: D first, then E first. The final D is explicitly reattacked.

Classical: continuity as well as change

Do not assume that reaching Haydn or Mozart means every trill now starts on the principal note. Upper-note entries remain an important eighteenth-century convention. Short trills, longer cadential trills, preparations, and endings must still be read in their local musical context. Keep the phrase's pulse intact rather than adding time whenever a symbol appears.

Early Classical notation can be particularly ambiguous. Henle's preface to **Mozart's piano variations** discusses a sign in K. 25 and K. 24 that can indicate different realizations depending on note length, tempo, and melodic setting. It also explains why some later printed signs were normalized using other sources. An editor's ornament table and critical notes therefore matter as much as a modern symbol dictionary. See Mozart: performance of the ornaments, pp. VII–VIII.

Before playing: decide which note begins, whether it coincides with the bass, which neighbors the harmony supports, and how the ornament reaches the next written note. Write out a plausible slow version first. Then let the speed and number of alternations serve the phrase; do not squeeze every trill into the same four-note recipe.



Major scales

A familiar pattern, a fresh listening task

A scale may be one of the first things you learn at the piano, but it gives you plenty to return to. One day you can listen for the thumb crossing; another day, for a quiet LH or a crescendo that grows over the whole line. The notes stay familiar while your attention becomes more exact.

Our aim: connect knowledge of a key with an even, comfortable route across the keyboard. Begin with a range you know, then learn how continuation fingers carry the line through two and four octaves. You need not rehearse every possible length before making music with it.

A PIANIST'S PERSPECTIVE · LANG LANG

Lang Lang chose the C-major scale for the first video in his public *Lang Lang Lessons* series. It is a friendly reminder that familiar material can still deserve a great pianist's attention. For your next pass, keep the key you know and choose one new thing to hear. Lang Lang Lesson 1, official artist channel.

Find your starting point

If one octave is still uncertain, begin with the first example and learn each hand's route. If that feels comfortable, move on to the continuation lesson. The four-octave reference is there when you are ready for a longer line.

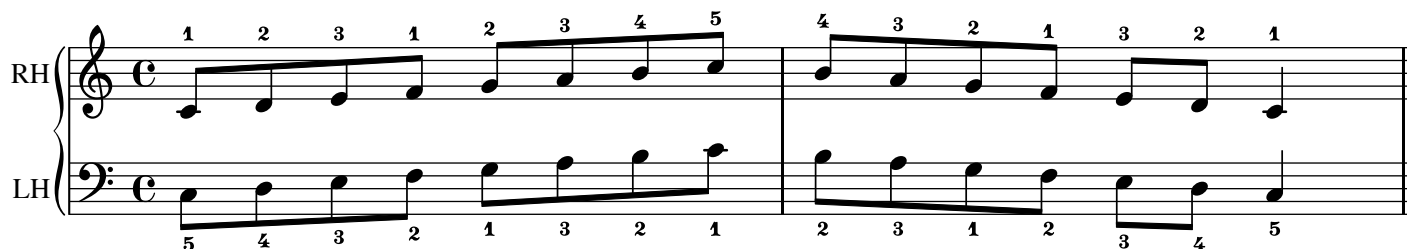
Listen for an even pulse, an unforced change of position, and a chosen dynamic. A thumb crossing should sound like part of the phrase—not an announcement that the thumb has arrived.

Carry the work into Mozart

Chapter 57 uses the opening of K.332's finale to show how scale motion combines with chromatic neighbors and changes of direction. Work on a small connection here, then hear what it makes possible in that phrase. Appendix A gathers the complete major-key reference so you can explore another key without starting the lesson again.

1. One octave: establish the route

Purpose: play a connected line without a bump when the thumb changes position. Begin with C major, one hand at a time. The right hand starts on middle C; the left starts an octave below.



C major, one octave ascending and descending, both hands with standard fingering.

Play two eighth notes per beat, initially around quarter note = 50–60 if that is comfortable. Let the hand travel along the keyboard rather than keeping it anchored over its first five notes. Do not accent a note just because it is played by the thumb.

Locate the crossings

Ascending RH: E–F uses **3–1**. Ascending LH: G–A uses **1–3**. On the return, RH F–E uses **1–3** and LH A–G uses **3–1**. These events happen at different places in the two hands.

1. Play the three notes around one crossing slowly. Prepare the thumb while the preceding finger is still playing, and let the hand and forearm travel toward the next group. A small comfortable wrist adjustment may help; avoid a deep sideways bend or forcing the thumb far underneath a stationary palm.
2. Continue through the crossing into the next group; avoid pausing on the thumb.
3. Play the full octave, then reverse at the top without repeating the top C.
4. Put the hands together only when each route feels predictable.

Listen for: the crossing note has the same length and volume as its neighbors. Record one ascent and descent if the bump is difficult to hear while playing.

If the thumb note bumps, play it quietly by itself, then join the preceding and following notes at that same level. Use a small D–E–F–G group in the RH and F–G–A–B in the LH. Increase speed only while timing and volume stay even.

WATCH OUT · A GAP HIDDEN BY PEDAL

Try this scale with the damper pedal up. If a crossing leaves a small hole in the sound, you want to hear it: that is the connection to work on. Pedal can make the gap harder to notice without improving the movement.

2. Extend the route without changing its purpose

The first and last fingers belong to the ends of a run. At an internal tonic, continue rather than using a terminal finger: ascending RH **B–C–D** = **4–1–2**; ascending LH **B–C–D** = **2–1–4**. Two, three, and four octaves use the same continuation principle.

Use the four-octave reference to locate these crossings. Begin with a shorter portion and its return before extending the range; separate full engravings of every octave length are unnecessary. The top C uses RH 5 and LH 1, while the final low C uses RH 1 and LH 5.

Three passes through a chosen range

- **Route:** play hands separately and check the fingers around each internal tonic.
- **Pulse:** join hands without pausing where one octave becomes the next.
- **Phrase:** make one gentle rise and fall in sound without changing note lengths.

Let the quality of the line tell you when to add range. If a longer run keeps interrupting its pulse, spend a little time with the crossing before adding another octave. Return to equal, unaccented notes after any practice variation.

Reference policy: this chapter teaches range extension once. The developed key reference will use a principal long-range version for each key, with extra examples only where the fingering or coordination changes. The reference appendices collect key patterns in one place; these selected examples teach specific fingering differences.

3. Four octaves: one continuous route

Think of the four octaves as one long phrase, with time to hear its shape. Start RH on C below middle C and LH one octave lower. Four sixteenth notes fit each beat. Choose a tempo that permits even movement; the smaller note values do not require fast playing.

The musical score is written for Right Hand (RH) and Left Hand (LH) in 2/4 time. The RH part starts on C3 and ascends to C7, with the final notes marked with an 8va line. The LH part starts on C2 and ascends to C6. Both hands use a continuous route of sixteenth notes with fingerings 1-2-3-4-1-2-3-4-1-2-3-4-1-2-3-4. The score includes a final measure with a whole note C in the RH and a whole note C in the LH.

C major, four octaves ascending and descending. RH C3 to C7; LH C2 to C6.

The **8va** line means sound those RH notes an octave above their written position. Clef changes and the octave sign keep the actual four-octave run readable; they do not change its route. Turn once at the highest C, without repeating it.

Practice two octaves first, then add one octave at a time. Listen across each internal tonic: RH continues with 1 and LH with 1. Reserve RH 5 for the top and LH 5 for the bottom. If a crossing interrupts the pulse, shorten the run before increasing the tempo.

4. G and F major: notice what changes

G and F are the first keys on either side of C in the circle of fifths: each adds just one key-signature accidental. G preserves the familiar finger sequence; F introduces a useful RH exception.

G major adds F $\sharp$ but keeps the C-major one-octave finger sequence.



G major, one octave in both directions, with F $\sharp$ in the key signature.

F major adds B $\flat$ and changes the right-hand route. Use finger 4 on B $\flat$ and the thumb on C. The upper F ends with RH 4 rather than 5.



F major, one octave in both directions, showing right-hand 4 on B $\flat$ and the top F.

Compare before repeating

Name the key signature, find the black key, then play one hand slowly. In F major, check A–B $\flat$ –C = 3–4–1 in the right hand. The left hand keeps the familiar 5–4–3–2–1–3–2–1 ascent.

Alternate C, G, and F rather than repeating only the easiest key. Later, try long–short and short–long pairs, then return to equal notes to check that the variation has improved control.

Repertoire connection: the scale passages in Mozart’s K.545 first movement make the same demand: continuous motion through crossings. The scale-technique repertoire chapter includes an excerpt.

Fingerings: conventional scale fingerings, consistent with the existing Cadenza reference. They are not invented by an automatic fingering algorithm.

5. D and B $\flat$ major: two different routes

D and B $\flat$ each have two key-signature accidentals, but use different finger routes. D retains the familiar C-major sequence; B $\flat$ begins on a black key and needs a different RH continuation finger.

B $\flat$ major, two octaves in both directions. RH B-flat3–B-flat5; LH B-flat2–B-flat4.

D major, two octaves in both directions. RH D4–D6; LH D3–D5.

Register: the hands begin one octave apart, as in the introductory C-major example. Follow the printed registers and ledger lines; the fingering does not change with register.

Practice check: give yourself a moment before starting to name where each thumb will next land. A little preparation can make the first attempt much less of a search. Then play the full run without a pause at the internal tonic. In D, RH uses 1 at the internal tonic and 5 at the top. In B $\flat$, the printed RH starts with 2, uses 4 on later B $\flat$ s, and returns to 2 only at the bottom. LH uses 3 on B $\flat$. Descend using the written fingers rather than restarting a one-octave pattern at the summit.

6. A and E major: retain fingers, change the map

A major adds G $\sharp$ to D major's two sharps. E major adds D $\sharp$ as well. The thumb still lands on white keys in these examples; the fingers that lead into it must find their new black-key positions.

A major, two octaves in both directions. RH A3–A5; LH A2–A4.

E major, two octaves in both directions. RH E4–E6; LH E3–E5.

An 8va line in the LH keeps the high passage readable in bass clef: sound those written notes one octave higher until the line ends.

Try G–D–A–E over four sessions, then select one of the four without playing the preceding keys first. Before each run, name the key signature and play its altered notes alone. This separates recall of the keyboard map from the motion of the scale.

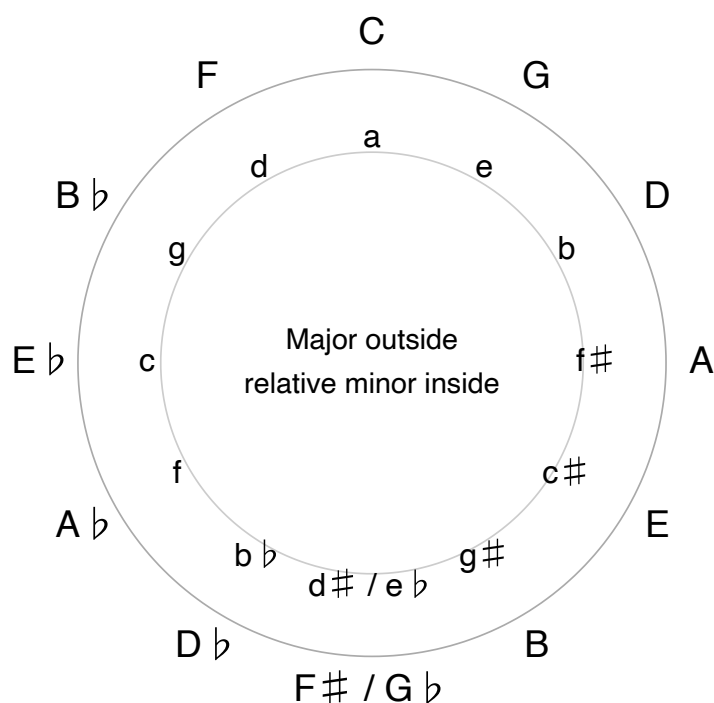
Listen for: black-key notes have the same timing and volume as white-key notes. If one becomes an accent, practice the surrounding three-note group and return to the complete phrase. These keys share fingers; that does not mean every major key does. F major already illustrates a different RH route, and other exceptions will be treated individually.

7. Rotate keys around the circle of fifths

Try **C–G–D–A–E–B–F[♯]/G[♭]–D[♭]–A[♭]–E[♭]–B[♭]–F**, then return to C. Adjacent keys differ by one key-signature accidental, using an enharmonic change halfway around. This gives your practice a systematic route through every key.

Pair each major key with its relative minor: **C/A minor**, **G/E minor**, **D/B minor**, and so on. Relative major and natural minor share a key signature but have different tonics; harmonic and melodic minor alter some of those notes. Compare the sound and fingering rather than assuming they stay the same.

One or two pairs can be enough for a session: leave time to hear their different characters. Once they feel familiar, mix the order so each key can be recalled independently.



Circle of fifths: major keys on the outer ring and relative minors on the inner ring.

Finding the relative minor

The relative minor's tonic is the sixth degree of the major scale: count C–D–E–F–G–A to find A minor. A *parallel* minor has the same tonic as its major, such as C major and C minor; it is a different relationship.

For an early session, compare C major with A natural minor. On another day, try G major with E natural minor. Listen to how beginning and ending on the minor tonic changes the sense of arrival even though the key signature is shared. Use the minor chapter's A-minor example as a starting point; the shared key signature alone does not determine the fingers.

Minor scales

Chapter overview

Minor scales offer several colors to explore. Changing just one or two notes can alter how a line approaches its tonic, so listening belongs beside learning the keys. Pay particular attention to the sixth and seventh degrees, and read the return independently when the ascending and descending forms differ.

Preparation: Know a one-octave scale and read the key signature and finger numbers.

Three sounds to recognize

Natural minor uses the key signature without raising degrees 6 or 7. Its whole-step approach from the seventh degree to the tonic gives a different sense of arrival from major.

Harmonic minor raises degree 7 to create a leading tone and support a major dominant chord. The augmented second between degrees 6 and 7 is its distinctive melodic gap.

Melodic minor, in the conventional classical scale exercise, raises both 6 and 7 ascending to smooth that gap, then uses natural minor descending. Actual minor-key melodies choose these notes according to harmony and direction; they do not obey a blanket rule that every ascent must be raised and every descent lowered.

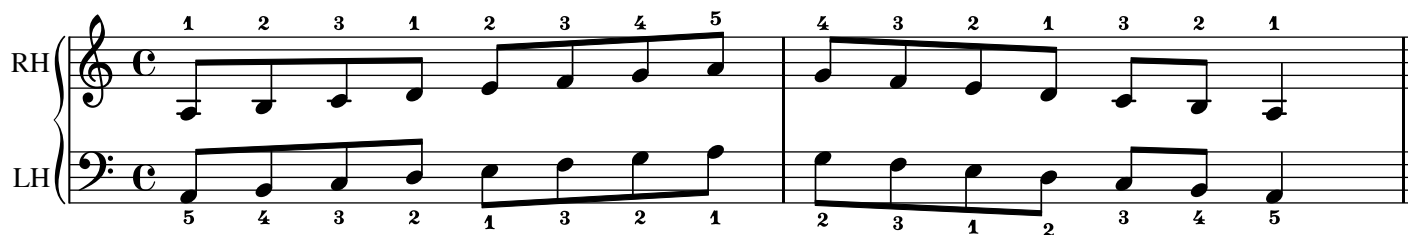
Musical connection

Planned application: selected scale passages, including the Mozart and Beethoven candidates in the repertoire section; exact excerpts still need source review.

In this review edition: selected material follows. The development list describes the full intended chapter; unengraved exercises and unverified repertoire candidates remain planned.

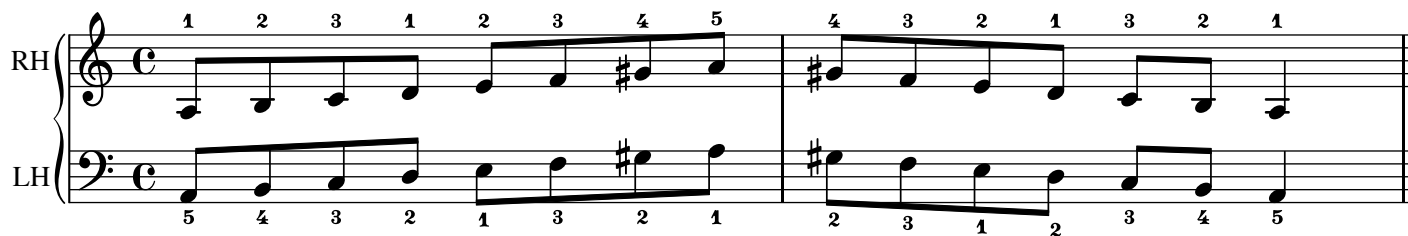
1. Natural and harmonic minor

Purpose: hear and play the altered scale degrees without disrupting the pulse. A minor shares C major's key signature, but A is its tonic. Start RH on A below middle C, LH an octave lower. These one-octave examples use the same finger sequence for all three forms.



A natural minor, ascending and descending: all white keys.

Play A–B–C–D–E–F–G–A and return. Give the final A time to settle, then compare that arrival with C major's arrival on C. The keys are familiar, but the place that feels like home has changed.



A harmonic minor, ascending and descending, with G# in both directions.

Harmonic minor raises degree 7: **G becomes G#**. The larger gap F–G# is an augmented second. Give it the same time as every other eighth note; do not rush across it or stretch its duration.

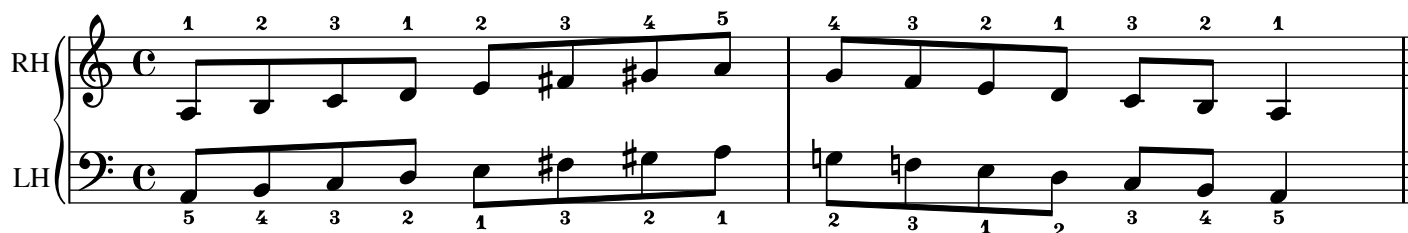
Practice and listen

1. Play F–G#–A and A–G#–F separately, using the printed fingers.
2. Play the complete harmonic form without pedal, then the natural form.
3. Sing the last three ascending notes of each. Hear G# lead into A.

Checkpoint: you can name which note changes, retain it on the harmonic descent, and keep a steady beat. Work hands separately if reading the accidental distracts from the crossing.

2. Melodic minor: read the return independently

In the conventional classical scale exercise, melodic minor raises degrees 6 and 7 ascending, then restores them descending. In A minor, ascend with **F# and G#**; descend with **G-natural and F-natural**.



A melodic minor: raised sixth and seventh ascending, natural minor descending.

This is a practice convention, not a rule that every minor-key melody must follow. Composers choose altered notes to fit the harmony and direction of a phrase.

Three passes through the pattern

You do not need to solve notes, fingers, and phrasing in one attempt. Give each pass one main question, then bring the answers together.

- **Notes first:** say E–F#–G#–A, then A–G–F–E. Locate the two black keys before playing.
- **Fingers next:** rehearse each hand separately. The written fingering remains the same as the preceding natural and harmonic forms, even though the keyboard shape changes.
- **Whole phrase:** play up and down with one turn at A. Keep the natural signs on the descent in view; do not repeat the ascending pitch pattern backwards.

Listen for: both directions remain even, with a clear change in color on the return. If you accidentally play G# descending, stop and rehearse just the descending four-note group before trying the whole scale again.

Choose a form deliberately

Return to the three forms over successive sessions, listening for the difference each time. Before playing, name the form and its altered notes. Pair A minor with C major in the circle-of-fifths routine. Other minor keys need their own fingering checks; do not transfer A minor's route to every key.

Next: the arpeggio chapter separates chord tones from the intervening scale notes. A minor's tonic triad is A–C–E in all three forms above.

Formula-Pattern Scales

1. Learn the route before increasing the range

A formula pattern can look like a lot to remember until you separate its journey into a few clear destinations. The task is to change direction without losing the pulse or your place. Similar motion means both hands travel in the same direction; contrary motion means they travel in opposite directions. Visit Chapter 13 first if contrary motion is unfamiliar.

A common two-octave formula route inserts an outward-and-inward excursion at the midpoint of both the ascending and descending scale. The route below starts with RH C4 and LH C3. Middle C is C4. Each arrow travels one octave through the notes of C major.

Leg	Motion	RH destination	LH destination
1	Together upward	C5	C4
2	Apart	C6	C3
3	Together inward	C5	C4
4	Together upward	C6	C5
5	Together downward	C5	C4
6	Apart	C6	C3
7	Together inward	C5	C4
8	Together downward	C4	C3

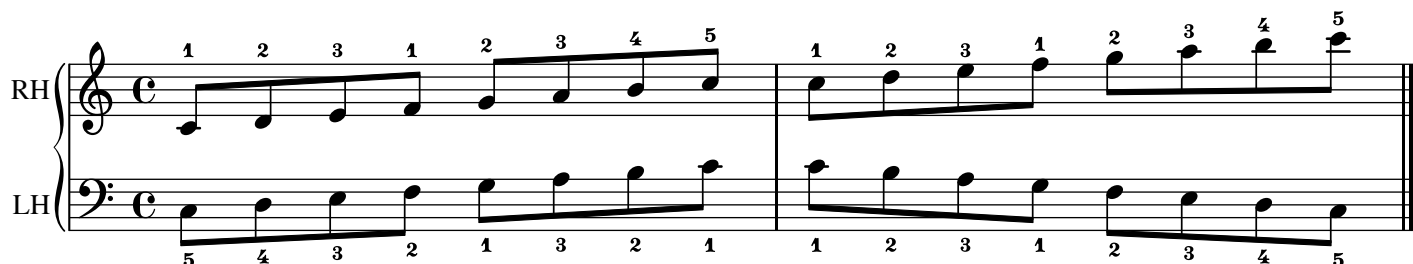
Here “inward” means the hands return to their earlier spacing, not that they collide on one key. Their separation changes during the contrary-motion legs; the one-octave spacing applies to the similar-motion sections.

Give yourself a quiet tour of the destinations first: play only these landing notes, slowly and without pedal. Say “up, apart, in, up; down, apart, in, down.” Then fill in one leg at a time. The Royal Conservatory piano syllabus provides a two-octave formula-pattern reference; use the precise notation required by your teacher or syllabus when preparing an examination.

Checkpoint: you can name both hands’ next destinations before playing. Knowing only the RH route is not yet knowing the pattern.

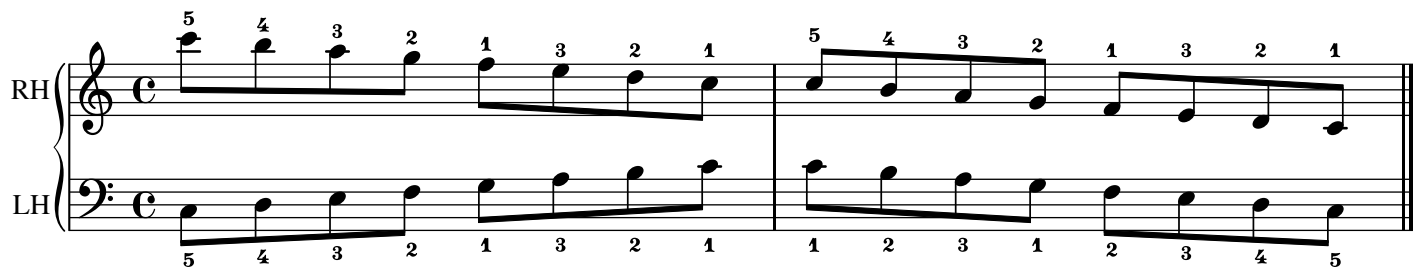
2. Rehearse the two changes of direction

These are **isolated transition studies**, not a continuous engraving of the entire formula. Each bar is a separate one-octave leg. Pause at the barline, release, and reposition for the printed starting finger. The repeated tonic and fresh fingering are deliberate; do not carry these pauses into a fluent formula scale.



Departure: similar motion upward, then outward contrary motion. Each bar is practiced separately before joining.

In the departure, RH continues upward while LH reverses. Learn the LH C–B–A–G change on its own, then include the RH C–D–E–F. At first, stop on each pair and check its position. RH changes from 5 to 1 on the repeated C5 between the printed bars.



Return: inward contrary motion, then similar motion downward. Pause and reset between the two bars.

In the return, RH continues downward while LH changes from upward to downward. LH reaches C4 with 1 and starts downward with 1. RH resets from 1 to 5 on the repeated C5. Neither study requires a clef change; ledger lines preserve the actual register.

Join only when the route is secure

For a continuous version, the shared turning tonic normally sounds once and its finger must suit the following leg. That means revising the isolated endpoint fingers, not simply deleting the repeated note from these drills. Plan that transition with your teacher before adding speed.

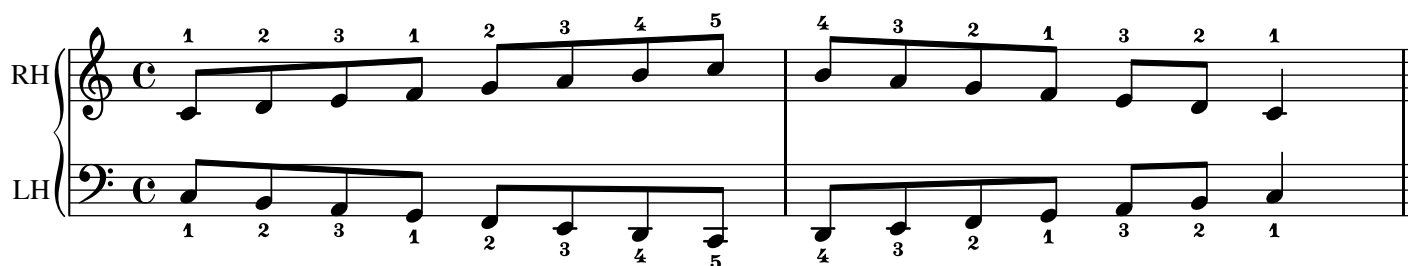
Transfer the route to G major only after checking every F♯ in both directions. For minor keys, choose and label the form first; melodic minor introduces a further question about which notes belong to each hand's direction. Complete continuous major/minor formula engravings and their transition fingerings remain a later reference expansion.

Checkpoint: each direction change feels dependable. A short, secure transition is real progress; build the longer pattern from those joins.

Contrary-Motion Scales

1. Move apart and return deliberately

Let the hands travel away from one another while your ear keeps them together. Aim for paired attacks and equal note lengths throughout the journey. Begin with RH on C₄ and LH on C₃, one octave apart. Both hands start with the thumb. RH ascends while LH descends; at the outer Cs, both reverse and return.



C-major contrary motion: RH C₄–C₅ and LH C₃–C₂, then return. Both hands use the same finger numbers together.

Play the outer C only once. The final C is a quarter note, giving the phrase a clear landing. At the widest point the hands are three octaves apart; this is a consequence of moving outward, not a change to the starting register.

Use the shared fingers as a first landmark

Outward, both hands use **1–2–3–1–2–3–4–5**. Inward, reverse those fingers. The thumbs arrive together after the first three notes, but they are on different pitches: RH F and LH G. Say the fingers first, then name each hand's notes separately so the apparent symmetry does not conceal the actual keyboard route.

1. Play RH alone, then LH alone, maintaining the same pulse.
2. Play only the first four pairs together. Stop and check both thumbs.
3. Add the outer tonic, then practice the inward half separately.
4. Join the halves with one clear turnaround and a quiet final landing.

Listen for: paired attacks, no extra accent at the thumb crossing, and neither hand rushing to reach its destination. Begin without pedal so uneven releases remain audible.

Checkpoint: you can stop at any pair and identify both pitches. If only the thumbs feel coordinated, shorten the exercise and listen to the intervening fingers.

2. Let each hand keep its own map

C major gives you the reassuring landmark of matching finger numbers. Take that confidence into the next key, while remembering that contrary motion does not mean identical physical movements in every key. A black key may arrive in one hand before it arrives in the other. Learn the pitch and finger route for each hand rather than copying a visual mirror image.

A focused transfer to G major

Start RH G₄ and LH G₃. Use the same finger-number sequence as the outward C-major example, but follow G major's notes. RH meets F $\sharp$ just before its upper G; LH meets F $\sharp$ immediately after its starting G. The hands therefore play their black keys at different moments even though their finger numbers match.

Name the first four pairs before playing: **G/G, A/F $\sharp$, B/E, C/D**. Then name the remaining four: **D/C, E/B, F $\sharp$ /A, G/G**. Return through those pairs in reverse, playing the outer G once.

Balance and range

Once the route is dependable, invite each hand to lead for a turn: play one pass with RH slightly more prominent and another with LH more prominent. Keep timing unchanged. This prepares listening independence without adding another exercise pattern.

Expand to two octaves only when each hand's continuation fingering is planned. An endpoint 5 in a one-octave exercise may need to become a continuation thumb in the longer route. Use the scale chapter's fingering principles rather than repeating the short sequence literally.

For minor work, begin with a clearly named natural or harmonic minor form. Save melodic minor contrary motion until you can explain each hand's ascending and descending notes; the directions are opposite at the same instant.

Musical connection: find a phrase in your music where the outer voices diverge. Practice its actual note pairs and rhythm. A contrary-motion scale develops coordination, but does not prescribe fingering for every diverging passage.

Checkpoint: you can explain where the two hands encounter their altered notes, and can change their balance without changing the pulse.

Chromatic Scales

1. Organize every adjacent key

A chromatic line takes you through every neighboring key, giving it a different feel from the major and minor scales. A dependable fingering makes that close-packed journey easier to hear and control. Its finger groups follow the keyboard's shape rather than a major scale's seven-note pattern.

The following study uses a common **1–3 framework**: finger 3 on black keys, thumb on most white keys, and finger 2 to negotiate the adjacent white-key pairs E–F and B–C. This is a useful starting fingering, not the only workable chromatic fingering.

The musical score shows a one-octave chromatic scale out and back for both Right Hand (RH) and Left Hand (LH). The RH part starts on C4 and goes up to C5, then back down to C4. The LH part starts on C3 and goes up to C4, then back down to C3. The score includes fingerings for each note. The RH part has two measures of ascending and two measures of descending. The LH part has two measures of ascending and two measures of descending. The final measure of the LH part has a whole note C3.

One-octave chromatic scale out and back: RH C4–C5, LH C3–C4. The upper C is played once and the last C is a whole note.

Read the printed fingers for each hand separately. RH crosses E–F with **1–2** and B–C with **1–2**. LH ascending crosses E–F with **2–1** and B–C with **2–1**. On the descent these pairs reverse. RH ends its ascent on C with 2; do not replace it with a scale-style 5 automatically.

Sharps are retained on the return to make the keyboard route easy to compare. A repertoire passage may spell those same keys with flats or other enharmonic names. The spelling is part of its harmonic meaning, not a different piano key.

First pass: one hand alone, naming each white-key pair before playing it. **Second pass:** both hands one octave apart, matching attacks. Count through the final whole note rather than treating it as an unmeasured stop.

Checkpoint: the white-key pairs are as even as the alternating black/white notes. If the passage speeds up or catches there, return to the small group on the next page.

2. Repair the joins instead of repeating the whole run

The two white-key bridges

If the run catches in the same place, you have found a useful place to begin. Spend a few attempts on the join itself, then see whether the whole line feels easier.

Take D $\sharp$ –E–F–F $\sharp$ slowly. RH uses **3–1–2–3**; LH uses **3–2–1–3**. Then take A $\sharp$ –B–C–C $\sharp$ with the same hand-specific fingers. Play each group upward and downward, with a short rest between attempts.

Move the hand along with the notes. The thumb should not have to reach back from a hand left behind over the preceding keys. Keep the sound light enough that you can hear an unintended accent; increasing force is not a solution to an awkward bridge.

Build distance gradually

Use the printed octave as the reference. To extend it, continue RH C–C $\sharp$ with 2–3 and LH C–C $\sharp$ with 1–3. Check the next E–F bridge before increasing speed. The same keyboard relationships recur in each octave, so another complete score for every range is unnecessary.

For a first contrary-motion experiment, take only C outward to the next three keys: RH C–C $\sharp$ –D–D $\sharp$ uses 1–3–1–3; LH C–B–B $\flat$ –A uses 1–2–3–1. Notice that the fingers already differ. Learn the rest of each hand's route separately before combining a full octave.

Choose fingering for the passage

Let the surrounding music help you choose. An alternative fingering can be useful when a chromatic fragment enters from a chord, changes direction, or must connect to the next phrase. Mark that destination before choosing the final finger. The study's fingering is a reference, not an instruction to overwrite a sound editorial fingering in your score.

Practice loop: bridge, short scale, bridge again, then one equal-note scale. Listen for the improvement to carry into the full run. Increase the metronome once the joins remain even in both directions and the result feels repeatable.

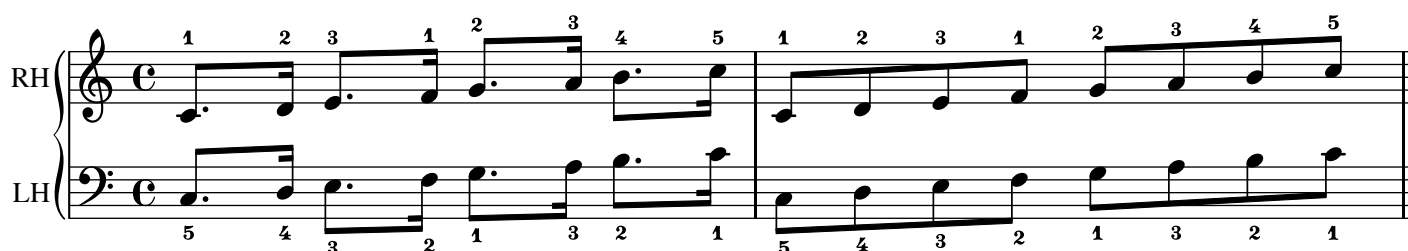
Checkpoint: you can start at either white-key bridge without first playing from C, and can explain how its RH and LH fingers differ.

Scales in Rhythmic Variations

1. Change the rhythm, then restore it

Why change the rhythm? A long note gives time to prepare the next position; the following short note tests whether that preparation works. Reversing the pattern exposes joins that were previously protected by the extra time. This can reveal a late thumb or a rushed finger more clearly than repeated equal-note runs. The test is whether an equal-note pass afterward becomes steadier.

Purpose: examine transitions by giving alternating notes different amounts of time. Keep the scale's pitches and fingers stable while changing its rhythm. Every variation should lead back to an equal-note pass: the original scale, not the dotted version, is the test of improvement.



Long-short C-major ascent followed by the same ascent in equal eighth notes. Reset to the starting C between bars.

The first bar uses a dotted eighth and a sixteenth in each pair: **three subdivisions plus one**. Count “1-e-and-a” and play on “1” and “a.” In the second bar play equal eighths. Both bars fill four quarter-note beats, though their internal rhythm differs.



Short-long C-major ascent followed by equal eighth notes. The short note falls on the beat.

Here the first attack falls on the beat and the second on “e”; hold the second for the remaining three subdivisions. Do not turn short-long into an upbeat pattern. Use a slow enough pulse that the single sixteenth is intentional rather than snatched.

The bars are separate passes. Release after the high C, return quietly to the starting register, and begin the next pass with a fresh count. The reset is not a rapid two-hand leap exercise.

Checkpoint: after either dotted rhythm, the equal eighths remain equal. If the old rhythm persists involuntarily, stop and count a neutral bar before starting again.

2. Change grouping without changing note lengths

Rhythm and grouping are different tools. In dotted practice, note lengths change. In accent-group practice, the notes remain equal while the listening emphasis moves. Neither tool should make a thumb crossing heavier by default.

Groups of three, four, or five

Use the existing four-octave scale reference. Play equal notes and give only a **gentle** emphasis to every third attack. Count continuously through the octave boundaries; do not restart the count whenever C returns. Then try every fourth, and later every fifth attack.

Groups of three do not automatically mean triplets: if you keep playing eighth notes in 4/4, an emphasis every three notes crosses the beat and barline. Keep a quiet metronome pulse and hear the shifting relationship. Work in a short range first, and stop the grouping exercise before an uncertain turnaround.

Find the actual difficulty

If RH E–F is uneven, isolate it with the preceding D and following G. Practice once with E long and F short, then once with E short and F long. Return to four equal notes immediately. Do the same around the LH G–A crossing rather than assuming the RH repair addresses both hands.

Avoid making the short note a forceful jab. The long note provides time to prepare the next position; it is not permission to hold tension until the last instant. Use rests between attempts.

A compact practice sequence

1. One comfortable equal-note scale to identify the uneven place.
2. Two slow repetitions of one small group in each dotted rhythm.
3. The same group with equal notes and no added emphasis.
4. One equal-note scale to check whether the local change transfers.

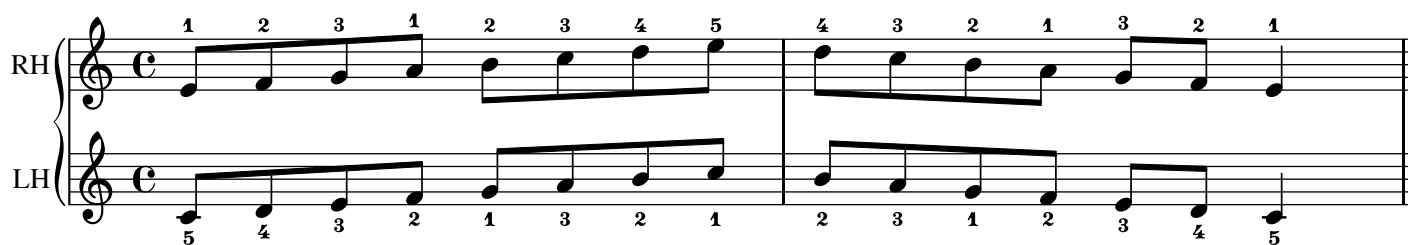
If the whole scale is already even, move on to tone, balance, or repertoire rather than adding variations for their own sake. Stop before the exercise becomes a test of endurance.

Checkpoint: you can distinguish a changed rhythm from a shifted accent, and can return to the original pulse and articulation on request.

Scales in Thirds, Sixths, and Tenths

1. Two single-note lines a third apart

Purpose: coordinate different starting positions and listen to their changing harmony. Here “thirds,” “sixths,” and “tenths” describe the interval **between the hands**. Each hand plays one note at a time. Double notes within one hand are a separate topic in Part IV.



C-major collection in diatonic thirds: RH E4–E5 above LH C4–C5, then return. Both staves use treble clef.

Both lines use C major’s notes. The upper line begins on E, but this is not an E-major scale: F and C remain natural. The intervals alternate between major and minor thirds as the pair moves through the key.

RH uses **1–2–3–1–2–3–4–5** for this short E-to-E route; LH uses **5–4–3–2–1–3–2–1** from C to C. These are editorial fingers for the printed study. Reverse them on the return, playing the top pair only once.

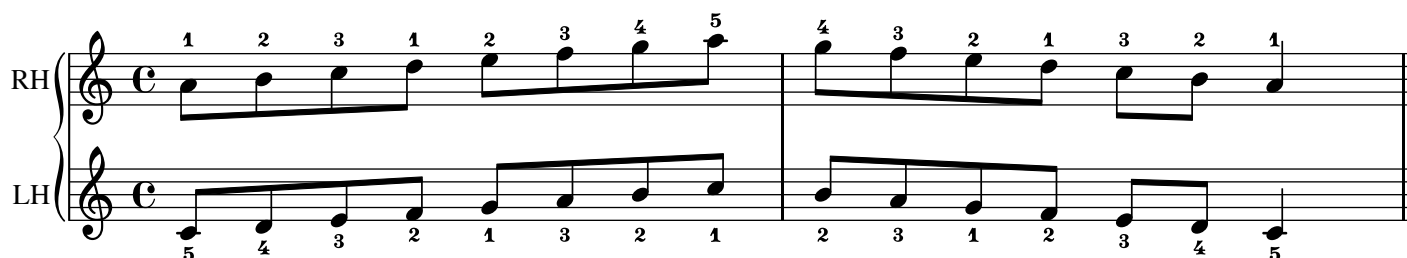
Listen vertically as well as horizontally

First play the starting pair C/E and the next pair D/F, with a rest between them. Then play four pairs in a row. Keep each attack together and avoid lifting one hand early to prepare its crossing. At the close spacing, position the hands so they do not obstruct each other; begin slowly and adjust your approach rather than pressing the hands together.

Make RH slightly more prominent for one pass, then LH for another. A clear upper melody should not require a louder overall sound. Keep the quieter line audible enough to judge its timing.

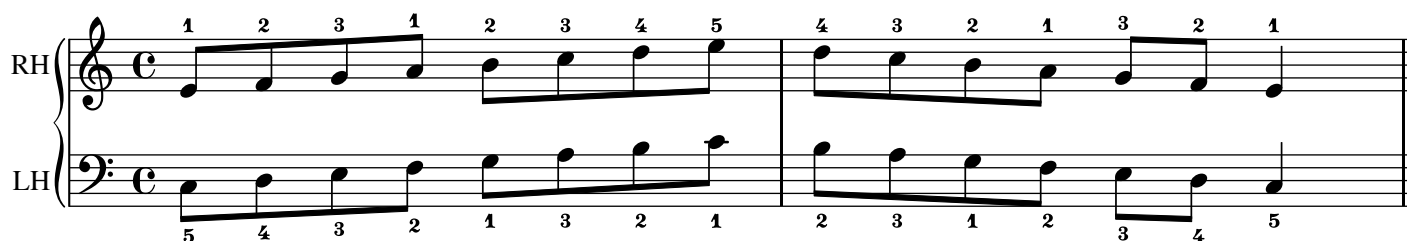
Checkpoint: you can name both notes of a pair and hear which hand leads the sound. The hands retain different finger routes even when their rhythm matches.

2. Compare sixths and tenths



Diatonic sixths in C major: RH A4–A5 above LH C4–C5, then return.

In sixths, the starting pair is C/A. Keep the same C-major pitch collection, so the upper line uses F-natural and G-natural. Play the short route separately in each hand before combining it. The fingers suit this isolated octave; longer ranges need continuation fingers at internal boundaries.



Diatonic tenths: RH E4–E5 above LH C3–C4, then return.

A tenth is a third expanded by an octave. Compare this example with the previous page: the RH line is unchanged, while LH is one octave lower. **No hand must stretch a tenth.** The interval belongs to the space between two separately moving hands.

Compare the sound, not the speed

Play thirds, sixths, then tenths at a shared comfortable pulse, with a pause to establish each starting position. Name the bottom and top notes before beginning. Listen to how register changes the blend; keep LH lighter if its lower range obscures the upper line.

These intentional interval spacings are exceptions to the ordinary one-octave separation used for matching scales elsewhere in the book. Do not “correct” them to an octave: their different spacing is the exercise itself.

Musical connection: when a melody is doubled at a third or sixth in your repertoire, isolate those two lines and retain their actual key, articulation, and rhythm. These studies prepare coordination; they are not substitute fingerings for the passage.

Checkpoint: you can distinguish thirds, sixths, and tenths by their starting notes, and can maintain a chosen balance through both hands’ crossings.

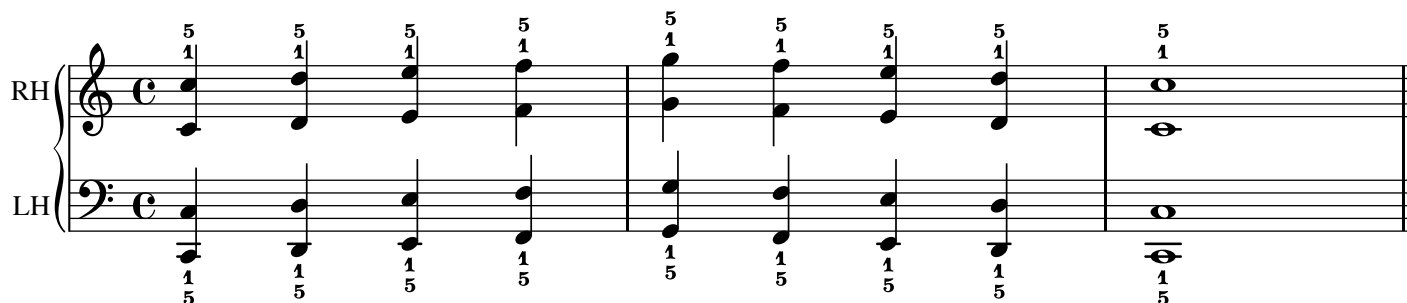
Scales in Octaves

1. Move a shape without holding a stretch

Touch and fingering: this opening study is for detached octaves. Its repeated 1–5 pairs are not a general prescription for legato octave scales. Legato passages often use different upper fingers, including 4 on suitable black keys, and require a route chosen for the actual key and hand. This C-major preparation teaches coordinated release and travel first.

Purpose: carry an octave through a short scale fragment with coordinated attacks and an easy release. This chapter means two notes an octave apart **within each hand**. It is different from ordinary single-note scales played with the hands one octave apart.

Begin with one hand. Only use the octave if both keys are comfortably available together; otherwise play the outer melody as single notes and leave octave work for a suitable adaptation. Do not force a span or keep the hand spread between attempts.



C-major octave fragment, C–D–E–F–G and back. RH occupies C4–G5; LH occupies C2–G3. Learn the hands separately.

The suggested fingers are **1–5** in RH and **5–1** in LH, read from the lower note upward. These all-white-key fragments use one consistent fingering so attention can stay on placement and release. They do not prescribe a fingering for every octave passage.

Play the quarter notes gently detached, moving the hand toward the next pair as a unit. The last C lasts four beats. Begin with just C–D–C, then expand to the printed five-note route. A small passage is enough to hear whether the two notes attack together.

The hands' lower notes start two octaves apart here so their octave shapes do not share a key. This intentional register choice applies to this double-note study; matching single-note scales elsewhere retain their usual one-octave separation.

Checkpoint: the hand can release between attacks, both notes speak together, and the return is as controlled as the ascent. Stop if you cannot keep the span comfortable.

2. Add distance before speed

Listen to the line you want to hear

Play only the upper notes of the RH fragment and shape their rise and return. Add the lower notes quietly, preserving that line. In LH, try first hearing the lower line clearly, then a balanced octave. There is no need to make both notes equally prominent in every musical setting.

If one note consistently arrives late, reduce the fragment to two neighboring octave shapes. Place the next shape silently, then sound it. Distinguish an inaccurate landing from an uneven attack; repeating the full scale will not tell you which needs attention.

Extend a familiar route

After the fragment is dependable, extend C–G to C–C one octave above, then return. Keep the same slow pulse and the same release. Learn each hand alone before combining them. For this first extension, use the printed 1–5 relationship rather than introducing a new finger choice and a new distance at once.

Black-key octaves change the position of the hand on the keyboard. Fingers 1–4 may be useful in some passages for some hands, but they are not a mandatory next level. Choose a comfortable fingering with a teacher, especially when trying to connect octaves; do not seek finger legato by stretching between two fixed positions.

Put the exercise into a phrase

Choose a short octave passage in your music. Identify the direction, landing notes, and desired articulation before adding speed. Let the arm carry the hand to each region rather than asking the fingers to reach from a stationary position. Pedal may connect the sound where the style allows; it does not remove the need for an accurate landing.

Use brief attempts with rests. A clear two- or three-note gesture is a better starting point than a long run that becomes tight or percussive. The later *Octaves* chapter develops repeated octaves, leaps, and broader textures.

Checkpoint: expanding the range does not require a stronger attack, a wider held stretch, or an accelerating pulse.

Repertoire Applications of Scale Technique

1. Mozart: a scale inside a phrase

Purpose: transfer a reliable scale route into music with its own starting note, rhythm, harmony, and destination. Begin with **Mozart, Sonata in C major, K.545, first movement, measures 5–6**. Count from the opening full measure of the Allegro.



Mozart K.545, first movement, measures 5–6: pitch-and-rhythm study transcription. Expressive markings and fingerings are omitted; the original rests and LH staccato dots are retained.

The first RH run travels A₄–A₅–A₄; the next travels G₄–G₅–G₄. These are white-note routes within C major, not A major and G major. Each bar begins with an **eighth note**, followed by fourteen sixteenths. Do not shorten the first note to make the passage resemble a uniform technical exercise.

The LH does not double the scale. It plays on beats 1 and 4, with two quarter rests between. In measure 5, the first F is F₄; the later F/C dyad is F₃/C₄. The fixed bass clef in this study keeps the pitches intact while avoiding the source's short clef change.

Find the structural moments

Play the LH alone and count all four beats. Then play RH alone, identifying the highest note and the descent to the next bar. Combine only the RH notes that coincide with the LH attacks before restoring the intervening sixteenths. Sparse accompaniment still needs exact timing.

Source: adapted from Alejandro Sierra's Mutopia 998 transcription, under CC BY-SA 3.0. Pitches and durations were checked against that transcription; its underlying edition is described only as IMSLP. This is not a claim of autograph or Urtext verification. Use your full edition for phrasing, dynamics, and fingering.

2. Restore the music after isolating the mechanism

A four-pass practice method

1. **Map:** name the starting note, turning note, and arrival. Read the next measure too; the arrival is part of a phrase, not merely the end of an exercise.
2. **Route:** play RH alone slowly, keeping the opening eighth note twice as long as each following sixteenth. Choose the crossing fingers from your edition and test them in both directions.
3. **Coordination:** add the LH on its written beats. Count the rests rather than shortening them to follow the moving hand.
4. **Phrase:** return to the full score and restore its slurs, dynamics, articulation, and continuation. The reduced example is a practice view, not a replacement performance text.

In measure 5, the top A falls on beat 3. Listen through that turnaround rather than automatically accenting it because it is the highest note. In measure 6, the corresponding G also falls on beat 3. Compare your edition's shaping of the two bars; their related contours need not sound like two disconnected exercises.

Use rhythm practice locally

If a crossing is uneven, take the note before it, the crossing itself, and the note after it. Try a slow long–short version and a slow short–long version, then restore the original note values immediately. Do not apply a dotted pattern to the whole excerpt without accounting for its opening eighth note.

Before increasing tempo, test starting directly at the descending half. If the run works only when launched from the beginning, that half may be relying on momentum rather than a known route.

Transfer the method, not a fingering formula

For your next passage, write down its actual key, altered notes, range, starting finger, and following chord or melody note. A familiar scale can require a different final finger to reach that destination. Keep the composer's written rhythm and articulation in view throughout.

Further Beethoven and Chopin examples will be added after their exact passages and editions have been reviewed. This chapter currently provides one sourced case study in depth rather than presenting unverified excerpts as finished material.

Checkpoint: the full phrase improves after the isolated work, including the accompaniment and arrival. Speed in the reduced pattern alone is not the final test.



Triads

1. Hear what changes a chord’s quality

Purpose: recognize a triad by its root, third, and fifth before learning many keyboard positions. A triad stacks two thirds. Changing one chord tone changes its quality even when the root remains C.

The image shows four measures of music, each containing a C-root triad. The first measure is C major (C-E-G), the second is C minor (C-E $\flat$ -G), the third is C diminished (C-E $\flat$ -G $\flat$), and the fourth is C augmented (C-E-G $\sharp$). Each triad is shown in both right hand (RH) and left hand (LH) staves. Fingerings are indicated: RH (1, 3, 5) and LH (5, 3, 1).

Four C-root triads: major, minor, diminished, augmented. Each lasts two beats; fingers are editorial suggestions.

Quality	Notes	Semitones above the root
Major	C–E–G	0, 4, 7
Minor	C–E $\flat$ –G	0, 3, 7
Diminished	C–E $\flat$ –G $\flat$	0, 3, 6
Augmented	C–E–G $\sharp$	0, 4, 8

Play one hand at a time. Name the notes, prepare the shape, and listen to the change before moving on. The notation uses E $\flat$ and G $\flat$ for stacked thirds in the diminished chord, rather than the enharmonic D $\sharp$ and F $\sharp$.

The printed 1–3–5 RH and 5–3–1 LH fingers are starting suggestions for these isolated placements. Move the hand toward the black keys as needed instead of twisting a finger toward them. Release between shapes; this is not a legato stretching drill.

Try it: play C major, lower only E, and compare C minor. Restore C major, raise only G, and compare C augmented. Return to C minor and lower G to make C diminished. Isolating one change helps the ear connect the label with its sound.

Checkpoint: you can build and name each quality without relying on a memorized drawing. The next chapter, **Chord Colors on One Root**, carries this comparison into suspended, added-note, seventh, and selected jazz chords.

2. Use triads in a short progression

The progression **I–IV–V–I** in C major uses C, F, G, and C major. Its RH chooses nearby shapes while LH supplies the roots. The G harmony uses B–D–G in RH; because LH plays G beneath it, the complete sonority is root-position V.

The musical notation shows a four-measure progression in C major. The Right Hand (RH) plays triads in the treble clef, and the Left Hand (LH) plays single notes in the bass clef. The progression is I–IV–V–I. The RH triads are: C major (C4, E4, G4), F major (F4, A4, C5), G major (B4, D5, G5), and C major (C5, E5, G5). The LH notes are: C4, F4, G4, and C5. Fingerings are indicated by numbers 1, 2, 3, and 5 above or below the notes.

C-major progression: nearby RH triads over LH roots. Each harmony lasts four beats.

Name each chord before playing. Observe the RH upper line G–A–G–G. Keep it audible without letting the bass dominate. Practice the RH alone, then add the bass on the same beat.

First rehearse I–IV: C remains while E moves to F and G moves to A. Then IV–V: C moves to B, F to D, and A to G. Finally V–I returns B to C and D to E while G remains. Common tones help explain the route; they do not require a forced legato grip.

At first, sound each chord for two beats and use the next two to prepare the following shape. Then sustain the full written values. Add pedal only after the attacks and changes are clear without it.

Transfer chord knowledge

Build G major, G minor, G diminished, and G augmented away from the score. Spell the notes as root, third, and fifth before finding them. G augmented uses G–B–D#. Repeat with another root only when the four qualities remain distinct to both eye and ear.

Do not repeat a full inversion sequence here. The next chapter carries the same chord into different positions; *Block Chord Technique* concentrates on attack and release, while *Cadences* later develops harmonic function and phrase endings.

Checkpoint: chord quality remains recognizable when the voicing changes, and every progression change arrives in time. If a bass note arrives late, isolate that change rather than repeating the whole progression.

Chord Colors on One Root

1. Four familiar foundations

Keep one root and change the color around it. These are all **C chords**, not chords confined to the key of C major. Play each for two beats, then use the two-beat rest to release, name the next chord, and hear it inwardly. Begin with one hand; the first four pages show the same quality in each hand, one octave apart. Fingers are suggested placements, not a legato prescription.

The sequence is a listening exercise, not a functional progression or an exhaustive list of every possible chord. A simple question gives each pass a purpose: which note changed, and what did it do to the sound?

The musical notation displays four C-root chords in two systems. The first system contains C (Major) and Cm (Minor). The second system contains Cdim (Diminished) and Caug (Augmented). Each chord is shown in both the Right Hand (RH) and Left Hand (LH) staves. Fingerings are indicated: for C, RH (5, 3, 1) and LH (1, 3, 5); for Cm, RH (5, 3, 1) and LH (1, 3, 5); for Cdim, RH (5, 3, 1) and LH (1, 3, 5); for Caug, RH (5, 3, 1) and LH (1, 3, 5). The notation includes half-note sounds alternating with half rests.

Four C-root chord qualities; half-note sounds alternate with half rests.

Symbol	Chord quality
C	Major
Cm	Minor
Cdim	Diminished
Caug	Augmented

Try it: alternate just C and Cm, then Cdim and Caug. Name the changed pitches before sounding the chords. Keep the same quiet dynamic so you can listen to quality rather than volume.

2. Suspended and added-note colors

Suspended chords replace the third with another degree: D in Csus2 and F in Csus4. Added-note chords retain the third. Here the added ninth D is placed inside the octave for a compact voicing; its chord-symbol name does not require a wide stretch. Compare Cadd9 with Cmadd9 by listening to E and E ♭ beside the D.

The musical score displays four C-root chords in 4/4 time, with RH and LH staves. Each chord is shown in two measures, with half-note sounds alternating with half rests. Fingerings are indicated by numbers 1-5.

- Csus2:** RH (C4, E4, G4), LH (C3, D3, F3). Fingerings: RH (5, 3, 1), LH (1, 3, 5).
- Csus4:** RH (C4, F4, A4), LH (C3, D3, E3). Fingerings: RH (5, 4, 1), LH (1, 2, 5).
- Cadd9:** RH (C4, E4, G4, B4), LH (C3, D3, F3). Fingerings: RH (5, 3, 2, 1), LH (1, 3, 5).
- Cmadd9:** RH (C4, E4, G4, B♭4), LH (C3, D3, F3). Fingerings: RH (5, 3, 2, 1), LH (1, 3, 5).

Four C-root chord qualities; half-note sounds alternate with half rests.

Symbol	Chord quality
Csus2	Suspended second
Csus4	Suspended fourth
Cadd9	Added ninth
Cmadd9	Minor added ninth

Watch out: sus4 and add9 are not interchangeable labels. The suspended version has no third; the added-note version keeps one. After comparing them, return to a plain C-major triad and hear what has disappeared.

3. Sixths and two kinds of seventh

A sixth chord adds A to the major or minor triad; it does not imply a seventh. In Cm6, the sixth is still A ♮. Then compare the major seventh B with the dominant seventh B ♭ above the unchanged C-major triad. Let the upper note speak clearly without making it louder than the rest by accident.

The musical score displays four C-root chords in two systems. The first system contains C6 and Cm6, and the second system contains Cmaj7 and C7. Each chord is played in both the Right Hand (RH) and Left Hand (LH) staves. The notes are: C6 (C4, E4, G4, A4), Cm6 (C4, E♭4, G4, A4), Cmaj7 (C4, E4, G4, B4), and C7 (C4, E4, G4, B♭4). Fingerings are indicated by numbers 1-5. The score is in common time (C) and uses half-note sounds alternating with half rests.

Four C-root chord qualities; half-note sounds alternate with half rests.

Symbol	Chord quality
C6	Major sixth
Cm6	Minor sixth
Cmaj7	Major seventh
C7	Dominant seventh

Try it: play C–C6–Cmaj7–C7 slowly, then reverse the order. Preserve each chord’s notes rather than guessing from the top note alone. You can practice only two colors today and add the others when their names feel familiar.

4. Minor and diminished sevenths

Keep track of the third, fifth, and seventh separately. Cm7 has E $\flat$, G, and B $\flat$; Cm(maj7) raises B $\flat$ to B $\natural$. Cm7($\flat$ 5), also written C $\emptyset$ 7, lowers G to G $\flat$. Cdim7, also written C $^{\circ}$ 7, lowers the seventh to B $\flat\flat$. B $\flat\flat$ sounds like A on the piano, but its spelling identifies a diminished seventh above C.

The image displays four musical systems, each representing a different C-root chord quality. Each system consists of a Right Hand (RH) and Left Hand (LH) staff. The chords are: Cm7, Cm(maj7), Cm7($\flat$ 5), and Cdim7. Fingerings are indicated by numbers 1-5. Half-note sounds are shown as black rectangles on the staff lines, alternating with half rests.

Four C-root chord qualities; half-note sounds alternate with half rests.

Symbol	Chord quality
Cm7	Minor seventh
Cm(maj7)	Minor major seventh
Cm7($\flat$ 5)	Half-diminished
Cdim7	Diminished seventh

Listening check: can you distinguish the two diminished qualities when someone else plays them? Sing or play the changing seventh alone, then restore the full chord. Similar shapes deserve careful listening.

5. Ninths with room for both hands

The larger colors now belong to **both hands together**. Neither hand alone plays the complete named chord. LH supplies the root and seventh, except in C6/9 where it supplies root and fifth. RH supplies the third and upper colors. Begin by placing each hand separately, then listen to the complete sonority. These are practical voicings, not every chord tone stacked in numerical order.

The musical notation shows four C-root chords: Cmaj9, C9, Cm9, and C6/9. Each chord is played in two measures, with half-note sounds alternating with half rests. The LH part includes fingerings (1, 2, 3, 5) and the RH part includes fingerings (1, 2, 3, 5).

Four C-root chord qualities; half-note sounds alternate with half rests.

Symbol	Chord quality
Cmaj9	Major ninth
C9	Dominant ninth
Cm9	Minor ninth
C6/9	Sixth and ninth

Watch out: the numeral 9 normally implies a seventh, while add9 does not. C6/9 contains a sixth and ninth without a seventh. Keep the written voicing as your reference; a chord symbol permits other voicings, but does not make every combination equivalent.

6. Elevenths, thirteenths, and altered dominants

Keep the C root and hear how the upper colors change. Cm11 includes the minor third, fifth, minor seventh, ninth, and eleventh across the hands. C13 here keeps the third, minor seventh, ninth, and thirteenth; the fifth and eleventh are omitted. C7(♭9) uses D ♭, while C7(#9) uses D♯ alongside E ♮. The latter is spelled as an altered ninth, even though D♯ sounds like E ♭.

Four C-root chord qualities; half-note sounds alternate with half rests.

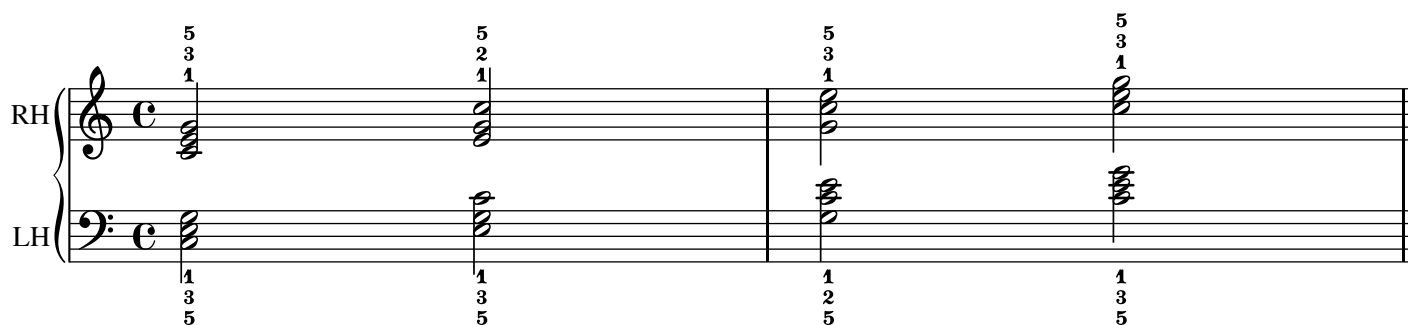
Symbol	Chord quality
Cm11	Minor eleventh
C13	Dominant thirteenth
C7(♭9)	Dominant flat ninth
C7(#9)	Dominant sharp ninth

Make the cycle your own: choose four contrasting colors, return to plain C between them, then try the same interval recipes on F or G. Write the new notes and test each hand's span before playing. A teacher can help select voicings that suit the next piece. This is a vocabulary to explore over several sessions, not a test of how many chord names you can memorize at once.

Chord Inversions

1. Keep the identity while changing the bass

Purpose: recognize the same triad in different positions. C major always contains C, E, and G. Root position has C at the bottom; first inversion has E; second inversion has G. Moving to a new inversion does not change the chord's quality.



C-major triads: root position, first inversion, second inversion, and upper root position. Suggested fingers are shown separately for each hand.

This drill was previously placed in the triads chapter. It appears here once, where its purpose is the route through inversions. Play each hand separately before combining them. Read the fingers for each hand; they are not identical in every shape.

Name, place, sound, release

Name the lowest note, prepare the shape, sound all three notes together, then release before moving. These are placement drills. There is no need to connect each chord with finger legato or hold a wide stretch between positions.

The written chords last two beats. Begin with unmeasured pauses between placements if necessary, then restore that pulse. Return through the four shapes in reverse order, including a clear landing on the lower root-position chord.

The outer interval in an inversion is a sixth rather than the fifth of root position. Locate the larger internal gap before choosing fingers. A black-key chord may call for a different practical fingering from this C-major example.

Listening task: lower every E to E $\flat$ and compare the same route in C minor. The quality changes while the inversion names stay the same. Do this slowly, one hand at a time.

Checkpoint: you can identify an inversion from its lowest chord tone without guessing from its height on the keyboard.

2. Choose a nearby position for a musical reason

Inversions can keep voices near one another when the harmony changes. The aim is not always to move through root, first, and second inversion in order; it is to reach the next harmony with an appropriate bass and a clear upper line.

The musical notation shows four measures of piano accompaniment. The right hand (RH) is in treble clef and the left hand (LH) is in bass clef. Both hands are in common time (C).
 Measure 1: RH plays a C major triad (C4, E4, G4) with fingerings 1, 3, 5. LH plays a whole note C3 with fingering 5.
 Measure 2: RH plays an F major triad in second inversion (C4, F4, A4) with fingerings 1, 3, 5. LH plays a whole note G3 with fingering 5.
 Measure 3: RH plays a G major triad (G4, B4, D5) with fingerings 1, 2, 5. LH plays a whole note C4 with fingering 5.
 Measure 4: RH plays a C major triad (C4, E4, G4) with fingerings 1, 3, 5. LH plays a whole note C3 with fingering 1.

Nearby chord positions over a changing bass: C major, F over C, G major, and C major.

The first bar holds C in the bass while RH moves from C–E–G to C–F–A. The second sonority is **F/C**, an F-major chord in second inversion: the lowest note in the complete texture is C. In bar 2, the bass changes to G and then C. Although RH uses B–D–G for G major, the bass G makes the complete chord root position.

Compare that distinction with the previous page’s isolated hands. When naming a full harmony’s inversion, find the lowest sounding chord tone in the complete texture, not merely the lowest note in RH.

Follow one voice at a time

Play only the top notes G–A–G–G, then add the remaining RH notes softly. Next play the bass C, G, C with its actual durations. Combine the parts only when the held C stays down through the first RH change.

Look for a common tone and the shortest useful movement, but do not assume every common tone must be physically held. Articulation, repetition, and the next position can require a release. The printed study gives a specific sustained bass; keep that written duration.

Read slash chords carefully

In F/C, the letter before the slash names the chord and the letter after it names the bass. When the bass belongs to the triad, this identifies an inversion. A slash chord can also specify a bass outside the triad, so the slash alone does not guarantee a simple inversion.

Checkpoint: you can distinguish the position of the RH shape from the inversion of the full sonority, and can explain why this example’s F/C differs from root-position F major.

Block Chord Technique

1. Coordinate an attack and a release

Purpose: sound a chord as one event, then release it without carrying a rigid shape into the next position. Begin with comfortable triads; adding more notes is not necessary to study timing and balance.

Quarter-note chords alternating with quarter rests. Both hands release during every written rest.

Count “play, rest, play, rest” across each bar. The rest is part of the exercise, not spare time to omit. Play one hand alone first, then both with the same gentle attack. Start without pedal so the releases remain audible.

If one note arrives late, prepare the shape silently and listen to that attack alone. If the chord rolls unintentionally, reduce speed and volume. Do not try to fix an uneven attack by striking harder.

Prepare the move during the release

The second bar changes to F major and back to C. Move the hand toward the new position during the rest rather than stretching the old shape toward the next chord. Look at the destination before sounding it, then reduce the visual checking as the route becomes familiar.

The fingers are suggestions for these shapes, not a requirement to use the same combination for every chord. A comfortable placement and clear sound matter more than preserving one fingering across unlike keyboard shapes.

Checkpoint: you can hear silence in each rest, the chord tones start together, and the hand is free to move before the next attack.

2. Balance a chord without making it louder

Bring out the upper voice

Return to the first C-major chord. Play its top note alone with the sound you want. Add the middle and lower notes more quietly, keeping the top note's sound similar. This is a listening comparison, not a demand to press the outer finger harder while the whole hand stiffens.

Practice one hand at a time before attempting a melody in RH over LH chords. Record a short attempt if the top line is difficult to hear while playing. The test is the result: can a listener follow the selected note?

Then try a balanced chord with no deliberately prominent tone. Both sounds are useful. Change the balance intentionally rather than treating every chord as a top-note exercise.

Sustain, repeat, and change

Once the release study is clear, replace each chord-and-rest pair with a half-note chord. Keep the same attack timing but sustain through the former rest. Restore the original version afterward. This distinguishes a planned release from an accidental gap or habitual clipping.

For repeated chords, release the key enough to allow its next attack while keeping the hand ready above the shape. Do not turn a two-chord experiment into an endurance test. The later repeated-chord chapter develops repeated patterns and their musical articulation in more detail.

Larger sonorities need a new decision

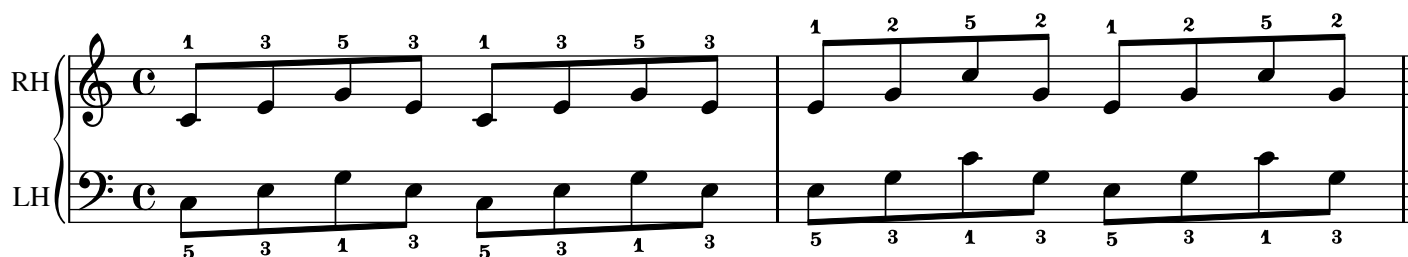
Adding a fourth note or widening the spacing can change what is comfortable. Redistributing a note between hands, omitting a doubled note in a practice reduction, or rolling a chord may help in a suitable context; each changes the texture and should be considered against the score and musical purpose. A rolled practice version is not automatically the intended performance.

Checkpoint: you can choose between a detached and sustained chord, and between a balanced and top-voiced sound, without changing the pulse or adding unwanted force.

Broken Chords

1. Hear the chord behind the pattern

Purpose: distribute chord tones across time while retaining their harmonic identity, pulse, and balance. A broken chord need not travel across several octaves; the order of a few nearby tones can create a recognizable accompaniment.



C-major broken triads: root-position C–E–G–E, then first-inversion E–G–C–G. Learn each bar separately.

Block the first three different pitches in each bar to hear the underlying chord, then restore the written sequence. Both bars are C major. The changed starting position and order do not create a new harmony.

Read the fingering separately for each hand. In RH, the first bar uses 1–3–5–3 and the second 1–2–5–2. LH uses 5–3–1–3 in both bars. These are short closed-position patterns, not a requirement to preserve those fingers when extending into an arpeggio.

Count two eighth notes per beat. Keep the repeating highest note from becoming an automatic accent. Practice one hand at a time and release the shape between attempts instead of holding a chord grip while the fingers work.

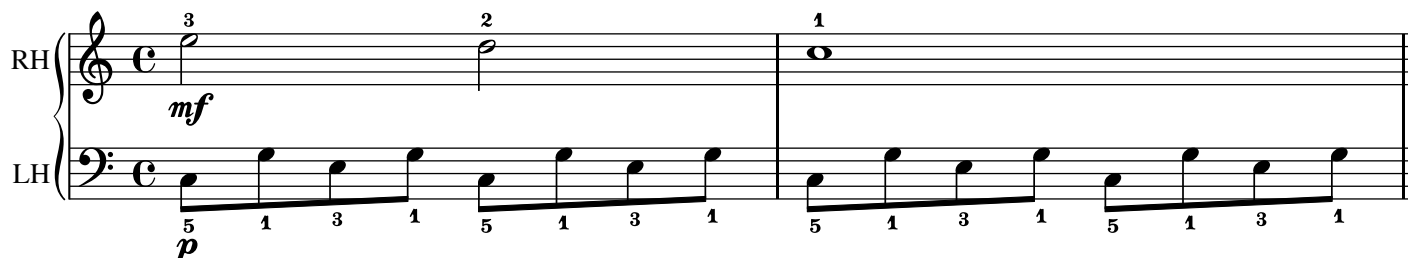
Change the contour, keep the harmony

Compare C–E–G–E with C–G–E–G. The latter uses lowest–highest–middle–highest, the familiar Alberti order. Play the two patterns at the same pulse and volume. The following page puts that order beneath a slower melody.

Checkpoint: you can name the chord before playing the pattern and can change its order without changing the beat.

2. Keep the accompaniment below the melody

Purpose: maintain an even repeating pattern while hearing a slower melody above it. Broken chords can change the order of chord tones without traveling across several octaves. The Alberti pattern below repeats **lowest–highest–middle–highest**: C–G–E–G.



Original two-bar study: a right-hand melody over a left-hand C-major Alberti pattern.

The LH uses **5–1–3–1**. Its thumb plays often, but those notes should not automatically become accents. The RH plays E–D–C as half notes and a whole note. This is an original preparation study, not a quotation from a sonata.

Put the layers together

1. Play the LH alone at two eighth notes per beat. Listen through every repeated G; keep its volume even.
2. Play the RH alone and sing its three-note line. Plan how the phrase settles on C.
3. Play one measure hands together, with the melody clearly above the accompaniment.
4. Join both measures. Sustain the final RH C for its full value while the LH continues underneath it.

Begin without pedal. If the melody becomes hard to hear, reduce the LH volume before trying to make the RH louder. Keep the beat steady at the moment the melody changes; a long melody note is not a pause in the accompaniment.

Change one variable

After the printed pattern is secure, change only the LH order to **C–E–G–E**, using **5–3–1–3**, while retaining the RH notes and rhythm. The harmony stays C major, but the accompaniment's contour changes. Restore the Alberti order and compare the sound.

Checkpoint: you can sing the RH line while playing both hands, and the LH neither stops nor swells at each RH entrance. If this fails, practice one beat at a time or return to separate hands.

Repertoire connection: revisit the Bach BWV 846 excerpt in *Melody over accompaniment*. Its broken chords distribute notes differently and include sustained tones. Identify the notes that must remain held before applying the same listening goal. A broken-chord texture is not permission to shorten every note to the next attack.

3. Change harmony without disturbing the melody



Original study: a half-note RH line over changing LH Alberti shapes, C–F–G–C.

The RH moves **E–F–D–C**, one note every two beats. Each four-note LH group supplies a new harmony: C major, F major, G major, then C major. The G shape begins on B in the bass, making that group's complete harmony G/B, or first-inversion G major.

Prepare one boundary at a time

Block each LH group to hear the progression. Then restore the eighth notes, checking the changes from G to C at the first boundary, A to B at the second, and G to C at the third. These are the last-to-first notes between groups, not the roots of all the harmonies.

Play the LH alone until the first note of each group arrives on its beat. Add only the RH attacks, sustaining each half note for its full value. The melody's change must not cause a gap or a louder thumb in the accompaniment.

Begin without pedal. Once the changes and balance are clear, try pedal appropriate to the harmony and listen for remnants of the previous chord. Detailed pedal timing belongs to the pedaling chapters; it should not disguise an uncertain change of position here.

Toward wider textures

When a broken chord spans more than a comfortable closed shape, allow the hand to travel rather than holding every note's position at once. Identify which notes the score requires to remain sustained and which can release. The arpeggio and wide-figure chapters develop that movement across larger ranges.

Checkpoint: the listener can follow the RH line, recognize the harmonic changes, and hear an uninterrupted accompaniment pulse.

Arpeggios

Chapter overview

Purpose: An arpeggio carries a chord through successive positions and registers. Secure its chord spelling and hand-specific crossings in a shorter range before extending the route to four octaves, inversions, and seventh-chord families.

Preparation: Identify root, third, and fifth, and place a simple triad without forcing a stretch.

Planned development

- Major and minor triads, then inversions
- Dominant, major, minor, half-diminished and fully diminished sevenths
- Diminished and augmented triads; later minor-major sevenths
- Explicit ascending and descending fingerings in both hands
- Progression from shorter runs to four octaves

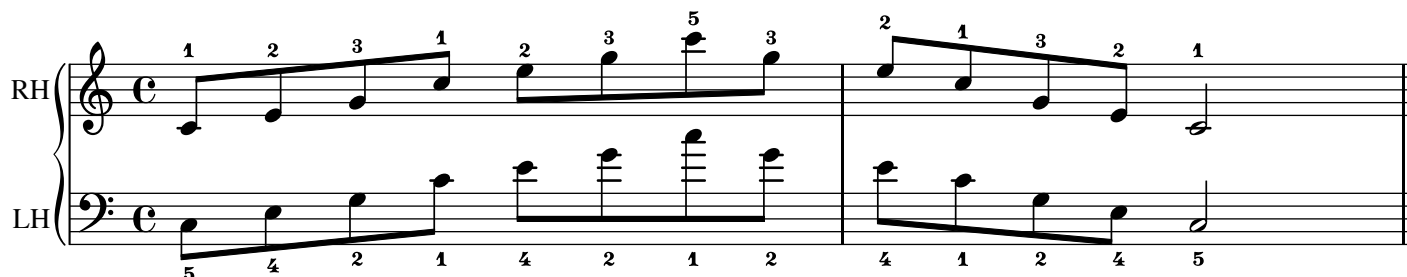
Musical connection

Planned application: a cadence or accompaniment figure in a sonata, connecting chord identity with the sound of a phrase.

In this review edition: selected material follows. The development list describes the full intended chapter; unengraved exercises and unverified repertoire candidates remain planned.

1. Carry a triad across two octaves

Purpose: connect successive chord tones without an accent or delay at a position change. An arpeggio unfolds a chord: C major uses C–E–G, skipping the other scale notes. Start with one hand; the RH begins on middle C and the LH an octave below.



C-major arpeggio, two octaves up and down, with complete continuation and return fingerings.

Ascending RH uses **1–2–3–1–2–3–5**; LH uses **5–4–2–1–4–2–1**. The top C is played once. The final half note gives the phrase time to settle. Both hands keep their opening clefs throughout; ledger lines show the top of the run.

Build the crossing, then the run

1. Play C–E–G slowly in each hand and release. Identify the next C before moving.
2. RH: rehearse E–G–C–E with 2–3–1–2. LH: rehearse G–C–E–G with 2–1–4–2.
3. Practice the return groups with the printed fingers. A familiar ascent does not guarantee a fluent descent.
4. Join the two-octave run at a steady eighth-note pulse. Add the other hand only when both routes are secure.

Let the arm accompany the hand along the keyboard. Do not hold the starting position while reaching for the next octave. Begin without pedal so gaps and uneven attacks are audible.

Checkpoint: internal Cs do not sound like endings. The crossing has the same timing and volume as its neighbors. If a gap persists, rehearse a smaller group at a slower tempo rather than forcing a larger stretch.

Variation: play softly, then at a moderate dynamic without speeding up. The following pages add major and minor keys; the later sections introduce four-note inversions and seventh chords; this fingering is a C-major reference, not a universal formula.

Connection: compare the same C–E–G material in the triads and broken-chords chapters: simultaneous harmony, then a repeating accompaniment pattern.

2. G and D major: the left hand changes

The RH uses **1–2–3–1–2–3–5** in both examples. The LH uses **5–4–2–1–4–2–1** in G major, but **5–3–2–1–3–2–1** in D major. Check the third of each chord: B in G major, F♯ in D major.

G-major root-position arpeggio, two octaves up and down. RH G3–G5; LH G2–G4.

D-major root-position arpeggio, two octaves up and down. RH D4–D6; LH D3–D5.

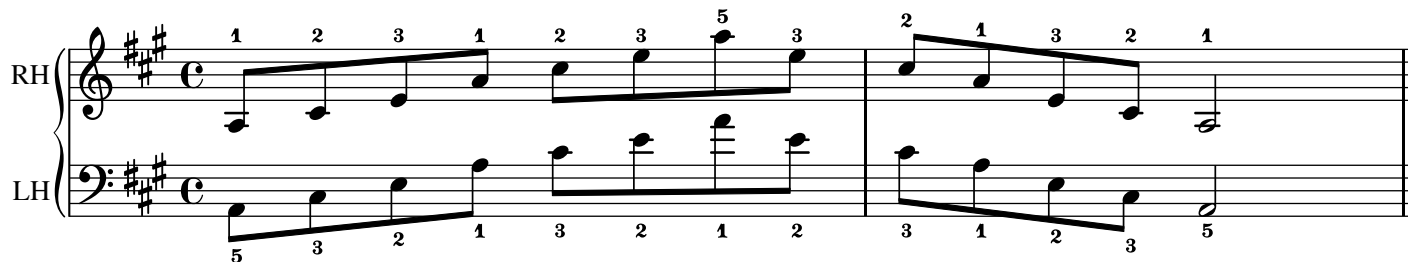
The hands start one octave apart, as in the introductory C-major example. Both retain their opening clefs; ledger lines show notes beyond the staff.

Isolate the difference: play just the first three LH notes of each chord, then the three around its internal tonic. In D major, rehearse A–D–F♯ with **2–1–3**. Return through F♯–D–A with **3–1–2**. Keep the crossing even before joining the entire run.

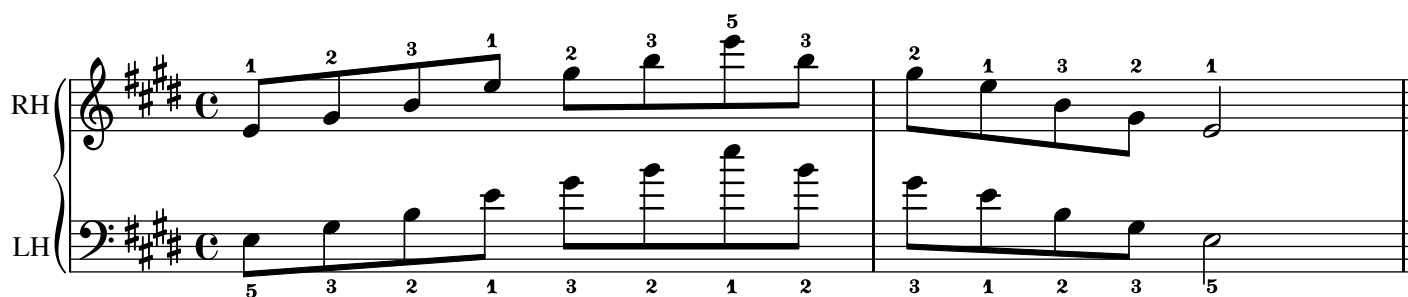
Checkpoint: you can choose LH 3 or 4 from the named chord before playing, without correcting the finger midway through the ascent.

3. A and E major: rehearse the new third

A major uses A–C♯–E; E major uses E–G♯–B. Both keep the RH route from C major but use the same **LH 3** route as D major. The key signature also contains notes that do not appear in the tonic arpeggio.



A-major root-position arpeggio, two octaves up and down. RH A3–A5; LH A2–A4.



E-major root-position arpeggio, two octaves up and down. RH E4–E6; LH E3–E5.

Name root, third, and fifth before playing. In A major, the LH crossing E–A–C♯ uses **2–1–3**. In E major, B–E–G♯ uses the same fingers. Practice each small group descending as well as ascending.

Variation: play one slow run with a quiet, even sound, then another with a gentle rise toward the summit. The change in loudness should not change the timing. Finish with even volume to check that the thumb is not supplying an unintended accent.

Next: lower the third of each chord and compare its minor form. Listen to the changed quality and check the LH finger rather than assuming that everything else remains identical.

4. A and D minor: change quality and fingering

A minor uses A–C–E, and D minor uses D–F–A. Their RH sequence remains **1–2–3–1–2–3–5**. For these minor arpeggios the LH uses **5–4–2–1–4–2–1**, changing the 3 used for the major third in the preceding major examples to 4 for the minor third.

Handwritten musical notation for A-minor root-position arpeggio, two octaves up and down. The right hand (RH) plays the sequence 1-2-3-1-2-3-5 in the treble clef. The left hand (LH) plays the sequence 5-4-2-1-4-2-1 in the bass clef. The key signature is one flat (B-flat).

A-minor root-position arpeggio, two octaves up and down. RH A3–A5; LH A2–A4.

Handwritten musical notation for D-minor root-position arpeggio, two octaves up and down. The right hand (RH) plays the sequence 1-2-3-1-2-3-5 in the treble clef. The left hand (LH) plays the sequence 5-4-2-1-4-2-1 in the bass clef. The key signature is one flat (B-flat).

D-minor root-position arpeggio, two octaves up and down. RH D4–D6; LH D3–D5.

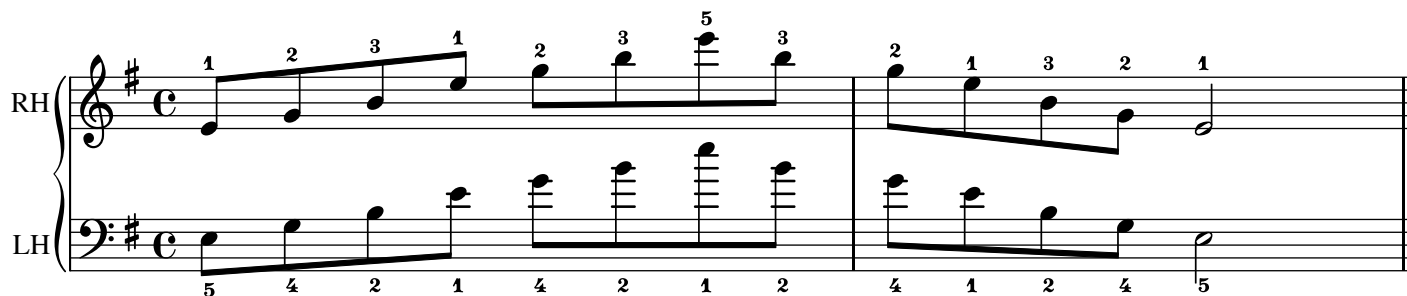
D minor has B $\flat$ in its key signature, but its tonic triad contains no B of either kind. An arpeggio selects chord tones rather than playing every scale degree.

Compare parallel keys: play the first three notes of A major, then A minor. C $\sharp$ becomes C-natural; LH 3 becomes 4. Repeat with D major and D minor: F $\sharp$ becomes F-natural. Keep the roots and fifths unchanged.

Checkpoint: you can name the altered chord tone, play it with the printed finger, and retain the correct route on the return. Use separate hands until the major/minor comparison no longer causes hesitation.

5. E minor and a practical key rotation

E minor uses E–G–B. As in the A- and D-minor examples, the LH uses 4 on the third; the corresponding E-major arpeggio uses 3 on G#. The F# in E minor's key signature does not occur in this tonic arpeggio.



E-minor root-position arpeggio, two octaves up and down. RH E4–E6; LH E3–E5.

Separate two useful comparisons

Parallel major/minor: compare A major with A minor, D major with D minor, or E major with E minor. The root stays the same; the third and the LH fingering change in these examples. Hear that change before extending to the full run.

Relative major/minor: pair C major with A minor, G major with E minor, and F major with D minor. These pairs share a key signature but have different tonic triads. F-major arpeggio notation will be added with the remaining white-key major patterns; for now, use the fully notated C/A and G/E pairs.

A short session

1. Select one fully notated pair and name its chord tones.
2. Play each hand separately, isolating the internal-tonic crossing.
3. Play both hands together at a tempo that preserves the pulse.
4. Repeat only the transition that was uneven, then play one complete return.

Listen for: the change of chord quality is clear, but the attack, rhythm, and volume remain controlled. A successful run includes its descent. Do not count an accurate ascent followed by guessed return fingers as a completed repetition.

Progression: the following studies change the chord structure. Read their four-note cycles explicitly rather than repeating a triad fingering.

6. Add a seventh: a four-note cycle

A seventh chord has four different chord tones. **C dominant seventh (C7)** contains C–E–G–B $\flat$. Its seventh is a minor seventh above C; C major seventh would use B-natural. Name the quality before playing.

C7 arpeggio: two octaves upward and back. RH C4–C6; LH C3–C5. The top C sounds once.

RH ascends **1–2–3–4–1–2–3–4–5**. LH ascends **5–4–3–2–1–4–3–2–1**. Reverse the printed fingers on the return. These are editorial suggestions for this C7 route, not a fingering formula for every seventh chord. The last C lasts four beats.

Rehearse the crossing by itself: RH G–B $\flat$ –C–E with 3–4–1–2; LH B $\flat$ –C–E–G with 2–1–4–3. Allow the hand to travel with the notes. The thumb does not need to reach under a hand held at its starting location.

Distinguish chord quality from harmonic function

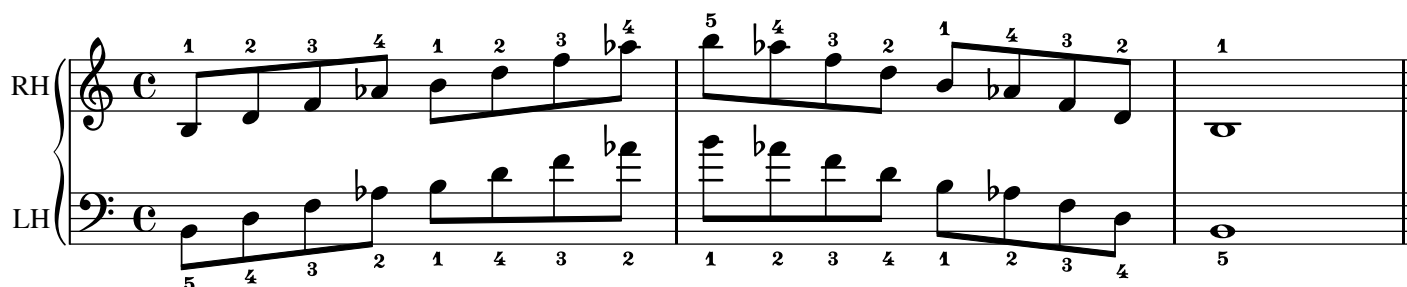
C7 commonly acts as the dominant of F. Play C7 slowly, then a comfortable F-major chord to hear that relationship. C7 is not the dominant seventh of C major; that chord is G–B–D–F. A chord symbol gives a root and quality, while a Roman numeral describes a role within a key.

For a first color comparison, change only B $\flat$ to B-natural and hear C major seventh. Next lower E to E $\flat$ while restoring B $\flat$ to hear C minor seventh. Name every changed note and reconsider the fingering before extending either comparison into a run. Complete major/minor seventh reference patterns remain later additions.

Checkpoint: you hear a four-note cycle, keep the crossing even, and can name the chord without confusing its root with the key in which it functions.

7. Diminished sevenths: spelling and symmetry

B diminished seventh contains B–D–F–A $\flat$. Its notes are separated by minor thirds. In C minor these pitches can form a leading-tone diminished seventh, with B tending toward C. The corresponding half-diminished chord would use A-natural, not A $\flat$.



B diminished-seventh arpeggio, two octaves up and down. RH B3–B5; LH B2–B4.

Use the fingers shown in both directions. The RH cycle is 1–2–3–4 before its next thumb; the LH internal cycle is 1–4–3–2 before its next thumb. Learn the A $\flat$ -to-B connection slowly rather than treating the symmetrical sound as proof that every physical movement is identical.

Let the notation explain the harmony

A $\flat$ is a diminished seventh above B when the letter names are counted: B–C–D–E–F–G–A. Calling the same piano key G $\sharp$ hides that spelling in this context. Enharmonic respelling may be appropriate in another key, but it changes how the chord is understood on the page.

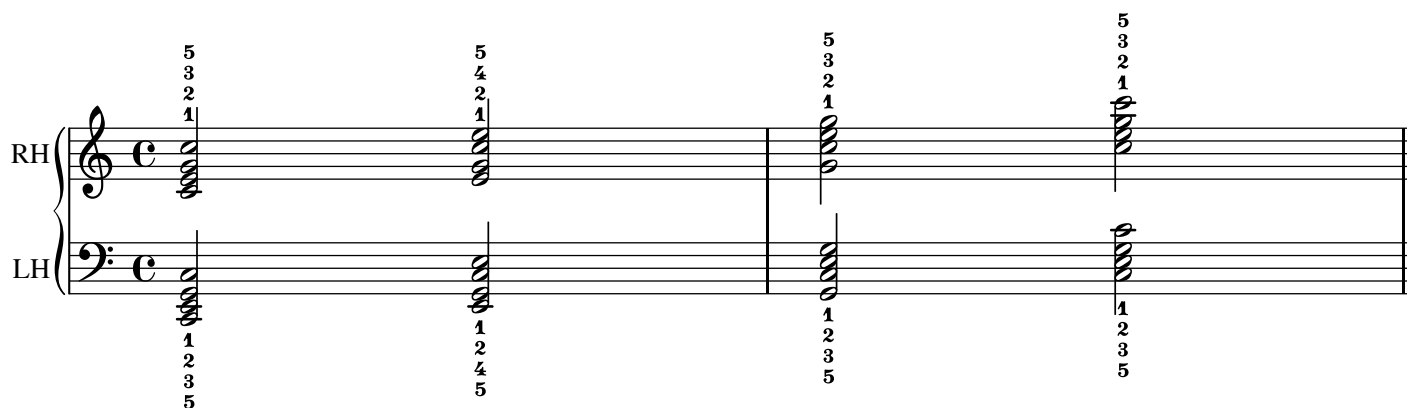
Block a comfortable selection of the chord tones, listen, then return to the single-note arpeggio. There is no requirement to hold the entire span of a moving pattern at once. Compare B–D–F–A $\flat$ with B–D–F–A-natural in a short range to distinguish fully diminished from half-diminished quality.

Finish by resolving to a comfortable C-minor chord. Listen for the semitone movements B to C and A $\flat$ to G. A useful technical repetition should preserve that sense of direction rather than sounding like an endless mechanical loop.

Checkpoint: you can spell both seventh-chord qualities and retain the correct accidental on the descent. Broader diminished and half-diminished patterns will receive separate fingering review.

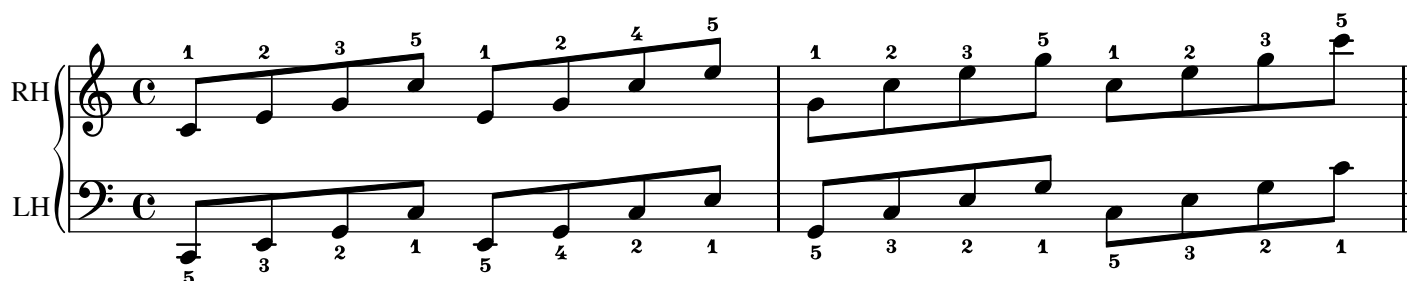
8. Four-note tonic chords through inversions

A **four-note tonic chord** can still be a triad: C–E–G–C doubles the root at the octave. It is not a seventh chord. Here the next shapes double E and G respectively as the inversions rise, before returning to a higher C-root shape.



Four-note C-major shapes: C–E–G–C, E–G–C–E, G–C–E–G, then the next C-root shape.

Begin hands separately. RH starts on C₄ and LH on C₂: their lowest notes are two octaves apart so the octave-wide shapes do not share a key. This is an intentional exception to the single-note arpeggios' one-octave spacing. These octave-wide shapes are optional if they do not fit comfortably. Use the broken version below without holding all four notes down, or work with the earlier three-note shapes. The printed four-finger choices are editorial suggestions for C major.



The same four shapes unfolded from low to high, four eighth notes per shape.

The broken study retains each shape's fingers. It is deliberately different from a continuous arpeggio with thumb crossings: each new group begins a new hand position, and some pitches return below the preceding group's last note. Blocked and broken forms should sound like the same sequence of harmonies.

Pause between shapes first. Then give each blocked chord two beats and each broken group two beats. Return through the shapes in reverse order; for broken descending practice, also reverse the note order within each shape. Do not reverse only the groups while continuing to play every group upward.

Checkpoint: you can distinguish a doubled triad from a seventh chord, and can hear each inversion inside its broken form.

9. Plan the extended route

The preceding ladder advances its lowest note by one octave, from C to the next C. A four-octave ladder repeats that inversion sequence through four such spans. The register and turnaround must be planned before joining a long pattern.

Position	RH lowest note	LH lowest note
Start	C3	C1
After one span	C4	C2
After two spans	C5	C3
After three spans	C6	C4
After four spans	C7	C5

The two hands' lowest notes remain two octaves apart to avoid shared keys. Each shape extends one octave above its lowest note. Thus the final RH blocked shape reaches C8. Use a shorter route on a keyboard that lacks this range. The table describes a four-octave movement of the **lowest note**, not a total four-octave compass for every note played.

Move through root position, first inversion, second inversion, and the next root position at each span. On the return, retrace the shapes. Play the highest shape once before reversing. For a broken version, decide whether the summit uses an ascending or descending group and write out that join; otherwise a repeated group can conceal an unplanned change of direction.

Reference scope

The RCM Piano Syllabus 2022, Level 10, distinguishes **two-octave four-note blocked/broken chord work** from **four-octave arpeggios**. This guide's longer blocked/broken route is an extension for study, not a claim to reproduce that examination requirement. See the RCM syllabus.

The complete engraved four-octave blocked and broken routes, including their exact summit and return, belong in the chord-reference appendix. The current page is a route map and the preceding page is its preparation; neither should be mistaken for a finished long-range score. We will retain readable system breaks and explicit RH/LH fingers there rather than squeezing a large sequence onto one line.

Practice choice: expand by one span only after the short ladder is secure. Increasing distance, changing chord quality, and increasing speed are three separate changes; introduce one at a time.

Cadences

1. Give harmony a destination

A **cadence** is a harmonic and melodic arrival that articulates the end of a phrase or section. Some sound conclusive; others sound like a pause that asks for continuation. The chord labels below describe the harmony, but rhythm, melody, and phrase position help determine the effect.

Purpose: hear a progression as preparation and arrival, not merely a row of chord shapes. A cadence belongs to the end of a phrase. The same chord succession in the middle of a phrase need not have the same closing effect.

5 3 1 5 3 1 5 1 2 5 2 1

RH

LH

5 2 1 5

C-major preparation and authentic arrival: I–ii6–V7–I. The V7 voicing omits its fifth, D.

The chords are C major; D minor over F; G7; and C major. **ii6** means the supertonic triad in first inversion, not a chord with an added sixth. Its F bass is the third of D minor. In V7, G is in the bass while RH supplies F, G, and B; the fifth D is omitted.

Follow the last change carefully: F resolves downward to E, B rises to C, and G remains in the RH. The bass returns G to C. These movements make the arrival more intelligible than treating the final chord as simply another grip.

Hear the closing voices

Play the bass alone, counting four beats per chord. Then play the RH upper line G–A–B–C. Add the remaining RH notes softly, and finally combine both hands. Keep the full values without making the last chord an automatic accent.

With root-position V and I and tonic C in the uppermost voice, the final V7–I has the ingredients of a **perfect authentic cadence** when it closes a phrase. Changing the final soprano or bass can change that classification. Terminology also varies between teaching traditions; learn the sound and voice motion alongside the name.

Checkpoint: you can identify the bass and upper voice, explain the F-to-E and B-to-C resolutions, and hear the final chord as a destination.

2. Compare an arrival with an open ending

The notation shows a four-measure exercise. The first two measures show a progression from F major to C major. The first measure has RH notes G4, A4, C5 (fingering 5, 3, 1) and LH note C3 (fingering 2). The second measure has RH notes C5, E4, G4 (fingering 5, 3, 1) and LH note C3 (fingering 5). The next two measures show a progression from G major to C major. The third measure has RH notes G4, B4, D5 (fingering 5, 3, 1) and LH note G2 (fingering 5). The fourth measure has RH notes C5, E4, G4 (fingering 5, 2, 1) and LH note C3 (fingering 1). The exercise is in C major, 4/4 time.

Two separate pairs in C major: IV–I, then I–V. Pause between the pairs.

The first pair is F major to C major, a **plagal** progression. Listen to F moving to E and A to G in RH while C remains. The second pair ends on G major, the dominant: at a phrase ending this creates a **half cadence**, leaving the music open rather than returning to tonic.

Play each pair separately with a breath between attempts. The written four-bar line is a comparison, not one prescribed four-chord cadence. Compare the final C of the first pair with the final G of the second; do not make the dominant sound final merely by playing it longer or louder.

Change the destination

After playing V–I from the previous page, try V–vi in C major: G major to A minor. In a phrase where tonic is expected, this can produce a deceptive arrival. Name the changed bass and chord tones before choosing comfortable voicings; not every V–vi succession is automatically a cadence.

For minor work, establish the form of the dominant explicitly. In A minor, a conventional major dominant is E–G#–B, and E7 adds D. G# leads to A; it is not supplied by the natural-minor key signature. Compare that pull with the softer effect of E minor to A minor.

Transfer the hearing

Choose one key and play the bass route first, then add a nearby upper-voice arrangement. Retain the common tones and resolving semitones that matter, without forcing every finger to remain held. Exact all-key cadence voicings will be collected in the reference appendix rather than duplicated throughout the chapter.

Checkpoint: you can distinguish authentic, plagal, and half-cadence effects by the harmony and phrase context, not only by a memorized label.

Repeated Chords and Wrist Technique

1. Renew the sound, then release

Purpose: repeat a chord on a steady pulse without accumulating effort between attacks. The wrist participates in a coordinated movement of the hand and arm; “wrist technique” does not mean pumping one joint while everything else stays rigid.

The musical notation shows two staves, RH (Right Hand) and LH (Left Hand), in common time (C). The first staff (RH) has a treble clef and the second staff (LH) has a bass clef. Both staves show four eighth-note chord attacks followed by a half rest. The first bar is in C major (C4, E4, G4 in RH; C3, E3, G3 in LH). The second bar is in F major (C4, E4, G4 in RH; F3, A3, C4 in LH). Fingerings are indicated by numbers 1-5 above or below the notes. For the first bar, RH fingering is 5, 3, 1 and LH is 1, 3, 5. For the second bar, RH fingering is 5, 3, 1 and LH is 1, 2, 5.

Four eighth-note chord attacks followed by a half rest. The second bar moves to an F-major shape.

Begin with one hand. Play the four attacks lightly and count the entire rest. Let the keys return enough to sound again. Avoid lifting high between notes or pushing downward after the sound has already begun; neither helps the next attack arrive on time.

The rests make this a short-group study, not an endurance drill. At first repeat only two attacks, stop, and notice whether the hand can release. Restore all four only when the smaller group feels controllable.

Keep the chord's voices together

Block the shape once before repeating it. If its notes start at different times, repair that single attack at a quiet dynamic. Speeding up can hide a staggered attack without correcting it.

When changing from C to F, use the rest to prepare the new position. Name the moving notes: E becomes F, G becomes A, and C remains. The fingers are starting suggestions for these isolated shapes; adjust a fingering that makes the placement awkward.

Checkpoint: the fourth chord is no louder, later, or more effortful than the first, and the rest is a real release rather than a held grip above the keys.

2. Shape a repeated accompaniment

Hear a phrase across the repetitions

Repeat the C-major group with a gentle rise through its middle and a quieter ending. Then play an even version. If the phrase shape changes the timing, shorten the group and separate those two goals again.

Next bring out the upper note of each chord while keeping the other tones softer. Play that line alone first. The listener should hear a musical voice, not four unrelated impacts. A lower accompaniment part generally needs less sound than a melody above it.

Change one demand at a time

Keep the shape and dynamic unchanged when increasing the number of repetitions. Keep the number unchanged when increasing tempo. Rest between attempts and stop if the movement becomes tight or uncomfortable. This chapter does not prescribe pushing through fatigue to build endurance.

For a repeated chord followed by a leap, practice the last chord and the landing alone. The release from the old position is part of reaching the next one. Let the hand travel with the arm rather than reaching while retaining the previous shape.

Repertoire is a separate level of difficulty

Schubert's *Erlkönig* is a well-known advanced repeated-chord texture, but it is not a suitable starting drill or a speed target for this page. Its sustained demands require preparation beyond a four-attack group. A specific excerpt and edition will be reviewed before it is engraved here.

In your own music, identify whether the repeated notes support a melody, intensify a harmony, or articulate a rhythm. Practice the actual dynamic and duration of that role. Repetition is the mechanism; the phrase determines how it should sound.

Checkpoint: you can vary the balance and phrase shape while keeping the repeated pulse stable, and can release promptly when the group ends.

3. Keep repeated chords beneath a melody

Chopin's **Prelude in E minor, Op. 28 No. 4**, opening pickup and measures 1–2, gives a more approachable study than an advanced repeated-chord showpiece. The LH repeats a changing harmony while the RH sustains a separate melodic line.



Chopin, Prelude Op. 28 No. 4: opening pickup and measures 1–2. Notes and rhythm from the Peters source; pedal and later phrase markings are omitted in this study excerpt.

Learn the LH's changes slowly: the first shape is G–B–E; the next is F#–A–E, then its E becomes D#. Keep the repeated eighth-note pulse steady. Hear the RH line alone before combining the hands, then let it remain audible above the chords without making the accompaniment disappear.

Practice without pedal first to hear the releases; this is a diagnostic exercise, not an instruction to perform the prelude without pedal. Restore pedaling according to the phrase and your edition. Do not treat each repeated chord as a new accent.

The *Raindrop* Prelude (Op. 28 No. 15) is another useful repetition study, but its characteristic repeated single note is a different texture from the block chords examined here.

Source: Mutopia 468, after Peters (1879), transcription by Magnus Lewis-Smith, public domain. This excerpt supplies no new fingering; choose a comfortable route for the chord changes.



Part IV — Double Notes and Octaves

Thirds

1. Coordinate two notes within one hand

Purpose: move two small lines together while retaining control of each voice. Unlike scales separated by a third between the hands, every attack here contains two notes in the same hand. Learn RH and LH separately before combining them.

Short diatonic thirds in C major: C/E, D/F, E/G, then return. The final pair lasts four beats.

RH uses **1–3, 2–4, 3–5, 2–4, 1–3**. LH uses **5–3, 4–2, 3–1, 4–2, 5–3**, with finger pairs read from the lower note upward. The pairs are not identical between hands.

The goal here is connected thirds using changing fingers. First identify each pair and, if necessary, make one detached placement to check simultaneous attacks; then practice connecting two adjacent pairs. Detached repetition is a diagnostic step, not the main exercise. The white notes produce both major and minor thirds: C/E and E/G have different qualities. Keep the fingers close enough to prepare the next pair without stretching the whole hand into a fixed position.

Hear the two lines

Play only the lower line C–D–E–D–C with its printed fingers. Then play only the upper line E–F–G–F–E with its fingers. Restore the pairs and listen for both notes arriving together. Work at a slow quarter-note pulse and connect the adjacent pairs without excessive overlap.

Checkpoint: you can hear and play each line separately, then combine them without one note consistently arriving late or sounding much louder unintentionally.

2. Connect selectively and choose the voice

Begin with two pairs

Practice C/E to D/F alone. Let each voice move toward its next note, using the printed change of fingers. Avoid gripping the first pair until the second has already been struck; excessive overlap blurs the two lines and makes the movement harder.

Then connect D/F to E/G and rehearse the return separately. A comfortable connection across this short fragment does not establish a fingering for a whole double-third scale. Longer routes need planned changes and crossings of their own.

Voice one line deliberately

Play the upper line with a singing sound, then add the lower line softly. Reverse the balance for a second pass. Use a small group and judge the result by ear; a louder upper voice need not mean more force from the whole hand.

If a connection is uncomfortable, use a clear, coordinated release instead. Musical legato can involve articulation and, where stylistically appropriate, pedal; it is not a demand to hold every pair until the next fingers are fully in place.

Where substitution belongs

Changing a finger silently on a held note can sometimes prepare the next interval. It should solve a specific connection in a known passage. Do not insert substitutions into this simple pattern just to make the exercise more complicated. First identify the note that must remain sustained and the next note that needs the freed finger.

Chromatic thirds and extended double-third scales will require separate patterns and fingering review. Chopin's Op. 25 No. 6 belongs to that advanced repertoire, not to the starting expectations of this page.

Checkpoint: you can choose the prominent voice, retain coordinated attacks on the return, and distinguish a useful connection from a forced stretch.

Sixths

1. Move a wider pair comfortably

Purpose: coordinate two lines within one hand while allowing the hand to travel between their wider shapes. A sixth here is one simultaneous pair, not the distance between the two hands' single-note scales.

C-major sixths, C/A–D/B–E/C and back, using changing finger pairs drawn from Hanon No. 49. Original paired-note adaptation.

RH uses **1–4, 2–5, 1–4, 2–5, 1–4**. LH uses **5–2, 4–1, 5–2, 4–1, 5–2**, with each pair read from the lower note upward. These are the changing finger relationships trained in Hanon No. 49. Learn the hands separately: the pairs do not change in the same way in both hands.

Use one hand first. If the interval is not comfortably available, play the two lines separately and leave the paired version for a suitable adaptation. The lower line is C–D–E–D–C; the upper is A–B–C–B–A. Hear both before combining them.

Prepare, sound, release, move

Start with only C/A to D/B and back. Let the arm carry the hand to the next position after releasing the first pair. Keep the attack moderate and the movement no larger than needed. Then add E/C and restore the complete written fragment. Do not force a connection across the return to the first finger pair.

The interval quality changes: C/A and D/B are major sixths; E/C is a minor sixth. The changing sound belongs to the C-major collection. It does not call for an extra accent or a sudden change of pulse.

Checkpoint: each pair starts together, the hand releases between positions, and the return stays as comfortable as the ascent.

2. Let the phrase determine the connection

Separate the voices first

Play the upper line with its intended phrase shape. Add the lower line softly, preserving that shape. Then try the lower line as the prominent voice. A sixth can sound thick when both notes are louder than necessary; clarity often comes from choosing which line the listener should follow.

Practice the printed pairs with a small release first, then explore a comfortable connection between the first two pairs. The change from 2–5 back to 1–4 in RH requires its own preparation; changing fingers alone does not guarantee legato. Pedal, where stylistically appropriate, can support the sound but should not conceal an uncertain movement.

What comes from Hanon

Hanon No. 48's *Detached Sixths* uses RH 1–5 and LH 5–1. No. 49 instead trains the spans 1–4 and 2–5 in **broken** sixths: its opening RH alternates 1–4 with 2–5, while LH alternates 5–2 with 4–1. Our preceding study applies those pairs to a short original sequence of simultaneous sixths; its notes and rhythm are not a quotation of No. 49.

Consult the Hanon scan, No. 48 and No. 49, PDF pages 9–10. The source distinction matters: the finger relationships are useful preparation, but they do not constitute a complete legato-sixth scale fingering. Use only comfortable spans, without adopting the historical exercise's stretching language as an instruction to force the hand.

A black-key sixth changes how far into the keyboard the fingers sit. Move the hand to accommodate the whole shape rather than twisting one finger toward the black key while fixing the other in place.

Expand by musical need

Choose a two- or three-pair fragment from your music. Identify the upper and lower lines, intended articulation, and any note that must remain held. Mark a workable route, then test the return or the following chord. Extend the fragment only when these transitions are dependable.

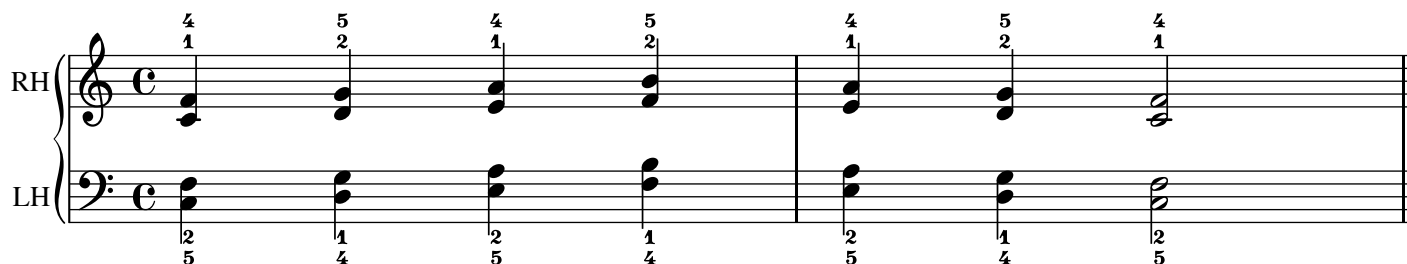
Long sixth passages and advanced studies such as Chopin's Op. 25 No. 8 need more specialized fingering and preparation. They remain later repertoire work, not an implied next tempo for this short exercise.

Checkpoint: you can explain why a chosen release or connection serves the phrase, and can preserve the intended balance without holding a rigid span between attacks.

Other Double-Note Patterns

1. Move a line of fourths

Purpose: coordinate two lines a fourth apart. Learn each hand separately, naming the lower and upper notes before combining them.



Ascending and descending diatonic fourths: C/F, D/G, E/A, F/B, then return.

The pairs rise C/F–D/G–E/A–F/B and return. The first three are perfect fourths; F/B is an augmented fourth, because both lines remain within C major. Read each hand's printed fingers independently. These suggestions fit the short study, not every fourth or fifth in repertoire.

Prepare each pair and release easily between positions. Learn the ascent and return separately before joining them.

Separate the routes

Play the lower line C–D–E–F–E–D–C, then the upper line F–G–A–B–A–G–F. Use the fingers printed for that voice. Restore the pairs and listen for both voices moving together.

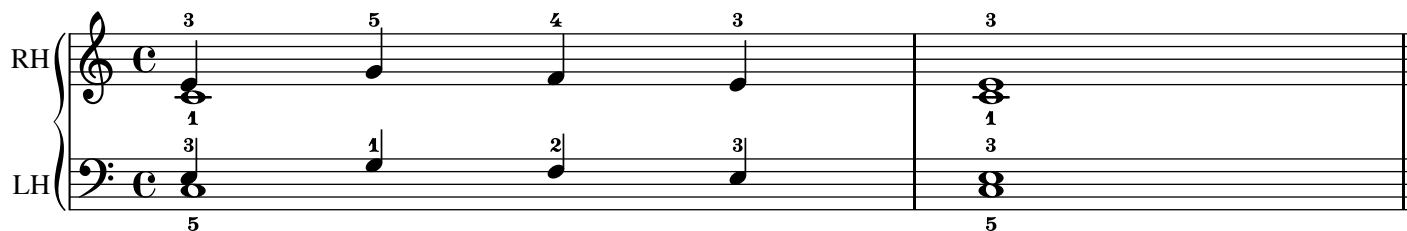
Next make the upper line slightly more prominent. Reverse the balance for a second pass. Keep the attack timing unchanged while changing which voice leads the sound.

Chopin's Polonaise in A $\flat$ major, Op. 53, offers an advanced later application of ascending fourths in its introduction. Treat it as a repertoire destination, not the expected speed or difficulty of this preparation.

Checkpoint: you can name each interval, identify which voice changes, and play the pair without an unintended roll. Shorten the pattern if one hand's route becomes a guess.

2. Hold one voice while another moves

A written sustained note creates a different task from a succession of fully reattacked pairs. In this study, each hand holds C for a whole measure while its upper voice moves. The whole notes show the sustained voice beneath the moving quarter notes.



Hold C while the upper voice moves E–G–F–E. In the second measure, reattack and sustain the C/E pair.

Begin with one hand. Sound C with the first E, retain C through the four upper notes, then release at the barline and reattack the final pair. There is no tie across the barline. The sustained voice lasts because its key stays down, not because pedal covers an early release.

Practice what remains still

Hold C quietly and move only E to G, then stop. Add F and the returning E after that small movement is dependable. The hand need not become rigid to keep one key depressed; allow the free fingers and the hand's position to adjust within a comfortable range.

Listen for the C remaining continuous without being struck again at each upper attack. Also listen for the upper line remaining even, rather than shortening every note to protect the held key.

Apply the distinction to a score

Before practicing a double-note passage, mark which pitches are tied, which are repeated, and which actually change. A repeated-looking shape may conceal an independent inner voice. Conversely, a common pitch without a tie may need a fresh attack.

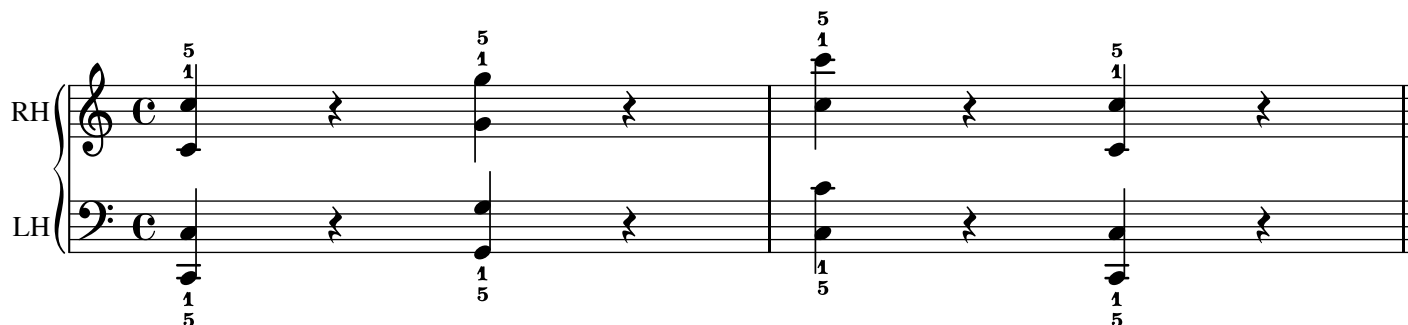
Chromatic combinations need their own fingering and spelling review. First transfer this reading method to a small passage; do not extend the printed fingers mechanically to all mixed intervals.

Checkpoint: you can maintain the written lower duration while shaping the upper line, and can distinguish a held common tone from a reattacked one.

Octaves

1. Separate repetition from travel

Purpose: place and move octave shapes without combining every difficulty at once. Chapter 17 introduced stepwise octave fragments. Here the new task is a change of position with a planned release and landing.



Octave landings: C, G, upper C, then lower C. Each attack is followed by a quarter rest.

Learn one hand at a time. RH uses 1–5 and LH 5–1 for this all-white-key study. The lowest notes start on RH C4 and LH C2, two octaves apart, so the hands' octave shapes do not share a key. Combine them only after each route is secure.

The first leap is a fifth, the next a fourth, and the return a full octave. Name the destination before moving. Use the written rest to release and travel, then arrive with both notes together. Do not hold the old span while reaching toward the new one.

Prepare the landing before adding speed

Play only the lower notes through the route, then only the upper notes. Restore the octave pairs at the same slow pulse. If the two notes do not land together, practice just that destination quietly before reconnecting the leap.

If an octave is not comfortably available, retain the single-note route. More force or a wider fixed stretch does not solve an unavailable span.

Checkpoint: the return to the starting C is as deliberate as the ascent, the rests remain audible, and the hand is free to move after each attack.

2. Shape an octave line

Hear one melody, supported by its doubling

Play the RH upper line alone and decide how it should rise and settle. Add the lower octave note more quietly. Then compare a balanced octave sound. Choose the balance for the musical phrase rather than assuming both notes always need equal prominence.

For LH, begin by listening to the bass line clearly. Add the upper octave note without making the total sound dominate the other hand. Register matters: a low octave can supply ample weight without a heavy attack.

Introduce short repetitions

On one comfortable C octave, play two quiet quarter-note attacks and rest for two beats. Let the keys return enough for the second attack. Expand to four attacks only if the release remains easy; do not combine extra repetitions with a faster tempo in the same attempt.

Now place that two-attack group before one leap from the previous page. Rehearse the last repeated octave and the landing separately. The release that prepares the leap belongs to the rhythm; it should not add an uncounted hesitation.

Choose articulation in context

A connected-sounding octave phrase may involve small releases and appropriate pedal rather than finger legato between every shape. Black-key passages may benefit from a different outer finger for some hands, but that choice must fit the actual route. Do not force 1–4 simply because it is presented as a more advanced option.

Return to the stepwise octave scale only when its particular movement is useful. Repeating every octave exercise in every session is less informative than identifying whether the current difficulty is attack, repetition, distance, or balance.

Checkpoint: the phrase remains recognizable when the doubling is added, and a position change does not produce an automatic accent or pause.

Chordal Octaves and Large Sonorities

1. Hear the melody above a broad bass

Purpose: combine a substantial bass with clear upper harmony without treating every note as equally loud. The first study places LH octaves beneath RH triads. Each chord lasts two beats.

C–F–G–C: LH bass octaves support nearby RH triads. The upper line is C–C–B–C.

Play the upper line alone, then add the remaining RH tones softly. Learn the LH octave route separately before combining it. If the octave span is not comfortable, play only its lower note as a practice reduction; the printed texture is a goal to assess, not a demand to stretch.

Build the sound in layers

1. Play the RH alone, with the upper line audible.
2. Add only the lowest LH note at each change.
3. Add the LH octave doubling quietly, if comfortable.
4. Compare the result with the reduced version and adjust the balance.

The G chord uses D–G–B in RH over a G bass. Its shape is a voicing of the harmony, not a different chord merely because D is the lowest RH note. Follow B up to C at the arrival.

Begin without pedal so the timing of every change is clear. Add pedal later only if the sound calls for it, listening especially across the change of harmony. Pedal should not conceal a bass that arrives late.

Checkpoint: the broad bass supports rather than obscures the top line, and both hands reach each harmony on the same beat.

2. Solve the distribution before stretching

A dense chord on the page describes a desired collection of sounds, but its staff layout is not always a complete instruction about which hand must take each note. First identify the bass, melody, and essential inner tones; then examine feasible hand distribution.

An explicit redistribution example

For the notes **C3–G3–C4–E4–G4**, try LH C3–G3 and RH C4–E4–G4. Another distribution puts only C3 in LH and G3–C4–E4–G4 in RH, if that octave-wide shape is comfortable. Both produce the same five pitches, but the second gives RH a larger task. Redistribution is useful only if it improves the actual passage.

Name the pitches after moving a note between hands to make sure none was lost or doubled accidentally. Check the preceding and following positions too; a comfortable isolated chord may leave a hand poorly placed for the next melody note.

Distinguish a reduction from the full texture

Omitting an octave doubling can clarify a practice route. Omitting a third or seventh may change the harmony more substantially. Label any reduction and return to the score's intended pitches when deciding on a performance solution.

Rolling a chord changes its attack and timing. It can be appropriate when marked or supported by the style and musical context, but should not be added automatically to every large sonority. Decide which note aligns with the beat and how the melodic voice arrives before rehearsing a rolled alternative.

Move between shapes

Release the old position before traveling toward the next. Begin with two chords and a counted preparation gap, then reduce that gap without increasing force. A held wide grip is not a substitute for knowing the next position.

Checkpoint: you can explain the role of each note, preserve the intended pitches when redistributing, and hear the melodic priority after combining the hands.



Part V — Rhythm and Coordination

Hand Independence

1. Keep different durations inside one pulse

Purpose: give each hand a distinct musical job while preserving a shared beat. Independence is coordinated listening, not two unrelated clocks. Start with a simple difference in note lengths.

RH quarter notes over LH half notes, then a whole note. Keep the bass durations complete.

RH plays C–D–E–F, then G–F–E–D. LH holds C for two beats and G for two beats in the first bar, then C for all four beats of the second. Learn both parts separately with the same quarter-note pulse.

Coordinate the changes that actually coincide

In bar 1, the LH changes with the first and third RH notes. In bar 2, it attacks only with the first RH note. Play those coinciding attacks alone, then restore the intervening RH notes while retaining the bass.

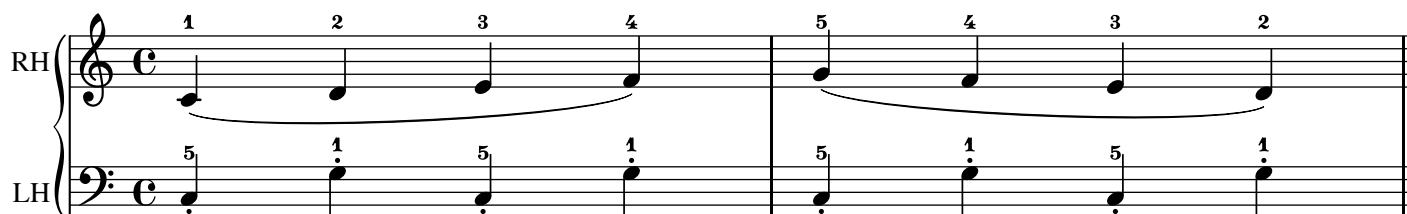
Do not renew the whole-note C every time RH moves. Equally, do not shorten RH notes because a held bass makes the beat less obvious. Count aloud without changing the value of either part.

Once the timing is secure, let RH lead the sound and keep LH softer. If the added balance task disrupts the durations, return briefly to equal comfortable dynamics and solve timing first.

Checkpoint: LH releases and changes only where written, while RH remains even across the whole bar.

2. Give each hand its own articulation

The next study keeps equal quarter-note attacks but contrasts a connected RH line with detached LH notes. Slurs group the RH phrase; dots mark the LH articulation.



RH connected groups over detached LH C–G quarter notes. Both hands keep the same pulse.

Play LH alone and listen to the space after each note. Then play RH alone, making each four-note group sound connected without blurring the barline. Combine only the first two attacks before attempting the full pattern.

A staccato dot does not specify one universal fraction of a note's duration. For this slow study, choose a clear, comfortable separation while keeping every attack on its beat. The detached hand should not pull the connected hand away from the keys.

Separate articulation from dynamic

First keep both hands at a moderate, similar volume. Then make LH softer while preserving its detached character. Quiet does not necessarily mean legato, and detached does not necessarily mean loud.

Exchange the jobs as a separate practice variation: play the RH notes detached and the LH route connected, planning a comfortable LH fingering. Do not simultaneously add a faster pulse. The earlier five-finger articulation study offers a fully notated example of exchanging roles.

Repair the point of interference

If RH lifts whenever LH releases, practice one RH held note against two detached LH attacks. If LH grows loud at a RH phrase peak, isolate that moment at a softer dynamic. Diagnose the specific influence rather than repeating the entire passage unchanged.

Checkpoint: a listener can identify the two articulations independently, and changing the balance does not change the beat or release pattern.

Two against three

1. Hear one shared span

Purpose: fit two equal notes in one hand into the same time as three equal notes in the other. Neither hand should copy the uneven spacing of the combined attacks.

Divide one quarter-note beat into six equal counting slots. The duple hand plays slots **1 and 4**; the triplet hand plays **1, 3, and 5**. Both begin together again on the next 1.

Counting slot	1	2	3	4	5	6
RH: two	tap	.	.	tap	.	.
LH: three	tap	.	tap	.	tap	.

Count the six slots slowly and evenly. Tap the RH alone, then the LH alone. Combine them only after each line is steady. The combined attacks occur on 1, 3, 4, 5; they are **not** four equally spaced attacks.



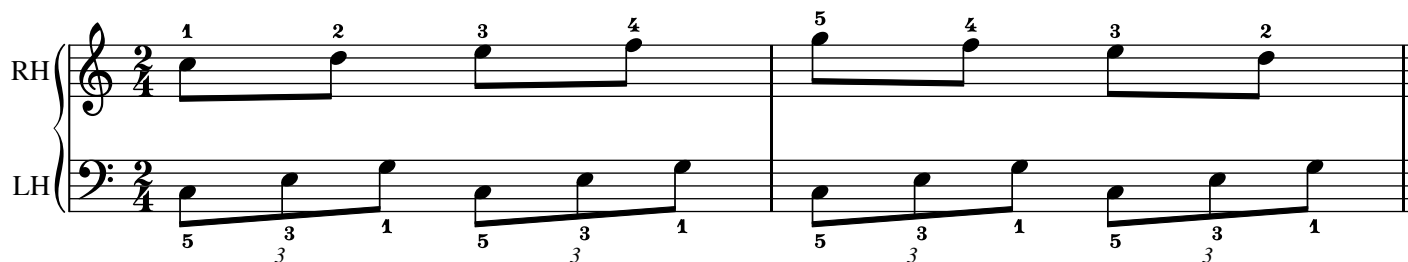
Repeated-note two-against-three: two RH eighth notes against three LH triplet eighth notes per quarter-note beat.

The example repeats the relationship twice in each 2/4 measure. Play repeated notes with any comfortable single finger at first; the task is timing, not fingering. Begin without pedal.

Listen for: two evenly spaced RH notes and three evenly spaced LH notes over each beat. Count the triplet hand aloud while playing, then count the duple hand.

2. Let the subdivisions become a background guide

Once the six-slot grid is reliable, feel a larger quarter-note beat. Keep the grid available as a repair tool, but avoid laboriously naming every slot forever.



Moving two-against-three pattern, right hand duple and left hand triplets.

Build the coordination

1. Play each hand alone for two measures.
2. Play only the first quarter-note beat together, then stop.
3. Repeat that beat four times with a pause between attempts.
4. Join both beats of a measure, then the two measures.

The right hand stays within C–G and the left outlines C–E–G. Suggested fingerings are printed; these are original practice patterns, not a quotation from a historical method.

Reverse the assignment

For a separate tapping variation, let the left hand play two and the right hand play three. Return to the six-slot grid with the hand labels exchanged. Do not try to reverse the printed notes mentally at the same time.

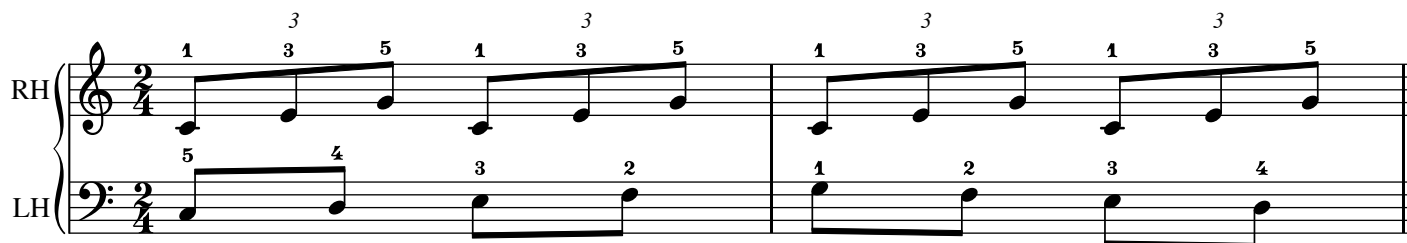
Common mistake: delaying the second triplet note so it nearly coincides with the second duple note. In the grid, they occupy slots 3 and 4, not the same slot.

Ready to continue: each hand keeps its own equal spacing for four repetitions, and both reliably meet at the start of the next beat.

Next step: reverse the hand assignment with the following written example before adding a larger range. A different ratio, such as 4:3, needs its own grid; it is not 2:3 sped up.

3. Reverse the roles without changing the ratio

The shared quarter-note beat still contains two equal attacks in one hand and three in the other. This time RH plays triplets while LH plays ordinary eighth notes.



RH triplet C–E–G groups over an LH five-finger line in ordinary eighth notes.

RH uses 1–3–5 for each group. LH uses 5–4–3–2, then 1–2–3–4. These are original short patterns chosen to keep the pitch routes simple while the rhythmic roles change.

Return to the six-slot grid with the labels exchanged: RH plays **1, 3, 5**, LH plays **1, 4**. Hear the second RH note before the second LH note, then the third RH note after it. They do not form a pair of simultaneous middle attacks.

Listen to one subdivision at a time

Tap the triplets and count a steady “one-and-a, two-and-a.” Keep that triplet spacing while adding the LH. Then listen mainly to the even LH eighths and make sure they have not become a long–short pattern.

Practice one beat and stop. Join two beats only when the second beat begins together without an extra pause. At first use a comfortable steady dynamic in both hands; add a balance difference after the two spacings are dependable.

Checkpoint: you can identify which hand plays two and which plays three by listening, not merely by counting the combined attacks.

4. Transfer the timing to a musical passage

Identify the shared span first

A 2:3 relationship can occupy a quarter-note beat, a half-note beat, or a larger written span. Find the endpoints and count the notes within that span before borrowing the six-slot grid. Three written notes are not automatically a triplet, and a triplet elsewhere in the measure does not automatically oppose two notes in the other hand.

Add range after rhythm

Choose one beat from the moving study and shift the whole pitch group to another comfortable position. Keep its note values unchanged. A position change should not delay the first attack of the next shared span.

For a scale application, plan each hand's note sequence and fingers separately before combining the rhythms. Because one hand plays more notes per beat, the hands do not reach octave boundaries at the same time simply because they began together. Stop at a chosen shared beat rather than forcing both hands to reach a tonic prematurely.

For an arpeggio application, keep the same timing while changing only one hand's pitch route. Learn its crossing separately; rhythm practice should not become a test of an unfamiliar fingering at the same time.

Restore the musical context

In a repertoire passage, retain the actual rests, ties, articulation, and dynamic balance. Count the common beat before and after the cross-rhythm so it does not become an isolated event with its own tempo. A verified repertoire excerpt remains a later addition; these original exercises teach the coordination without claiming to quote a particular work.

Checkpoint: each hand keeps equal spacing within its own division, both agree on the shared beat, and the surrounding phrase continues at the same pace.

5. Challenge: a C-major scale in 2:3

Let each hand travel at its own even pace. Start **RH on C3** and **LH on C2**, one octave apart. RH plays 3 notes in each shared group while LH plays 2. Over seven groups, RH climbs **3 octaves** and LH **2 octaves**; their final tonics arrive together, now two octaves apart.

C major ascending: LH 2 octaves against RH 3, with simultaneous final tonics.

Count the journey, then hear the lines

The seven moving bars contain 14 LH notes and 21 RH notes. The final tonic is the **next shared arrival**, printed separately in bar 8; it is not an extra note squeezed into the last group. Hold that arrival together at the fermata. The endpoints are LH C4 and RH C6.

1. Learn each scale alone with the printed continuation fingers. Pass through intermediate tonics without using an ending finger or pausing.
2. Tap one bar of the ratio, then play just that bar's notes. Add the next bar without stretching the boundary.
3. Join all seven moving bars and arrive together. The hands meet rhythmically at each barline, even when their notes have different names.
4. Listen to one hand at a time while both play. Each line should remain even, with no accent forced onto a thumb crossing or shared attack.

Watch out: the hands cover different distances. Asking both to travel the same number of octaves at these constant rates would prevent a simultaneous finish. The ratio counts notes within each group, not the number of notes including the final held tonic.

Keep the sound quiet and easy while learning. This is an optional coordination challenge, not a speed target. Once the ascent feels secure, plan a separate descending version with proper return fingers rather than turning around in a hurry.

Three Against Four

1. Fit two even streams into one span

Purpose: play three equal attacks in one hand against four in the other, without turning either line into an uneven imitation of the combined rhythm. **Preparation:** maintain 2:3 and count a slow four-beat bar steadily.

Here the RH plays four quarters while the LH plays three half-note triplets. Each complete group fills one 4/4 bar. The numbers describe attacks within a shared duration, not different tempos that drift apart.

Four RH quarters against three LH half-note triplets, on repeated C.

Twelve small divisions reveal the timing

Divide the bar into twelve equal parts. Number them 1 through 12; the next bar begins on a new 1. The RH attacks at **1, 4, 7, 10**; the LH at **1, 5, 9**. Both hands next meet at the following bar's 1.

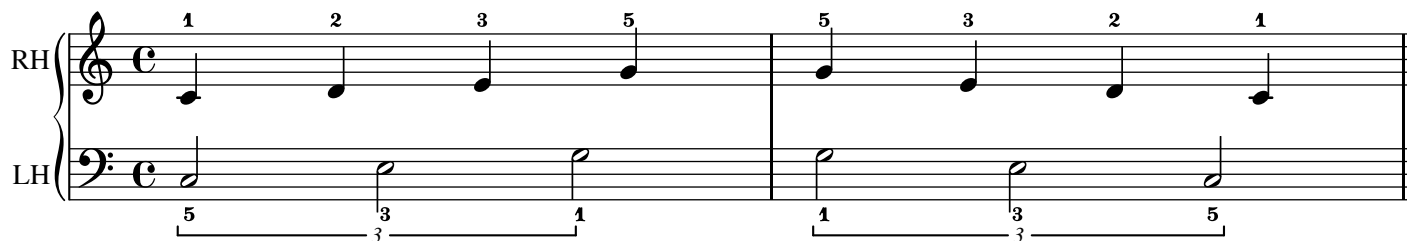
Small division	1	2	3	4	5	6	7	8	9	10	11	12
RH	x			x			x			x		
LH	x				x				x			

Tap this on a tabletop before playing. Let each hand keep its own equal spacing. The combined attacks are **not** equally spaced: their successive gaps, including the gap to the next bar, are 3, 1, 2, 2, 1, 3 small divisions.

Check: the second LH note falls just after the second RH note; the third LH note falls just before the fourth RH note. Neither coincides with an interior RH quarter.

2. Replace the grid with two lines

The pitches now move, but the timing is unchanged. The hands begin an octave apart; the suggested fingers keep each line within one position.



Two bars of a four-note RH line against a three-note LH line.

Build continuity in small steps

1. Play each hand separately while counting the shared four-beat bar. Hear the LH as three equal notes across the whole bar, not as three notes fitted to its first three beats.
2. Tap the twelve divisions very slowly and combine one bar. Sustain each written note until the next attack in that hand.
3. Add the second bar without pausing. Listen especially to the space after the final attacks and before the new downbeat.
4. Reduce the spoken count to four beats, then to one bar. Return to the fine grid only when a specific attack needs repair.

Hear one line while playing both

Attend to the LH for one repetition and the RH for the next. Each should sound even when heard by itself. If one becomes a jerky succession of reactions to the other, simplify back to repeated notes.

Variation: exchange the rhythms. Play three equal notes with the RH and four with the LH, first on repeated C, then on a comfortable three- or four-note shape. Keep the same shared duration rather than simply swapping finger numbers.

Ready to move on: three connected repetitions retain the same bar length, and either hand can be brought quietly into the foreground without disturbing the other.

3. Transfer the relationship to a passage

A score may write four sixteenths against three triplet eighths within a single quarter-note beat. That is the same 4:3 relationship on a shorter timescale. Our bar-long studies deliberately enlarge the span so that the timing can be heard and checked.

A reduction that preserves the music

Choose one shared beat or group from the piece. Mark its start and end in both hands. Retain just one easy pitch per hand, keeping every attack and its duration. Establish the ratio, then restore the original pitches one hand at a time. Finally reconnect the beat before and the beat after the fragment.

Avoid adding a pause at the boundary to make the hands agree. The arrival is part of the exercise. A metronome can mark the shared span while you listen to the spacing inside it; it cannot confirm every interior attack by itself.

Common failures and a useful repair

What you hear	What to try
The middle attacks collapse together	Return to divisions 4 and 5, then 9 and 10, in the twelve-part grid.
The LH becomes dotted or lopsided	Play it alone, then add only the RH downbeat before restoring all four notes.
Each bar begins after a hesitation	Loop the last half of one bar into the next downbeat.
Correct timing but a hard accent at every meeting	Keep the shared arrival quiet and shape one longer phrase.

Repertoire bridge

Use this preparation when approaching four-against-three textures such as those in Chopin’s *Fantaisie-Improptu*, Op. 66. The aim is to hear two coherent gestures, not to recite twelve syllables indefinitely at performance tempo. Work from the actual note groupings and shared beats in your edition; an exact annotated excerpt remains a later source-review task.

Practice dose: a few accurate, easy repetitions followed by a short musical phrase are more useful than prolonged tense looping. Stop and reset if the fingers begin to brace for every attack.

4. Challenge: a C-major scale in 3:4

Let each hand travel at its own even pace. Start **RH on C3** and **LH on C2**, one octave apart. RH plays 4 notes in each shared group while LH plays 3. Over seven groups, RH climbs **4 octaves** and LH **3 octaves**; their final tonics arrive together, now two octaves apart.

C major ascending: LH 3 octaves against RH 4, with simultaneous final tonics.

Count the journey, then hear the lines

The seven moving bars contain 21 LH notes and 28 RH notes. The final tonic is the **next shared arrival**, printed separately in bar 8; it is not an extra note squeezed into the last group. Hold that arrival together at the fermata. The endpoints are LH C5 and RH C7.

1. Learn each scale alone with the printed continuation fingers. Pass through intermediate tonics without using an ending finger or pausing.
2. Tap one bar of the ratio, then play just that bar's notes. Add the next bar without stretching the boundary.
3. Join all seven moving bars and arrive together. The hands meet rhythmically at each barline, even when their notes have different names.
4. Listen to one hand at a time while both play. Each line should remain even, with no accent forced onto a thumb crossing or shared attack.

Watch out: the hands cover different distances. Asking both to travel the same number of octaves at these constant rates would prevent a simultaneous finish. The ratio counts notes within each group, not the number of notes including the final held tonic.

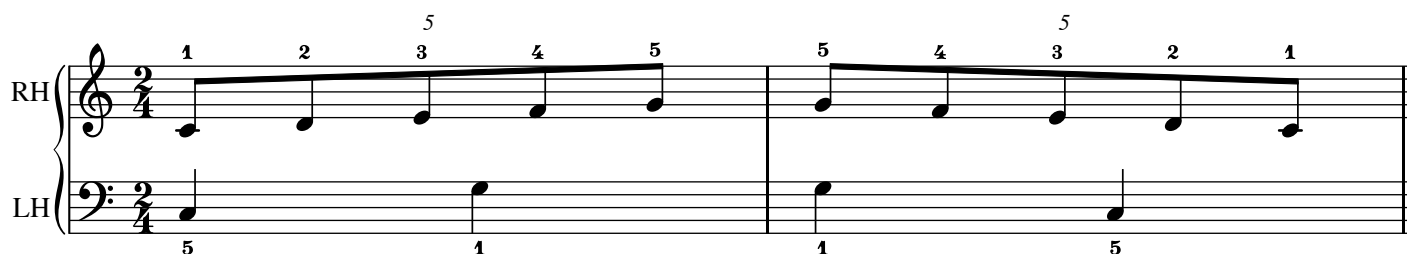
Keep the sound quiet and easy while learning. This is an optional coordination challenge, not a speed target. Once the ascent feels secure, plan a separate descending version with proper return fingers rather than turning around in a hurry.

Other Cross-Rhythms

1. Five notes against two

Purpose: learn a reusable way to approach unfamiliar ratios. **Preparation:** understand a shared span and play 2:3 and 3:4 without losing the start of the next group. These studies are optional preparation for music that needs them, not a daily endurance requirement.

The RH quintuplet contains five equal eighth notes in the time of four ordinary eighths: one complete 2/4 bar. The LH plays two quarters over the same span.



Five RH quintuplet eighths against two LH quarters in each 2/4 bar.

Locate the second LH attack

Use ten equal small divisions. RH attacks occur at **1, 3, 5, 7, 9**; LH attacks at **1 and 6**. The second LH note therefore falls halfway between the third and fourth RH notes. It does not coincide with the middle note of the quintuplet.

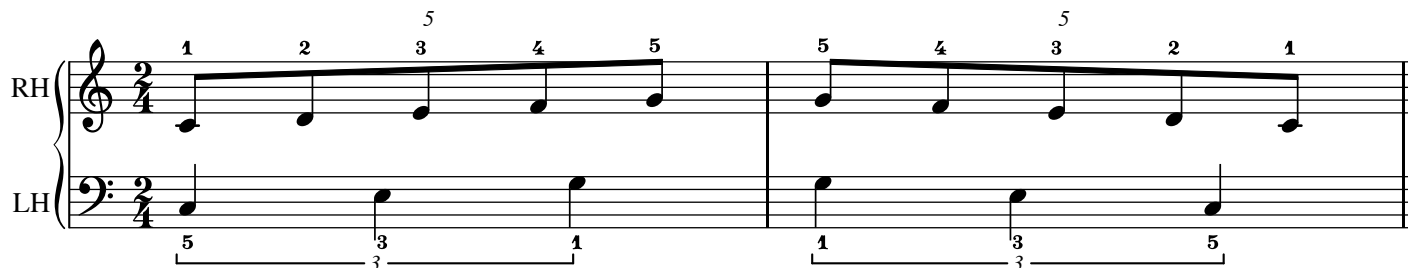
Tap each stream separately, then combine one group on repeated pitches. Restore the five-note line only after the halfway point remains clear. The descending second bar has exactly the same timing as the ascending first bar.

Listening test: mute the LH mentally and hear five equal notes; then attend to the LH and hear an ordinary two-beat pulse. If the fourth RH note arrives early to join the LH, return to divisions 5, 6, and 7.

The suggested five-finger position is only a way to remove pitch difficulty. When a repertoire figure needs a crossing or a leap, practice that movement separately before asking it to carry a new rhythm.

2. Five notes against three

Both groups still fill one 2/4 bar. The LH quarter-note triplet now divides that span into three equal parts. Its notes are neither ordinary quarters nor an extra beat added to the bar.



Five RH quintuplet eighths against three LH quarter-note triplets.

Use fifteen divisions once, then hear the groups

With fifteen equal divisions, RH attacks fall at **1, 4, 7, 10, 13**, and LH attacks at **1, 6, 11**. Only the opening attacks coincide inside this bar; the next shared attack is the following downbeat.

The second LH attack is between RH notes 2 and 3, closer to note 3. The third LH attack is between RH notes 4 and 5, closer to note 4. These are useful orientation points, but neither gap should be approximated as an equal subdivision of a RH note.

1. Speak or tap five equal notes across one span, then three across that same span.
2. Combine repeated notes at a slow tempo, using the fifteen-part grid to place uncertain attacks.
3. Play the printed pitches and connect both bars. Keep the quintuplet even on its return.
4. Alternate attention between the two streams. Reduce the small count when each can be heard clearly.

Repair: if the quintuplet starts sounding like a triplet followed by a pair, stop and play the five notes alone. All five have equal duration. Any musical grouping must preserve that equality.

Variation: exchange the rhythmic roles on repeated notes. Do not transfer the descending line until the new hand assignment is secure.

3. A method for larger ratios

A common grid is a temporary measuring tool. Use the least common multiple of the two group sizes to find exact attack locations, then return to hearing the larger gestures. The table numbers divisions from 1; the next common arrival is one division beyond the table's total.

Ratio across one shared span	Equal divisions	First stream attacks	Second stream attacks
4 against 5	20	1, 6, 11, 16	1, 5, 9, 13, 17
5 against 6	30	1, 7, 13, 19, 25	1, 6, 11, 16, 21, 26

For 4:5, neither middle pair quite coincides. For 5:6, the attacks repeatedly pass close to one another. Do not force these neighboring attacks together merely because that is easier to coordinate.

Choose the amount of precision the notation asks for

First identify whether the composer has specified equal tuplets, a cadenza-like flourish, or a freer ornamental group. Those are different musical situations. An exact ratio drill is appropriate for explicitly even simultaneous groups; it should not make a flexible ornamental passage mechanically rigid.

For a written 4:5 or 5:6 group, mark the shared endpoints, practice each line's pitches separately, and try repeated-note tapping before restoring the texture. A slow sequencer playback can help you hear the alignment, provided its tuplets are entered correctly. Compare the individual streams as well as the combined sound.

Decide whether to practice it now

Work on a larger ratio when it solves a real passage or develops a clearly identified coordination skill. If you cannot yet maintain each line independently, return to 2:3 or 3:4. Difficulty alone does not make an exercise useful.

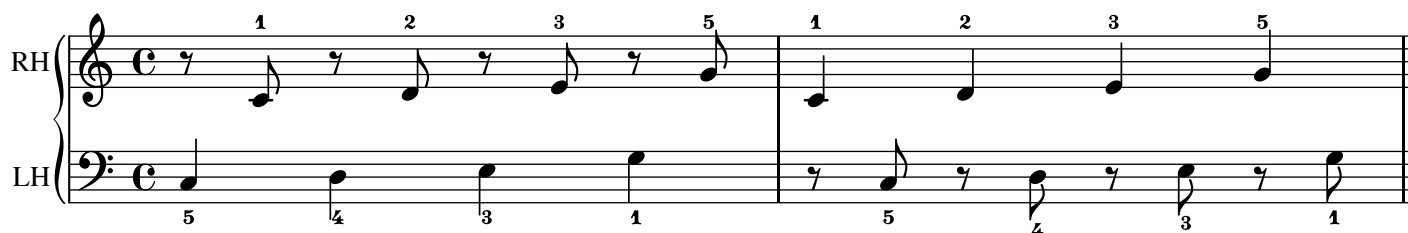
Completion check: explain the shared span, locate every true coincidence, and play several groups without lengthening the boundary. Fluent musical shaping and source-specific repertoire examples will need further work beyond these introductory studies.

Syncopation and Off-Beat Coordination

1. Keep the beat when the other hand enters between it

Purpose: preserve a clear underlying pulse while attacks occur away from it. **Preparation:** count “1 and 2 and 3 and 4 and” evenly and distinguish a rest from a held note.

An off-beat attack is not automatically a strong accent. Syncopation arises when the music gives emphasis to a normally weaker position, for example through an accent, duration, or a tie over a stronger beat. Begin by locating the attacks without exaggerating their volume.



RH off-beat eighths against LH quarters, followed by exchanged rhythmic roles.

Let the rests do their work

In bar 1 the LH plays each numbered beat and the RH enters on each “and.” Each RH eighth ends at the following numbered beat. In bar 2 the RH keeps the quarters while the LH takes the off-beats. Keep the pulse continuous across the exchange.

1. Count the eighth-note subdivisions while tapping the beat with one hand.
2. Add the other hand on the “ands.” Avoid moving the beat hand early to meet it.
3. Play the notes, then reduce the spoken count to the numbered beats.
4. Reverse the order of the bars to practice changing roles in either direction.

Check: the off-beat notes should sit halfway between beats. If both hands begin sounding together, slow down and restore the spoken “ands.” If the off-beat hand becomes loud, repeat at a softer dynamic before increasing speed.

2. A tie carries sound, not a new attack

The RH begins on the “and” of beat 1 and holds E through beat 2. The two tied E noteheads describe one continuous sound. The LH still plays beat 2, so one hand attacks while the other remains down.



An off-beat RH E tied through beat 2 over steady LH quarters.

Count attacks and releases separately

The first RH E begins on **1-and** and releases at **3**, when G begins. It lasts three eighth-note subdivisions. Do not strike E again on beat 2, and do not release it simply because the LH has moved.

Play the RH alone while speaking all four numbered beats. Then add only the LH note on beat 2, the point where the hands have different jobs. Finally restore the complete bass pattern.

Make the syncopation audible without forcing it

The off-beat E gains weight through its duration. It does not require a jab. Shape the line toward G and through F into the next bar; allow the accompaniment to keep a quiet pulse beneath it.

Variation: play the RH on a single repeated pitch while preserving its rests and ties. This exposes timing errors that changing notes can disguise. Then restore the melody.

Completion check: record one repetition. Count the RH attacks in bar 1: there are three, on 1-and, 3, and 4. A fourth attack on beat 2 means that the tie has been lost.

3. Anticipate a bar without moving its downbeat

The RH G arrives on the final “and” of bar 1 and is tied over the next downbeat. The LH begins bar 2 on time, while the RH continues the sound already in progress.

RH G anticipated on beat 4-and and tied across the barline over a moving LH.

Practice across the line on the page

Loop beats 3 and 4 of the first bar through beats 1 and 2 of the second. Speak “3 and 4 and, 1 and 2 and.” The RH enters on 4-and and next changes pitch on the following 2. The LH plays both the last beat of one bar and the first beat of the next.

If the RH reattacks on the downbeat, practice holding its G while the LH alone crosses the barline. If the next bar arrives early, tap the missing subdivisions instead of shortening the tied duration.

Transfer to accompaniment and melody

An accompaniment can anticipate a harmony while a melody remains on the beat, or a melody can anticipate its next note over an unchanged accompaniment. Locate both the rhythmic arrival and the harmonic change in the actual score; they need not be the same event.

Add pedal only after the attacks, holds, and releases are secure. Pedal can obscure an early release and does not replace the written tie.

Short practice sequence: one off-beat exchange, one tied-note study, then one barline anticipation. Return to a passage from your music and identify which of the three situations it contains. Keep the underlying beat audible without accenting every accompaniment note.

Changing Meters and Rhythmic Displacement

1. The same six pulses, a different grouping

Purpose: distinguish a change in grouping from a change in pulse speed. **Preparation:** count steady quarters and sustain the beat while accents move.

A common **hemiola** turns two groups of three into three groups of two. Across two bars of 3/4, six quarter-note pulses can be heard as **ONE two three**, **ONE two three**, or as **ONE two**, **ONE two**, **ONE two**. The quarter notes take the same total time.

The musical score shows two staves, RH (Right Hand) and LH (Left Hand), in 3/4 time. The RH staff has six quarter notes with accents on the first, third, and fifth pulses in the first two bars, and then accents on the first and third pulses in the last two bars. The LH staff has six quarter notes with accents on the first, third, and fifth pulses in the first two bars, and then accents on the first and third pulses in the last two bars. The score is divided into four bars by bar lines.

Two bars accented in groups of three, followed by two bars accented in groups of two within unchanged 3/4.

In bars 1–2, emphasize the first quarter of each bar. In bars 3–4, emphasize bar 3 beats **1 and 3**, then bar 4 beat **2**. The latter pattern crosses the written barline. Its accents fall at pulses 1, 3, and 5 of the six-pulse span.

Count both versions

Tap six even quarters while speaking each grouping in turn. Then play the score with modest accents. The study uses repeated pitches to make the grouping easy to hear; actual music can establish the same effect through harmony, bass motion, or phrase shape.

Check: the hemiola must not become faster because it contains three perceived groups instead of two. Do not insert a pause at the barline to recover the printed meter.

This is a successive regrouping of a span. The earlier cross-rhythm chapters instead place different equal divisions in the two hands at the same time. Related proportions do not make the musical tasks identical.

2. Hear it in Mozart: Sonata in F, K.332

The first movement's **measures 63–65** show a regular three-quarter bar followed by the hemiola. The written meter remains 3/4 throughout.

Mozart, K.332, first movement, measures 63–65. Both hands; source notes, rests, and dynamics retained.

Follow the change in emphasis

1. In measure 63, count three steady quarters. The opening forte gives way to piano, establishing the grouping before the change.
2. Across measures 64–65, follow **64:1, 64:3, and 65:2**. These forte arrivals lie two quarter notes apart: “ONE two, ONE two, ONE two.” The forte on measure 64 beat 3 interrupts the earlier bar-by-bar pattern.
3. Notice that measure 65 begins piano. Its strongest event arrives on beat 2; do not add a heavy downbeat merely because a new bar begins.
4. Play the LH alone, then add the RH, preserving its eighth rests. Keep the quarter-note duration steady through all three bars.

The RH often answers a bass attack half a beat later. Follow each hand's printed dynamics rather than moving every change to the same instant. Let the larger two-quarter grouping emerge without turning each forte into a harsh accent.

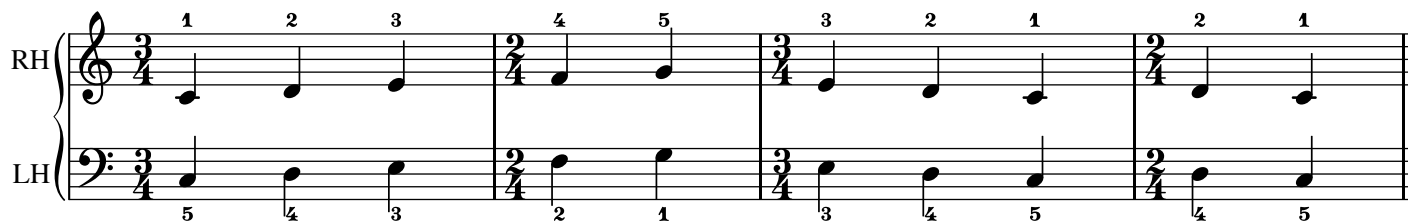
Return to the phrase

Compare the excerpt with the simplified exercise on the preceding page. Then listen to measures 60–66 in the complete sonata: hear the established pattern, the temporary regrouping, and its continuation. The double bar here marks the excerpt boundary, not the end of Mozart's phrase.

Source: re-engraved from the K.332 score handout hosted by Nancy Rogers at Florida State University. Notes, rests, and dynamics checked against measures 63–65; key and time signatures repeated for this excerpt. No fingering added. The handout's underlying edition is unidentified, so this is not an Urtext claim.

3. When the time signature really changes

This study alternates 3/4 and 2/4. Keep the **quarter note constant**: the three-beat bars are longer than the two-beat bars. Both hands follow the same line an octave apart so that the changing bar lengths remain the central task.



Alternating 3/4 and 2/4 with a constant quarter-note pulse in both hands.

Count “1 2 3, 1 2, 1 2 3, 1 2.” Then join each three-beat/two-beat pair into a five-quarter phrase. Feel the longer shape without losing the written bar boundaries.

Prepare the next bar early

Before playing, circle every new time signature and say how many quarter notes it contains. Practice the final beat of one bar into the first beat of the next. Do not add a third beat to 2/4 out of habit, or squeeze three beats into the duration of two.

Variation: tap the same five quarters as 2+3 instead of 3+2. Their total length remains equal, but the internal grouping changes. This is a counting variation, not the bar structure printed above.

Check what stays constant

In other music, a change such as 6/8 to 3/4 may preserve the eighth note, or a composer may explicitly equate a dotted-quarter beat with a quarter-note beat. Read any tempo equation before deciding. The new time signature alone does not settle every tempo relationship.

Completion check: play the study with a metronome marking every quarter. Every note should align with a click, including the first note after each meter change. Then try without the clicks and preserve the same bar proportions.

4. Move an accent through a stable meter

The RH repeats C–D–E in even eighth notes while the LH keeps quarter notes. Accenting each C creates groups of three eighths that move through 4/4. The bar lengths and note values remain unchanged.

Repeated three-eighth RH cells displaced across 4/4 over steady LH quarters.

The RH accents fall on bar 1 **1, 2-and, 4**, and bar 2 **1-and, 3, 4-and**. The last C begins a new three-note cell, but the example ends before that cell is complete. Release at the end of the bar; do not add notes to finish it.

Separate the repeating cell from the bar

First play unaccented eighths with the LH. Then bring out each C slightly while counting “1 and 2 and 3 and 4 and.” If the LH starts following the three-note pattern, simplify it to a single quiet note on each beat.

For a longer loop, continue the C–D–E sequence without restarting it at the barline. The cell and the bar align again after **three full bars**: 24 eighth notes contain eight three-note cells. A two-bar loop of the printed fragment would interrupt that cycle; use the printed ending as a stopping point, not a seamless repeat sign.

Three questions for a difficult rhythm

- Has the written time signature changed?
- Is the pulse unchanged while accents or harmony suggest another grouping?
- Are two different subdivisions sounding simultaneously?

A passage can combine these devices. Identify one layer at a time, preserve its duration, and then restore the phrase. Irregular phrase lengths likewise need not imply irregular bar lengths: a five-bar phrase may still consist entirely of ordinary 4/4 bars.



Melody over accompaniment

Choose a foreground before choosing a volume

Purpose: let a listener follow the melody while the accompaniment supports its pulse, harmony, and direction. **Preparation:** sustain written durations and play each layer separately with an easy, controlled sound.

A melody is a connected line, not merely the loudest note in every chord. Begin by singing or playing it alone. Decide where it moves forward, where it settles, and which note needs the most attention. Then ask what the accompaniment contributes underneath it.

Build the balance in three passes

1. **Melody alone:** shape the phrase and listen across repeated notes and changes of direction. Keep its rhythm intact.
2. **Accompaniment alone:** preserve its releases and harmonic movement at a quieter level. Quiet does not mean rhythmically vague.
3. **Together:** retain the melody's shape and reduce any accompaniment note that draws attention away from it.

Start without pedal to hear the balance and releases. Add pedal for the harmony and character after the fingers can make the basic distinction. Pedal blends sound; it cannot reliably rescue an accompaniment that is much too loud.

Diagnose the sound you actually made

A recording at a little distance often reveals balance more clearly than listening from directly over the keys. Can you sing the melody back without looking at the page? Does it disappear on a weak finger or at a hand shift? Does the accompaniment swell whenever its pattern rises?

Change one cause at a time. Soften the competing layer before asking for more force in the melody. Work on the precise transition where the balance changes, then restore its context.

In this chapter: a RH melody, two voices within the RH, a Bach texture that tests duration and balance, and a LH melody with quieter RH accompaniment. Fingerings in original studies are editorial starting points, not universal prescriptions.

1. Decide what the listener should follow

Purpose: make a melody audible over accompanying notes without making every note loud. In the first study, the right hand carries the melody and the left hand supplies broken chords.

The musical score consists of four measures. The right hand (RH) melody is: Measure 1 (F4, G4, A4), Measure 2 (B4, C5, D5), Measure 3 (E5, D5, C5), Measure 4 (B4, A4, G4). The left hand (LH) accompaniment is: Measure 1 (F4, G4, A4), Measure 2 (B4, C5, D5), Measure 3 (E5, D5, C5), Measure 4 (B4, A4, G4). Fingerings for RH: Measure 1 (3, 2, 1), Measure 2 (2, 3, 5), Measure 3 (4, 3, 2, 1), Measure 4 (2). Fingerings for LH: Measure 1 (5, 3, 1, 3), Measure 2 (5, 3, 1, 3), Measure 3 (5, 3, 1, 3), Measure 4 (5).

Original four-measure melody and broken-chord study, RH mezzo-forte and LH piano.

Establish a sound before combining hands

Play the melody alone and sing its shape. Then play the accompaniment alone, quietly enough that the melody would have space above it. Combine them at a tempo that preserves both the pulse and the difference in sound.

The dynamic marks describe a relationship, not a demand for a forceful attack. If the melody is buried, first soften the accompaniment rather than continually making the melody louder.

A practical listening check

Record the four bars. Can you follow the melody without looking at the score? Does the accompaniment surge whenever the hand changes position? Repeat only the spot where the balance changed.

Variation: play the melody with a gentle rise toward the third measure and release into the fourth. Keep the accompaniment level. Then remove the dynamic shaping and check the basic balance again.

Next step: preserve a voice while other notes sound in the same hand, as on the following page.

2. Two layers inside a texture

In this original drill, the upper RH voice is held while quieter lower notes move. The upper whole note is one voice; the lower, downward-stemmed quarter notes are another. Release the held note only when its written duration ends.

Two-voice RH study with a sustained upper voice and moving lower notes, over LH bass notes.

Play the upper voice alone, then add the lower notes softly. Do not re-strike the held note with every moving note. If the hand becomes rigid, shorten the practice segment and release between attempts.

Repertoire application: Bach, Prelude in C, BWV 846

The first four measures show how held bass/inner notes and flowing upper notes can form one texture. This is an application of balance and duration, not a literal melody-plus-accompaniment exercise.

Bach Prelude in C, BWV 846, measures 1–4: original notes and durations, without added fingering.

Listen for continuity through the broken chord and the change in harmony. Preserve the written sustained notes; avoid making each rising figure an automatic crescendo. First work without pedal to hear the releases clearly.

Source: Mutopia's public-domain transcription, copied from the source held in the pianobook project. Four measures re-engraved; no fingering added. The source notes give provenance and the limits of this review.

3. Put the melody in the left hand

Here the LH carries a simple moving line while the RH repeats a quiet broken chord. The hands begin an octave apart. The dynamic marks indicate relative prominence, not a fixed loudness appropriate to every piano or room.

The musical score consists of two staves. The right hand (RH) is in treble clef and plays a broken chord pattern: C4-E4-G4 (quarter), F4-A4-C5 (quarter), E4-G4-B4 (quarter), and A4-F4 (quarter). This pattern repeats twice. The left hand (LH) is in bass clef and plays a quarter-note melody: C3 (half), F2 (half), C3 (half), and F2 (half). This pattern repeats twice. The RH is marked *p* and the LH is marked *mf*. Fingering numbers are provided for each note: RH (1, 3, 5, 3, 1, 3, 5, 3, 1, 3, 5, 3, 1, 3, 5, 3) and LH (5, 4, 3, 1, 2, 3, 4, 5).

LH quarter-note melody marked mezzo-forte under a quiet repeating RH broken chord.

Resist the automatic RH spotlight

Play the LH alone and sing the phrase. Then add only the first RH note of each beat, keeping it softer. Restore the RH eighths without letting their greater number of attacks dominate the line.

Listen particularly to the LH F at the start of bar 2 and the final C. Keep the phrase moving through the first and settling into the second. A quieter melody note can remain clear if the accompaniment makes room for it.

A controlled exchange of attention

Repeat once while listening mainly to the LH, then once while checking the RH's evenness. The accompaniment should remain a coherent pattern even while it is secondary. Do not try to make every RH note inaudible.

Variation: move the LH melody one octave lower, leaving the RH in place. This deliberately changes the register and balance problem. Listen again rather than assuming that the same physical effort produces the same result.

Ready to transfer: identify the leading voice in a short repertoire phrase, including any moment when it passes between hands. Mark the handoff, practice the two adjacent melody notes alone, then restore the supporting texture. More complex inner voices and chord-top voicing are developed in the following chapters.

Voicing Within a Chord

1. Let the top line lead

Purpose: bring out one note of a chord without delaying it or hardening the whole sound. **Preparation:** play a comfortable three-note chord with an easy release. Work without pedal initially.

In this D-minor study, the RH upper notes form a small melodic line. Upward stems identify that line; downward stems identify the quieter chord tones. Notes beginning together should still sound together. The stem directions distinguish musical roles, not separate attacks.

Original D-minor chord study: RH top notes mezzo-forte, supporting notes piano.

Establish the sound in layers

1. Play the upper line alone: A–B ♭ –A–A. Sing through its motion instead of treating each note as a new event.
2. Play the lower RH pairs alone at piano. Keep their changes clear and unhurried.
3. Combine the RH voices. Prepare all fingers on the keys, and aim for a clearer top note with quieter support beneath it.
4. Add the LH softly. Record the result and listen for the upper line without looking at the score.

The printed fingers are editorial starting points. Let the hand adjust to each shape; do not immobilize the wrist or squeeze the quieter fingers down to restrain them. Make only a few attempts before releasing the hand.

Check: an audible roll or a late top note is a different effect from simultaneous voicing. Practice the unvoiced chord once, with every note together, then restore the balance. Soften the support before trying to make the melody much louder.

2. Follow an inner note

The highest note need not carry the melody. Here A and D frame a moving inner line: F–E–G–F. The outer notes last a whole bar while the inner voice changes halfway through it.

Three RH layers: sustained outer A and D, with a moving F–E–G–F inner voice.

Hear the middle before adding the frame

Play and sing F–E–G–F alone with fingers 3–2–4–3. Then add only the held upper A. Finally add the lower D and the quiet LH bass. The whole notes are reattacked at the next barline; they are not tied across it.

Keep the sustained fingers in contact without continuing to press harder after the sound has begun. As the middle finger changes, listen for an unwanted new attack or release in either outer voice. If the hand tightens, practice one half-bar at a time with a complete release between attempts.

Build a hierarchy, not a volume contest

Three layers need not mean three dramatically different dynamic levels. First make the inner line recognizable. Next check that the upper note remains part of the harmony without stealing attention. Finally restore the bass as a quiet foundation.

Variation: play the same notes while listening primarily to the top voice, then to the inner voice. This is a control experiment, not a direction to switch the musical foreground randomly in a piece.

Transfer: in a chordal passage, trace the desired voice horizontally before marking its individual notes. A line that disappears during one chord change usually needs that transition repaired, rather than more volume throughout the passage.

3. Project a bass without making everything heavy

The LH lower notes now carry the harmonic route D–G–A–D. The upper LH notes and the RH chords should leave space around that route. The LH intervals fit within one octave; release and prepare each new shape rather than holding a stretched position between chords.

Original chord study with a projected LH bass line beneath quieter upper notes.

Play the bass alone and hear where it travels. Add its upper LH partner softly, then the RH. Keep both notes of each LH interval simultaneous, with more prominence in the lower note. If the interval is uncomfortable, practice the two voices separately or choose a closer arrangement with a teacher.

Listen to the register

Low notes can accumulate resonance. A projected bass may need less pedal or a cleaner release, not a more forceful attack. Compare the passage without pedal, then with brief changes at each harmony. Keep enough clarity to hear the bass movement.

A compact voicing check

- Can you sing the intended line after hearing the complete texture?
- Do supporting notes stay quieter through every chord change?
- Do simultaneous notes begin together unless a roll is intended?
- Can the hand release easily after the phrase?

Top, inner, and bass projection are different applications of the same listening task. In repertoire, the leading role can pass between them. Mark those handoffs and practice the adjacent melody notes alone before restoring the chords.

Next step: the following chapter separates not only dynamic roles but also the durations and releases of two voices within one hand.

Two Voices in One Hand

1. Hold the melody while another voice moves

Purpose: preserve two lines with different rhythms in the same hand. **Preparation:** identify which notes belong to each voice by their stems, rests, and durations. Start without pedal.

The RH upper voice moves in half notes. The lower voice mostly moves in quarters. Each lower change must leave the half note sounding until its written release; the upper line is not a series of accents attached to the lower line.

The musical score shows two voices in the right hand. The upper voice consists of half notes: A4 (finger 5), G4 (finger 4), F4 (finger 3), and E4 (finger 2). The lower voice consists of quarter notes: F4 (finger 1), E4 (finger 2), D4 (finger 1), and C4 (finger 2). The left hand plays a single half note C3 with a piano (p) dynamic, using finger 5.

Two RH voices in D minor, upper half notes over lower quarters, with quiet LH support.

Learn each release as well as each attack

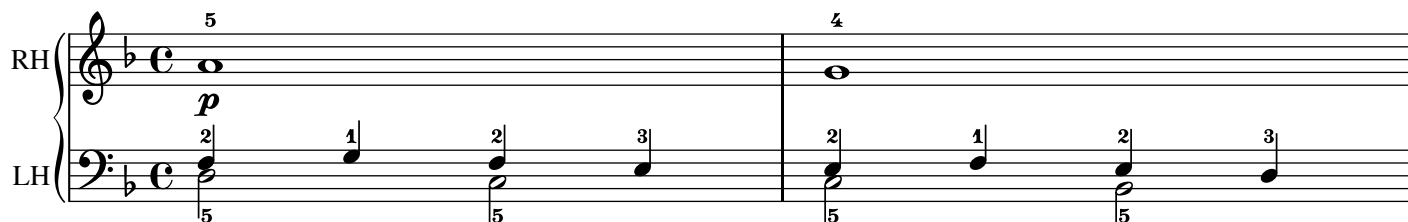
1. Play the upper line alone: A–G–F–E. Count its full two-beat durations.
2. Play the lower line alone. Notice its final half note, which ends with the upper E.
3. Combine the RH at a slow pulse. At the middle of a held half note, only the lower finger changes.
4. Add the LH after the RH can maintain the durations without stiffening.

The lower voice uses the thumb on neighboring notes in bar 2. Make a small lateral adjustment; do not hold the previous lower note past its duration in pursuit of perfect finger legato. The upper F is sustained while that lower move takes place.

Check: stop after the first beat of a half note and name what must remain down. Then continue without making the pause part of the finished exercise. This inspection is a temporary repair, not the final rhythm.

2. Give the left hand the same responsibility

The LH now carries a half-note bass beneath moving quarters. The higher LH voice uses the thumb and neighboring fingers while the little finger changes the bass every two beats.



Two LH voices with a sustained half-note bass and moving upper quarters.

Prepare the bass change without losing the upper line

Play the bass D–C–C–B ♭ alone. Then play the upper LH quarters alone. Combine them while listening to the moment at beat 3: the bass changes, but the upper line continues its own quarter-note rhythm.

The fingering changes between bars to accommodate the new shape. Test it slowly and watch whether a held bass makes the rest of the hand rigid. It should remain supported with no more effort than needed to keep its key down.

Two useful reductions

Hold plus one change: sustain the first bass D and play only the first two upper quarters. Release the entire hand and repeat once. Add the next bass only after the upper change is easy.

Two lines in two hands: temporarily give each voice to a separate hand. This helps establish the intended sound before restoring the one-hand distribution. Keep the printed pitches and durations unchanged during this listening reduction.

Check: the bass must not pulse with every upper quarter. Conversely, its release must not cut short an upper note. A short recording without pedal makes these errors easier to hear.

3. Choose a workable connection

Two written voices do not require every interval to be stretched or every note to be connected by the fingers at any cost. Begin with the written durations and musical roles, then decide how the physical connections can be made comfortably.

A practical order of decisions

1. Locate notes that genuinely must continue sounding. A tie carries one sound; a repeated note requires a new attack.
2. Mark the moving line and its destination. Choose fingers that allow the next change, not merely the first sonority.
3. Test the most awkward overlap slowly without pedal. Adjust the hand's position before adding speed.
4. Where a literal one-hand connection is impractical, consider redistribution, substitution, a controlled release, or appropriate pedal in context. Mark any change deliberately.

Finger substitution can help in some sustained passages, but changing fingers on a depressed key is itself a skill. Introduce it separately; do not add it automatically to every long note. Nor should pedal conceal an accidental early release while you are learning the voices.

Listen for two phrase shapes

Once the durations are secure, play the upper line gently toward its destination while the lower line remains level. Then reverse the listening emphasis as a diagnostic experiment. The quieter line still needs direction and rhythmic definition.

Ready to move on: play either printed study with both lines audible, correct holds, and an easy release afterward. You should also be able to play each line separately from memory while counting the other line's rhythm.

The next chapter applies this work to Bach's actual three- and four-voice textures. Its stems show voices, not a rule that every upward stem must be played by the RH. Hand distribution may need to serve the line.

Three- and Four-Voice Independence

1. Three voices: Sinfonia No. 11 in G minor

Purpose: maintain several lines without letting the busiest one dominate. **Preparation:** sustain one voice while another moves in the same hand. Treat this repertoire excerpt as an advanced application, not a required sight-reading test.

The musical score is presented in two systems. The first system contains measures 1 through 4, and the second system contains measures 5 through 7. The right hand (RH) is on a treble clef staff, and the left hand (LH) is on a bass clef staff. The key signature has two flats (B-flat and E-flat), and the time signature is 3/8. Measure numbers 1 through 7 are indicated above the first staff of each system. The notation includes various note values, rests, and ties, illustrating the independence of the three voices.

Bach, Sinfonia No. 11 in G minor, BWV 797, measures 1–7; three independent voices.

The upper voice opens with a short figure; the middle voice enters in measure 2 while the upper F continues. In measure 4, listen for the related figure in the bass. Stem-up and stem-down notes on the upper staff distinguish the two higher voices.

Play the upper voice alone, preserving its dotted quarters. Then add the middle voice without clipping those long notes. Work on the bass separately before combining all three. Three eighth notes fill each bar: a dotted quarter lasts the entire measure.

Listening task: trace the active figure from upper to middle to bass. Let each entry become clear without making the other voices disappear. Held notes continue even when attention shifts elsewhere.

Source: Olivier Vermersch, *Mutopia 200*, public-domain transcription; underlying edition unspecified. Notes, rests, ties, and registers retained. Layout changed; no fingering or dynamics added.

2. Four voices: Fugue in C major, WTC I

This excerpt begins with a three-voice texture; the bass enters in measure 5, after the first half of the bar. For this reading, call the voices **soprano and alto** on the upper staff, **tenor and bass** on the lower staff.

Upward stems identify the higher voice on each staff.

Bach, WTC I Fugue in C major, BWV 846, measures 4–7; the bass entrance completes the four-voice texture.

Preserve what is already sounding

In measure 5 the bass begins on the “and” of beat 3: C–D–E. Hear this entrance while continuing all three existing lines. In measure 6, keep the soprano’s long C audible through the moving inner parts. The alto G tied into measure 7 must not be reattacked.

Four voices do not mean four notes sounding at every instant. Rests, overlaps, and entries are part of the texture. Track a voice through its silence and know when it returns.

Source: Shay Rojansky / Andreas Scherer, Mutopia 4, public-domain transcription; underlying edition unspecified. Notes, rests, ties, and registers retained; layout changed and no fingering or dynamics added. Double bar marks the excerpt boundary.

3. Practice combinations, then restore the whole

Start with the G-minor Sinfonia if the fugue is too demanding. Correct duration and clear listening at a comfortable tempo are more valuable than an approximate performance of all the notes.

A pairing plan

Texture	First combinations	Then add
Three voices	Upper + middle; middle + bass; upper + bass	The missing voice, softly at first
Four voices	Soprano + bass; alto + tenor	One inner voice, then the fourth voice

Also test the two voices sharing each hand. An outer-voice reduction can sound secure while hiding a difficult inner-voice overlap. Keep each selected voice's original rhythm, including rests, so that the reductions still join correctly.

Attend to one line while playing the others

Play all the voices and listen mainly to one for a short segment. On the next repetition, move your attention to another. This is an aural check, not a demand that every voice be equally loud. In the final musical version, entrances, harmonic direction, and phrase endings should guide the balance.

For the fugue, rehearse the bass entrance with each upper voice in turn. For the Sinfonia, sustain the upper notes while following the middle voice's ties. If an overlap is physically awkward, temporarily separate the voices between hands to establish the sound before choosing a comfortable final distribution.

Check the boundary of the exercise

The printed excerpts stop before the pieces end. In the complete score, practice into the next measure so that an artificial stopping point does not become part of your phrasing. Restore pedal only after you can hear the individual releases; use it according to the texture and acoustics rather than as a substitute for voice control.

Ready to transfer: identify each entry, play each voice independently, and explain which notes remain down while another voice changes. Keep that clarity when the full texture returns.

Bach as Technique

1. Invention No. 13: two active partners

Purpose: practice technique through the exchange of musical ideas. **Preparation:** read sixteenths steadily and work on each line separately. This A-minor excerpt avoids treating Bach as a RH melody with a passive LH accompaniment.



Bach, Invention No. 13 in A minor, BWV 784, measures 1–2.

The RH begins with a sixteenth rest; the LH sounds on the downbeat. Count that first subdivision rather than beginning both hands together. During the second half of measure 1, the LH takes up the running figure while the RH has eighth notes.

Learn the exchange, not just the hands

1. Play the RH alone, including its opening rest and the quarter rest at the end of measure 2.
2. Play the LH alone. Hold its first A in the higher register for the full quarter note; the opening bass A is only an eighth.
3. Combine one half-bar at a time, then overlap the segments. Listen through the point where the sixteenths pass to the LH.
4. Shape the two bars as a phrase fragment. Avoid a new accent every time the figure changes hands.

No fingering is imposed on this excerpt. Choose and test a route for the broken-chord shapes at a slow tempo before speeding up. The G#s are written alterations, not a direction to sharpen every G throughout the piece.

Source: Allen Garvin, Mutopia 59, public-domain transcription from Bach-Gesellschaft. Notes, rests, and registers retained; layout changed; no new articulation, fingering, or dynamics.

2. Recognize a familiar figure in a new place

Measures 7–8 of the same invention bring the running figure into a different harmonic setting. Compare the contour with the opening rather than assuming that the same written fingers will fit every transposition.



Bach, Invention No. 13, BWV 784, measures 7–8; running figures and a later LH re-entry.

Keep listening during rests

In measure 8 the LH plays two eighths, rests for a quarter, and then begins its next figure after a sixteenth rest. Count the silence as carefully as the notes. The RH continues through this gap; it must not wait for the LH to re-enter.

Play the LH with the RH downbeats only as a temporary timing reduction. Then restore the RH notes, keeping the LH entry in its original place. Do not turn the rest into extra preparation time by slowing the pulse.

Make a fingering comparison

Choose one short running shape in the opening and its counterpart here. Write a provisional fingering for each. Compare their destinations, black keys, and the notes that follow. Keep a fingering when it serves the new context; change it when the next movement requires a better position.

Play each choice slowly several times, then at a moderate flowing tempo. A route that works only when every note is separately positioned is not yet secure. Avoid changing several fingers at once during the same attempt.

Check: sing either line while playing the other, within a comfortable vocal range or by humming its contour. Then play both and retain that sense of two partners. Source and adaptation scope are the same as for measures 1–2 on the preceding page.

3. Use repertoire as a focused technical study

Bach's music offers specific coordination problems inside complete phrases. Choose one problem at a time rather than repeating a whole invention and hoping that independence will emerge automatically.

Passage printed in these chapters	Technical question	A useful reduction
Invention No. 13, measures 1–2	Does the pulse survive the transfer of sixteenths?	One running line plus the other hand's beat points
Invention No. 13, measures 7–8	Does a voice re-enter accurately after rests?	The returning line plus a sparse pulse in the other hand
Sinfonia No. 11, measures 1–7	Do long upper notes survive middle-voice movement?	Upper and middle voices only
WTC I C-major Fugue, measures 4–7	Can a new bass entry emerge without losing inner lines?	Bass paired with one existing voice at a time

Restore every omitted note before deciding that the passage is secure. A reduction is a way to diagnose and learn the texture, not a replacement arrangement for the final performance.

Choose articulation deliberately

The excerpts here do not add blanket legato or staccato rules. Start by hearing the motive, meter, note lengths, and relationship between voices. Compare two plausible degrees of separation at an easy tempo, and listen for clarity and phrase direction.

Do not assume that every eighth note should be detached or every sixteenth connected simply because of its duration. Editorial slurs and fingerings in other editions are useful evidence, but distinguish them from the source and from your own practice markings.

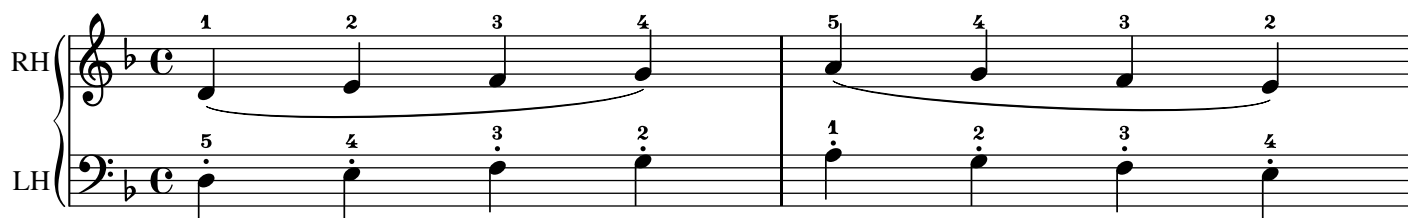
Practice record: note the excerpt, the one problem being addressed, the reduction used, and what improved when the full texture returned. Keep a musical goal such as a clear entrance or an uninterrupted inner line alongside any tempo target.

Independent Articulation

1. Connect one hand, release the other

Purpose: give simultaneous lines different connections without changing their shared timing.

Preparation: play each articulation separately with an easy hand and a steady pulse. The marks below are editorial practice choices in an original study.



Original D-minor study: RH four-note slurs against detached LH quarters.

The RH slurs group four quarters at a time. Aim for a connected line within each slur and a small, deliberate release at its end. The LH quarters are detached: shorten their sounding length without making the next attack early.

Establish the contrast

1. Play the RH alone and sing its two small phrases. Let the phrase endings release without an exaggerated gap.
2. Play the LH alone, leaving a small silence after each note while retaining the quarter-note pulse.
3. Combine the hands at a moderate, comfortable pace. Listen for RH gaps that appear whenever the LH releases.
4. Exchange the articulations as a variation: LH connected, RH detached. Keep pitches and rhythms unchanged.

A staccato dot does not prescribe one exact percentage of a note's duration in every context. For this drill, choose an obvious but comfortable contrast. Reduce the difference later while preserving independent control.

Check: the detached hand should not become automatically louder. Separate the questions “how long?” and “how strong?” before trying to control both at once.

2. Put accents in different places

The LH emphasizes beats 1 and 3. In the first bar, the RH emphasizes the F on beats 2 and 4 within a connected eighth-note line. Those accents need not pull the other hand into the same pattern.

Original study with RH accents on beats 2 and 4 against LH accents on beats 1 and 3.

Keep the pulse under the accents

Tap the LH pattern while speaking all four beats. Add the RH rhythm on a tabletop, then play the pitches. Begin with small dynamic differences: an accent is relative prominence, not a demand for a hard attack.

The second bar removes the RH accent marks while the LH keeps its pattern. Let the RH settle into a phrase ending. Do not continue accenting mechanically after the written pattern stops.

Separate three controls

Timing: keep each eighth note in place. An accented note should not arrive early merely because it is stronger.

Duration: maintain the RH connection inside its slur. An accent does not automatically shorten the note.

Balance: let the hands keep different degrees of emphasis. If every LH accent becomes a RH accent too, simplify the RH to repeated notes before restoring its contour.

Variation: move the RH emphasis to its off-beats on repeated eighths while the LH retains beats 1 and 3. This is an unprinted coordination variation; do not transfer its accents into a repertoire score unless the phrase supports them.

3. Make contrasting articulation serve the phrase

Return to the Invention No. 13 excerpts in the preceding chapter. Choose a short segment where one voice has running sixteenths and the other has longer notes. Hear the rhythm and direction of each before deciding how connected they should be.

Compare two versions

In the first version, connect the running figure and gently separate selected longer notes in the other voice. In the second, use a less pronounced contrast. These are listening experiments, not claims that Bach prescribed either version. Preserve all ties and rests, and avoid shortening notes whose sustained duration is essential to another voice's movement.

Record both at the same tempo. Prefer the version that makes the motives and phrase direction clearer without sounding clipped or heavy. The appropriate degree of separation will also depend on tempo, instrument, room, and musical context.

Keep phrase endings independent

One voice may finish while another continues. Practice the ending voice alone, then add the other line through that release. Avoid a shared breath that interrupts the continuing voice unless the music calls for one.

Where a voice starts again after a rest, prepare its next position during the silence while the other hand continues. The rest belongs to the rhythm; it is not permission to delay the next entrance.

Final check for this group of chapters

Play a short polyphonic passage and ask: which voice leads, which notes remain sounding, which line releases, and where does the next entry occur? You should be able to answer those questions from both the score and the sound.

Practice dose: a few attentive repetitions of one overlap or release, followed by the complete phrase. Stop when the intended contrast becomes reliable; further repetition without listening can replace an independent articulation with a habitual one.



Part VII — Movement Across the Keyboard

Leaps and Rapid Position Changes

1. Know the destination before leaving

Purpose: arrive on the intended key at the intended time, without making every distant note an accent. A leap includes departure, travel, and landing; practice these as a coordinated movement rather than a last-moment search.

Play one hand at a time in this D-minor study. The hands move in opposite directions. The quarter rests give time to release and relocate; they are part of the exercise, not a license to insert pauses into repertoire.

D-minor destinations with a counted rest between attacks. Editorial fingers.

1. Name the next note and locate it visually before playing the present one.
2. Sound the quarter note at **p**. Release on the rest, move to the next position, and arrive with the finger resting lightly on its key.
3. Play on the next beat. Keep counting through the travel; if there is not enough time, slow the whole pulse.
4. Repeat at **mf**, preserving the same rhythm and a comfortable landing.

The finger number identifies the landing finger, not a stretch to maintain throughout the journey. Let the arm transport the hand. The distance and the surrounding music determine how much movement is needed.

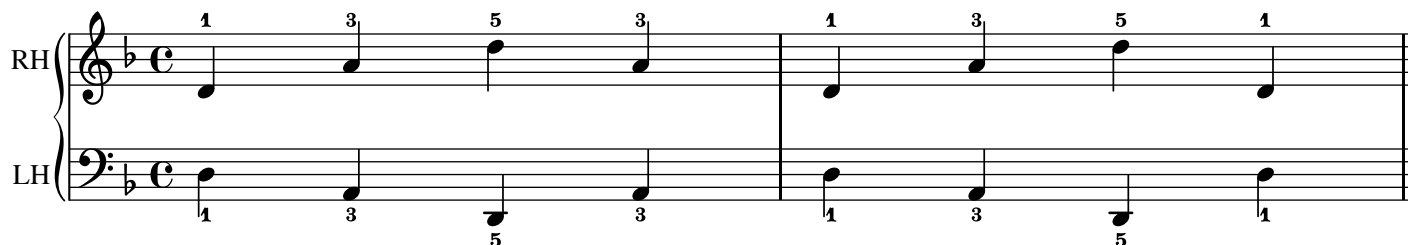
Listen for the landing

A correct pitch with an unintended accent is only a partial success. Compare the two notes' loudness and tone. If the arrival is harsh, rehearse touching the destination silently before sounding it, then gradually join preparation and attack.

Checkpoint: four accurate repetitions at one dynamic, with no extra pause and no need to correct the finger after landing. Increase the distance only after this is dependable.

2. Remove the waiting time

The destinations below are familiar from the previous page, but the rests have disappeared. Release and travel within the musical timing. Do not hold the departing key so long that the next note becomes a scramble.



Continuous quarter-note leaps in D minor. Practice each hand separately before combining them.

Begin with a comfortably detached touch. Aim for an even succession of attacks; physical connection between widely separated keys is not the goal. Once the route is secure, vary the articulation deliberately rather than letting distance dictate it.

Practice the departure as well as the arrival

- Play the first two notes, stop, and notice where the hand finishes. Repeat the pair from a relaxed starting position.
- Add the third note. Make the middle note a passing destination rather than a place to grip the keyboard.
- Complete each bar, then join the bars without a new hesitation at the boundary.
- Combine hands only when their separate routes are reliable. Watch whichever destination needs the most help.

Diagnose a miss

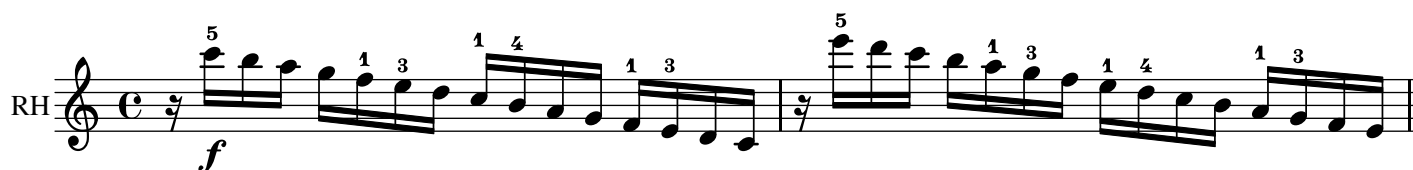
Overshooting or undershooting: reduce speed and check the distance from a consistent starting position. **Right note, late arrival:** prepare the destination earlier and examine whether the previous finger releases. **Right note, unwanted accent:** practice a quiet arrival before restoring the phrase's dynamic.

Do not respond to every miss by jumping faster. A clear target, economical departure, and timely release often matter more than travel speed.

Transfer: in a piece, circle the last note before a leap and its landing. Rehearse that pair in its actual rhythm, articulation, and dynamic, then restore the notes on both sides.

3. Czerny: finish the scale, prepare the leap

The opening of *The School of Velocity*, **Op. 299 No. 1**, connects a familiar descending scale with a much larger change of position. That makes it a useful next step: the run itself is predictable, but its ending must also prepare a new beginning.



Czerny, Op. 299 No. 1, measures 1–2, RH only. After descending from C6 to C4, the hand relocates to E6 following a sixteenth rest.

Practice across the barline

1. Play the first descending run slowly, keeping the source's *f* character without striking each note harshly.
2. Isolate its last three notes, E4–D4–C4, the following sixteenth rest, and the landing on E6. Locate that high E before you leave the low C.
3. Play that connection in rhythm. Release and travel during the written rest; if it is not enough time at your current tempo, slow the whole fragment rather than lengthening only the rest.
4. Include the first few notes after the landing, E6–D6–C6. A successful arrival should leave the hand ready to continue the new scale.

The jump from C4 to E6 is **two octaves plus a major third**. It is much wider than an octave pair, and it follows a long downward journey. Avoid letting the hand settle heavily on the low C as though the phrase had already finished.

WATCH OUT · PRACTICING ONLY THE EASY PART

A smooth descending scale can disguise an uncertain relocation. Begin a few notes before the leap and stop a few notes after it, so the movement you need receives more attention than the run you already know.

The example omits the LH and retains the source's printed RH fingering indications; unnumbered notes are not new editorial fingerings. Add the original accompaniment from a complete edition after the RH transition is comfortable. No. 35 remains another useful kind of leap study—continuous octave pairs—but No. 1 shows the scale-to-destination problem more clearly here.

Source: Peters edition edited by Adolf Ruthardt, plate 6963, first music page (PDF page 4 in the retained complete scan). RH notes, rests, *f*, and printed fingers retained; LH and tempo heading omitted. This is a slow-practice excerpt, not a request to begin at Presto.

Landing Accurately Without Looking

1. Build a map, not a blindfold test

Purpose: use keyboard geography to reduce the need to inspect every note. Looking is a musical resource. The goal is to choose where a glance is useful while keeping enough attention on the score, ensemble, or phrase.

Find the groups of two and three black keys. Locate E ♭ beside the two-black-key group and B ♭ within the three-black-key group. First explore these positions silently with either hand; the fingers need not press the keys to identify the neighborhood.



E ♭-major out-and-back destinations. RH begins on E ♭ 4; LH on E ♭ 3. Editorial fingers.

Glance, prepare, play

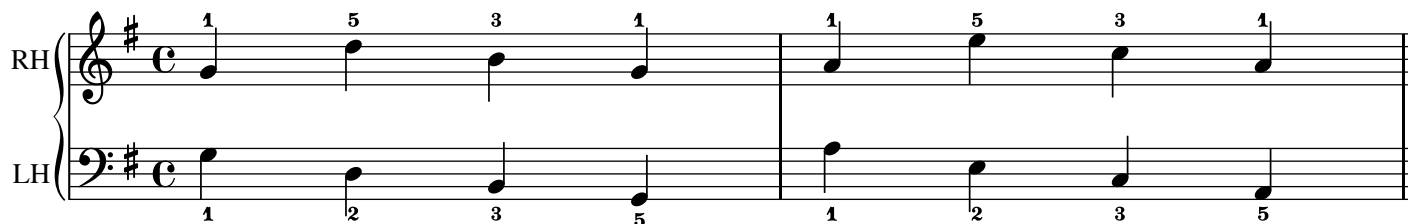
1. Play one hand alone while looking. Identify both the destination and its surrounding black keys.
2. Before another attempt, glance at the route, then direct your eyes toward the score. Play slowly enough to arrive deliberately.
3. Return to the starting E ♭ and check whether the hand actually returned to its original position.
4. If a landing is uncertain, look and reset. Avoid fishing across neighboring keys while continuing the exercise.

The final half rest allows a fresh start. Keep the quarter-note pulse steady; silent exploration belongs before the timed attempt.

Checkpoint: the same short route works both with a preparatory glance and with your attention on the score. A successful repetition should feel recognizable, not lucky. Keep the sound at **p** so a forceful attack does not substitute for certainty.

2. Change the destination

Repeating one route can train a single habit without building a flexible map. The next study moves the pattern from G to A. RH begins on G₄ and LH on G₃; the two hands have different routes, so learn them separately.



Two related destination patterns in G major. The second bar begins one step higher.

Use a stable reference point

Play the first bar, then stop. Name the second bar's starting note and prepare it before beginning again. Once each bar is clear, join them in time. The transition from the end of bar 1 to the start of bar 2 deserves its own practice pair.

Try this sequence of attention:

- Look at the initial position, then read the score during the bar.
- Glance ahead to the next starting position before the hand moves there.
- Repeat with one fewer glance, only if the previous attempt was accurate.

A brief, well-timed look may be more useful than staring at the hand throughout. There is no requirement to perform every leap without looking.

Test what was learned

Choose either bar first rather than always beginning with bar 1. After a pause, set up again from the score. If only a continuous chain of repetitions works, spend more time identifying each starting position independently.

Checkpoint: begin either bar accurately after a pause, keep the chosen dynamic, and explain which keyboard landmark helps you find the first note. Do not increase the tempo and remove visual guidance at the same time.

3. Decide where to look in a real phrase

In performance, visual attention has several jobs: following notation, locating a distant key, watching a conductor or partner, and reading ahead. Plan the difficult transitions rather than trying to keep your eyes in one place throughout.

Make a glance plan

Select a short passage with one leap. Mark its destination in your practice copy. Read enough of the next musical unit to know what follows, glance at the landing area, and return to the score where reading must resume. Try this slowly in the actual rhythm.

For two hands, determine which route is less secure. Let that hand receive the glance while the other uses a familiar position. If both need attention at once, first simplify or separate the parts; do not demand an unreliable eyes-away jump merely to preserve the appearance of fluency.

A short practice cycle

1. Identify the starting note, landing note, and direction of travel.
2. Play the pair while looking, at the passage's intended dynamic.
3. Repeat after a preparatory glance, returning attention to the score.
4. Restore the preceding and following notes. Check whether the glance still fits the phrase.
5. Revisit after practicing something else. Delayed success is a better test than a long uninterrupted string of repetitions.

Boundaries of the exercise

Keyboard dimensions are familiar, but the feel and visual surroundings of another instrument may differ. Take time to locate useful landmarks on a new piano. Avoid treating memorized distance as a substitute for listening and checking.

A wrong note gives specific information: the starting position was inconsistent, the travel distance was misjudged, or attention moved too late. Choose one variable to change on the next attempt.

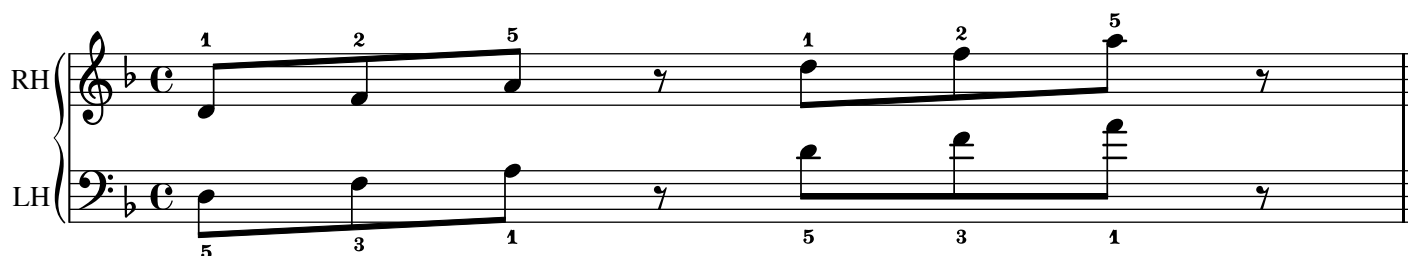
Transfer: use the leap studies from Chapter 43 to rehearse glance timing. For the crossing passage in Chapter 46, identify the RH's low and high destinations while the LH stays in its accompaniment position.

Wide Arpeggiated Figures

1. Move between positions

Purpose: carry a broken chord across a wide register without trying to hold its entire span in one fixed hand shape. Hear the harmony as a unit while allowing the hand to release and relocate.

These D-minor groups each fit within a fifth. The second group begins an octave above the first. Practice hands separately; both rise, beginning one octave apart. All fingers are editorial suggestions for this particular grouped exercise.



Two D-minor positions, with an eighth rest for relocation. Do not hold the first position while reaching for the second.

1. Play D–F–A quietly and evenly. Notice the compact position without fixing the wrist or spreading beyond the notes needed.
2. On the rest, release and carry the hand to the next D–F–A position.
3. Prepare the new position before sounding its first note. Keep counting eighth notes through the rest.
4. Repeat at **mf**, retaining an even group rather than accenting the first note after travel.

Separate reach from travel

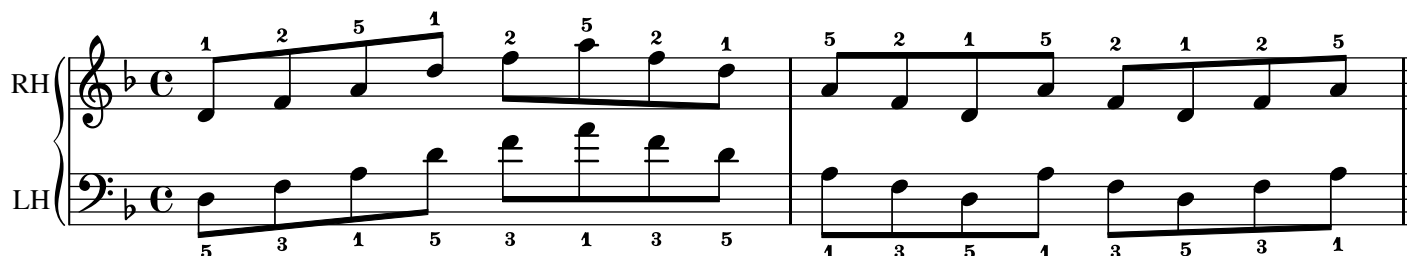
The gap between positions is not an instruction to stretch the thumb or little finger while another finger remains anchored. This preliminary exercise explicitly allows release. At a slow tempo, prepare silently between groups; then put the movement back into the counted rest.

If a fifth is uncomfortable in a fixed shape, play its notes successively with a freely moving hand. Blocked inspection of a position is optional, not a requirement to hold an uncomfortable span.

Checkpoint: the new position feels prepared, the rest lasts exactly one eighth, and the second group sounds as controlled as the first.

2. Carry the figure through the turn

Remove the practice rest. These are broken-position figures with deliberate relocations, not a replacement fingering for the standard continuous arpeggio reference. Start with a light detached touch; do not force finger legato across the largest gaps.



D-minor broken positions joined in eighth notes, with a return to the lower register. Editorial grouping fingers.

Hear the whole contour

First play only the lowest and highest destinations. Then restore the intermediate notes. Keep the top A part of the phrase rather than making it an automatic accent. Practice at **p** before adding a gradual rise and fall in sound.

The two hands use different fingers because their shapes face different directions. Learn each route alone. In the RH, the move from the first A to the higher D transfers from finger 5 to thumb 1. In the LH, the same upward position change transfers from thumb 1 to finger 5. Both require relocation, not an attempt to hold the departing note throughout.

Work on the return separately

Begin at the top group and descend. Check the change from the high D at the end of bar 1 to the lower A at the start of bar 2. A reliable ascent does not guarantee a prepared descent.

Add hands together only after the turning points and bar boundary are stable. Keep the hands one octave apart as written; listen for simultaneous attacks without stiffening both hands to force agreement.

Checkpoint: no added pause at a change of position, no squeezed stretch, and a deliberate dynamic contour over the complete two-bar phrase. If the route becomes uneven, restore the rest temporarily and identify the exact move that needs preparation.

3. Keep the accompaniment in its role

A wide figure often supports a simpler melody. The LH below passes through B $\flat$ major and F major while the RH holds a short melodic line. Learn the bass route without pedal first; then add the RH at a clearly stronger dynamic.

Original B $\flat$ -major study: wide LH accompaniment under sustained RH notes. Editorial fingers.

Practice the layers

1. Play the RH alone at **mf**, sustaining each half note for its full value.
2. Play the LH alone at **p**. Its first three notes establish a lower position; the thumb then passes to finger 3 as the hand moves upward. Let the movement continue toward the upper note.
3. Play only the first LH bass note of each bar under the complete RH. Hear the harmonic change and the melody together.
4. Restore all LH eighth notes without allowing the wide bass or upper arrival to cover the melody.

Add pedal by listening

Once pitches and balance are secure, try a modest pedal connection within each harmony. Clear the old harmony when the new bass arrives. Listen for resonance without blurring the change from B $\flat$ harmony to F harmony. The exact pedal depth and timing depend on the instrument and room.

Pedal can connect the sound across released notes; it does not remove the need to prepare the next position. Compare a dry version and a pedaled version at the same tempo. The rhythmic arrivals should agree.

Transfer: identify harmonic positions in a wide accompaniment from your repertoire. Reduce them to bass notes and comfortable groups, then rebuild the printed figure with the original melody, rhythm, and dynamic intact.

Hand Crossing

1. Move the RH below the LH

Purpose: let one hand pass into the other's register without interrupting a sustained voice. Hand assignment and register are different things: the upper staff below is always RH, even when its notes sound below the LH.

In this study the LH holds middle C while the RH alternates between E₄ and a lower note. Practice the RH route alone first. The rests provide time to cross and return.

The musical notation shows two staves. The upper staff (RH) has a treble clef and a common time signature. It contains four measures. In the first measure, there is a quarter note E4 (first line) with a fingering of 3, followed by a quarter rest. In the second measure, there is a quarter rest followed by a quarter note E3 (first space) with a fingering of 2. The third measure has a quarter note E4 with a fingering of 3, followed by a quarter rest. The fourth measure has a quarter rest followed by a quarter note E3 with a fingering of 2. The lower staff (LH) has a bass clef and a common time signature. It contains a single whole note C4 (middle C) with a fingering of 1. The piece ends with a double bar line.

RH crosses below a held LH middle C. Upper staff = RH; lower staff = LH throughout.

Prepare the crossing space

Place the LH on middle C without gripping. Move the RH to its lower destination silently and find a comfortable path around the stationary hand. Choose enough clearance for the moving hand without lifting the shoulder or making a large theatrical arc.

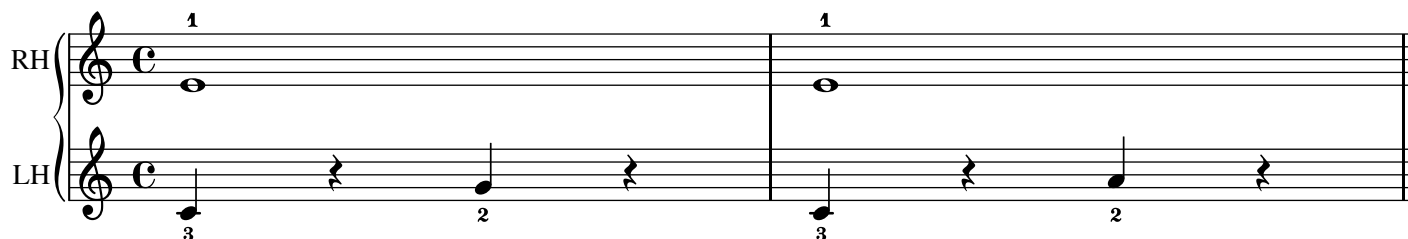
1. Hold the LH whole note for four beats.
2. Play the RH E on beat 1, release on beat 2, and arrive at the lower note on beat 3.
3. Release on beat 4 and prepare the return to E in the following bar.
4. Listen for an unbroken LH duration and quiet, deliberate RH arrivals.

Which hand passes above the other can depend on register, anatomy, and the next movement. Test the route slowly before committing to a fingering. Avoid a path that traps a finger beneath the other hand.

Checkpoint: the LH sound remains uninterrupted and the RH stays on the pulse. If the hands collide, simplify the crossing distance and rearrange the path before repeating.

2. Move the LH above the RH

Now the RH holds E₄ while the LH moves from middle C to G₄ or A₄. Both staves use treble clef because both parts lie in that register. The hand labels remain unchanged.



LH crosses above the held RH E₄, then returns. Both staves use treble clef.

Give the moving hand a destination

First locate the upper G and A with the LH alone. Reintroduce the RH held note, then rehearse the travel without sounding the LH. Once the path is clear, restore the rhythm and dynamic.

The held hand also has a job: sustain without clamping and leave the moving hand enough room. A crossing is a coordination problem between two hands, not just a jump performed by one.

Put the phrase ahead of the gesture

Play the moving notes at **mf** over a quieter held note. Then reverse the balance. This tests whether the crossing itself has become an automatic accent. Keep the dynamic choice intentional from the first slow repetition.

Try joining the two bars without an extra pause. The return from the upper G to middle C requires preparation just as much as the outward crossing. Look at the destination that is less secure; you do not need to watch both hands continuously.

Checkpoint: a listener should hear the chosen balance and steady timing without needing to know that the hands crossed. Move on to the repertoire example only when the elementary route is comfortable.

3. Beethoven: crossing around an accompaniment

In the first movement of Beethoven's *Pathétique* Sonata, Op. 13, measures **51–54**, the RH first plays below the LH accompaniment, then travels to the upper register. Each staff here retains its assigned hand. The RH bass-to-treble clef change reflects that genuine change of register.

Beethoven, *Pathétique* Sonata, first movement, measures 51–54. Original hand allocation, notes, rhythms, and excerpt expression retained; no added fingers.

Prepare the two RH regions

Play the RH alone: the low B $\flat$ – E $\flat$ – F – G $\flat$, then the high B $\flat$ – E $\flat$ – F. Rehearse the jump from G $\flat$ to B $\flat$ separately before restoring its quarter-note timing. Do not add an unprinted rest for the crossing.

Play the LH alone, sustaining its B $\flat$ whole note while repeating the upper E $\flat$ – G $\flat$ dyads. The first-beat rest belongs to the upper voice; the lower B $\flat$ still sounds. Keep that distinction when combining hands.

Start hands together with only the LH sustained note, then restore its dyads. Maintain the RH staccatos in measures 51–52 and the grace-note/slur figures in 53–54. The printed **sf** belongs to the high G $\flat$ figures; avoid inventing an accent at every crossing.

Source: Mutoxia 299, Peter Samuelson and Chris Sawyer, after Schirmer (1894) and Berners (1908), public domain. Layout and excerpt boundaries are editorial. Consult a complete edition for the preceding dynamic context and phrase; grace-note execution needs that context rather than a mechanically fixed rhythm.

Thumb Under vs. Lateral Motion

1. Coordinate the thumb with the moving hand

Purpose: make a fingering change without a bump, hesitation, or forced reach. “Thumb under” describes a relationship between fingers; it should not imply that the rest of the hand and arm must remain fixed while the thumb does all the traveling.

The RH below practices E–F with fingers 3–1. The LH descends A–G with fingers 3–1. The hands have different note patterns: practice them separately before trying them together.

Small 3–1 crossings and their returns. RH starts D4; LH starts C4. Editorial fingers.

Work slowly enough to hear the join

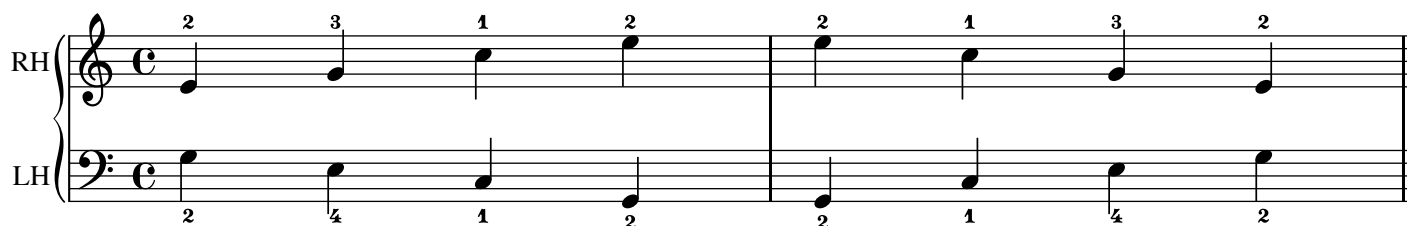
1. Play the first two notes at **p**. Prepare the thumb’s destination while allowing the hand to move toward it.
2. Continue through the thumb note and the following note. Listen for an unintended thumb accent or a longer gap.
3. Reverse the four-note group. On the return, coordinate the finger passing over the thumb with the hand’s movement.
4. Repeat at **mf**, keeping the same timing and a free wrist.

At this speed, some thumb passage beneath the hand may be useful. The objective is a comfortable connection, not the largest possible tuck. Do not pin the previous finger down after its musical duration has ended.

Checkpoint: the crossing note belongs to the phrase. A listener should not hear a new accent simply because the fingering changes from 3 to 1.

2. A larger gap needs more travel

The arpeggio fragment increases the distance around the change of position. In the RH, G₄–C₅ uses 3–1; in the descending LH, E₃–C₃ uses 4–1. These fingers match the C-major arpeggio pattern used earlier in the book.



C-major arpeggio crossing fragments, one hand at a time first. The second bar reverses each route.

Let the hand arrive with the thumb

Practice the two notes around each crossing, then add one note before and one after. Notice how the whole hand changes position. Avoid trying to reach the destination with the thumb while leaving the forearm behind.

Compare a comfortably detached version with a more connected version. The detached version makes timely release easier to observe; the connected version asks how smoothly you can join the sounds without strain. Neither requires freezing the hand at the departure point.

The returning finger-over movement also needs room. In the RH return, prepare finger 3 for G while releasing the thumb's C at the appropriate time. In the LH return, prepare finger 4 for E while the hand moves upward from the thumb's C.

Choose the sound before adding speed

Keep a clear pulse and a specified dynamic. If the thumb produces a repeated accent, practice the crossing softly in a short group before restoring the full phrase. If the connection requires an uncomfortable stretch, use a freer release and review the route rather than forcing it.

Checkpoint: both directions work, the notes after the crossing are prepared, and the hand does not remain twisted after the group ends.

3. Adapt the movement to tempo and articulation

There is no single visible motion that fits every scale, arpeggio, hand size, and tempo. Slow finger connection, fast light passagework, and deliberately detached notes place different demands on timing and release.

As the tempo rises, the sideways travel of the hand and arm becomes especially important. A deep, slow thumb tuck can obstruct a fast passage. Equally, “never pass the thumb under” is too rigid a rule for all situations. Seek a movement that serves the written sound and leaves the next position ready.

A controlled comparison

Use the four-note RH group from the first page.

1. Play it slowly and connected at **p**. Notice the thumb’s preparation and the hand’s sideways movement.
2. Play the same notes detached at the same tempo. Keep the arm free to travel as each note releases.
3. Return to a connected musical intention and increase the tempo slightly. Allow the movement to become smaller and more continuous rather than exaggerating the slow-motion demonstration.
4. Stop after a short group. Check that the hand can release comfortably, then repeat only if the sound remains even.

Do not speed up to hide an unreliable join. Record a short attempt and listen for timing and tone across the crossing; the motion’s appearance alone cannot establish whether it works.

Return to full patterns

Apply the same process to one scale and one arpeggio already learned. Mark each position change and practice its neighboring notes in both directions. Preserve the printed fingers unless a considered alternative suits the passage and hand better.

For a real piece, include its articulation and dynamic from the start. A legato cantabile passage and a light detached run may use the same fingers with different release timing.

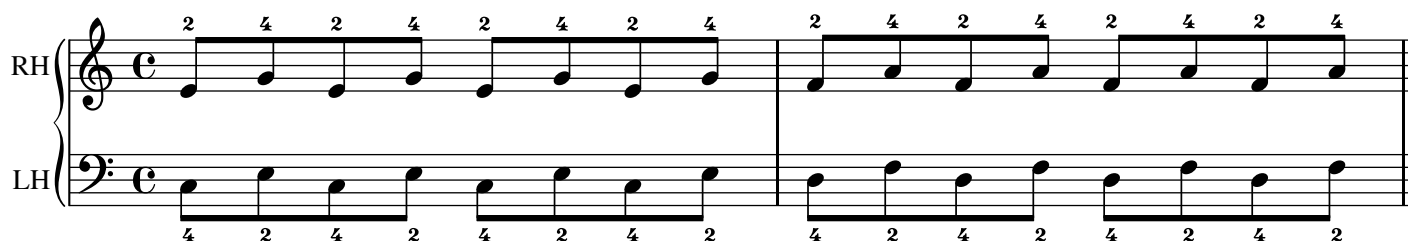
Transfer: use the fingering chapter’s decision process when a standard pattern does not fit the musical context. Comfortable movement, reliable rhythm, intended articulation, and preparation of the next notes all matter.

Rotation, Lateral Motion, and Forearm Movement

1. Let the forearm share the work

Purpose: coordinate fingers, hand, and forearm so a small pattern does not become a series of isolated, forceful finger lifts. Rotation here means a modest turning of the forearm, not swinging the wrist from side to side or making a large rolling gesture for every note.

Rest the fingers lightly on the keys. Try the two-note pair slowly with one hand, allowing a small adjustment toward each playing finger. Listen for two equally controlled sounds. The movement should help the notes, not become a separate action to exaggerate.



Original paired-note study. RH uses 2–4; LH uses 4–2. Editorial fingers.

1. Play one pair at **p**, release, and reset. Avoid raising the unused fingers high above the keyboard.
2. Join two pairs, then one bar. Keep the rhythm even and the wrist available to adjust.
3. Move to the second bar as a whole position. Do not twist the hand to leave the forearm behind.
4. Compare **p** and **mf** without enlarging the turning motion simply to make more sound.

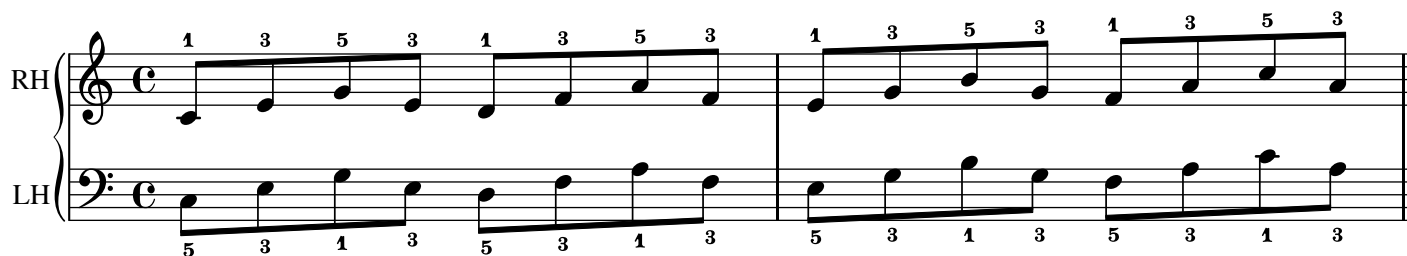
Find the useful amount

A visible demonstration can be larger than the movement eventually needed in playing. At a working tempo, a useful adjustment may be very small. Avoid treating rotation as the sole cause of every attack; fingers and the transport of the arm still have roles.

Checkpoint: both notes are clear, the pair is even, and the hand can release comfortably after the group. If a movement produces discomfort, stop and reassess it with a teacher rather than repeating it more forcefully.

2. Travel with the changing position

The next figure shifts through adjacent triads. A comfortable hand shape in one position does not remain comfortable if the notes move and the arm does not follow.



Original lateral-motion study, hands one octave apart. Shift toward each new group without holding the old position.

Group the movement by its destination

Play one four-note group, then pause. Locate the next group's starting note and move the hand toward it. Join neighboring groups only when their separate positions feel clear. The pause is a preparation drill; remove it when restoring the printed eighth notes.

Let the forearm follow the direction of the passage. Small turning adjustments may help different fingers meet the keys, while lateral travel places the hand over the next group. These movements can cooperate; they are not competing methods from which you must choose only one.

Change the task without losing the phrase

Play one hand alone with a light detached touch, then with a more connected sound. Keep the same note lengths and pulse as the musical intention requires. Avoid holding a departing finger merely to prove that the hand can stretch to the next note.

Add a gentle crescendo through bar 1 and a diminuendo through bar 2. Listen for a line, not four identical mechanical units. When adding the other hand, preserve its own comfortable route instead of forcing both arms to copy each other's movement.

Transfer: return to the scale and arpeggio crossings in Chapter 47. Identify where the hand needs to travel, where a small adjustment helps a finger arrive, and where release is needed. Judge the result by sound, timing, and comfort rather than by the size of a visible gesture.



Part VIII — Pedaling

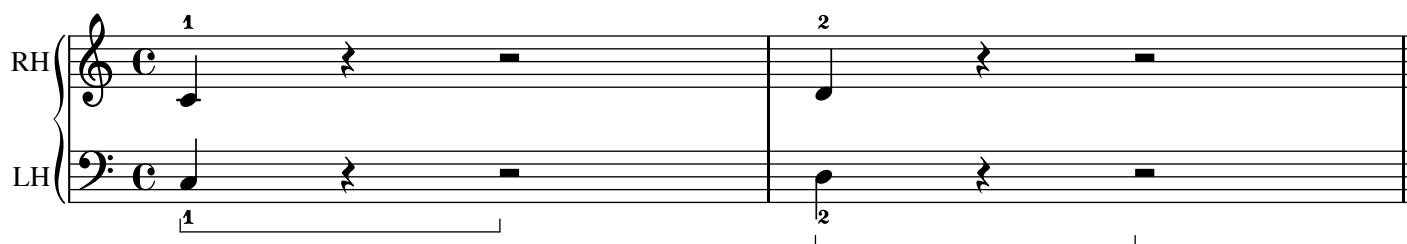
Basic Damper Pedaling

1. Hear what the pedal retains

There is a small pleasure in hearing a note continue after your hand has left the key. The pedal gives you that freedom—and the responsibility to decide when the sound should end. Start by listening to the difference between a finger-held note, retained resonance, and silence.

The right pedal lifts the dampers on the damped strings. Struck notes and sympathetic resonance can continue, though the sound still decays.

Sit where the right foot can reach comfortably. Keep the heel supported when practical and the foot in contact with the pedal. Move quietly; stamping and letting the pedal spring back can add mechanical noise.



Play on beat 1, release the keys on beat 2, and lift the damper pedal on beat 3. The bracket shows pedal down.

First, play the bar without pedal and listen to the silence after the fingers release on beat 2. Now add the printed pedal. Let the sound stay with you for one more beat, then clear it on beat 3. Try the same comparison on D.

WATCH OUT

A held key keeps sounding after the pedal lifts. Check the finger's release before blaming the foot.

Read the signs

Ped. followed later by * means depress and release the damper pedal. A bracket indicates its span; a notch commonly marks a lift and renewed depression. Notation conventions vary by edition. Unless labeled otherwise, the pedal lines in this section are editorial practice instructions.

A bracket is a timing guide, not a diagram of the pedal's exact depth. On many instruments the effective range occupies only part of the travel. Find where the sound begins to sustain instead of assuming the pedal must hit the floor.

Checkpoint: distinguish finger-held sound, pedal-held sound, and silence by ear. Test in the middle register: the highest acoustic-piano strings may have no dampers and will not provide the same clear demonstration.

2. Choose clarity before quantity

Pedaling is part of articulation, balance, and style. Begin by deciding what should continue and what should stop. A phrase can need no pedal at all, a brief touch of resonance, or a sustained harmonic field.

Classical and Romantic textures

In much early Classical writing, especially transparent fast passages, light pedal or no pedal is a useful starting point on a modern piano. Preserve rests, short articulations, and the separation of changing harmonies. Try the opening of Mozart K.332's finale in Chapter 57 dry before considering any brief support.

FROM THE PIANO'S PAST · MOZART'S KNEE LEVER

In a 1777 letter, Mozart praised the sensitive knee-operated damper mechanism on Stein's pianos. The means of sustaining sound has changed; the pleasure of shaping resonance is familiar. A Mozart score without pedal signs is not, by itself, an instruction to play everything dry. Letter discussed in Ernst Herttrich's Henle preface.

Romantic textures often depend more extensively on pedal to connect wide accompaniments, sustain bass notes, and enrich a singing line. "More pedal" does not mean keeping it fully down through every change. A fast chromatic Romantic passage may need frequent clearing; a slow Classical passage may benefit from discreet resonance.

A first listening test

Choose two contrasting phrases you know. Play each without pedal, then add only enough to serve its sound. Ask:

- Are the written releases and rests still audible?
- Can I hear the new bass and harmony clearly?
- Does the melody project without a louder accompaniment?
- Is the resonance helping the phrase, or merely hiding uneven playing?

Checkpoint: explain one place where you use pedal and one where you deliberately release or omit it. Practice that decision from the beginning, together with the intended dynamic. Depth and clearing will be refined in the following chapters.

Legato Pedaling

1. Connect the change, then clear the old sound

Purpose: connect harmonies without leaving a gap or carrying the old chord too far into the new one.

Legato pedaling is often called **syncopated** or **overlapping** pedaling: the foot changes just after the new notes sound.

The essential sequence is **play the new notes, lift the old pedal, then depress again while the new notes remain held**. The fingers preserve the new sound during the brief clearing. Starting the lift too early can leave a gap; lifting too late can smear the harmonies.

Original chord-connection study. Changes are placed an eighth note after each new chord to make the learning sequence visible.

1. Learn the chords without pedal and hold each for its full half-note duration.
2. Play the first chord, then depress the pedal on the following eighth-note subdivision.
3. At the next chord, retain the old pedal for that same subdivision, then lift and depress while holding the new keys.
4. Continue through the four harmonies. Release keys and pedal together at the start of the final silent bar.

Shorten the demonstration delay

The marked eighth-note delay is deliberately generous for slow coordination practice. In a musical phrase, the clearing is usually much closer to the new attack. Listen while reducing the delay; the right amount is determined by the sound, not a fixed fraction of a beat.

Checkpoint: hear a connected arrival followed immediately by a clean new harmony. Do not confuse connection with the continued presence of the old bass.

2. Keep fingers and foot responsible for different things

A pedal change can silence a note whose key has already been released. If a melodic note must continue through the change, hold it with a finger when possible. Conversely, holding an unwanted note with a finger prevents the pedal from clearing it.

Compare three versions of the chord study

Lift before the new chord: exaggerate a small gap once so you can identify it. **Lift well after the new chord:** hear the mixed harmony. **Change just after the attack:** aim for connection and prompt clearing. The first two versions are diagnostic comparisons, not habits to repeat at speed.

Then practice at **p** and **mf**. A louder attack produces more resonance and may expose a change that seemed clean at a softer dynamic. Do not learn the foot movement at one sound level and assume it will work unchanged at every other level.

Keep the release intentional

At the end of the phrase, decide whether the music asks for a clear stop or a resonant decay. In this exercise, clear at the start of the silent reset bar. In repertoire, a rest may belong to one voice while another continues, so read the complete texture before lifting every held sound.

If coordination breaks down, reduce the task to two chords. Hold the second chord while slowly rehearsing the foot's clearing motion, then bring the action closer to its attack. Add the melody only after the harmonic change is dependable.

Transfer: mark actual harmonic changes in a short piece, rather than adding one pedal change automatically at every barline. Chapter 52 extends this same overlapping technique to a moving melody and more selective releases.

Half Pedal and Partial Pedal

1. Find the instrument's working range

Purpose: control how much resonance remains instead of treating the pedal as only fully up or fully down. “Half pedal” does not prescribe half the physical travel. The responsive range depends on the piano, its regulation, the register, and the sound already present.

Some digital instruments and pedals support only on/off sustain. If yours does, practice clean timing and releases first; this depth exercise requires a compatible continuous or half-pedal system.



Original listening study. Repeat with different pedal depths; no fixed depth is prescribed in the score.

1. Sound the C and G at **mp** with the damper pedal fully down. Release the keys at beat 3.
2. During the following silence, slowly lift the pedal until you hear the sound begin to damp. Notice how small the useful movement may be.
3. Start again from silence and compare a shallower depression. Does the released sound continue, decay more quickly, or stop?
4. Repeat at **p**, then **mf**, allowing each trial to clear before the next attack.

Listen rather than measure

Compare the low C with the upper G. Their decay and response need not match. The foot position that gives one useful effect in this register may be inappropriate for a loud chord elsewhere.

Checkpoint: produce two distinguishable resonance levels deliberately, then return to a clean release. Do not claim a partial-pedal effect merely because the foot traveled a shorter distance; the audible result is the test.

2. Refresh the resonance without losing the line

A partial lift may reduce accumulated sound while preserving some resonance. It cannot reliably select any desired note from a mixed harmony. If the old harmony remains objectionable, use a fuller clearing and keep essential new notes held with the fingers.

Apply depth to a familiar change

Return to the chord study in Chapter 50. First make clean full changes. Then compare a slightly shallower clearing at one transition. Listen specifically for the old bass and the notes that conflict with the new chord.

If the result is cloudy, increase the lift or change sooner. If the phrase becomes too dry, check whether the fingers can sustain a needed voice before adding more pedal. Change only one variable at a time: timing, depth, or hand balance.

Repeated shallow refreshes

A series of small, quick pedal lifts is often called **flutter pedaling**. It can reduce accumulated resonance in a sustained texture, but it is not a substitute for knowing the harmony. Begin with a single controlled refresh; avoid an automatic shaking foot that produces noise or unpredictable gaps.

Try the listening study once with a gradual partial lift and once with two small refreshes after the keys release. Compare the decay. These are sound experiments, not fixed instructions to insert into every piece.

Transfer: test depth again when the piano or room changes. A resonant hall may require less sustained accumulation than a dry room. Retain the musical goal while adjusting the foot movement. Written pedal marks identify an intention and timing framework; the instrument determines how that intention is realized.

Syncopated Pedaling

1. Free the foot from the hand's pulse

Purpose: make the overlapping change from Chapter 50 while the fingers continue moving. “Syncopated” here refers to the offset between the attack and pedal action. It does not require syncopated accents in the music, and it is not a separate pedal mechanism.

The LH half notes below remain held even when the damper pedal lifts. The short brackets add resonance briefly; the unpedaled notes restore clarity. This deliberately selective pattern is a coordination exercise, not the only possible interpretation of the melody.



Original foot-independence study. Depress on the second eighth of each half-bar; release on the following quarter-note beat. Hold the LH half notes throughout.

1. Play the hands alone and count four quarter-note beats per bar.
2. Add the pedal on **1-and**, release on **2**, then repeat on **3-and** and **4**.
3. Keep the RH even. A foot movement should not cause an accent, pause, or missed note.
4. Listen for the LH bass continuing through each release because its key remains held.

Check the cause of the connection

Repeat while releasing the LH early. Hear how the pedal lift now removes its sound. Restore the written duration. This comparison reveals whether finger-held voices are actually being sustained.

Checkpoint: the RH proceeds steadily while the foot depresses and releases at different points. Keep the exercise slow enough to hear which sounds continue.

2. Move from a counted drill to musical timing

The practice grid makes the coordination visible. It is not a universal pedal pattern. In repertoire, move the change close enough to the new attack to clear the old harmony promptly, and release whenever the texture needs separation.

Three things to hear at a change

The arrival: the new note speaks at its intended dynamic. **The clearing:** unwanted previous notes disappear. **The continuation:** any voice that should remain audible is supported by fingers, a new pedal capture, or another appropriate means.

Choose a phrase with a moving melody and a slower bass. Mark the bass changes, melodic dissonances, and written rests. Start with the fewest pedal touches that serve the phrase. Add detail only when you can explain what each change improves.

A non-chord tone may need to remain briefly as part of an expressive harmony, or it may need to clear before the next tone. Its role and the texture matter; changing on every melody note is no more universal than changing only at barlines.

Troubleshooting

If the foot moves only when the hands stop, practice two attacks and one pedal change. If a release interrupts the bass, check its finger duration. If the melody sounds smeared, shorten the pedal span before trying to make it quieter. If each depression is audible mechanically, keep contact with the pedal and reduce unnecessary travel.

Transfer: restore the phrase's original dynamic and articulation early. Foot coordination learned only in a slow, quiet, uniformly legato version may not survive the actual sound of the piece.

Pedaling Broken Chords and Arpeggios

1. Capture the bass, then carry the harmony

Purpose: connect a wide accompaniment while retaining a clear harmonic change. Pedal can preserve the sound of a bass note after the hand leaves it; it does not remove the need to play the following notes evenly and softly.

The study moves from C major to G7. The RH sings above the LH figure. Practice the hands without pedal first, accepting the physical releases needed for the wide route.

Original accompaniment study. Catch the first bass after its attack; clear and recapture just after the new bass in bar 2.

The last bar is a silent reset: release both keys and pedal on its first beat, then count the silence.

1. Play only each bar's first LH note with the RH melody. Hear the change from C to G.
2. Add the pedal, holding the new bass key through the brief change whenever possible.
3. Restore the LH eighth notes at **p** beneath an **mf** melody.
4. Check that the C harmony clears when G7 arrives. End with a deliberate release of both hands and pedal.

Do not lose the bass before catching it

The printed depression follows the bass by an eighth note so the sequence is visible. At slow practice speed, let the finger retain the bass until the pedal takes over. As the wide route resumes, shorten that coordination delay; catching an already-damped bass cannot bring its original sound back.

Checkpoint: the bass remains audible through the figure, the melodic line projects, and the second harmony is distinct. More pedal depth is not the first remedy for an accompaniment played too loudly.

2. Listen inside the harmonic span

A broken chord is not automatically a license to hold one pedal for a whole bar. Added tones, changing basses, chromatic notes, articulation, and tempo may demand earlier clearing or partial refreshes.

Compare three versions

Play the study dry, then with the printed broad spans, then with an additional clearing halfway through each bar. Notice what is gained and lost. The extra change may improve clarity while reducing the original bass's presence, because that key is no longer held.

Do not insist that every original bass survive every later clearing. Decide whether the music requires its sustained sound, whether another voice can hold it, or whether a lighter resonance is preferable. A true *sostenuto* pedal offers another option in suitable textures; Chapter 55 explains its limits.

Shape the accompaniment before adding resonance

Practice the LH softly enough that the RH melody remains clear without pedal. Then add resonance and reassess the balance. A loud inner note can remain audible longer than intended once captured; the foot cannot reliably erase only that one note.

For a Romantic cantabile texture, a generous harmonic connection may be essential. For a light Classical broken-chord accompaniment, brief touches or no pedal may preserve the character better. The decision follows the phrase and instrument rather than the presence of arpeggios alone.

Transfer: in a passage you are learning, label the harmonic changes and circle any non-chord tones that collect undesirably. Choose pedal spans after hearing those relationships. Keep practice variations separate from the composer's or editor's actual pedal signs.

Pedal Changes in Impressionist Music

1. Preserve a color without losing its boundary

Purpose: hear sustained resonance as part of a sonority while still controlling when that sonority changes. Music associated with Debussy and Ravel often asks for subtle color and layered sound; this does not mean indiscriminate blurring.

The following original study uses one whole-tone collection in bar 1 and another a semitone higher in bar 2. It is a sound experiment, not an excerpt from either composer. The point is to hear a coherent collection accumulate, then hear the old collection clear.

Original whole-tone color study. Keep each bass held through the pedal change; clear distinctly between the two collections. Editorial fingers and pedal.

The last bar is a silent reset: release both keys and pedal on its first beat, then count the silence.

1. Play each bar without pedal, listening to its interval pattern.
2. Add the printed pedal at **p**. Let the RH notes contribute to one resonant color without making each attack an accent.
3. At bar 2, hear the new bass and clear the previous collection promptly. Shorten the illustrated eighth-note delay as needed.
4. Compare a full change with a partial lift. If the two collections merge unintentionally, clear more fully.

Make a boundary audible

The pedal joins the notes within a field, while the clearing separates the fields. That contrast should be perceptible even when the playing is quiet. Do not confuse a soft dynamic with a clean texture.

Checkpoint: a listener can hear the change of color without seeing the barline. The RH stays shaped and controlled inside the resonance.

2. Separate layers of sound

In a real coloristic passage, the bass, inner harmony, and melody may not change together. Read their durations and roles before choosing one broad pedal span. A sustained bass under changing upper notes can require finger retention, carefully judged partial lifts, or selective sustain where available.

A listening procedure for repertoire

First play the melody and bass without pedal. Identify the important arrivals. Add the inner voices, then pedal only enough to create the intended resonance. Listen from a little distance or record a short passage; detail that seems clear at the keyboard may merge in the room.

Ask what must remain recognizable: a bass foundation, a new harmony, a melodic interval, or an intentional wash of sound. Retain that priority while trying different depths and clearing points. A composer's long pedal indication can ask for a special blend; it should not be shortened automatically merely because it is unusual.

A practical comparison

Return to the whole-tone study. Sustain the bass with the finger and briefly refresh the pedal halfway through a bar. Hear the upper accumulation reduce while the finger-held bass remains. Repeat with the bass released early and notice the different result.

This experiment does not prescribe one method for *Clair de lune* or every Impressionist texture. Use a reliable complete score, its pedal and articulation markings, the actual tempo, and the particular instrument. An edition's added pedal suggestions should be distinguished from source markings.

Transfer: write a short description beside a difficult pedal passage, such as “retain the bass, clear the upper harmony.” A sound goal is more useful than an unexplained instruction to use a lot of pedal.

Una Corda and Sostenuto Pedal

1. Use the left pedal for color

Purpose: distinguish a change of tone from simply playing more quietly. On a grand piano, the left pedal shifts the action; on a typical upright it moves the hammers nearer the strings. The effects are not identical. Digital instruments vary with their pedal system and selected sound.

The traditional directions **una corda** and **tre corde** ask for the shifted color and its return. The mechanism of a modern grand does not necessarily make the literal “one string” description true for every note.

The musical score consists of two measures. The first measure is without the left pedal, and the second measure is with the left pedal depressed. The right hand (RH) plays a melody of quarter notes: F4 (finger 3), G4 (finger 2), A4 (finger 1), B4 (finger 2), C5 (finger 3), and B4 (finger 1). The left hand (LH) plays a constant bass line of F2, C3, and F3 (finger 1, 3, 5). The first measure is without the left pedal, and the second measure is with the left pedal depressed, indicated by a thick vertical line at the start of the second measure.

Original color comparison in F major. Repeat at the same intended dynamic, first without and then with the left pedal.

Play the phrase at **mp** with the damper pedal up. Repeat with the left pedal depressed before the first attack. Compare tone, attack, and decay, not only loudness. Then try **p** by touch alone and compare that result with **p** plus the left pedal.

Keep touch responsible for the phrase

The left pedal is not a substitute for controlled quiet playing. Shape the line and balance the hands in either version. A phrase may ask for a veiled color without becoming inaudible, or for a clear soft sound without the left pedal.

Release the left pedal at a deliberate point before a new attack and listen to the return of the normal color. Avoid a sudden physical movement that disturbs posture or creates mechanical noise.

Checkpoint: describe the difference your own instrument produces. Do not assume that an upright, grand, and digital piano offer the same tonal effect.

2. Capture selected notes with sostenuto

A **true sostenuto pedal** retains the dampers of notes whose keys are held when it is engaged. Notes played afterward can remain detached. This differs from the damper pedal, which sustains subsequently played notes as well.

Not every middle pedal provides sostenuto. Many uprights use it as a practice mute or bass-sustain pedal. Check the instrument's function before this exercise; a mute pedal cannot perform the selective-capture task.

5 *Sost. Ped.*

True sostenuto exercise: catch the LH C during beat 1, release its key on beat 2, and play the RH detached from beat 3 onward. Damper pedal stays up.

1. Play and hold the low C with the LH while the RH rests.
2. Depress the middle sostenuto pedal before releasing that key. The marked eighth-note offset makes the capture sequence visible.
3. Release the LH on beat 2. Confirm that the bass continues.
4. Play the RH staccatos. They should stop when the fingers release while the captured C continues to decay.
5. Lift the sostenuto on the final quarter rest to release the retained bass.

If the upper notes sustain too, check whether the damper pedal is down or the middle pedal has a different function. If the bass stops immediately, confirm that its key was still held at the moment of capture.

Checkpoint: one selected bass continues while later upper notes remain short. The bracket in this example controls sostenuto, not the right damper pedal.

3. Combine the pedals only for a reason

Sostenuto can retain a selected bass while the damper pedal clears changing upper harmonies. Learn each action separately before combining them. Capture only the intended notes: any other damped keys held at the capture moment may also be retained.

Try the previous exercise with one brief damper-pedal touch during the RH line. Release the right pedal while keeping sostenuto depressed. Hear the difference between the cleared upper notes and the continuing selected bass. Then release sostenuto as well.

Choose a practical alternative

If an instrument lacks true sostenuto, possible alternatives include holding a bass with a finger, redistributing notes between hands, adjusting a pedal span, or accepting a shorter resonance. These choices can alter articulation or texture; test the musical result rather than pretending they are exact mechanical substitutes.

The left pedal can be combined with either sustaining pedal when the desired color calls for it. Its job remains distinct: changing the attack and tone of new notes, rather than selecting which old notes are retained.

A final pedal checklist

- **Right pedal:** what sound should continue, and when should it clear?
- **Partial depth:** does a smaller movement produce the intended audible change on this instrument?
- **Left pedal:** what color do I want beyond a simple change of loudness?
- **Sostenuto:** exactly which notes should be captured, and are their keys held at that moment?

Transfer: practice the intended pedal and dynamic early in a piece's preparation. Also use dry versions to diagnose finger timing and balance. The two approaches answer different questions; neither should become an excuse to postpone listening to the finished musical sound.



Part IX — Technique in the Repertoire

Bach — Finger Independence and Polyphony

1. Let the conversation change hands

The pleasure of this invention is that neither hand gets to remain the accompanist for long. Once you can play the notes, a new task begins: let the listener follow the exchange without hearing the effort of passing it from hand to hand.

Starting point: revisit the separate-line work in Chapter 41. Here we use the later passage from **Invention No. 13 in A minor, BWV 784, measures 7–8**, to make choices about balance, articulation, and phrase direction.

Bach, Invention No. 13, measures 7–8. Follow the running figure as its role changes between the hands.

Give each line a destination

Play the RH alone and sing or hum its contour. Find a destination within the two bars, then play toward it without accenting every group of four. Do the same with the LH. The two lines need not breathe or peak at the same instant.

Now combine them quietly. Listen to the line with the running sixteenths, then listen through it to the other line. If the quieter line disappears, first reduce the busy voice; simply making both louder will not clarify the conversation.

WATCH OUT · SILENCE IS STILL COUNTED

In measure 8 the LH has two eighth notes, a quarter rest, and a sixteenth rest before its next entry. The RH carries on. Keep hearing the LH's pulse during the gap so its return does not pull the other hand off course.

Try this: record one version with a clearer LH and one with a clearer RH. Which reveals the exchange most naturally? Then choose a balance that lets the musical role move between them.

Source: Allen Garvin, Mutopia 59, Bach-Gesellschaft; public-domain transcription. Notes, rests, and registers retained; layout changed. Fingering, dynamics, and articulation choices above are practice suggestions.

2. An entrance does not erase the other voices

Bach's **C-major Fugue from WTC I, BWV 846, measures 4–7**, asks a different question. Can a new voice arrive clearly while the lines already in motion remain alive? This is an advanced listening and coordination study; begin with a pair of voices if the complete texture is unfamiliar.

The image shows a musical score for measures 4 through 7 of the C-major Fugue from the Notebook for Anna Bach (BWV 846). The score is written for piano, with a right hand (RH) and left hand (LH) staff. Measures 4 and 5 show the RH and LH playing. Measure 6 shows the RH playing a long C note, and the LH playing. Measure 7 shows the RH playing, and the LH playing. The bass enters in measure 5, completing the four-voice texture.

Bach, WTC I C-major Fugue, measures 4–7. The bass enters in measure 5, completing the four-voice texture.

Rehearse the moment of arrival

1. Play the bass entrance alone. Its first C arrives on the “and” of beat 3 in measure 5, after an eighth rest within that beat.
2. Add the soprano, keeping its rhythm and held notes intact. Then try the bass with the alto, and with the tenor.
3. Restore the complete texture. Give the entrance enough presence to be recognized, then let it join the conversation rather than remaining permanently louder.

In measure 6, hear the soprano’s long C through the movement below it. The alto G tied into measure 7 continues without a new attack. Those details are part of the line even when another voice attracts your attention.

LISTEN CLOSER · FOUR VOICES, TWO HANDS

A voice is a musical line, not a hand. In this passage each hand carries more than one line, and four voices do not require four simultaneous attacks. Following the rests and ties can reveal more than counting the notes in each chord.

Source: Shay Rojansky / Andreas Scherer, Mutopia 4, public-domain transcription; underlying edition unspecified. Pitches, rhythms, rests, ties, and registers retained. No fingering or dynamics added.

3. Turn voice control into an interpretation

The earlier polyphony chapters teach how to keep several lines going. This chapter’s final step is to decide what those lines are saying. Choose one short passage you can already coordinate, and use three contrasting passes.

Pass 1: hear the structure

Play each voice in its own rhythm, including rests and held notes. Notice recurring shapes and where they reappear. Mark one entrance or turning point to bring out when the voices reunite. A pencil bracket is enough; covering the score with markings can make the important ones harder to see.

Pass 2: compare articulation

Try a gently connected version and a version with slightly more space between selected notes. Keep the tempo and dynamic similar so the comparison is useful. Which makes the motive and meter easier to hear? Avoid applying one touch to every eighth note simply because it is an eighth note.

For the G-minor Sinfonia in Chapter 40, keep the long upper notes while the middle voice moves. Its close overlaps make a good next test after the two-voice invention. Return to the printed score there rather than inventing a new duration when a hand feels busy.

Pass 3: restore the phrase

Return every note omitted during reductions. Play into the next measure in a complete edition so that the edge of our excerpt does not become a habitual stopping point. If you add pedal, listen for whether it supports resonance or erases the releases you have just learned.

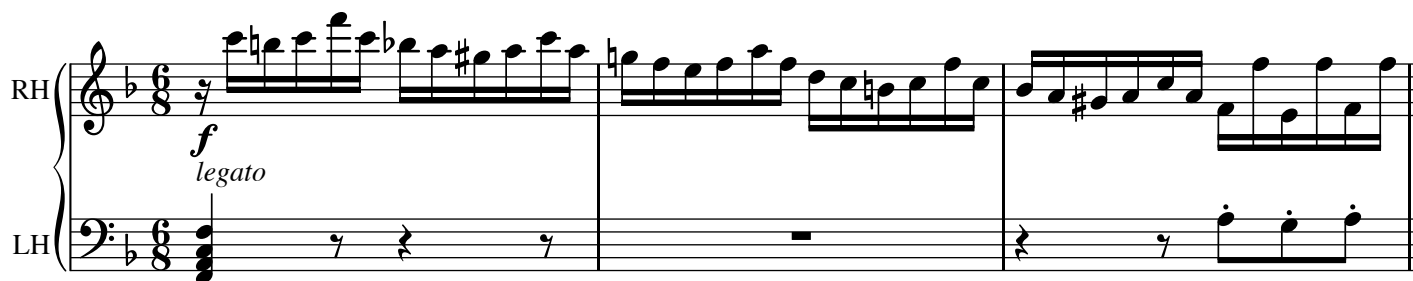
What you hear	A useful next attempt
The new entry swallows an older line	Pair those two voices; reduce the entry’s level after its arrival
Every group sounds separately accented	Play a longer contour with fewer points of emphasis
A held note disappears early	Rehearse its duration against the voice that moves underneath
Hands together lose the character of hands alone	Keep a shorter segment and restore the intended articulation immediately

Checkpoint: you can follow any one voice while playing the others, and explain why a particular entry or destination deserves attention. Independence is serving a phrase, not merely keeping fingers occupied.

Mozart — Scale Clarity and Classical Articulation

1. K.332 finale: a scale becomes a gesture

The opening of Mozart's Sonata in F major, K.332, **third movement, measures 1–3**, is a useful bridge between scales and repertoire. Its fast RH line includes descending motion, chromatic neighbors, and changes of direction. It is not simply an F-major scale placed in a sonata.



Mozart, K.332, finale opening, measures 1–3. Notes, rhythm, *f* legato, and LH staccatos follow Breitkopf & Härtel (1878); no added fingering or pedal.

Read before running

The **6/8** meter has two dotted-quarter beats. The RH begins with a sixteenth rest while the LH chord sounds. Count that initial silence accurately; do not start the hands' first notes together.

Follow the chromatic details: B $\natural$ and B $\flat$ both occur in bar 1, as does G $\sharp$. Bar 2 restores G $\natural$ and later introduces B $\natural$ in the lower register; bar 3 restores B $\flat$ and uses G $\sharp$ again. Read the actual notes instead of applying an automatic F-major pattern.

The source marks ***f* legato** at the opening. Practice that strong, connected intention slowly from the outset, without hardening every sixteenth. The LH's later staccatos require a separate release character.

Source: *Mozarts Werke*, Serie XX, Breitkopf & Härtel, 1878, plate W.A.M.332, printed page 138. This is an excerpt from that historical edition, not a claim to reproduce every detail of a modern Urtext.

2. Keep direction inside the even notes

Play the RH alone slowly and hear where each group is going. In bar 1, the upper F is a turning point; the following notes work down through chromatic neighbors. Bar 2 continues into a lower register. Bar 3 changes the texture into repeated upper notes over moving lower notes within the RH.

Build the passage in small units

1. Count the opening rest and play the first dotted-quarter beat. Include the preceding LH attack when combining hands.
2. Practice each six-note beat separately, then join two neighboring beats. Carry the pulse through the seam rather than inserting a new accent at each practice boundary.
3. Isolate the chromatic turns and choose a fingering that prepares the next notes. Mark it before increasing speed; the unmarked source excerpt deliberately leaves fingering decisions to this work.
4. Restore the LH exactly as written. Its rests matter as much as its attacks, and its staccatos should not shorten the RH's legato line.

Begin with little or no pedal

On a modern piano, first make this opening clear without damper pedal. Hear the LH release and the RH's changing pitches. If a brief pedal touch improves the opening chord's sonority, test whether it obscures the subsequent line or the written rests. Do not sustain a whole bar merely because the hand is moving quickly.

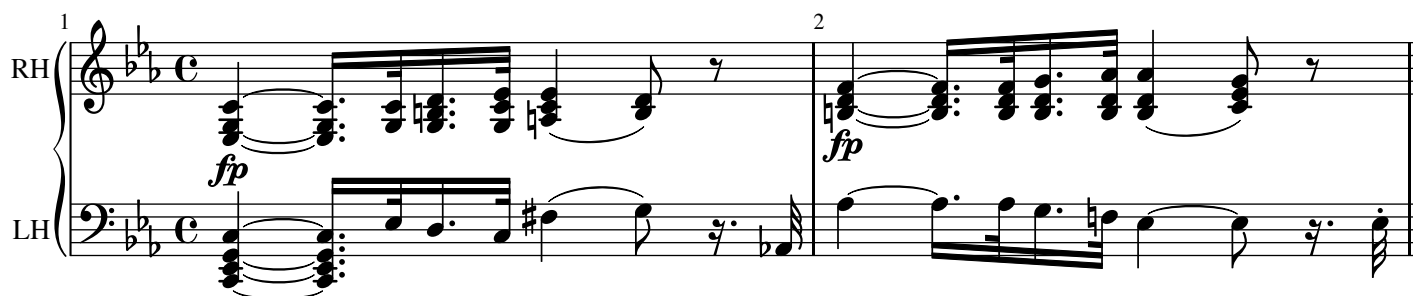
This is a passage-specific starting point, not a prohibition on pedal throughout Mozart. The pedaling chapters explain how instrument, texture, and phrase affect the choice.

Checkpoint: two broad beats remain audible, the chromatic notes are accurate, and the phrase has direction at a controlled tempo. Return to a complete edition to continue the movement beyond the excerpt.

Beethoven — Chords, Octaves, Scales, and Leaps

1. A chord can speak, then release

The opening of the **Pathétique Sonata, Op. 13, first movement**, is a useful reminder that a powerful gesture can contain carefully timed softness and silence. Start with the character of the music, even when your working tempo is very slow.



Beethoven, Op. 13, first movement, measures 1–2, Grave. The *fp* and tied durations are part of the gesture.

The opening ***fp*** asks for an immediate contrast after the strong attack. Once a piano note has sounded, you cannot reduce its volume by easing pressure on a held key. Hear its decay, control any resonance, and make the following attacks belong to the softer continuation.

Prepare the shape and its release

First place the opening chord comfortably without sounding it. Play it once, then release. Next add the tied continuation and the dotted figure, counting every subdivision. A tie continues the original sound; it is not another attack.

Practice the RH and LH endings separately. The RH leaves an eighth rest at the end of each bar, but the LH has a late thirty-second-note entry. Combine them slowly enough to preserve those different endings. Do not let the pedal turn the RH rest into an unbroken chord.

WATCH OUT · DRAMA IS NOT EXTRA TIME EVERYWHERE

The dotted rhythms already contain unequal durations. Count them before adding expressive flexibility; otherwise an unintended pause can replace the written rhythm each time the hand changes shape.

Checkpoint: the chord speaks clearly, its continuation softens, and the short LH entry arrives in time without filling the RH's rest.

Source for this chapter's excerpts: Peter Samuelson and Chris Sawyer, *Mutopia* 299, citing Schirmer (1894) and Berners (1908); public domain. Notes and displayed expression retained; layout and excerpt boundaries changed; no fingers added.

2. Keep a moving octave underneath a quiet beginning

When the **Allegro di molto e con brio** begins, the LH's octave motion creates energy beneath a much slower RH line. The opening dynamic is **p**. Learn that relationship immediately instead of treating the left hand as a loud exercise to be softened later.



Pathétique, first movement, measures 11–12. The LH alternates C2 and C3 while the RH sustains, then changes through detached intervals.

Find the movement in a small group

Play one low–high C pair with an easy release. Allow a small alternating movement of the forearm and hand; avoid holding the octave as a rigid stretch. Choose a fingering that fits comfortably—5–1 is a possible LH starting point for the two notes, not a demand to hold them down together.

Join two pairs, then four. Keep a broad **two-beat pulse**: each half-note beat contains four LH eighth notes. At a learning tempo you may count subdivisions, but hear where the larger beats lead.

Add the RH's long C, then its final interval in measure 11. Keep that last quarter short as marked without shortening the earlier long note. In measure 12, place each new RH shape calmly while the LH continues.

LISTEN CLOSER · QUIET CAN STILL BE URGENT

The score begins this fast section softly. Try preserving the octave motion's energy at **p**. It is an especially useful experiment if your hands tend to equate faster movement with louder playing.

Transfer the idea to scales

Play a familiar scale with the same two-level attention: a broad pulse and even subdivisions inside it. Then return to Beethoven. The LH is an octave pattern, not a scale, but the skill of hearing a long line through repeated small movements transfers directly.

Checkpoint: the LH keeps its pulse and level when the RH changes. If the octave motion becomes stiff, shorten the group and pause; extending the duration is not the first goal.

3. Arrive without announcing the journey

Later in the same movement, the RH passes around the LH accompaniment. The crossing can look like the main event, yet the listener should hear a coherent phrase rather than a series of difficult landings.

The musical score for measures 51-54 of the first movement of Beethoven's Pathétique. The score is written for a piano with a Right Hand (RH) and Left Hand (LH) system. Measures 51-52 show the RH crossing over the LH. Measures 53-54 show the RH playing grace notes and a slurred continuation, while the LH continues with a sustained texture. The dynamic *sf* (sforzando) is marked in measures 53 and 54.

Pathétique, first movement, measures 51–54. RH crossings surround a continuing LH texture; the grace notes and *sf* belong to the source.

Reconnect the crossing to the phrase

Use the preparation in Chapter 44 to locate the RH destinations. Then play only the LH, maintaining its held bass and repeated upper notes. Reintroduce the RH one bar at a time without changing the LH's level or timing when the hands pass.

The RH's detached notes in measures 51–52 lead to the different gesture in measures 53–54: grace notes, a sustained accented note, and a slurred continuation. Give those gestures their own character. A landing that is accurate but accidentally loud has solved only part of the problem.

Choose one problem per repetition

- **Placement:** find the destination before moving; use an easy tempo and a brief pause between attempts.
- **Balance:** keep the LH present but subordinate while the RH changes register.
- **Timing:** restore the written pulse and grace-note relationship; remove any extra practice pause.
- **Character:** keep the detached approach distinct from the later slurred gesture.

Checkpoint: you can play through the crossing with the intended dynamic and articulation. Use the complete score to connect both ends of the excerpt to their surrounding phrases.

Other sonatas offer further applications: the Moonlight finale for arpeggio motion and Op. 2 No. 1's finale for rapid position changes. Those are future repertoire choices, not extra notes to add to this week's practice plan. Begin with a passage whose component movements are already comfortable.

Schubert — Flowing Lines and Accompaniment

1. Hear the line inside the repetition

The beginning of **Erlkönig, D.328**, feels in motion before a singer has said a word. The RH repeats octaves while the LH introduces its own rising and falling figure. Our task is to hear both the persistent pulse and the changing idea within it.

Advanced application: this is a demanding accompaniment, not an endurance test or an introductory octave drill. Read and listen to the excerpt first. The preparation on the next page lets you explore the coordination without immediately repeating full octaves.

Schubert, *Erlkönig*, measures 1–3, piano introduction. The RH maintains triplet eighth-note octaves; the LH enters in measure 2.

Two kinds of motion

There are four quarter-note beats in each bar, with three RH attacks per beat. The LH rests throughout measure 1. In measure 2 it rises through six triplet eighth notes, then has two marked quarter notes; measure 3 begins with a quarter note and rests.

Play the LH alone and hear the rise and return. Then tap the RH triplets while speaking the LH rhythm. The LH's quarter notes span three RH attacks; they must not shorten to the length of a single repeated octave.

LISTEN CLOSER · THE ACCOMPANIMENT STARTS THE STORY

The singer is silent in these opening measures. The piano's repeated motion and bass figure already create a scene. Try hearing the LH as an active line rather than treating the RH octaves as the whole musical event.

Source: Ph. Raynaud, *Mutopia 1030*, C. F. Peters, Band I; public-domain transcription. Notes, forte, LH slur and wedge articulations retained. Tuplet numbers are repeated for study; no fingering or pedal added. The introduction's empty vocal staff is omitted.

2. Find an easy repetition before adding the octave

Start with a single RH G and a quiet LH bass. A modest sound is enough to hear the release and return. The following original study gives each short group room to stop; its rests are deliberate practice space, not rests added to Schubert's score.

1
RH *mp*
LH

Original preparation: three ordinary eighths and a rest in each half-bar, then triplet groups separated by quarter rests. This is not a Schubert excerpt.

Keep the groups distinct

In bar 1, each three-note group and its eighth rest occupy two beats. In bar 2, each triplet group occupies one beat and is followed by a quarter rest. Count the difference. The triplet should fit the beat evenly rather than becoming three hurried notes followed by an oversized pause.

The printed RH 3 is a simple slow-practice choice. Let the key return enough to repeat reliably. On a different instrument, the depth and timing of that return may feel different; listen to the actual attacks instead of forcing one fixed motion.

1. Play one group, stop, and check whether the hand can soften immediately.
2. Play both groups in the bar without increasing the dynamic.
3. Try the lower RH G alone in its original register, then the octave for just one triplet group if the span is comfortable.
4. Add a small piece of the original LH line before extending the RH duration.

WATCH OUT · REST DOES NOT MEAN SQUEEZE AND WAIT

A pause helps only if you release the effort as well as the sound. If the hand remains braced during every rest, return to a single note and a smaller movement. Stop for pain or persistent tension.

Checkpoint: each attack speaks, the triplet is even, and you finish a short group ready to let go. The goal is an economical return, not the maximum number of repetitions you can tolerate.

3. Support a singer without losing the pulse

The printed introduction is only the beginning of the accompaniment’s job. When learning the complete song, follow the vocal line as carefully as your own part. A technically secure repetition can still be too loud, too inflexible, or too busy to support a phrase.

Rehearse with a line in mind

First sing or hum the vocal contour while tapping the accompaniment’s broad beats. If the song is outside your vocal range, speak its rhythm or sing it in a comfortable octave. Learn where the singer begins, breathes, and finishes before deciding how the piano should respond.

Then try a reduced accompaniment: one RH pitch in the written rhythm, with the LH retained where manageable. This is a rehearsal tool. Restore the octave and chord texture gradually, checking that its added weight does not cover the line you were following.

Separate pulse from loudness

A reliable pulse can remain clear at several dynamic levels. Practice a short repeated group at *p*, then *mf*, without changing its spacing. Return to the score’s actual dynamic when playing the passage. Avoid a loud accent on every first note of a triplet unless the musical context calls for it.

The opening excerpt is marked *f*. Begin slowly with that intended character, within a comfortable sound and motion. A lighter preparation is useful for diagnosis, but should lead back to the dramatic balance of the original.

Extend by checkpoints

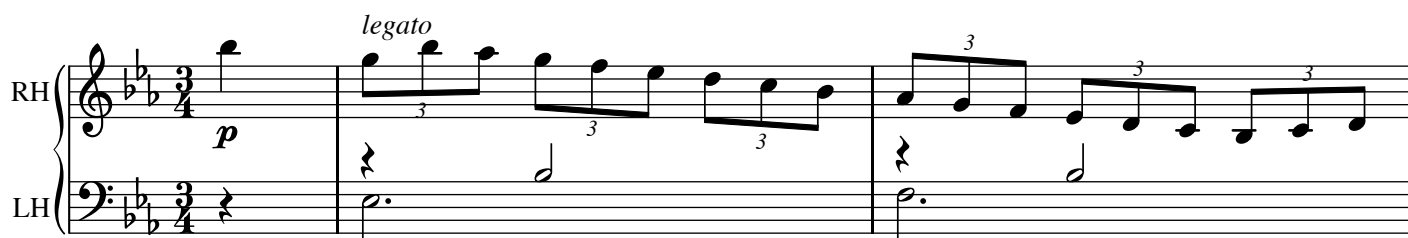
Before extending the passage	Listen or check for
One group becomes two	The second group is no harder or louder by accident
One bar becomes a short phrase	The LH still has its own direction
A reduced texture becomes full octaves	The movement remains free and attacks stay reliable
Solo practice becomes ensemble rehearsal	The singer’s entrances and words remain audible

Return to the complete edition for the changing textures and dynamics beyond the introduction. Coordinate tempo and breathing with the singer rather than treating a metronome setting as the entire interpretation.

Checkpoint: you can explain what the accompaniment contributes to a phrase, and adjust its balance while preserving the written rhythm. That is a more useful milestone than a long uninterrupted run of octaves.

4. Let a scale become a phrase

The opening of Schubert's E $\flat$ **major Impromptu, Op. 90 No. 2 (D.899)** offers a gentler kind of motion. After a single upbeat, the RH flows down through triplets while the LH holds a quiet foundation. Familiar scale material becomes a long, graceful line: an inviting reason to practice evenness with a musical destination in mind.



Schubert, Impromptu in E $\flat$ major, Op. 90 No. 2: upbeat and measures 1–2, both hands.

Hear beyond each group of three

1. Begin with the written *p*, even at a slow tempo. Choose a clear, quiet sound that lets every note speak; do not postpone the dynamic until the notes are learned.
2. Play the RH alone. Count three broad quarter-note beats per full bar, with three even notes inside each beat. The opening B $\flat$ is a quarter-note upbeat, not another triplet group.
3. Follow the descent through the barline. In measure 2, notice how the line reaches the lower B $\flat$ and turns upward to C–D. Let that turn feel like part of a continuing thought.
4. Play the LH alone, holding its dotted-half-note bass while the upper B $\flat$ enters on beat 2 and lasts for two beats. Add the RH without allowing that inner entrance to interrupt the flow.

Choose and mark a workable RH fingering before increasing speed. The opening leap and the turn at the bottom mean this is not simply an E $\flat$ scale with its usual starting finger. Try each connection in context, and use the fingering chapter's advice about looking ahead to the next position.

WATCH OUT · THREE NOTES NEED NOT MEAN THREE-NOTE PHRASES

A small accent at the start of every triplet can make the line sound bumpy. Keep the beat clear while listening across the groups. The source's *legato* asks for connection; pedal should not conceal a gap or blur the moving notes.

Checkpoint: you can hear one continuous RH line above the sustained LH, keep the triplets even through a crossing, and begin quietly without losing clarity. Continue in a complete edition to hear where the phrase leads beyond this short excerpt.

Source: Ph. Raynaud, *Mutopia* 1551, based on Breitkopf & Härtel, 1888; public domain. Notes, rhythms and initial *p* retained; *legato* placed above the RH and triplet numbers repeated for study. No fingering or pedal added. Tempo heading omitted for slow practice.

Chopin — Arpeggios, Double Notes, and Polyrhythms

1. Two even streams can share one pulse

The first moving RH passage in **Fantaisie-Impromptu, Op. 66, measures 5–6**, can look like a coordination puzzle. It becomes more inviting when you hear the broad pulse first: the two hands divide the same span differently, then meet again.

Preparation: use Chapter 33's 3-against-4 work before attempting this advanced excerpt. Learn each hand's pitches and direction separately; the ratio alone does not solve the fingering or position changes.

Chopin, *Fantaisie-Impromptu*, measures 5–6. Each quarter beat has four RH subdivision positions against three LH triplet notes; the first RH position is silent.

Each half-bar contains **eight RH sixteenth-note positions against six LH eighth-note triplets**. Divide that into two quarter-note beats and the relationship is **four against three**. The first RH position is a rest, so the hands do not attack together on the first downbeat of either printed bar.

Learn the actual route

Name the altered notes before playing. F* sounds at the same pitch as G $\flat$ on the piano, but its spelling shows its relationship to G $\sharp$; B $\sharp$ sounds as C $\flat$. Do not replace these with the ordinary notes of a remembered C $\sharp$ -minor scale.

The LH's first group rises from C $\sharp$ through its broken-chord shape and returns; its second group starts on E. Let the hand travel through the notes rather than stretching to hold the entire span. Mark a workable fingering in your full edition and test what follows each group before increasing tempo.

WATCH OUT · COUNT THE MISSING ATTACK

The RH begins after a sixteenth rest. Keep its silent first position in the four-note grid; starting the RH together with the LH changes the rhythm before the passage has begun.

Source: Guy D. Lederfein, *Mutopia* 1693, naming a Scholtz source; public domain. Notes, rhythms, slurs, and p retained; pedal omitted and tuplets shown explicitly. No fingers added.

2. Build the meeting points, then let the line flow

At first, simplify the pitches rather than guessing the rhythm. Tap RH four and LH three over one quarter-note beat. In a twelve-part counting grid, RH positions are **1, 4, 7, 10** and LH positions are **1, 5, 9**. Both return to 1 on the next beat.

For the opening beat of our excerpt, leave the RH's first position silent. The next beat resumes the usual shared attack. This explains the entrance without making every note a separate calculation forever.

Restore one layer at a time

1. Play the LH alone in even groups, hearing two broad half-note beats in the bar.
2. Add the RH beat points only, keeping the initial rest. This is a temporary reduction, not an alternative rhythm for the final passage.
3. Practice one complete quarter-note beat with both hands, then include the first note of the next beat. Do not squeeze the last subdivision to reach that landing.
4. Join neighboring beats. Keep the same evenness when you stop consciously reciting the twelve-part grid.
5. Restore a gentle RH phrase over a quieter LH. The excerpt begins p; choose that sound from the start of full-texture practice.

Give the broken chord a direction

Play the LH group once with equal weight on every note. Then try a lighter interior and a clear sense of its bass and destination. Listen to how the second version leaves more room for the RH, without introducing gaps or rushed notes.

Pedal was omitted from our study excerpt to keep the coordination visible. Begin dry, then return to your complete edition and make a harmonic pedal plan. Pedal can support resonance, but it cannot make displaced attacks occur together.

LISTEN CLOSER · THE APPARENT COMPLEXITY HAS A REGULAR STRUCTURE

Across a half-bar the hands have eight and six positions; both counts share a factor of two. The smaller four-against-three pattern is already familiar from Chapter 33. The new challenge is carrying it through changing pitches and a phrase.

Checkpoint: either hand remains even while you attend to the other, the opening silence remains accurate, and the next beat arrives without a last-moment correction. Increase speed only while those relationships remain clear.

3. Prepare double notes as two lines

Chopin's double-note studies ask for more than moving two fingers together. Before approaching long passages in thirds or sixths, hear the two lines separately and decide which should lead. The original preparations below revisit that work in a compact form; they are **not quotations from Chopin**.

Original preparation in thirds, revisited from Chapter 26. Preserve the upper line while placing the lower notes gently.

Play the upper line alone with its intended shape. Add the lower notes more softly. Then reverse the balance as a listening experiment. Both notes should begin together, even when their dynamic levels differ.

Original sixths preparation from Chapter 27. Its changing finger pairs draw on Hanon No. 49; this is not a fingering prescription for a Chopin étude.

Carry the principle into the repertoire

For **Étude Op. 25 No. 6** (thirds) or **Op. 25 No. 8** (sixths), choose only a short passage with a teacher or a reliable complete edition. Read the actual intervals, accidentals, and fingering; do not transplant this C-major exercise's finger pairs into a chromatic étude.

First play each component line. Then join a comfortable pair or two, allowing release and lateral movement where needed. Add the accompaniment only after the double notes have a dependable route. If a span is uncomfortable, retain the separate-line version rather than forcing it.

WATCH OUT · A QUIET LOWER NOTE IS STILL A NOTE

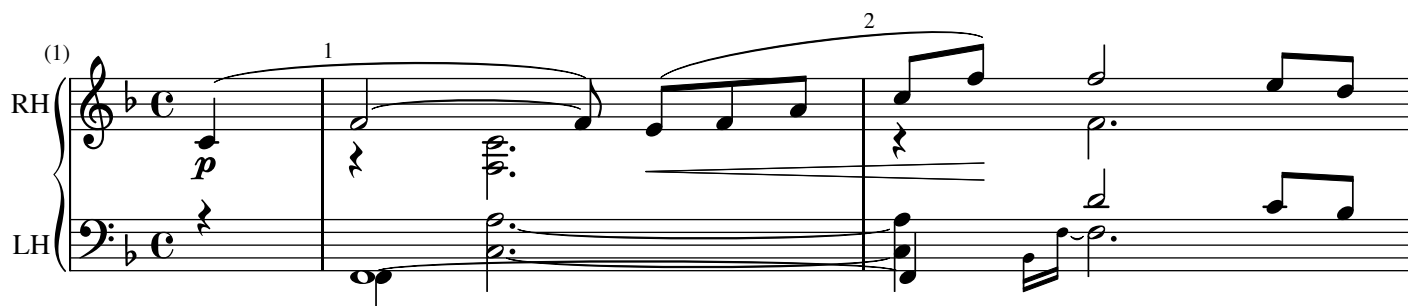
In voicing a pair, do not let the quieter finger arrive late or fail to sound. Listen for one coordinated attack with two different levels, not a tiny rolled interval.

Checkpoint: the chosen line sings through the pairs, attacks stay together, and the movement remains comfortable. Full étude excerpts and passage-specific fingerings will need a separate advanced treatment; these preparations establish the listening and coordination to bring to them.

Schumann — Voicing

1. Let the melody outlast the moving fingers

A quiet melody can feel wonderfully spacious when its accompaniment leaves it room. The opening of **Träumerei, Op. 15 No. 7**, gives us a small but searching test: keep hearing the long melodic notes while other fingers change underneath them.



Schumann, *Träumerei*, pickup and measures 1–2. Follow the upper melody through its tied F while the supporting voices enter below it.

The opening RH C is a quarter-note pickup. In the first full bar, the melodic F lasts a half note tied to an eighth before moving to E–F–A. The RH’s lower voice enters on beat 2 and lasts three beats. That entrance should enrich the sound without restarting or covering the F above it.

Listen to one note through another attack

Play the melody alone from the pickup. Sing its contour and hear its destination. Next add just the RH lower-voice entrance. Listen across that new attack: can you still follow the F as a continuing melodic note?

Rehearse the LH separately, including the bass tie into measure 2 and the small grace-note figure. Then combine one bar at a time. Choose a hand distribution and fingering that preserve the durations without strain. The printed staff is a reading aid, not a reason to force an uncomfortable reach.

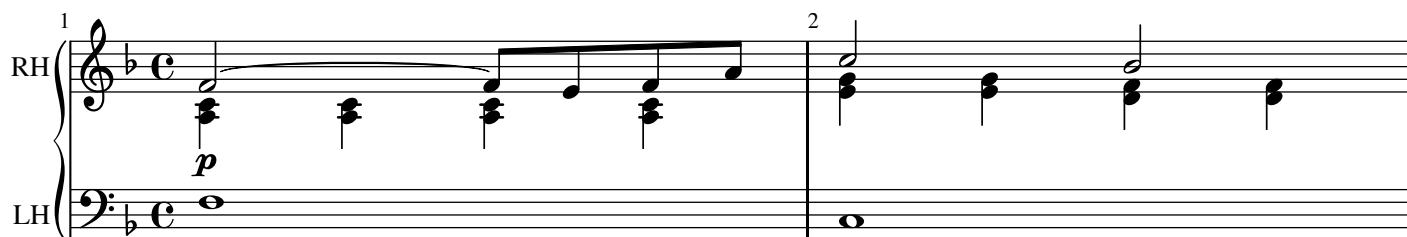
WATCH OUT · A LONG NOTE CANNOT BE TURNED UP LATER

Once the melodic F has sounded, holding it harder will not make it louder. Give it an appropriate initial sound and keep the later supporting attacks light enough for its decay to remain audible.

Source: Ying-Chun Liu, Mutopia 504, *Leichte Stucke* (1900); public domain. Pitches, rhythms, grace notes, internal ties, initial *p*, and opening crescendo retained. Fingering and pedal omitted; phrase slurs and the lower RH tie continuing beyond this excerpt are omitted at the boundary. Consult a complete edition for the continuation.

2. Make room beneath a sustained line

This original study simplifies the texture while retaining the listening problem. Its repeated inner notes deliberately test whether a long upper note remains perceptible. It is a preparation for voicing, not a reduction of Schumann's exact accompaniment.



Original F-major voicing study: sustain the upper line while the RH supporting notes repeat. The LH provides a quiet bass.

Start with a contrast you can hear

Play the upper line alone. Then add the RH support at a clearly softer level. Finally add the bass. Aim for a natural melody over a light background; you do not need an exaggerated or percussive top note.

Use only a comfortable hand position. Choose fingers for the supporting pair and melody together, and release or reposition between unattached notes where needed. Do not hold a repeated supporting chord past its written duration simply to avoid moving.

Try two versions: one with equal weight throughout, then one with the melody clearly in front. Record them if possible. The second should sound more intelligible, not merely louder.

Return to Träumerei

The source passage has held inner notes rather than this exercise's repeated accompaniment. Restore those exact durations. In measure 2, hear the melody's rise and the lower voices' continuing movement as parts of one phrase.

Pedal may support the resonance, but first check which notes are held by fingers and which are released. Add a small amount by ear, listening for clarity when the harmony or moving notes change. Neither blanket pedal nor a completely dry sound should be an automatic answer.

LISTEN CLOSER · QUIET MUSIC EXPOSES BALANCE

Try listening from several feet away, or to a recording, rather than only from the bench. A melody that feels prominent under one finger can still disappear behind a fresh inner-voice attack.

Checkpoint: the inner notes are audible and coordinated, yet the melody remains the line you naturally follow. You can soften the support without interrupting its rhythm.

3. Shape the phrase, not just the top note

Voicing becomes musical when the melody has somewhere to go. Once the opening texture is comfortable, stop checking every vertical chord in isolation and listen across the whole fragment.

Make three short recordings

Melody alone: play with the timing and dynamic shape you want. Do not save expression for the complete texture; this is your reference for how the phrase should sound.

Melody and bass: preserve that shape while hearing the harmonic support. Notice whether a bass arrival makes you accent the melody accidentally or hold up the pulse.

Full texture: add the inner voices. Compare the recording with the first version. The melody need not be identical in every detail, but its direction should remain recognizable.

Where the attention moves

An inner voice may briefly deserve more attention, especially when it moves while the melody is held. Bring out that movement enough to make sense of the texture, then let it return to its supporting role. “Melody louder” is a starting exercise, not a permanent hierarchy for every note in the piece.

If you cannot hear the inner line, play it alone with the bass. Give it its own phrase, then restore the melody. This often clarifies the whole texture more effectively than repeatedly trying to press the top finger harder.

Keep a short practice record

Question	A useful observation
Where is the melodic destination?	Name the note or phrase point, not only a bar number
Which new attack covers a held note?	Identify the supporting voice and soften that entrance
Where does a voice continue through a tie?	Preserve the duration without reattacking
What does the pedal contribute?	State the resonance you want and the blur you want to avoid

Our excerpt stops inside an ongoing phrase. Continue in the complete score before settling its final timing or pedal. The aim is a singing line that remains convincing through the texture, not a beautiful two-bar fragment with an artificial ending.

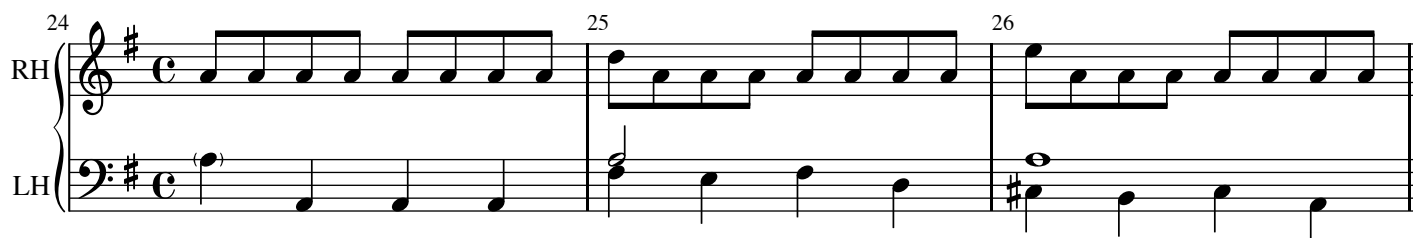
Checkpoint: you can retain the melodic direction from your first recording while playing all the voices, and explain the one balance change that most improved the result.

Scarlatti — Repeated Notes and Hand Crossing

1. Let repeated notes speak

A repeated note can have direction even when its pitch stays put. In **Sonata in G major, K.455, measures 24–26**, Scarlatti makes a string of A's into a lively accompaniment to changing upper notes. Listen for the small change of shape at each bar, rather than eight identical taps.

Preparation: comfortable slow repeated notes and a free release after each attack. This is an advanced repertoire excerpt; the work's Allegro is a destination, not a starting tempo. Begin without pedal.



Scarlatti, K.455, measures 24–26. The RH repeats A4; D5 and E5 begin the next two bars. The parenthesized LH A3 is retained from the source.

Give the key time to return

1. Play the RH A's alone, slowly, with finger 2. Let the key rise enough to sound again without lifting the whole arm for every note.
2. Try **3–2–1–3–2–1–3–2** over the eight A's of measure 24. This is an editorial experiment, not a fingering printed in the source. Compare it with alternating 3–2.
3. For measures 25–26, try finger 5 on the first, higher note, then **3–2–1–3–2–1–2** on the seven A's. Test the return to 5 at the next bar before choosing this route.
4. Add the LH at a quieter level. Preserve the held upper A in its inner texture rather than repeating it with every lower note.

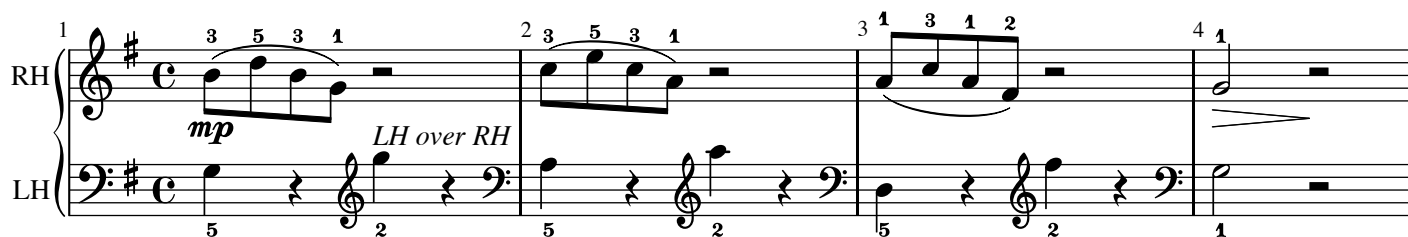
WATCH OUT · THREE FINGERS DO NOT CHANGE THE METER

A 3–2–1 fingering cycle must not turn the eighth notes into audible groups of three. Count the four quarter-note beats and listen across the finger changes.

Source: Knute Snortum, Mutopia 2104, citing the Italian Digital Library; CC BY-SA 4.0. This re-engraved excerpt retains notes and rhythm; spacing is adapted. The adapted score remains CC BY-SA 4.0.

2. Give a crossing somewhere to land

Hand crossing needs a clear route, not a theatrical swing. In this **original preparation**, the RH finishes its little figure before the LH passes over it to a bright upper note. The rests make room to travel and return. This is not another passage from K.455.



Original crossing preparation in G major. The LH alternates a bass note with a note above the RH; clefs show the actual registers. Fingerings and dynamics are editorial.

Practice the journey in three stages

First play only the LH bass and upper destinations, with a pause before each. Look toward the next key while the hand is still traveling. Keep the unused hand out of the way, then place the RH in its playing position and trace the same path above it without playing.

Next play the RH alone. Its first four eighth notes occupy beats 1–2; the LH upper note belongs on **beat 3**. Let the RH release at the end of beat 2, keeping the hand near the keyboard rather than pulling it dramatically away.

Finally join the hands. Keep the first LH bass lighter than the upper answering note. Return during beat 4 so the next bass arrives on time. The last bar settles on G and gives both hands a rest.

LISTEN CLOSER · DISTANCE CAN CREATE DIALOGUE

The bass statement and high answer sound like different characters. A well-timed arrival makes that exchange convincing; simply playing the upper note louder does not.

Bring it back to Scarlatti

Use the repeated-note excerpt to refine release and the preparation to refine travel. In a complete sonata with crossing passages, mark which hand goes over, where it lands, and when the other hand can release. Do not infer a crossing merely because the two staves overlap in pitch.

Checkpoint: four slow repetitions keep the pulse, the RH does not duck abruptly, and the upper LH note speaks without a hard landing. If the crossing feels cramped, widen the pause first; speed should follow a dependable route.

Liszt — Octaves, Leaps, and Large Gestures

1. A large gesture can begin slowly

Liszt's broad textures invite us to think beyond individual keys. Before tackling rapid octave passages, learn to arrive at a new position with a clear sound and a hand that can release. A slow passage makes that work easier to hear.

In the **Second Ballade, S.171, measures 20–21**, a pause opens into *Lento assai*. The LH moves from C $\sharp$ 3 to a low F $\sharp$ octave, then carries its octave line upward. The RH holds a different rhythm above it: the two hands need not make every change together.



Liszt, Second Ballade, measures 20–21. The low LH octaves and sustained RH chords establish a broad gesture. The final slur is closed for this excerpt.

Preparation: comfortable octave placement and the ability to release between positions. This is a short look into advanced repertoire, not a claim that the complete Ballade is an intermediate assignment.

Reduce before you stretch

Play only the LH upper notes first: C $\sharp$ 3, F $\sharp$ 2, G2, A2, B2. Keep the half rest's fermata in the RH and the held C $\sharp$'s fermata in the LH together; after the pause, preserve the quarter rest before the F $\sharp$ octave enters.

Then add the lower octave notes only if the span is comfortable. Try 5–1 for each octave at this slow tempo, releasing between changes. The low register can grow heavy very quickly: listen for a moving line rather than a sequence of impacts.

WATCH OUT · THE RH SPANS MORE THAN AN OCTAVE

The first RH chord reaches A $\sharp$ 3–C $\sharp$ 5, a tenth. Do not force it. For this preparation, omit its lowest note and play the upper pair; that is a deliberate reduction of the printed score. A full performance needs an individually planned redistribution or roll.

Source: Vassily Checkin, Mutopia 236, public-domain transcription; underlying edition unspecified. Pitch, rhythm and fermatas retained; layout adapted. No source fingering is claimed.

2. Rehearse arrival, then connect the phrase

The original study below uses a gentler harmonic setting to practice the same broad coordination. Its rests belong to the music: use them to release the LH octave and prepare the next place. The RH should sound like one phrase above that movement.

Original octave-and-chord preparation in G major. LH rests provide travel time; the RH sustains through the changes. Use single LH upper notes if octaves are uncomfortable.

Build a reliable landing

1. Play the LH upper notes alone. Say the next destination before moving. Begin with generous pauses between bars, then restore the printed pulse.
2. Add the lower octave note where comfortable. Place both notes together at a modest dynamic; do not squeeze the octave while moving through the air.
3. Play the RH alone, shaping each two-bar phrase. Its half notes should remain alive while the LH has a rest.
4. Join the hands without pedal. Keep the LH quieter than the RH, especially when returning to the low G.
5. Try a small amount of pedal, clearing on each change of harmony. Preserve the LH rests as releases of the hand even if some resonance continues.

Bigger is not automatically louder

Repeat once at *p* and once at *mf*. Use the same destinations and basic route; change the sound without enlarging every gesture. A movement that feels manageable softly is a better starting point than a loud leap rescued by pedal.

LISTEN CLOSER · THE SUSTAINED HAND KEEPS THE PHRASE MOVING

While the LH travels, the ear can follow the RH's held notes toward the next harmony. Think of carrying that sound forward rather than waiting for the next bass event.

Checkpoint: the octave notes arrive together, the RH is not shortened by the LH rests, and the fourth bar sounds like an arrival. Return to the Ballade's two bars with the same listening priorities. Fast octave chains and larger leaps require a separate gradual progression; this preparation establishes placement and balance first.

Debussy — Pedaling, Voicing, and Color

1. Quiet does not mean indistinct

The opening of **Clair de lune**, **measures 1–2**, asks for a sound that is soft yet present. The upper notes need a gentle outline, and the held harmony needs enough space to resonate without swallowing that outline. Start with the printed *pp* while learning the notes; color is part of the passage from the beginning.

Debussy, *Clair de lune*, measures 1–2. Both staves use treble clef. The RH's initial low pair is retained on the upper staff here rather than cross-staff; the sounding pitches are unchanged.

Preparation: comfortable quiet chord attacks and control of one line within a pair. Count **three dotted-quarter beats** per bar. The opening eighth rest is part of the phrase, not an invitation to enter whenever convenient.

Find the line inside the pairs

Play the top notes of the RH alone, preserving the ties. Then add the lower notes more softly. In the first bar, the low F4–A4 pair coincides with the LH's pair; let the hands share that register without competing for the same keys. You may let the LH sound those two pitches alone for this practice version.

At the start of measure 2, the tied RH D4–F4 pair continues across the barline: do not re-strike it. The changing harmony below should be audible without an extra accent from above. B $\flat$ in the LH sounds like A $\sharp$, but its spelling belongs to the written harmony.

WATCH OUT · SOFT PEDAL AND SUSTAINING PEDAL DO DIFFERENT JOBS

The source's *con sordina* asks for a muted color; on a modern grand, explore the una-corda pedal. It does not mean holding the right pedal continuously. Compare the result on your own instrument.

Source: Keith OHara, *Mutopia* 1778, after E. Fromont (1905), public domain. Notes, durations, internal ties, *pp* and *con sordina* retained; cross-staff layout simplified and continuation beyond measure 2 omitted.

2. Choose resonance by listening

This original four-bar phrase separates balance from the more intricate opening of Debussy's piece. Each bar has one clear harmony, making it easier to hear what the sustaining pedal adds and what it obscures.

The musical score shows a four-bar phrase in F major, 3/4 time. The Right Hand (RH) part is written in treble clef and the Left Hand (LH) part is written in bass clef. The RH part has a long sustain pedal line underneath it. The LH part has a single harmonic line. The score is marked with fingerings (1-5) and dynamics (p). The first bar has a half note F4 and a half note C5. The second bar has a half note G4 and a half note E4. The third bar has a half note A4 and a half note D4. The fourth bar has a half note B4 and a half note F4. The RH part has a long sustain pedal line underneath it. The LH part has a single harmonic line. The score is marked with fingerings (1-5) and dynamics (p).

Original color study in F major. Bring out the upper RH line over a quieter lower note and LH harmony. The last chord settles rather than disappearing abruptly.

Make three versions

Without pedal: connect the upper line as comfortably as you can. Accept a small gap where necessary rather than distorting the hand to hold every note. Keep both notes of each RH pair aligned at the attack.

With a clean change at each bar: play the new harmony, then release and depress the right pedal promptly to catch it. Listen through the change. A brief overlap can connect the sound; a slow release may leave the previous bass muddy.

With less pedal depth: where the instrument responds to it, experiment with a shallower depression. Compare the bass and the moving upper line. The useful depth depends on the piano and room, not on a universal fraction of the pedal's travel.

Return to the opening

In *Clair de lune*, begin by clearing for the changed LH harmony at measure 2. Listen to the moving RH pairs within that harmony and adjust the pedal if their sound accumulates. This is a starting experiment, not an authoritative pedal edition; the short source excerpt prints no sustaining-pedal plan.

LISTEN CLOSER · RESONANCE HAS A FOREGROUND

After playing a phrase, ask which note you could sing back. If the melody disappeared into an attractive cloud, lighten the accompaniment before adding more pedal.

Checkpoint: the upper line remains identifiable at pp, ties are sustained without extra attacks, and harmonic changes sound intentional. Record both dry and pedaled versions from a little distance. Keep the version that lets the phrase speak most clearly, not simply the one with the longest resonance.



Part X — Mixed Technical Studies

Mixed Study 1 — Scales + Chords

1. A line finds its landing

A scale becomes more musical when it has somewhere to go. This **original eight-bar study in C major** turns running eighth notes into chordal arrivals. The first four bars ask a question on G; the answering four return to C. Think in those two phrases rather than treating every change of texture as a new exercise.

Preparation: an even C-major scale, comfortable RH thirds, and quiet LH triads. Begin around quarter note = 48–60, or slower if the landing interrupts the pulse. The tempo is a starting suggestion, not a requirement.

Mixed Study 1, measures 1–4: an ascending line opens into paired notes; the phrase pauses on the dominant. Original music with editorial fingering and dynamics.

Prepare the chord before it arrives

Play the first bar and stop silently over the next pair, G5–C6. Notice that the top C remains in the same place while the lower finger moves. Repeat with no pause, keeping beat 1 of the second bar in time. The pair should sound like a natural continuation of the line.

In measure 3, the RH turns downward. Its F–E transition uses **1–3**; allow the thumb crossing without pressing harder on the first note after it. Let the line lead into the dominant chord in measure 4, then honor the half rest.

Keep the LH companionable

Play the LH alone, listening for even chord attacks. It should support the shape without becoming louder whenever the RH gets busier. Add only the RH's first note of each beat, then restore the intervening eighths.

WATCH OUT · ARRIVAL IS NOT A COLLISION

A chord has more notes than a single-note line, so it may sound louder even with a similar touch. Aim for the intended phrase dynamic rather than giving the landing an extra push.

2. Answer the phrase

Begin the second half with the same basic pulse. Its opening rises from E before turning back toward D; the chord sequence then leads through a brief D-major color into G and home to C. The F $\sharp$ in measure 7 belongs to that D-major harmony; F $\natural$ later in the bar changes the color toward G7.

Mixed Study 1, measures 5–8. Join directly after measure 4's rest. The final tonic chord completes the eight-bar phrase.

Join melody and harmony

1. Play measures 6–8 as slow chord changes in the LH while singing the RH's main notes. Hear the move toward G and its resolution to C.
2. Play the RH seventh bar alone. Read both **F $\sharp$** and **F $\natural$** ; do not let the first accidental carry through the whole bar in your memory.
3. Practice the last two RH eighth notes and the final chord as a small unit. Use the printed 3–2 into 1–3–5 as a starting fingering, adjusting if your hand needs another comfortable route.
4. Join both four-bar phrases. Keep the rest in measure 4 inside the continuing pulse, so the answer does not begin late.

Make two interpretations

First use a modest swell through the first scale, relaxing into the following pairs. Then try a quieter beginning with the high C as the phrase's brightest point. In both versions keep the final chord at p. Neither version should require faster notes to create excitement.

Begin without pedal. Once the attacks and releases are clear, try light pedal on the chordal portions, clearing with the harmony. Avoid carrying it across the whole scale: the running line should remain intelligible.

LISTEN CLOSER · A REST CAN KEEP SPEAKING

Measure 4's silence is the breath before the answer. Hear the pulse and the coming E during the rest instead of resetting your attention.

Checkpoint: play the complete study twice at a comfortable tempo with a quiet LH, deliberate accidental changes, and a settled ending. Then transfer the same preparation to a repertoire passage that changes from a scale into a chord. All music and fingering in this study are original editorial material.

Mixed Study 2 — Arpeggios + Leaps

1. Keep a waltz moving underneath

Here the RH traces a broken-chord melody while the LH moves from a bass note to lighter upper chords. This **original eight-bar study in F major** combines arpeggio shapes with measured travel. Its waltz character gives the coordination a purpose: one grounded beat, followed by two buoyant replies.

Preparation: comfortable one-octave broken chords and slow bass-to-chord placement. Start around quarter note = 54–66 if that leaves time to travel easily. Use the printed fingerings as a starting route, not a reason to hold a rigid hand shape.

Musical score for Mixed Study 2, measures 1–4. The score is in 3/4 time, F major. The Right Hand (RH) plays a broken-chord melody with fingerings: 1 2 3 5 3 2, 2 1 2 4 5 4 2, 3 1 2 4 5 4 2, 4 1 4 2. The Left Hand (LH) plays chords with fingerings: 5 1 3, 5 1 2, 5 1 3, 5 1 2. The tempo marking 'mp' is present.

Mixed Study 2, measures 1–4. RH broken chords travel up and back; LH chords on beats 2–3 remain lighter than the bass. Original music and editorial fingerings.

Release the span

Play the RH first bar alone. The notes cover an octave, but the hand does not need to hold that octave open. Move through F–A–C toward the upper F, then return. The apex should belong to the phrase, not sound like an involuntary accent from finger 5.

For the LH, play only beat 1 and beat 2. Release the bass before traveling, and find the chord shape in time for its attack. Add beat 3 without bouncing higher into the air. The return to the next bass is another journey; give it equal attention.

Put the two routes together

Play the LH with only the first RH note of each beat. Once the arrivals line up, restore the RH's second eighth note on each beat. Keep the LH detached enough to hear its release; use no pedal at this stage.

WATCH OUT · THE LEAP MUST FIT THE BEAT

Do not shorten the bass to the point of a jab, or delay beat 2 to finish traveling. At a slower tempo, find a release and motion that leave both attacks in their proper places.

First checkpoint: the LH reaches its chord without searching, the RH apex stays gentle, and the fourth bar's quarter notes keep the same pulse as the preceding eighths.

2. Let the bass shape the return

The second phrase begins on B $\flat$ harmony, moves through an F-major chord over A in the bass, and returns through C7 to F. Listen for **B $\flat$ – A – C – F** underneath the RH. That small bass story is more useful than thinking only “jump down, jump up.”

Mixed Study 2, measures 5–8. The second phrase closes on F; retain a light accompaniment through the larger shapes.

Practice the changes, not just the comfortable bars

1. Join the last beat of measure 4 to the first two beats of measure 5. Look toward the LH B $\flat$ bass before the hand arrives.
2. Practice measures 5–6 slowly. The LH shifts down a step in both its bass and chord; avoid making that easy change louder than the previous leap.
3. Check measure 7 separately. The RH uses G–B $\flat$ – C–E and returns through C–B $\flat$. It is a seventh-chord shape, not the opening F-major triad moved to another starting key.
4. Land on the final chord with both hands together. Let its dotted half note last all three beats.

Choose the sound from the beginning

Keep the opening at *mp* and the final chord at *p*. Play the whole study once without pedal. Then try catching each bass and its harmony with a light pedal, clearing at the next bar. Compare whether the accompaniment still feels buoyant; if it grows thick, use less pedal or return to the dry version.

LISTEN CLOSER · A BASS NOTE CAN BE A DESTINATION

The quiet upper chords are not the only important arrivals. A well-placed next bass gives the following bar its direction, especially in the descending B $\flat$ – A motion.

Checkpoint: the melody is easier to hear than the accompaniment, no leap changes the tempo, and the last bar settles without a sudden loud attack. For a further challenge, transpose only the first two bars to G major, writing the new pitches and checking fingerings first. Keep the same balance and travel time. This is original teaching material, not an excerpt from a historical composer.

Mixed Study 3 — Thirds + Trills

1. Change texture without changing the pulse

This **original eight-bar study in G major** alternates short lines in thirds with a single-note trill figure. The thirds make a compact melodic statement; the quicker alternation answers it. The aim is to keep the same gentle character when the fingers suddenly have more to do.

Preparation: comfortable pairs of thirds and an even 2–3 alternation. Begin around quarter note = 40–48, or slower. The trill is written out in sixteenths so its exact length and ending are clear; it is not an instruction to play as fast as possible.

The musical score for Mixed Study 3, measures 1–4, is shown. It is in G major (one sharp) and 3/4 time. The Right Hand (RH) plays chords in measures 1 and 3, and a trill figure in measure 2. The Left Hand (LH) plays single notes throughout. Fingerings are indicated by numbers 1–5 above or below notes. The tempo/mood is marked 'mp'.

Mixed Study 3, measures 1–4. The written alternation occupies the first two beats of measure 2; its final eighth notes lead back toward the thirds.

Hear two lines, then one ornament

Play only the upper notes of the thirds in measures 1 and 3. Shape B–C–D as a little rising line. Add the lower notes more quietly, using **1–3, 2–4, 3–5**. Release between pairs if that is more comfortable than finger legato; preserve the phrase through the sound and timing.

In measure 2, alternate C5 and D5 with 2–3 for exactly two quarter-note beats. Then play B4–A4 as the two eighth notes of beat 3. Practice that ending on its own: a fluent alternation is useful only if you can leave it on time.

Add a quiet foundation

The LH has one note per beat. Keep those notes even while the RH changes from quarters to sixteenths. Try counting the LH beats aloud; if the count hesitates during the trill, slow down before repeating.

WATCH OUT · THIS IS A MEASURED TRILL FIGURE

The written pattern starts on its lower note and has a fixed number of attacks. It is an original exercise, not a rule for interpreting every historical trill sign. Return to the ornaments chapter for period and contextual conventions.

First checkpoint: the thirds begin together, the upper line remains clear, and the trill ends on beat 3 without borrowing time from the next bar.

2. Keep the ending as easy as the beginning

The answering phrase starts higher, then comes down toward G. Its second trill figure alternates B₄–C₅. These are a semitone apart, unlike the whole-tone C–D pair in the first phrase; notice how the spacing changes without changing your pulse.

Musical score for Mixed Study 3, measures 5–8. The score is in 3/4 time with a key signature of one sharp (F#). The right hand (RH) plays a descending trill figure in measures 5, 6, and 7, ending with a dotted half note in measure 8. The left hand (LH) plays a steady quarter-note accompaniment. Dynamics include *mp* (mezzo-piano) and *p* (piano). Fingerings are indicated by numbers 1–5 above or below notes.

Mixed Study 3, measures 5–8. Descending thirds and a second measured trill lead to a quiet G-major close.

Prepare the handoffs

1. Play measure 5's upper line E–D–C alone, then restore the lower notes. Use the descending pairs **3–5**, **2–4**, **1–3** as a comfortable starting pattern.
2. Play the last third of measure 5 followed by the first two notes of measure 6. Release the pair into the single-note alternation; do not keep an unused finger pressing or stretched away.
3. Practice the end of measure 6 into measure 7. The A–G eighth notes finish the trill figure; the following A–C third begins a new bar.
4. Shape measure 7's upper C–B–A toward the final B in the tonic third. Keep the last chord at *p* and hold it for the full dotted half note.

Change the listening task

On one repetition, attend to the upper voice in the thirds. On the next, listen for steady LH quarters beneath the alternations. Finally hear the whole eight-bar phrase, with the rest in measure 4 as its breath. A good technical repetition should still have a beginning, an answer, and an ending.

LISTEN CLOSER · QUICKER NOTES NEED NOT SOUND MORE URGENT

The trill has four attacks per beat, but the harmony and LH continue at their original pace. Let that slower layer keep the music calm.

Checkpoint: you can play both phrases without a tempo change at either trill, and without making the lower notes of the thirds dominant. Stop and release between repetitions rather than drilling the alternation to fatigue. Once dependable, try the entire study a little quieter before making it faster. All notes, fingerings and dynamics here are original editorial material.

Mixed Study 4 — Octaves + Repeated Chords

Chapter overview

Purpose: This study will alternate octave gestures and repeated chords in short phrases. The emphasis will be on controlled attacks and releases, with sufficient preparation before extending the repetitions.

Preparation: Prepare the component skills in their individual chapters before combining them.

Planned development

- Wrist motion
- Rebound
- Endurance

Musical connection

These will be original studies, not attributed repertoire excerpts. Each will include a short note explaining how its musical shape motivates the technical work.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Mixed Study 5 — Polyrhythm + Voicing

Chapter overview

Purpose: This study will place a leading line within a cross-rhythm. Correct alignment is the beginning; the musical task is to keep the melody recognizable while the supporting pattern maintains its own rhythm.

Preparation: Prepare the component skills in their individual chapters before combining them.

Planned development

- 2:3
- 3:4
- Melody projection
- Accompaniment control

Musical connection

These will be original studies, not attributed repertoire excerpts. Each will include a short note explaining how its musical shape motivates the technical work.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Mixed Study 6 — Advanced Coordination

Chapter overview

Purpose: This study will combine contrasting articulation, rhythm, and register changes. Each layer will have a separate preparation so that the assembled texture does not become a test of guessing several demands at once.

Preparation: Prepare the component skills in their individual chapters before combining them.

Planned development

- Independent articulation
- Cross-rhythm
- Leaps
- Dynamic layering

Musical connection

These will be original studies, not attributed repertoire excerpts. Each will include a short note explaining how its musical shape motivates the technical work.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Capstone Study — Multiple Techniques Combined

Chapter overview

Purpose: The capstone will combine several skills in a short, shaped piece. Its sections will remain traceable to earlier preparations, and the final goal will be a coherent performance rather than a catalogue of technical effects.

Preparation: Prepare the component skills in their individual chapters before combining them.

Planned development

- Scales
- Arpeggios
- Chords
- Double notes
- Polyrhythm
- Leaps
- Voicing
- Pedal

Musical connection

These will be original studies, not attributed repertoire excerpts. Each will include a short note explaining how its musical shape motivates the technical work.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.



A 20-minute practice session

Chapter overview

Purpose: A short daily session works best when each block has one audible goal. Use the included routine as a flexible starting point, and choose material that can be practiced attentively within the available time.

Preparation: Choose exercises already comfortable enough to evaluate; a routine is not a requirement to attempt every advanced topic.

Planned development

- 5 min scales
- 5 min arpeggios / chords
- 5 min coordination / Hanon
- 5 min rotating specialty technique

Musical connection

Apply one result to a small passage in current repertoire and record what changed before planning the next session.

In this review edition: selected material follows. The development list describes the full intended chapter; unengraved exercises and unverified repertoire candidates remain planned.

Choose a level at which you can listen and adjust. The times are limits for focused work, not instructions to repeat continuously. Include brief releases between attempts.

Time	Material	One goal
0–5 minutes	C major; then G or F	Keep the crossing note even. Start with one octave; use two only if secure.
5–9 minutes	Hanon No. 1 excerpts	Two minutes on each direction, one hand first. Connect measures without restarting the pulse.
9–13 minutes	Two against three	Tap the grid, play repeated notes, then try the moving pattern if steady.
13–18 minutes	Melody study or held-voice drill	Preserve one clearly audible voice with a quieter supporting layer.
18–20 minutes	One chosen passage	Record a short attempt, listen, and note one next step.

Choose less when necessary

If a task is new, spend its whole block on the first step. Four minutes of accurate tapping can be more useful than rushing into the moving polyrhythm. If you have ten minutes, choose the scale and one other category rather than compressing every task.

Write a useful note

Replace “practice scales more” with an observation: “F-major RH: B ♭ to C becomes louder; start there tomorrow.” Record what happened and what you will try, not just a speed or repetition total.

Rotate tomorrow

Change C/G/F, swap the leading hand in the balance work, or choose a different Hanon direction first. Keep enough familiar material to compare the sound from one session to the next.

Finish with: one thing that improved, one unresolved spot, and one achievable starting task for the next session.

30-Minute Daily Routine

Chapter overview

Purpose: Thirty minutes allows more room for a second technical family and a short application in repertoire. We will plan the extra time around distinct tasks rather than simply extending every repetition count.

Preparation: Choose exercises already comfortable enough to evaluate; a routine is not a requirement to attempt every advanced topic.

Planned development

- 8 min scales
- 6 min arpeggios
- 5 min chords / broken chords
- 5 min Hanon / coordination
- 6 min rotating specialty technique

Musical connection

Apply one result to a small passage in current repertoire and record what changed before planning the next session.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

45-Minute Daily Routine

Chapter overview

Purpose: A longer session needs variety and a clear reason for each block. The proposed program will distribute concentrated work across several skills and leave room to assess whether the last attempt improved on the first.

Preparation: Choose exercises already comfortable enough to evaluate; a routine is not a requirement to attempt every advanced topic.

Planned development

- 10 min scales
- 10 min arpeggios / chords
- 8 min Hanon / finger control
- 7 min double notes / octaves
- 5 min polyrhythm / independence
- 5 min repertoire-derived technical work

Musical connection

Apply one result to a small passage in current repertoire and record what changed before planning the next session.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Three-Day Rotation

Chapter overview

Purpose: A three-day rotation can balance recurring fundamentals with skills that need less frequent attention. The categories organize practice; they do not require every listed exercise to be completed on every visit.

Preparation: Choose exercises already comfortable enough to evaluate; a routine is not a requirement to attempt every advanced topic.

Planned development

- Day 1: scales, finger patterns, trills, and a voicing check
- Day 2: chords, arpeggios, broken chords, repeated notes, and a voicing check
- Day 3: double notes, octaves, and rhythmic coordination
- Distribute Hanon 1–20 across the cycle, selecting only patterns appropriate to the session
- Adjust the rotation to repertoire needs instead of completing every category each day

Musical connection

Apply one result to a small passage in current repertoire and record what changed before planning the next session.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Seven-Day Rotation

Chapter overview

Purpose: A week-long rotation gives each technical family a regular place without making a single session crowded. We will combine a small recurring core with a changing focus and a day for review in repertoire.

Preparation: Choose exercises already comfortable enough to evaluate; a routine is not a requirement to attempt every advanced topic.

Planned development

- Day 1 — Scales
- Day 2 — Chords / arpeggios
- Day 3 — Double notes
- Day 4 — Rhythm / polyrhythm
- Day 5 — Voicing / polyphony
- Day 6 — Octaves / leaps / movement
- Day 7 — Mixed review / repertoire

Musical connection

Apply one result to a small passage in current repertoire and record what changed before planning the next session.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Key Rotation System

Chapter overview

Purpose: Key rotation should develop reliable recall as well as familiarity with related keys. Begin with an ordered route, then mix the selection so a key can be started without first playing its neighbors.

Preparation: Choose exercises already comfortable enough to evaluate; a routine is not a requirement to attempt every advanced topic.

Planned development

- Cycle 1: C, G, D, A
- Cycle 2: E, B, F $\sharp$, D $\flat$
- Cycle 3: A $\flat$, E $\flat$, B $\flat$, F
- Relative minors
- Parallel minors
- Mixed major/minor groupings

Musical connection

Apply one result to a small passage in current repertoire and record what changed before planning the next session.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Beginner-to-Intermediate Technique Plan

Chapter overview

Purpose: A developing technique plan needs clear entry points and modest progressions. This chapter will connect a small set of scales, chords, coordination patterns, and listening goals before introducing more demanding combinations.

Preparation: Choose exercises already comfortable enough to evaluate; a routine is not a requirement to attempt every advanced topic.

Planned development

- Core scales
- Basic arpeggios
- Chord inversions
- Broken chords
- Hanon 1–10
- Basic trills
- Basic voicing
- Introductory 2:3

Musical connection

Apply one result to a small passage in current repertoire and record what changed before planning the next session.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Intermediate-to-Advanced Technique Plan

Chapter overview

Purpose: Progress toward advanced work depends on the quality of existing habits, not merely the number of patterns learned. We will connect longer ranges, more complex harmony, and layered coordination with specific readiness checks.

Preparation: Choose exercises already comfortable enough to evaluate; a routine is not a requirement to attempt every advanced topic.

Planned development

- Full key rotation
- Four-octave scales
- Formula patterns
- Dominant / diminished arpeggios
- Thirds and sixths
- Octaves
- 3:4 polyrhythms
- Repeated chords
- Leaps
- Advanced voicing

Musical connection

Apply one result to a small passage in current repertoire and record what changed before planning the next session.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Maintaining Technique When Time Is Limited

Chapter overview

Purpose: When practice time is limited, a narrow, well-chosen task can be more useful than a hurried survey of everything. Choose priorities from current repertoire and rotate the remaining skills across subsequent sessions.

Preparation: Choose exercises already comfortable enough to evaluate; a routine is not a requirement to attempt every advanced topic.

Planned development

- Minimum effective routine
- Rotating specialties
- Avoiding unnecessary repetition
- Prioritizing current repertoire needs

Musical connection

Apply one result to a small passage in current repertoire and record what changed before planning the next session.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Turning Difficult Repertoire Into an Exercise

Chapter overview

Purpose: A passage can become an exercise when its central demand is isolated without losing its musical purpose. We will reduce, vary, and rebuild selected examples, checking the original passage after each useful change.

Preparation: Choose exercises already comfortable enough to evaluate; a routine is not a requirement to attempt every advanced topic.

Planned development

- Isolate the technical gesture
- Remove unnecessary notes
- Transpose
- Change rhythms
- Change accents
- Practice in bursts
- Restore original passage

Musical connection

Apply one result to a small passage in current repertoire and record what changed before planning the next session.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.



Scale Reference

Major scales in every key

Every major scale below uses the same format: **four octaves ascending and descending, in sixteenth notes, with the hands one octave apart**. Play the top note once; the final half note completes the last measure. Each scale occupies two lines of grand staff.

The reference includes all twelve major-key keyboard patterns. F $\sharp$ /G $\flat$ and C $\sharp$ /D $\flat$ are also shown in both spellings. **B major appears at the end, using five sharps, in place of a separate seven-flat C $\flat$ scale.** The two are enharmonic, but B major is the more familiar reading choice here.

Read the fingering through the octave

Starting and finishing fingers may differ from continuation fingers. Follow the full printed sequence across each internal tonic. In B $\flat$, the RH starts on 2 but uses 4 on later B $\flat$ s. A $\flat$ uses RH 3 on A $\flat$ and 4 on B $\flat$ in its repeating group. Other comfortable endpoint choices exist; the printed version is consistent throughout each complete run.

Clefs and octave lines keep the extended range readable. RH and LH labels identify the hands even when a clef changes. An octave line marked 8 means to sound its notes one octave above the written position. The hands remain one octave apart in sound.

Use a metronome after learning the notes and fingers. Choose a dynamic and touch before beginning, and retain that choice through crossings and register changes. The teaching chapters explain these practice tasks in more detail.

Conventional fingering groups were checked against the Hoffman Academy Major Scales Fingering Guide and Baylor Piano Basics. The scores here are newly engraved from note and fingering data; they do not reproduce those sources' illustrations.

The complete minor-key reference remains in development. The minor-scale teaching chapter retains its comparison of natural, harmonic, and melodic forms.

C major scale

Four octaves, ascending and descending.

G major scale

Four octaves, ascending and descending.

D major scale

Four octaves, ascending and descending.

A major scale

Four octaves, ascending and descending.

E major scale

Four octaves, ascending and descending.

The score is written for piano (RH and LH) in E major (three sharps: F#, C#, G#) and 2/4 time. It consists of two systems of four measures each. The first system shows the right hand (RH) and left hand (LH) playing the scale. The second system shows the right hand (RH) and left hand (LH) playing the scale. The scale is played in a continuous, flowing manner, with fingerings indicated by numbers 1-5. The RH starts on E4 and ends on E8, while the LH starts on E2 and ends on E5. The score includes a repeat sign at the end of the second system.

Four octaves, ascending and descending.

F# major scale

Four octaves, ascending and descending.

The score is written for piano (RH and LH) in F# major (four sharps: F#, C#, G#, D#) and 2/4 time. It consists of two systems of four measures each. The first system shows the right hand (RH) and left hand (LH) playing the scale. The second system shows the right hand (RH) and left hand (LH) playing the scale. The scale is played in a continuous, flowing manner, with fingerings indicated by numbers 1-5. The RH starts on F#4 and ends on F#8, while the LH starts on F#2 and ends on F#5. The score includes a repeat sign at the end of the second system.

Four octaves, ascending and descending.

C# major scale

The musical score for 'The Rose Tree' is presented in a single system with a treble and bass staff. The key signature is three sharps (F#, C#, G#) and the time signature is 2/4. The score includes fingerings for both hands and a repeat sign at the end.

Right Hand (RH) Part:

- Measure 1: G4 (2), A4 (3), B4 (1), C5 (2), D5 (3), E5 (4), F#5 (1), G5 (2).
- Measure 2: A4 (3), B4 (1), C5 (2), D5 (3), E5 (4), F#5 (1), G5 (2), A5 (3).
- Measure 3: B4 (1), C5 (2), D5 (3), E5 (4), F#5 (1), G5 (2), A5 (3), B5 (4).
- Measure 4: C5 (2), D5 (3), E5 (4), F#5 (1), G5 (2), A5 (3), B5 (4), C6 (1).

Left Hand (LH) Part:

- Measure 1: G3 (3), F#3 (2), E3 (1), D3 (4), C3 (3), B2 (2), A2 (1), G2 (3).
- Measure 2: F#2 (2), E2 (1), D2 (4), C2 (3), B1 (2), A1 (1), G1 (3), F#1 (2).
- Measure 3: E2 (1), D2 (4), C2 (3), B1 (2), A1 (1), G1 (3), F#1 (2), E1 (1).
- Measure 4: D2 (4), C2 (3), B1 (2), A1 (1), G1 (3), F#1 (2), E1 (1), D1 (3).

Second System:

- Measure 5: G4 (2), A4 (1), B4 (3), C5 (2), D5 (1), E5 (4), F#5 (3), G5 (2).
- Measure 6: A4 (1), B4 (3), C5 (2), D5 (1), E5 (4), F#5 (3), G5 (2), A5 (1).
- Measure 7: B4 (3), A4 (2), G4 (1), F#4 (4), E4 (3), D4 (2), C4 (1), B3 (3).
- Measure 8: A3 (2), G3 (1), F#3 (4), E3 (3), D3 (2), C3 (1), B2 (3), A2 (2).

Four octaves, ascending and descending.

F major scale

The musical score for 'The Rose Tree' is presented in two systems. The first system consists of two staves: the upper staff is labeled 'RH' (Right Hand) and the lower staff is labeled 'LH' (Left Hand). Both staves are in 2/4 time and use a key signature of one flat (B-flat). The RH staff begins with a treble clef, while the LH staff begins with a bass clef. The melody is primarily in the RH, with the LH providing a harmonic accompaniment. The second system continues the piece, with the RH staff using a treble clef and the LH staff using a bass clef. The piece concludes with a final chord in the RH and a single note in the LH. Fingerings are indicated by numbers 1-4 above or below notes, and breath marks (8-) are placed above the RH staff at the beginning of the first and second systems.

Four octaves, ascending and descending.

B $\flat$ major scale

Four octaves, ascending and descending.

E $\flat$ major scale

Four octaves, ascending and descending.

A $\flat$ major scale

Four octaves, ascending and descending.

D $\flat$ major scale

Four octaves, ascending and descending.

G $\flat$ major scale

Four octaves, ascending and descending.

The score is written for Right Hand (RH) and Left Hand (LH) in 2/4 time. The key signature has five flats (B $\flat$, E $\flat$, A $\flat$, D $\flat$, G $\flat$). The RH part starts on G $\flat$ (B $\flat$ 4) and the LH part starts on G $\flat$ (B $\flat$ 1). The scale is played for four octaves, ascending and then descending. Fingerings are indicated by numbers 1-5 above or below the notes. Octave markers (8-) are placed above the first and fifth measures of both hands. The piece concludes with a final G $\flat$ note in both hands.

Four octaves, ascending and descending.

B major scale

Four octaves, ascending and descending.

The score is written for Right Hand (RH) and Left Hand (LH) in 2/4 time. The key signature has two sharps (F $\sharp$, C $\sharp$). The RH part starts on B (F $\sharp$ 4) and the LH part starts on B (F $\sharp$ 1). The scale is played for four octaves, ascending and then descending. Fingerings are indicated by numbers 1-5 above or below the notes. Octave markers (8-) are placed above the first and fifth measures of both hands. The piece concludes with a final B note in both hands.

Four octaves, ascending and descending.

Arpeggio Reference

Major and minor arpeggios in every key

Here are **all twelve major and twelve minor root-position triads**, each spanning **four octaves up and down**, with the hands one octave apart. Every pattern uses sixteenth notes beamed in groups of four in 3/4, two lines of grand staff, and a final dotted half note. Play the top note once. Prominent titles make it easy to find a key and begin.

Follow the full fingering across the internal octaves. An endpoint finger is not necessarily the finger used to continue: the RH's final 5 in a white-key arpeggio replaces the 1 used at earlier tonics. The black-key patterns likewise distinguish the opening finger from the recurring group.

Practice in groups of four

Count four even sixteenth notes to each beat: **1-e-and-a, 2-e-and-a, 3-e-and-a**. A triad repeats every three pitches, so four-note groups begin on different chord tones. This helps prevent an automatic accent on every third note when a three-note grouping becomes habitual.

At first, play four notes, release, and pause before the next group. Then join the groups into a continuous line, keeping the pulse steady and the sound even. The groups organize your attention; they do not require a strong accent every four notes either. Carry this evenness through each crossing and the turn at the top.

Choose a comfortable route, then keep it consistent

These are conventional root-position fingerings checked against the Eastern Illinois University-hosted fingering charts, with the optional initial RH 2 for several black-key roots also documented in Joy Morin's chart. Some teachers choose LH 3 rather than 4 in selected white-key minor arpeggios; the earlier teaching examples illustrate that alternative. Test a comfortable choice through both directions instead of changing it accidentally mid-run.

A thumb on a black key is appropriate in the all-black F $\sharp$ -major and E $\flat$ -minor triads. For black–white–black triads, the recurring thumb falls on the white middle chord tone. Read the actual notes and fingers rather than applying a blanket rule about black keys.

Clefs and octave lines keep the register readable; the hands stay one octave apart in sound. An 8 above the staff means one octave above the written notes. Choose a dynamic and touch before beginning, and let the return have the same clarity as the ascent.

The website's chord-tone definitions provide the pitch catalog. Fingerings have been checked separately for this edition. Inversions, dominant-seventh and diminished-seventh reference runs remain the next expansion; their introductory material stays in Chapter 23.

C major arpeggio

The musical score for the C major arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with the RH in bass clef and LH in bass clef. The second system shows the RH in treble clef and LH in bass clef. The arpeggio is played in root position, ascending and descending over four octaves. Fingerings are indicated by numbers 1-5. The RH starts on C4 and ends on C8, while the LH starts on C3 and ends on C7. The score includes a repeat sign at the end of the descending passage.

Four octaves, ascending and descending; root position.

G major arpeggio

The musical score for the G major arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with the RH in bass clef and LH in bass clef. The second system shows the RH in treble clef and LH in bass clef. The arpeggio is played in root position, ascending and descending over four octaves. Fingerings are indicated by numbers 1-5. The RH starts on G4 and ends on G8, while the LH starts on G3 and ends on G7. The score includes a repeat sign at the end of the descending passage.

Four octaves, ascending and descending; root position.

D major arpeggio

The musical score for the D major arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with a key signature of two sharps (F# and C#). The RH part starts on D4 and ascends to D8, while the LH part starts on D3 and ascends to D7. The second system shows the descending arpeggio, with the RH part descending from D8 to D4 and the LH part descending from D7 to D3. Fingerings are indicated by numbers 1-5 above or below the notes. A dashed line labeled '8' indicates the octave boundary.

Four octaves, ascending and descending; root position.

A major arpeggio

The musical score for the A major arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with a key signature of three sharps (F#, C#, and G#). The RH part starts on A4 and ascends to A8, while the LH part starts on A3 and ascends to A7. The second system shows the descending arpeggio, with the RH part descending from A8 to A4 and the LH part descending from A7 to A3. Fingerings are indicated by numbers 1-5 above or below the notes. A dashed line labeled '8' indicates the octave boundary.

Four octaves, ascending and descending; root position.

E major arpeggio

The musical score for the E major arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with a key signature of three sharps (F#, C#, G#). The RH part starts on E4 and ascends to E8, while the LH part starts on E3 and descends to E2. The second system continues the arpeggio, showing the RH part ascending to E8 and the LH part descending to E2. Fingerings are indicated by numbers 1-5 above or below the notes. Octave markers (8-) are placed above the final notes of each octave.

Four octaves, ascending and descending; root position.

B major arpeggio

The musical score for the B major arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with a key signature of two sharps (F#, C#). The RH part starts on B4 and ascends to B8, while the LH part starts on B3 and descends to B2. The second system continues the arpeggio, showing the RH part ascending to B8 and the LH part descending to B2. Fingerings are indicated by numbers 1-5 above or below the notes. Octave markers (8-) are placed above the final notes of each octave.

Four octaves, ascending and descending; root position.

F# major arpeggio

Four octaves, ascending and descending; root position.

The score is written for Right Hand (RH) and Left Hand (LH) in 3/4 time, F# major (three sharps: F#, C#, G#). The RH part uses a treble clef and the LH part uses a bass clef. The piece consists of two systems, each with two staves. The first system shows the first two octaves of the arpeggio. The second system shows the next two octaves. Fingering numbers (1-5) are indicated above or below the notes. Octave markers (8) are placed above the first and last notes of each octave. The piece ends with a double bar line.

Four octaves, ascending and descending; root position.

D♭ major arpeggio

Four octaves, ascending and descending; root position.

The score is written for Right Hand (RH) and Left Hand (LH) in 3/4 time, D♭ major (three flats: B♭, E♭, A♭). The RH part uses a bass clef and the LH part uses a treble clef. The piece consists of two systems, each with two staves. The first system shows the first two octaves of the arpeggio. The second system shows the next two octaves. Fingering numbers (1-4) are indicated above or below the notes. Octave markers (8) are placed above the first and last notes of each octave. The piece ends with a double bar line.

Four octaves, ascending and descending; root position.

A ♭ major arpeggio

The musical score for the A-flat major arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with the RH in bass clef and LH in bass clef. The second system shows the RH in treble clef and LH in bass clef. The score includes fingerings (1-4) and octave markings (8-). The piece concludes with a final chord in the RH.

Four octaves, ascending and descending; root position.

E ♭ major arpeggio

The musical score for the E-flat major arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with the RH in bass clef and LH in bass clef. The second system shows the RH in treble clef and LH in bass clef. The score includes fingerings (1-4) and octave markings (8-). The piece concludes with a final chord in the RH.

Four octaves, ascending and descending; root position.

B $\flat$ major arpeggio

The musical score for the B $\flat$ major arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with the RH starting on B $\flat$ and the LH on B $\flat$ (two ledger lines below). The second system shows the RH and LH in 2/4 time, with the RH starting on B $\flat$ and the LH on B $\flat$ (two ledger lines below). The score includes fingerings (1-4) and articulation marks (accents) for each note. The RH part is marked with an 8-measure repeat sign, and the LH part is marked with an 8-measure repeat sign.

Four octaves, ascending and descending; root position.

F major arpeggio

The musical score for the F major arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with the RH starting on F and the LH on F (two ledger lines below). The second system shows the RH and LH in 2/4 time, with the RH starting on F and the LH on F (two ledger lines below). The score includes fingerings (1-4) and articulation marks (accents) for each note. The RH part is marked with an 8-measure repeat sign, and the LH part is marked with an 8-measure repeat sign.

Four octaves, ascending and descending; root position.

A minor arpeggio

Four octaves, ascending and descending; root position.

The score is written for Right Hand (RH) and Left Hand (LH) in 3/4 time. The RH part uses a bass clef and the LH part uses a bass clef. The key signature is one flat (B-flat). The RH part consists of three measures of ascending eighth notes, each measure containing four notes with fingerings 1, 2, 3, 1; 2, 3, 1, 2; and 3, 1, 2, 3. The LH part consists of three measures of descending eighth notes, each measure containing four notes with fingerings 5, 4, 2, 1; 4, 2, 1, 4; and 2, 1, 4, 2. The final measure of the LH part shows the root position (B-flat) with a fingering of 5.

Four octaves, ascending and descending; root position.

E minor arpeggio

Four octaves, ascending and descending; root position.

The score is written for Right Hand (RH) and Left Hand (LH) in 3/4 time. The RH part uses a bass clef and the LH part uses a bass clef. The key signature is one sharp (F-sharp). The RH part consists of three measures of ascending eighth notes, each measure containing four notes with fingerings 1, 2, 3, 1; 2, 3, 1, 2; and 3, 1, 2, 3. The LH part consists of three measures of descending eighth notes, each measure containing four notes with fingerings 5, 4, 2, 1; 4, 2, 1, 4; and 2, 1, 4, 2. The final measure of the LH part shows the root position (F-sharp) with a fingering of 5.

Four octaves, ascending and descending; root position.

B minor arpeggio

The musical score for the B minor arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with the key signature of two sharps (F# and C#). The RH part starts on B4 and ascends to B7, while the LH part starts on B2 and ascends to B5. The second system shows the descending arpeggio, with the RH part descending from B7 to B4 and the LH part descending from B5 to B2. Fingerings are indicated by numbers 1-5 above or below the notes. Octave markers (8) are placed above the first and last notes of the ascending and descending runs. The piece concludes with a final B note in the RH and a final B note in the LH.

Four octaves, ascending and descending; root position.

F# minor arpeggio

The musical score for the F# minor arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with the key signature of three sharps (F#, C#, and G#). The RH part starts on F#4 and ascends to F#7, while the LH part starts on F#2 and ascends to F#5. The second system shows the descending arpeggio, with the RH part descending from F#7 to F#4 and the LH part descending from F#5 to F#2. Fingerings are indicated by numbers 1-5 above or below the notes. Octave markers (8) are placed above the first and last notes of the ascending and descending runs. The piece concludes with a final F# note in the RH and a final F# note in the LH.

Four octaves, ascending and descending; root position.

C# minor arpeggio

The musical score for the C# minor arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with a key signature of three sharps (F#, C#, G#). The RH part starts on a middle C# and ascends to a C# an octave and a half higher, then descends. The LH part starts on a C# two octaves below middle C and ascends to a C# an octave below middle C, then descends. The second system continues the arpeggio for four octaves, with the RH part starting on a C# an octave below middle C and ascending to a C# an octave and a half higher, then descending. The LH part starts on a C# two octaves below middle C and ascends to a C# an octave below middle C, then descends. Fingerings are indicated by numbers 1-4 above or below the notes. A dashed line with an '8' indicates an octave shift.

Four octaves, ascending and descending; root position.

G# minor arpeggio

The musical score for the G# minor arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with a key signature of four sharps (F#, C#, G#, D#). The RH part starts on a G# and ascends to a G# an octave and a half higher, then descends. The LH part starts on a G# two octaves below middle C and ascends to a G# an octave below middle C, then descends. The second system continues the arpeggio for four octaves, with the RH part starting on a G# an octave below middle C and ascending to a G# an octave and a half higher, then descending. The LH part starts on a G# two octaves below middle C and ascends to a G# an octave below middle C, then descends. Fingerings are indicated by numbers 1-4 above or below the notes. A dashed line with an '8' indicates an octave shift.

Four octaves, ascending and descending; root position.

E ♭ minor arpeggio

The musical score for the E-flat minor arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with the RH starting on a middle C and the LH starting on a C two octaves below. The second system continues the pattern, with the RH starting on a C four octaves above the first system and the LH starting on a C four octaves below. The score includes fingerings (1-3) for the ascending and descending sequences, and a final measure with a whole note chord in the RH and a whole note chord in the LH.

Four octaves, ascending and descending; root position.

B ♭ minor arpeggio

The musical score for the B-flat minor arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with the RH starting on a B-flat and the LH starting on a B-flat two octaves below. The second system continues the pattern, with the RH starting on a B-flat four octaves above the first system and the LH starting on a B-flat four octaves below. The score includes fingerings (1-3) for the ascending and descending sequences, and a final measure with a whole note chord in the RH and a whole note chord in the LH.

Four octaves, ascending and descending; root position.

F minor arpeggio

Four octaves, ascending and descending; root position.

The score is written for Right Hand (RH) and Left Hand (LH) in 3/4 time, F minor (three flats). The RH part uses a treble clef and the LH part uses a bass clef. The piece consists of two systems. The first system shows the first two octaves of the ascending and descending arpeggios. The second system shows the final two octaves, ending with a whole note chord in the right hand and a whole note bass line in the left hand. Fingerings are indicated by numbers 1-5 above or below the notes. Octave markers (8-) are placed above the first and last notes of the ascending and descending runs.

Four octaves, ascending and descending; root position.

C minor arpeggio

Four octaves, ascending and descending; root position.

The score is written for Right Hand (RH) and Left Hand (LH) in 3/4 time, C minor (three flats). The RH part uses a bass clef and the LH part uses a bass clef. The piece consists of two systems. The first system shows the first two octaves of the ascending and descending arpeggios. The second system shows the final two octaves, ending with a whole note chord in the right hand and a whole note bass line in the left hand. Fingerings are indicated by numbers 1-5 above or below the notes. Octave markers (8-) are placed above the first and last notes of the ascending and descending runs.

Four octaves, ascending and descending; root position.

G minor arpeggio

The musical score for the G minor arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with the RH playing the ascending and descending arpeggios and the LH playing the root position. The second system shows the grand staff (treble and bass clefs) with the RH playing the ascending and descending arpeggios and the LH playing the root position. The score includes fingerings (1-5) and a final measure with a whole note G.

Four octaves, ascending and descending; root position.

D minor arpeggio

The musical score for the D minor arpeggio is presented in two systems. The first system shows the right hand (RH) and left hand (LH) in 3/4 time, with the RH playing the ascending and descending arpeggios and the LH playing the root position. The second system shows the grand staff (treble and bass clefs) with the RH playing the ascending and descending arpeggios and the LH playing the root position. The score includes fingerings (1-5) and a final measure with a whole note D.

Four octaves, ascending and descending; root position.

Chord and Inversion Reference

Hear one chord from several positions

A familiar chord can feel new when a different note moves to the bottom. Use these pages to connect the name, the sound, and the shape. The first reference covers **major and minor triads in all twelve keys**, with both hands written out. Each route goes root position, first inversion, second inversion, upper root position, then returns through the same positions.

Name the lowest chord tone before playing. Major triads contain a major third and perfect fifth above the root; minor triads lower that third by a semitone. Inverting a chord changes its bass, not its collection of chord tones. The first, third, and fifth degrees remain its root, third, and fifth wherever they appear in the voicing.

Place, sound, listen, release

Play one hand first. Sound each half-note chord together, hold for two beats, then release to travel. The final whole-note chord lasts four beats. Begin without pedal; add time between placements while learning, then restore the written rhythm. These are placement exercises, not a requirement to connect every voice with finger legato.

Fingering is editorial and suggested, not attributed to Hanon or an examination syllabus. The three-note routes use a conventional starting framework: RH 1–3–5 in root/second position and 1–2–5 in first; LH 5–3–1 in root/first and 5–2–1 in second. Keyboard shape and hand size can justify alternatives. Test a comfortable placement and its next move; do not force a printed choice.

The hands are one octave apart in the compact triad reference. Later four-note octave shapes use wider hand separation to avoid sharing keys. If a chord exceeds your comfortable span, release and break it, or practice a smaller voicing rather than stretching to hold it.

How to use the rest of this appendix

After the all-key triads, six seventh-chord qualities in C show all four inversions. Four-octave blocked and broken studies in C major and C minor then teach the longer inversion route. The root moves through four octaves; these are not all-key four-octave engravings. Use the key reference to check each new spelling before transposing.

For the comparison among suspended, added-note, seventh, and extended chords, turn to **Chord Colors on One Root**, immediately after the triads chapter. Cadences remain a separate subject: this appendix identifies and places chords rather than prescribing how they must resolve.

C major triad

The image shows the C major triad in C major, consisting of the notes C4, E4, and G4. The notation is presented for both right hand (RH) and left hand (LH) in a grand staff. The key signature has one flat (Bb) and the time signature is common time (C). The RH part uses a treble clef and the LH part uses a bass clef. The triad is shown in root position and two inversions for both hands. Fingerings are indicated by numbers 1-5. The RH part shows the triad in root position and two inversions. The LH part shows the triad in root position and two inversions. The notes are C4, E4, and G4. The RH part shows the triad in root position and two inversions. The LH part shows the triad in root position and two inversions.

Root, first, second, upper root; second, first, root.

G major triad

The image shows the G major triad in G major, consisting of the notes G4, B4, and D5. The notation is presented for both right hand (RH) and left hand (LH) in a grand staff. The key signature has two sharps (F# and C#) and the time signature is common time (C). The RH part uses a treble clef and the LH part uses a bass clef. The triad is shown in root position and two inversions for both hands. Fingerings are indicated by numbers 1-5. The RH part shows the triad in root position and two inversions. The LH part shows the triad in root position and two inversions. The notes are G4, B4, and D5. The RH part shows the triad in root position and two inversions. The LH part shows the triad in root position and two inversions.

Root, first, second, upper root; second, first, root.

D major triad

The image shows the D major triad (D-F-A) in C major, spanning two staves (RH and LH). The RH staff uses a treble clef and the LH staff uses a bass clef. The key signature has two sharps (F# and C#). The time signature is common time (C). The RH staff shows the triad in three positions: root position (D-F-A), first inversion (F-A-D), and second inversion (A-D-F). The LH staff shows the triad in three positions: root position (D-F-A), first inversion (F-A-D), and second inversion (A-D-F). Fingerings are indicated by numbers 1-5 above or below the notes.

Root, first, second, upper root; second, first, root.

A major triad

The image shows the A major triad (A-C-E) in C major, spanning two staves (RH and LH). The RH staff uses a treble clef and the LH staff uses a bass clef. The key signature has two sharps (F# and C#). The time signature is common time (C). The RH staff shows the triad in three positions: root position (A-C-E), first inversion (C-E-A), and second inversion (E-A-C). The LH staff shows the triad in three positions: root position (A-C-E), first inversion (C-E-A), and second inversion (E-A-C). Fingerings are indicated by numbers 1-5 above or below the notes.

Root, first, second, upper root; second, first, root.

E major triad

The musical notation for the E major triad is shown in C major (one sharp). The right hand (RH) is in treble clef and the left hand (LH) is in bass clef. The time signature is common time (C). The RH staff shows the triad in three positions: root position (E4, G#4, B4), first inversion (G#4, B4, E5), and second inversion (B4, E5, G#5). The LH staff shows the triad in three positions: root position (E3, G#3, B3), first inversion (G#3, B3, E4), and second inversion (B3, E4, G#4). Fingerings are indicated by numbers 1-5 above or below the notes.

Root, first, second, upper root; second, first, root.

B major triad

The musical notation for the B major triad is shown in D major (two sharps). The right hand (RH) is in treble clef and the left hand (LH) is in bass clef. The time signature is common time (C). The RH staff shows the triad in three positions: root position (B4, D#5, F#5), first inversion (D#5, F#5, B5), and second inversion (F#5, B5, D#6). The LH staff shows the triad in three positions: root position (B3, D#4, F#4), first inversion (D#4, F#4, B4), and second inversion (F#4, B4, D#5). Fingerings are indicated by numbers 1-5 above or below the notes.

Root, first, second, upper root; second, first, root.

F# major triad

The musical notation for the F# major triad is presented in two systems, RH (Right Hand) and LH (Left Hand). The key signature is C major (no sharps or flats). The time signature is common time (C). The RH part uses a treble clef, and the LH part uses a bass clef. The notation shows the root position and the first, second, and third inversions of the F# major triad. Fingerings are indicated by numbers 1-5. The RH part shows the root position and the first, second, and third inversions. The LH part shows the root position and the first, second, and third inversions.

Root, first, second, upper root; second, first, root.

D b major triad

The musical notation for the D b major triad is presented in two systems, RH (Right Hand) and LH (Left Hand). The key signature is C major (no sharps or flats). The time signature is common time (C). The RH part uses a treble clef, and the LH part uses a bass clef. The notation shows the root position and the first, second, and third inversions of the D b major triad. Fingerings are indicated by numbers 1-5. The RH part shows the root position and the first, second, and third inversions. The LH part shows the root position and the first, second, and third inversions.

Root, first, second, upper root; second, first, root.

A $\flat$ major triad

Handwritten musical notation for the A $\flat$ major triad in C major scale, measures 1-6. The notation is for the right hand (RH) and left hand (LH) in C major (one flat). The RH part shows the triad in root position and first inversion. The LH part shows the triad in second inversion and root position. Fingerings are indicated by numbers 1-5.

Root, first, second, upper root; second, first, root.

E $\flat$ major triad

Handwritten musical notation for the E $\flat$ major triad in C major scale, measures 7-12. The notation is for the right hand (RH) and left hand (LH) in C major (one flat). The RH part shows the triad in root position and first inversion. The LH part shows the triad in second inversion and root position. Fingerings are indicated by numbers 1-5.

Root, first, second, upper root; second, first, root.

B $\flat$ major triad

Musical notation for the B $\flat$ major triad in C major. The right hand (RH) is in treble clef and the left hand (LH) is in bass clef. The key signature has one flat (B $\flat$). The time signature is common time (C). The notation shows the triad in three positions: root position, first inversion, and second inversion. Fingerings are indicated by numbers 1-5.

Root position: RH (B $\flat$ 4, D 3, F 1), LH (B $\flat$ 1, D 3, F 5).

First inversion: RH (D 2, F 1, B $\flat$ 5), LH (B $\flat$ 1, D 3, F 5).

Second inversion: RH (F 1, B $\flat$ 5, D 3), LH (B $\flat$ 1, D 3, F 5).

Root, first, second, upper root; second, first, root.

F major triad

Musical notation for the F major triad in C major. The right hand (RH) is in treble clef and the left hand (LH) is in bass clef. The key signature has one flat (B $\flat$). The time signature is common time (C). The notation shows the triad in three positions: root position, first inversion, and second inversion. Fingerings are indicated by numbers 1-5.

Root position: RH (F 4, A 3, C 1), LH (F 1, A 3, C 5).

First inversion: RH (A 2, C 1, F 5), LH (F 1, A 3, C 5).

Second inversion: RH (C 1, F 5, A 3), LH (F 1, A 3, C 5).

Root, first, second, upper root; second, first, root.

A minor triad

The musical notation for the A minor triad is presented in two systems, RH (Right Hand) and LH (Left Hand). The key signature is C major (no sharps or flats), and the time signature is common time (C). The RH part uses a treble clef, and the LH part uses a bass clef. The notation shows the root position and first and second inversions of the A minor triad (A, C, E) for both hands. Fingerings are indicated by numbers 1-5. The RH part shows the root position (A, C, E) and first and second inversions (C, E, A and E, A, C). The LH part shows the root position (A, C, E) and first and second inversions (C, E, A and E, A, C). The notation is as follows:

Hand	Position	Notes (RH)	Notes (LH)
RH	Root	A4, C5, E5	A3, C3, E3
RH	First	C5, E5, A5	C3, E3, A3
RH	Second	E5, A5, C6	E3, A3, C4

Root, first, second, upper root; second, first, root.

E minor triad

The musical notation for the E minor triad is presented in two systems, RH (Right Hand) and LH (Left Hand). The key signature is C major (no sharps or flats), and the time signature is common time (C). The RH part uses a treble clef, and the LH part uses a bass clef. The notation shows the root position and first and second inversions of the E minor triad (E, G, B) for both hands. Fingerings are indicated by numbers 1-5. The RH part shows the root position (E, G, B) and first and second inversions (G, B, E and B, E, G). The LH part shows the root position (E, G, B) and first and second inversions (G, B, E and B, E, G). The notation is as follows:

Hand	Position	Notes (RH)	Notes (LH)
RH	Root	E4, G4, B4	E3, G3, B3
RH	First	G4, B4, E5	G3, B3, E4
RH	Second	B4, E5, G5	B3, E4, G4

Root, first, second, upper root; second, first, root.

B minor triad

The image shows the B minor triad in C major, consisting of the notes B2, D3, and F#3. The notation is presented for both right hand (RH) and left hand (LH) in C major (one sharp, F#). The key signature is C major (one sharp, F#). The time signature is common time (C). The RH part is in treble clef, and the LH part is in bass clef. The triad is shown in root position and first, second, and third inversions for both hands. Fingerings are indicated by numbers 1-5. The RH part shows the triad in root position (B2, D3, F#3) and first inversion (D3, F#3, B2). The LH part shows the triad in root position (B2, D3, F#3) and first inversion (D3, F#3, B2). The triad is shown in root position and first, second, and third inversions for both hands.

Root, first, second, upper root; second, first, root.

F# minor triad

The image shows the F# minor triad in D major, consisting of the notes F#2, A2, and C#3. The notation is presented for both right hand (RH) and left hand (LH) in D major (two sharps, F# and C#). The key signature is D major (two sharps, F# and C#). The time signature is common time (C). The RH part is in treble clef, and the LH part is in bass clef. The triad is shown in root position and first, second, and third inversions for both hands. Fingerings are indicated by numbers 1-5. The RH part shows the triad in root position (F#2, A2, C#3) and first inversion (A2, C#3, F#2). The LH part shows the triad in root position (F#2, A2, C#3) and first inversion (A2, C#3, F#2). The triad is shown in root position and first, second, and third inversions for both hands.

Root, first, second, upper root; second, first, root.

C# minor triad

Handwritten musical notation for the C# minor triad in C major. The notation is presented in two staves: RH (Right Hand) and LH (Left Hand). The key signature is C major (no sharps or flats). The time signature is common time (C). The RH staff uses a treble clef and the LH staff uses a bass clef. The triad is shown in three positions: root position, first inversion, and second inversion. Fingerings are indicated by numbers 1-5. The RH staff shows the triad in root position (C#4, E4, G#4) and first inversion (E4, G#4, C#5). The LH staff shows the triad in root position (C#3, E3, G#3) and first inversion (E3, G#3, C#4). The second inversion is shown in the LH staff as (G#3, C#4, E4).

Root, first, second, upper root; second, first, root.

G# minor triad

Handwritten musical notation for the G# minor triad in D major. The notation is presented in two staves: RH (Right Hand) and LH (Left Hand). The key signature is D major (two sharps: F# and C#). The time signature is common time (C). The RH staff uses a treble clef and the LH staff uses a bass clef. The triad is shown in three positions: root position, first inversion, and second inversion. Fingerings are indicated by numbers 1-5. The RH staff shows the triad in root position (G#4, B4, D#5) and first inversion (B4, D#5, G#5). The LH staff shows the triad in root position (G#3, B3, D#4) and first inversion (B3, D#4, G#4). The second inversion is shown in the LH staff as (D#4, G#4, B4).

Root, first, second, upper root; second, first, root.

E $\flat$ minor triad

Musical notation for the E $\flat$ minor triad in C major. The right hand (RH) is in treble clef and the left hand (LH) is in bass clef. The key signature has one flat (B $\flat$). The time signature is common time (C). The RH staff shows the triad in root position (E $\flat$, G $\flat$, B $\flat$) and first inversion (G $\flat$, B $\flat$, E $\flat$). The LH staff shows the triad in second inversion (B $\flat$, E $\flat$, G $\flat$) and root position (E $\flat$, G $\flat$, B $\flat$). Fingerings are indicated by numbers 1-5.

Root, first, second, upper root; second, first, root.

B $\flat$ minor triad

Musical notation for the B $\flat$ minor triad in C major. The right hand (RH) is in treble clef and the left hand (LH) is in bass clef. The key signature has one flat (B $\flat$). The time signature is common time (C). The RH staff shows the triad in root position (B $\flat$, D $\flat$, F $\flat$) and first inversion (D $\flat$, F $\flat$, B $\flat$). The LH staff shows the triad in second inversion (F $\flat$, B $\flat$, D $\flat$) and root position (B $\flat$, D $\flat$, F $\flat$). Fingerings are indicated by numbers 1-5.

Root, first, second, upper root; second, first, root.

F minor triad

The musical notation for the F minor triad is presented in two systems, RH (Right Hand) and LH (Left Hand). The key signature is C minor (three flats: Bb, Eb, Ab) and the time signature is common time (C). The RH system shows the triad in root position (F, Ab, C) and its first and second inversions (Ab, C, F and C, F, Ab). The LH system shows the triad in root position (F, Ab, C) and its first and second inversions (Ab, C, F and C, F, Ab). Fingerings are indicated by numbers 1-5 above or below the notes.

Root, first, second, upper root; second, first, root.

C minor triad

The musical notation for the C minor triad is presented in two systems, RH (Right Hand) and LH (Left Hand). The key signature is C minor (three flats: Bb, Eb, Ab) and the time signature is common time (C). The RH system shows the triad in root position (C, Eb, G) and its first and second inversions (Eb, G, C and G, C, Eb). The LH system shows the triad in root position (C, Eb, G) and its first and second inversions (Eb, G, C and G, C, Eb). Fingerings are indicated by numbers 1-5 above or below the notes.

Root, first, second, upper root; second, first, root.

G minor triad

Musical notation for the G minor triad in C minor. The right hand (RH) is in treble clef and the left hand (LH) is in bass clef. The key signature has two flats (Bb and Eb). The time signature is common time (C). The notation shows the triad in root position and two inversions, with fingerings indicated by numbers 1-5.

Root position: RH (G4, Bb4, D5) with fingerings 5, 3, 1; LH (G3, Bb2, D3) with fingerings 1, 3, 5.

First inversion: RH (Bb4, D5, G5) with fingerings 5, 2, 1; LH (G3, Bb2, D3) with fingerings 1, 3, 5.

Second inversion: RH (D5, G5, Bb4) with fingerings 5, 3, 1; LH (G3, Bb2, D3) with fingerings 1, 3, 5.

Root, first, second, upper root; second, first, root.

D minor triad

Musical notation for the D minor triad in C minor. The right hand (RH) is in treble clef and the left hand (LH) is in bass clef. The key signature has two flats (Bb and Eb). The time signature is common time (C). The notation shows the triad in root position and two inversions, with fingerings indicated by numbers 1-5.

Root position: RH (D4, F4, Ab4) with fingerings 5, 3, 1; LH (D3, F2, Ab2) with fingerings 1, 3, 5.

First inversion: RH (F4, Ab4, D5) with fingerings 5, 2, 1; LH (D3, F2, Ab2) with fingerings 1, 3, 5.

Second inversion: RH (Ab4, D5, F5) with fingerings 5, 3, 1; LH (D3, F2, Ab2) with fingerings 1, 3, 5.

Root, first, second, upper root; second, first, root.

Seventh chords: major and dominant

A seventh chord has four positions. Read each whole-note chord from its lowest note: root, third, fifth, then seventh. Release between placements. The suggested 1–2–3–5 / 5–3–2–1 fingers are starting choices for these isolated shapes.

C dominant seventh

Root First Second Third

RH

LH

All four inversions, one whole-note chord per measure.

C major seventh

Root First Second Third

RH

LH

All four inversions, one whole-note chord per measure.

Seventh chords: minor and minor major

Keep C–E $\flat$ –G and compare B $\flat$ with B $\natural$. That single change distinguishes minor seventh from minor major seventh. Read the altered notes afresh in each inversion.

C minor seventh

Root First Second Third

RH

LH

All four inversions, one whole-note chord per measure.

C minor major seventh

Root First Second Third

RH

LH

All four inversions, one whole-note chord per measure.

Seventh chords: two diminished qualities

C half-diminished is C–E $\flat$ –G $\flat$ –B $\flat$. C fully diminished is C–E $\flat$ –G $\flat$ –B $\flat\flat$: the diminished seventh sounds like A, but B $\flat\flat$ preserves the chord's stacked-third spelling. The two chords share the diminished triad and differ in the seventh.

C half-diminished seventh

Root First Second Third

RH

LH

The musical notation shows the C half-diminished seventh chord in four inversions. The Root position is C4 (middle C), E4 $\flat$, G4 $\flat$, B4 $\flat$. The First inversion is E4 $\flat$, G4 $\flat$, B4 $\flat$, C5. The Second inversion is G4 $\flat$, B4 $\flat$, C5, E5 $\flat$. The Third inversion is B4 $\flat$, C5, E5 $\flat$, G5 $\flat$. The notation includes fingerings (1-5) and pedaling marks (ped. and ped. off) for both right and left hands.

All four inversions, one whole-note chord per measure.

C diminished seventh

Root First Second Third

RH

LH

The musical notation shows the C diminished seventh chord in four inversions. The Root position is C4, E4 $\flat$, G4 $\flat$, B4 $\flat\flat$. The First inversion is E4 $\flat$, G4 $\flat$, B4 $\flat\flat$, C5. The Second inversion is G4 $\flat$, B4 $\flat\flat$, C5, E5 $\flat$. The Third inversion is B4 $\flat\flat$, C5, E5 $\flat$, G5 $\flat$. The notation includes fingerings (1-5) and pedaling marks (ped. and ped. off) for both right and left hands.

All four inversions, one whole-note chord per measure.

C major: four-octave blocked inversions

Each shape doubles its lowest tone at the octave. RH bass notes travel C3–C7 and back; LH travels C1–C5. Hands are two octaves apart to avoid shared keys; the highest note is C8. Shorten the route on a smaller keyboard.

Place each chord as one quarter-note attack. Move through root, first, and second inversions repeatedly; the highest root-position chord sounds once before the return. The final chord is a whole note. Work on one octave first, with a pause between placements if needed.

The musical score is divided into two systems. The first system (RH and LH) shows four octaves of ascending and descending chord shapes. The RH part starts with a bass clef and the LH part with a bass clef. Both parts use a grand staff with a treble clef for the right hand and a bass clef for the left hand. The RH part shows four octaves of ascending and descending chord shapes, with editorial fingering (1-2-3-4-5) and a final whole note chord. The LH part shows four octaves of ascending and descending chord shapes, with editorial fingering (1-2-3-4-5) and a final whole note chord. The second system (RH and LH) shows four octaves of ascending and descending chord shapes, with editorial fingering (1-2-3-4-5) and a final whole note chord. The score is divided into two systems, each with a repeat sign and a final whole note chord.

Four-note inversion positions across four octaves, ascending and descending. Editorial fingering.

Listen for: even tone through each move. Use three-note shapes if octave spans feel uncomfortable.

C major: four-octave broken inversions

Each shape doubles its lowest tone at the octave. RH bass notes travel C3–C7 and back; LH travels C1–C5. Hands are two octaves apart to avoid shared keys; the highest note is C8. Shorten the route on a smaller keyboard.

Play each shape bottom-to-top in four even sixteenths. The inversion positions rise and then fall; the notes within each group still go upward. The top position appears once. The final group uses quarter notes to settle. Release and move between shapes; this is a sequence of broken chords, not continuous arpeggio fingering.

The musical score is divided into three systems, each showing four-note inversion positions across four octaves, ascending and descending. Editorial fingering is provided for all notes.

System 1: RH and LH staves. RH bass notes travel C3–C7 and back; LH travels C1–C5. Hands are two octaves apart to avoid shared keys; the highest note is C8. Shorten the route on a smaller keyboard.

System 2: Grand staff (RH and LH). Four-note inversion positions across four octaves, ascending and descending. Editorial fingering.

System 3: Grand staff (RH and LH). Six-note inversion positions across four octaves, ascending and descending. Editorial fingering.

Four-note inversion positions across four octaves, ascending and descending. Editorial fingering.

Listen for: even tone through each move. Use three-note shapes if octave spans feel uncomfortable.

C minor: four-octave blocked inversions

Each shape doubles its lowest tone at the octave. RH bass notes travel C3–C7 and back; LH travels C1–C5. Hands are two octaves apart to avoid shared keys; the highest note is C8. Shorten the route on a smaller keyboard.

Place each chord as one quarter-note attack. Move through root, first, and second inversions repeatedly; the highest root-position chord sounds once before the return. The final chord is a whole note. Work on one octave first, with a pause between placements if needed.

The musical score is divided into two systems. The first system covers the first two octaves, and the second system covers the next two octaves. Each system contains an ascending sequence followed by a descending sequence. The RH part uses a bass clef for the first two octaves and a treble clef for the last two. The LH part uses a bass clef throughout. Editorial fingering is provided for each chord, with numbers 1-5 indicating fingerings. The final chord in the second system is a whole note.

Four-note inversion positions across four octaves, ascending and descending. Editorial fingering.

Listen for: even tone through each move. Use three-note shapes if octave spans feel uncomfortable.

C minor: four-octave broken inversions

Each shape doubles its lowest tone at the octave. RH bass notes travel C3–C7 and back; LH travels C1–C5. Hands are two octaves apart to avoid shared keys; the highest note is C8. Shorten the route on a smaller keyboard.

Play each shape bottom-to-top in four even sixteenths. The inversion positions rise and then fall; the notes within each group still go upward. The top position appears once. The final group uses quarter notes to settle. Release and move between shapes; this is a sequence of broken chords, not continuous arpeggio fingering.

Four-note inversion positions across four octaves, ascending and descending. Editorial fingering.

Listen for: even tone through each move. Use three-note shapes if octave spans feel uncomfortable.

Cadence Reference in Every Key

Chapter overview

Purpose: A cadence reference makes it possible to compare a familiar harmonic route across keys. Each example will show the bass and upper voices, with minor-key alterations stated explicitly.

Preparation: Use the corresponding teaching chapters first; these tables and indexes will serve as reference material.

Planned development

- I–IV–V–I
- I–ii6–V–I
- Minor-key cadences

Musical connection

Reference entries will point back to included exercises and source-reviewed repertoire; candidates are not yet published examples.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Polyrhythm Grids

Chapter overview

Purpose: These grids will show where attacks fall within a shared rhythmic span. Use them to understand alignment, then return to hearing two continuous musical lines rather than counting every small subdivision indefinitely.

Preparation: Use the corresponding teaching chapters first; these tables and indexes will serve as reference material.

Planned development

- 2:3
- 3:4
- 2:5
- 3:5
- 4:5

Musical connection

Reference entries will point back to included exercises and source-reviewed repertoire; candidates are not yet published examples.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Technique Checklist

Chapter overview

Purpose: The checklist will help identify what is secure, what needs attention, and what has not yet been studied. It will record musical control and useful range rather than rank progress only by maximum tempo.

Preparation: Use the corresponding teaching chapters first; these tables and indexes will serve as reference material.

Planned development

- Scales
- Arpeggios
- Chords
- Broken chords
- Hanon
- Trills
- Thirds
- Sixths
- Octaves
- Polyrhythms
- Voicing
- Pedaling
- Leaps
- Repeated notes
- Repeated chords

Musical connection

Reference entries will point back to included exercises and source-reviewed repertoire; candidates are not yet published examples.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Repertoire Index by Technique

Chapter overview

Purpose: Use this index to move from a technical question to a specific musical example. Published entries will link only to excerpts that are actually included and will name the relevant gesture and difficulty.

Preparation: Use the corresponding teaching chapters first; these tables and indexes will serve as reference material.

Planned development

- Arpeggios → Beethoven, Moonlight Sonata III
- Broken chords → Beethoven, Moonlight Sonata I
- Repeated notes → Scarlatti K.141
- Thirds → Chopin Op. 25 No. 6
- Sixths → Chopin Op. 25 No. 8
- 4:3 → Chopin Fantaisie-Impromptu
- Repeated chords → Schubert Erlkönig
- Voicing → Schumann Träumerei
- Scales + jumps + contrary motion → Beethoven Waldstein I ending
- Polyphony → Bach Inventions / Sinfonias
- Pedaling → Debussy Clair de lune

Musical connection

Reference entries will point back to included exercises and source-reviewed repertoire; candidates are not yet published examples.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Public-Domain Repertoire Sources

Chapter overview

Purpose: This appendix will make the provenance of each repertoire excerpt inspectable. It will distinguish the composition, source edition, transcription, and this guide's added annotations and fingerings.

Preparation: Use the corresponding teaching chapters first; these tables and indexes will serve as reference material.

Planned development

- Composer
- Work
- Measure numbers
- Source edition
- Publication year
- Public-domain status
- Whether re-engraving is complete
- Whether fingering / editorial marks are original to this project

Musical connection

Reference entries will point back to included exercises and source-reviewed repertoire; candidates are not yet published examples.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Additional Scale Colors and Patterns

Chapter overview

Purpose: Explore a few additional pitch collections after the core scale work is familiar. These patterns will be presented with specific names and contexts, rather than treating unfamiliar musical traditions as interchangeable colors.

Preparation: Use the corresponding teaching chapters first; these tables and indexes will serve as reference material.

Planned development

- Major and minor pentatonic patterns
- Blues-scale examples and listening context
- Whole-tone and diminished/octatonic patterns
- A sourced named tradition, such as hirajoshi, with limits of the piano illustration explained

Musical connection

Reference entries will point back to included exercises and source-reviewed repertoire; candidates are not yet published examples.

Development status: chapter opening only. Exercises, score examples, detailed practice instructions, and editorial review are forthcoming. This page establishes the proposed scope and reading order.

Hanon 1–20: Complete Routes

Use the teaching chapter for worked examples and practice variations. This reference contains the complete ascending and descending routes of all twenty exercises, including their turning points and final notes. It prints one pass; the source's repeat may be taken before the closing note. Each exercise continues across two pages.

Fingers printed here are those explicitly supplied in the source; unnumbered notes are not omissions to fill by guessing from a scale fingering. Establish the repeating hand pattern from the marked measures and the teaching examples. The descent often changes the figure. Work slowly at the transition before joining the two directions.

Read the register before starting

RH and LH labels remain attached to their respective staves. Clefs can change at a system boundary as the hands travel. An **8va** line means to sound the written notes an octave higher; its end restores the written octave. These changes affect the notation, not the source pitches.

Do not treat twenty exercises as a mandatory daily endurance routine. Select a short passage for a specific goal, use a comfortable tempo and dynamic, and stop for pain or strain. A brief, attentive session is more useful than completing the collection without listening.

Source and adaptation

Hanon, *The Virtuoso Pianist*, Part I, Schirmer (1900), transcribed by Charles David Taylor and revised by David J. Ruiz-Alma: Mutopia 2037. The adapted notation is **CC BY-SA 4.0**. Full source files are retained with the project. This layout keeps each hand on its own staff, replaces cross-staff layout with clefs/octave lines, and omits the source's tempo and dynamic directions for use with the book's practice instructions.

Hanon 1 — opening and turn

Focus: Opening stretch and five-finger movement.

The musical score for Hanon 1, measures 1–16, is presented in four systems. The first system (measures 1–4) shows the Right Hand (RH) playing ascending and descending five-finger patterns, while the Left Hand (LH) plays a steady eighth-note accompaniment. The second system (measures 5–8) continues the RH patterns with fingerings 1–2 and 5–4. The third system (measures 9–12) shows the RH playing ascending and descending five-finger patterns, while the LH plays a steady eighth-note accompaniment. The fourth system (measures 13–16) shows the RH playing a descending five-finger pattern, while the LH plays a steady eighth-note accompaniment. The word "Descending" is written above the RH staff in measure 14.

Exercise 1, measures 1–16. Continue on the next page.

Hanon 1 — continuation and close

The musical score for Hanon 1, measures 17–30, is presented in four systems. The first system (measures 17–20) is for RH and LH. The second system (measures 21–24) is for RH and LH. The third system (measures 25–28) is for RH and LH. The fourth system (measures 29–30) is for RH and LH. The score includes fingerings (1, 2, 4, 5) and a final closing note in measure 30.

Exercise 1, measures 17–30. Complete the written return and closing note.

Hanon 2 — opening and turn

Focus: Leaps and third/fourth-finger movement.

The musical score for Hanon 2, measures 1–16, is presented in four systems, each with a Right Hand (RH) and Left Hand (LH) staff. The time signature is 2/4. The exercise focuses on leaps and third/fourth-finger movement.

Measure 1: RH: 1 2 5 4 3 4 3 2; LH: 5 3 1 2 3 2 3 4

Measure 2: RH: 1 2 5; LH: 5 3 1

Measure 3: RH: 1 2 5; LH: 5 3 1

Measure 4: RH: 1 2; LH: 5 3 1

Measure 5: RH: 1 2; LH: 5 3 1

Measure 6: RH: 1 2; LH: 5 3 1

Measure 7: RH: 1 2; LH: 5 3 1

Measure 8: RH: 1 2; LH: 5 3 1

Measure 9: RH: 1 2; LH: 5 3 1

Measure 10: RH: 1 2; LH: 5 3 1

Measure 11: RH: 1 2; LH: 5 3 1 (Descending)

Measure 12: RH: 1 2; LH: 5 3 1

Measure 13: RH: 1 2; LH: 5 3 1

Measure 14: RH: 1 2; LH: 5 3 1

Measure 15: RH: 1 2 1 2 3 2 3 4; LH: 1 3 5 4 3 4 3 2

Measure 16: RH: 5 2 1; LH: 1 3 5

Exercise 2, measures 1–16. Continue on the next page.

Hanon 2 — continuation and close

The musical score for Hanon 2, measures 17–29, is presented in three systems. Each system contains a Right Hand (RH) and Left Hand (LH) part. The RH part consists of a descending eighth-note scale with fingerings 5, 2, 1. The LH part consists of an ascending eighth-note scale with fingerings 1, 3, 5. The score ends with a double bar line and a final note in the LH part.

Exercise 2, measures 17–29. Complete the written return and closing note.

Hanon 3 — opening and turn

Focus: Leaps and descending/ascending movement.

Exercise 3, measures 1–16. Continue on the next page.

Hanon 3 — continuation and close

17 RH 5 2 1 1 3 5 1 3 5 1 3 5 1 3 5

21 RH 5 2 1 1 3 5 1 3 5 1 3 5 1 3 5

25 RH 5 2 1 1 3 5 1 3 5 1 3 5 1 3 5

Exercise 3, measures 17–29. Complete the written return and closing note.

Hanon 4 — opening and turn

Focus: Third, fourth, and fifth fingers.

The musical score for Hanon 4, measures 1–16, is presented in a four-system format. Each system contains a Right Hand (RH) and Left Hand (LH) part. The RH part is written in treble clef, and the LH part is written in bass clef. The time signature is 2/4. The exercise focuses on the third, fourth, and fifth fingers. The first four measures show an ascending scale with fingering 1, 2, 1, 2, 5. The next four measures show a descending scale with fingering 5, 4, 5, 3, 1. The final four measures show a descending scale with fingering 5, 4, 5, 2, 1. The score ends with a double bar line.

Exercise 4, measures 1–16. Continue on the next page.

Hanon 4 — continuation and close

The musical score for Hanon 4, measures 17–29, is presented in three systems. Each system contains a Right Hand (RH) and Left Hand (LH) part. The RH part consists of a descending eighth-note scale starting on G4, and the LH part consists of an ascending eighth-note scale starting on C3. The measures are numbered 17, 21, and 25 at the beginning of each system. The score ends with a double bar line and a final note in the LH part.

Exercise 4, measures 17–29. Complete the written return and closing note.

Hanon 5 — opening and turn

Focus: Fourth/fifth-finger trill preparation.

The musical score for Hanon 5, measures 1–16, is presented in a four-measure system. The right hand (RH) and left hand (LH) parts are shown. The RH part begins with a trill on G4, followed by a descending scale. The LH part begins with a trill on C4, followed by an ascending scale. The exercise is divided into four measures, each with a key signature change (one sharp, two sharps, three sharps, and four sharps). The RH part ends with a trill on G4, and the LH part ends with a trill on C4. The exercise is labeled 'Descending' and 'Ascending'.

Exercise 5, measures 1–16. Continue on the next page.

Hanon 5 — continuation and close

The musical score for Hanon 5, measures 17–29, is presented in three systems. The first system (measures 17–20) shows the continuation of the exercise. The second system (measures 21–24) continues the pattern. The third system (measures 25–29) concludes the exercise with a final closing note in measure 29.

System 1 (Measures 17–20): The right hand (RH) plays a series of eighth notes, starting with a finger number 1 above the first measure. The left hand (LH) plays a series of eighth notes, starting with a finger number 5 below the first measure.

System 2 (Measures 21–24): The right hand (RH) continues the eighth-note pattern, starting with a finger number 1 above the first measure. The left hand (LH) continues the eighth-note pattern, starting with a finger number 5 below the first measure.

System 3 (Measures 25–29): The right hand (RH) continues the eighth-note pattern, starting with a finger number 1 above the first measure. The left hand (LH) continues the eighth-note pattern, starting with a finger number 5 below the first measure. The exercise concludes with a final closing note in measure 29.

Exercise 5, measures 17–29. Complete the written return and closing note.

Hanon 6 — opening and turn

Focus: Fifth-finger exercise.

The musical score for Hanon 6, measures 1–16, is presented in four systems. The first system consists of two staves: RH (Right Hand) and LH (Left Hand). The second and third systems each consist of two staves. The fourth system consists of two staves. The score includes fingerings (1–5) and a 'Descending' section starting at measure 13.

Measure 1: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 2: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 3: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 4: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 5: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 6: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 7: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 8: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 9: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 10: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 11: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 12: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 13: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 14: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 15: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Measure 16: RH: 1 5 4 5 3 5 2 5; LH: 5 1 2 1 3 1 4 1

Exercise 6, measures 1–16. Continue on the next page.

Hanon 6 — continuation and close

The musical score for Hanon 6, measures 17–29, is presented in three systems. The first system (measures 17–20) shows the continuation of the exercise. The second system (measures 21–24) continues the pattern. The third system (measures 25–29) concludes the exercise with a final closing note in measure 29.

System 1 (Measures 17–20): The right hand (RH) plays a sequence of eighth notes, starting with a 5th finger and a 1st finger. The left hand (LH) plays a sequence of eighth notes, starting with a 1st finger and a 5th finger. The pattern repeats for four measures.

System 2 (Measures 21–24): The right hand (RH) plays a sequence of eighth notes, starting with a 1st finger. The left hand (LH) plays a sequence of eighth notes, starting with a 5th finger. The pattern repeats for four measures.

System 3 (Measures 25–29): The right hand (RH) plays a sequence of eighth notes, starting with a 1st finger. The left hand (LH) plays a sequence of eighth notes, starting with a 5th finger. The pattern repeats for four measures, ending with a final closing note in measure 29.

Exercise 6, measures 17–29. Complete the written return and closing note.

Hanon 7 — opening and turn

Focus: Third, fourth, and fifth fingers.

The musical score for Hanon 7, measures 1–16, is presented in a two-staff system (RH and LH) in 2/4 time. The RH part begins with a descending sequence of eighth notes (1 3 2 4 3 5 4 3) and continues with various patterns. The LH part begins with an ascending sequence of eighth notes (5 3 4 2 3 1 3 4) and continues with various patterns. The score includes fingerings (1-5) and articulation marks (accents). The piece ends with a double bar line at measure 16.

Measures 1–16 are shown, with the score continuing on the next page.

Exercise 7, measures 1–16. Continue on the next page.

Hanon 7 — continuation and close

The musical score for Hanon 7, measures 17–29, is presented in three systems. The first system (measures 17–20) is for the Right Hand (RH) and Left Hand (LH). The second system (measures 21–24) is for the Right Hand (RH) and Left Hand (LH). The third system (measures 25–29) is for the Right Hand (RH) and Left Hand (LH). The score includes fingerings (1, 3, 5) and a closing note in measure 29.

Exercise 7, measures 17–29. Complete the written return and closing note.

Hanon 8 — opening and turn

Focus: Coordination of all five fingers.

The musical score for Hanon 8, measures 1–16, is presented in four systems, each with a Right Hand (RH) and Left Hand (LH) staff. The time signature is 2/4. The exercise focuses on the coordination of all five fingers through ascending and descending patterns.

System 1 (Measures 1–4): The RH part begins with an ascending pattern (1 2 4 5 3 4 2 3) and a descending pattern (1 2 4 5 3). The LH part follows with an ascending pattern (5 4 2 1 3 2 4 3) and a descending pattern (5 4 2 1 3). The RH part then plays a descending pattern (1 2 4) and an ascending pattern (1 2 4), while the LH part plays a descending pattern (5 4 2) and an ascending pattern (5 4 2).

System 2 (Measures 5–8): The RH part continues with ascending (1 2 4) and descending (1 2 4) patterns. The LH part continues with descending (5 4 2) and ascending (5 4 2) patterns.

System 3 (Measures 9–12): The RH part plays ascending (1 2 4) and descending (1 2 4) patterns. The LH part plays descending (5 4 2) and ascending (5 4 2) patterns.

System 4 (Measures 13–16): The RH part plays ascending (1) and descending (1) patterns. The LH part plays ascending (1 2 4 5 3 4 2 3) and descending (5 4 2 1 3 2 4 3) patterns. The word "Descending" is written above the RH staff in measure 15.

Exercise 8, measures 1–16. Continue on the next page.

Hanon 8 — continuation and close

The musical score for Hanon 8, measures 17–29, is presented in three systems. Each system consists of a treble staff (RH) and a bass staff (LH). The time signature is 2/4. The score includes fingerings (1-5) and a final closing note in measure 29.

System 1 (Measures 17–20):

- Measure 17: RH (5 4 2 1), LH (1 2 4 5)
- Measure 18: RH (5 4 2 1), LH (1 2 4 5)
- Measure 19: RH (5), LH (1)
- Measure 20: RH (5), LH (1)

System 2 (Measures 21–24):

- Measure 21: RH (5), LH (1)
- Measure 22: RH (5), LH (1)
- Measure 23: RH (5), LH (1)
- Measure 24: RH (5), LH (1)

System 3 (Measures 25–29):

- Measure 25: RH (5), LH (1)
- Measure 26: RH (5), LH (1)
- Measure 27: RH (5), LH (1)
- Measure 28: RH (5), LH (1)
- Measure 29: RH (5), LH (1) with a final closing note.

Exercise 8, measures 17–29. Complete the written return and closing note.

Hanon 9 — opening and turn

Focus: Fourth/fifth-finger extension.

The musical score for Hanon 9, measures 1–16, is presented in four systems. Each system consists of a Right Hand (RH) and Left Hand (LH) staff. The time signature is 2/4. The exercise focuses on fourth and fifth finger extension.

- System 1 (Measures 1–4):** RH starts with an ascending pattern (1 2 3 2 4 3 5 4) and a descending pattern (1 2 3 2 4 3 5 4). LH starts with an ascending pattern (5 4 3 4 2 3 1 2) and a descending pattern (5 4 3 4 2 3 1 2).
- System 2 (Measures 5–8):** RH continues with ascending and descending patterns. LH continues with ascending and descending patterns.
- System 3 (Measures 9–12):** RH continues with ascending and descending patterns. LH continues with ascending and descending patterns.
- System 4 (Measures 13–16):** RH continues with ascending and descending patterns. LH continues with ascending and descending patterns.

The word "Descending" is written above the RH staff in measure 11.

Exercise 9, measures 1–16. Continue on the next page.

Hanon 9 — continuation and close

17 RH 5 4 5 4 5 4 5 4

LH 1 2 1 2 1 2 1 2

21 5 4 1 2 5 4 1 2 5 4 1 2 5 4 1 2

25 5 4 5 4 5 4 5 4 1 2 1 2 1 2 1 2

Exercise 9, measures 17–29. Complete the written return and closing note.

Hanon 10 — opening and turn

Focus: Third/fourth-finger trill preparation.

The musical score for Hanon 10, measures 1–16, is presented in four systems. Each system consists of a Right Hand (RH) and Left Hand (LH) staff. The time signature is 2/4. The RH part features a descending trill pattern (1-5-4-3-2-3-2-3) in measures 1, 5, 9, and 13. The LH part features a descending scale pattern (5-4-3-2-1-2-3-4) in measures 1, 5, 9, and 13. The word "Descending" is written above the RH staff in the fourth system, indicating the direction of the trill.

Exercise 10, measures 1–16. Continue on the next page.

Hanon 10 — continuation and close

17 RH LH

21 RH LH

25 RH LH

Exercise 10, measures 17–29. Complete the written return and closing note.

Hanon 11 — opening and turn

Focus: Fourth/fifth-finger trill preparation.

1 2 5 4 5 4 3 4 1 2 5 1 2 5 1 2 5

5 3 1 2 1 2 3 2 5 3 1 5 3 1 5 3 1

5 1 2 5 1 2 1 2 1 2 1 2 1 2

5 3 1 5 3 5 3 1 5 3 1 5 3 1 5 3

9 1 2 1 2 1 2 1 2 1 2 1 2 1 2

5 3 5 3 5 3 5 3 5 3 5 3 5 3

13 1 2 1 2 5 2 1 2 1 2 3 2 5 2 1

5 3 5 3 1 3 5 4 5 4 3 4 1 3 5

Descending

Exercise 11, measures 1–16. Continue on the next page.

Hanon 11 — continuation and close

17 RH 5 2 1 1 3 5 1 3 5 1 3 5 1 3 5

21 RH 5 2 1 1 3 5 1 3 5 1 3 5 1 3 5

25 RH 1 3 5 5 2 1 5 2 1 5 2 1 5 2 1

LH 1 3 5 1 3 5 1 3 5 1 3 5 1 3 5

Exercise 11, measures 17–29. Complete the written return and closing note.

Hanon 12 — opening and turn

Focus: Thumb/fifth-finger extension.

Exercise 12, measures 1–16. Continue on the next page.

Hanon 12 — continuation and close

17 RH 1 5 3 1 5 1 5 1 5

18 LH 5 1 3 5 1 3 5 1 3

21 RH 1 5 1 5 1 5 1 5

22 LH 5 1 3 5 1 3 5 1 3

25 RH 1 5 1 5 1 5 1 5

26 LH 5 1 3 5 1 3 5 1 3

29 RH 1 5

30 LH 5 1

Exercise 12, measures 17–30. Complete the written return and closing note.

Hanon 13 — opening and turn

Focus: Third, fourth, and fifth fingers.

Exercise 13, measures 1–16. Continue on the next page.

Hanon 13 — continuation and close

17

RH

LH

21

25

Exercise 13, measures 17–29. Complete the written return and closing note.

Hanon 14 — opening and turn

Focus: Third/fourth-finger trill preparation.

The musical score for Hanon 14, measures 1–16, is presented in four systems. Each system contains four measures of music. The first system (measures 1–4) is for the Right Hand (RH) and Left Hand (LH). The second system (measures 5–8) is for the Right Hand (RH) and Left Hand (LH). The third system (measures 9–12) is for the Right Hand (RH) and Left Hand (LH). The fourth system (measures 13–16) is for the Right Hand (RH) and Left Hand (LH). The score includes fingerings (1–5) and a 'Descending' section starting at measure 13.

Exercise 14, measures 1–16. Continue on the next page.

Hanon 14 — continuation and close

The musical score for Hanon 14, measures 17–29, is presented in three systems. The first system (measures 17–20) shows the continuation of the exercise. The second system (measures 21–24) continues the pattern. The third system (measures 25–29) concludes the exercise with a final closing note in measure 29.

System 1 (Measures 17–20): The right hand (RH) and left hand (LH) play a sequence of eighth notes. The RH starts on G4 and the LH on G3. The sequence is: 5, 1, 3, 5, 1, 3, 5, 1, 3, 5. The sequence is repeated four times.

System 2 (Measures 21–24): The RH and LH continue the sequence. The RH starts on A4 and the LH on A3. The sequence is: 5, 1, 3, 5, 1, 3, 5, 1, 3, 5. The sequence is repeated four times.

System 3 (Measures 25–29): The RH and LH continue the sequence. The RH starts on B4 and the LH on B3. The sequence is: 5, 1, 3, 5, 1, 3, 5, 1, 3, 5. The sequence is repeated four times. The final measure (29) ends with a closing note on G4 in the RH and G3 in the LH.

Exercise 14, measures 17–29. Complete the written return and closing note.

Hanon 15 — opening and turn

Focus: Thumb/index-finger extension.

The musical score for Hanon 15, measures 1–16, is presented in four systems. Each system contains a Right Hand (RH) and Left Hand (LH) staff. The time signature is 2/4. The music consists of eighth-note patterns with specific fingering indicated by numbers 1-5 above or below the notes.

- System 1 (Measures 1-4):** RH and LH both play ascending eighth-note patterns. RH fingering: 1 2 1 3 2 4 3 5; LH fingering: 5 3 4 2 3 1 2 1.
- System 2 (Measures 5-8):** RH and LH both play ascending eighth-note patterns. RH fingering: 1 2 1 3 2 4 3 5; LH fingering: 5 3 4 2 3 1 2 1.
- System 3 (Measures 9-12):** RH and LH both play ascending eighth-note patterns. RH fingering: 1 2 1 3 2 4 3 5; LH fingering: 5 3 4 2 3 1 2 1.
- System 4 (Measures 13-16):** RH and LH both play descending eighth-note patterns. RH fingering: 5 3 4 2 3 1 2 1; LH fingering: 5 3 4 2 3 1 2 1. Measure 13 is marked with a "Descending" label.

Exercise 15, measures 1–16. Continue on the next page.

Hanon 15 — continuation and close

The musical score for Hanon 15, measures 17–29, is presented in three systems. The first system (measures 17–20) shows the continuation of the exercise. The second system (measures 21–24) continues the pattern. The third system (measures 25–29) concludes the exercise with a final closing note. Fingerings are indicated by numbers 1–5 above or below notes. The RH part uses a treble clef and the LH part uses a bass clef.

Exercise 15, measures 17–29. Complete the written return and closing note.

Hanon 16 — opening and turn

Focus: Third/fifth-finger extension.

The musical score for Hanon 16, measures 1–16, is presented in four systems. Each system consists of a Right Hand (RH) and Left Hand (LH) staff. The time signature is 2/4. The score includes fingerings (1–5) and a descending section starting at measure 13.

Measure 13: 1 5

Measure 14: 1 5

Measure 15: 1 5

Measure 16: 1 5

Descending: 5 2 3 2 1 2 3 2

Exercise 16, measures 1–16. Continue on the next page.

Hanon 16 — continuation and close

The musical score for Hanon 16, measures 17–29, is presented in three systems. Each system contains a Right Hand (RH) and Left Hand (LH) part. The RH part consists of a descending eighth-note scale with fingerings 5, 2, 1, 5, 2, 1. The LH part consists of an ascending eighth-note scale with fingerings 1, 3, 5, 1, 3, 5. The score ends with a double bar line and a fermata on the final note of the LH part.

Exercise 16, measures 17–29. Complete the written return and closing note.

Hanon 17 — opening and turn

Focus: Extension and third/fourth/fifth-finger movement.

The musical score for Hanon 17, measures 1–16, is presented in four systems. Each system consists of a Right Hand (RH) and Left Hand (LH) staff. The time signature is 2/4. The RH part features ascending and descending runs with fingerings 1-2-4-3-5-4-3-2 and 5-4-3-2-1. The LH part features ascending and descending runs with fingerings 5-4-2-1 and 1-2-3-4-5-4-3-2. A 'Descending' section is marked above measures 13-16.

Exercise 17, measures 1–16. Continue on the next page.

Hanon 17 — continuation and close

17 RH 5 3 2 1 5 3 2 1 5 3 2 1 5 3 2 1

LH 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5

21 5 3 2 1 5 3 2 1 5 3 2 1 5 3 2 1

25 5 3 2 1 5 3 2 1 5 3 2 1

Exercise 17, measures 17–28. Complete the written return and closing note.

Hanon 18 — opening and turn

Focus: Coordination of all five fingers.

The musical score for Hanon 18 is presented in four systems, each containing a right hand (RH) and left hand (LH) part. The key signature is one flat (B-flat) and the time signature is 2/4. The exercise consists of 16 measures, with measures 1–4 in the first system, measures 5–8 in the second, measures 9–12 in the third, and measures 13–16 in the fourth. The notation includes various fingerings (1-5) and a 'Descending' section starting at measure 13. The exercise focuses on the coordination of all five fingers.

Exercise 18, measures 1–16. Continue on the next page.

Hanon 18 — continuation and close

The musical score for Hanon 18, measures 17–29, is presented in three systems. The first system (measures 17–20) shows the continuation of the exercise. The second system (measures 21–24) continues the pattern. The third system (measures 25–29) concludes the exercise with a final closing note in measure 29. Fingerings are indicated by numbers 1–5 above or below notes. The RH and LH parts are clearly labeled.

Exercise 18, measures 17–29. Complete the written return and closing note.

Hanon 19 — opening and turn

Focus: Coordination of all five fingers.

Exercise 19, measures 1–16. Continue on the next page.

Hanon 19 — continuation and close

The musical score for Hanon 19, measures 17–29, is presented in three systems. The time signature is 2/4. The score is written for Right Hand (RH) and Left Hand (LH) staves.

System 1 (Measures 17–20):

- Measure 17:** RH: 5 1, 1 3 4 2; LH: 1 5, 5 3 2 4.
- Measure 18:** RH: 5 1, 1 3 4 2; LH: 1 5, 5 3 2 4.
- Measure 19:** RH: 5, 4 2; LH: 1, 2 4.
- Measure 20:** RH: 5, 4 2; LH: 1, 2 4.

System 2 (Measures 21–24):

- Measure 21:** RH: 5, 4 2; LH: 1, 2 4.
- Measure 22:** RH: 5, 4 2; LH: 1, 2 4.
- Measure 23:** RH: 5, 4 2; LH: 1, 2 4.
- Measure 24:** RH: 5, 4 2; LH: 1, 2 4.

System 3 (Measures 25–29):

- Measure 25:** RH: 5, 4 2; LH: 1, 2 4.
- Measure 26:** RH: 5, 4 2; LH: 1, 2 4.
- Measure 27:** RH: 5, 4 2; LH: 1, 2 4.
- Measure 28:** RH: 5, 4 2; LH: 1, 2 4.
- Measure 29:** RH: 5, 4 2; LH: 1, 2 4.

Exercise 19, measures 17–29. Complete the written return and closing note.

Hanon 20 — opening and turn

Focus: Second/fourth- and fourth/fifth-finger extension.

The musical score for Hanon Exercise 20, measures 1–16, is presented in a four-system format. The first system (measures 1–4) is labeled 'RH' and 'LH' and shows the right and left hands. The second system (measures 5–8) continues the exercise. The third system (measures 9–12) also continues the exercise. The fourth system (measures 13–16) includes a 'Descending' section starting at measure 8, indicated by a dashed line and the word 'Descending' above the staff. The score includes fingerings (1–5) and accents (4) throughout.

Exercise 20, measures 1–16. Continue on the next page.

Hanon 20 — continuation and close

The musical score for Hanon 20, measures 17–31, is presented in four systems. Each system contains a Right Hand (RH) and Left Hand (LH) part. The RH part consists of a descending scale with fingerings 5, 4, 2, 1, 3. The LH part consists of an ascending scale with fingerings 1, 2, 4, 5, 3. The score is in 2/4 time and ends with a double bar line and a repeat sign.

Exercise 20, measures 17–31. Complete the written return and closing note.

Sources and review notes

Hanon No. 1

C. L. Hanon, *The Virtuoso Pianist*, Part I, No. 1; Schirmer (1900), as transcribed by Steve Taylor and Javier Ruiz-Alma for the Mutoxia Project, music ID 2037. The underlying composition is public domain; this transcription is identified by Mutoxia as CC BY-SA 4.0.

Our adapted Hanon score files and their generated score assets are distributed under **CC BY-SA 4.0**. Changes: excerpted measures 1–4 and 15–18, separate staves for the hands, new layout, and editorial completion of repeated fingering numbers. The original register, pitches, and sixteenth-note rhythm are retained. The surrounding original instructional text is separate from that score adaptation.

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Bach, BWV 846, measures 1–4

Source file: `bach_prelude_c_wtcl.ly`, from the separate pianobook project. Its header credits Shay Rojansky, Han-Wen Nienhuys, Tobias Erbsland, and a version update by Javier Ruiz-Alma; Mutoxia ID 5, dated 2011-09-12. The typesetter’s header places the transcription in the public domain and lists the underlying edition as “Unknown.”

We preserve the first four measures’ notes and durations, use explicit treble/bass staves, and omit the source’s tempo instruction. There are no added fingerings. This is suitable for an internal sample; identify and compare a historical edition before publication.

Mutoxia record

Scales and original studies

The C-, G-, and F-major scale fingerings use the conventional patterns already present in Cadenza. The sample distinguishes octave-end fingers from continuation fingers. These are newly engraved examples, not facsimile pages from Hanon. An exact historical scale-edition comparison remains part of publication review.

The two-against-three drills, melody study, held-voice drill, practice routine, and explanatory prose were created for this guide. Their pedagogical review is pending.

Review scope

This sample is for content, density, and engraving feedback. A successful build does not establish musical correctness. Check source fidelity, fingering clarity, comfortable movement, and the usefulness of each listening goal. EPUB packaging is checked automatically; actual Kindle Previewer review remains a separate step.

Phase 4: scales, arpeggios, and chord studies

The four-octave C-major scale and the three one-octave A-minor forms are newly engraved conventional exercises. Both directions are written out. In classical melodic minor, the ascending sixth and seventh are raised and the descending form restores them; harmonic minor retains its raised seventh in both directions. The A-minor scale fingering is conventional; a historical Hanon edition comparison remains pending.

For the C-major arpeggio, the two-octave finger sequences were checked against Michael Clark's *Baylor Piano Basics*, chapter 61, "Two-Octave Major Arpeggios." This is a factual fingering reference only: no Baylor score, illustration, or instructional passage is reproduced. The guide's notation, rhythm, layout, and prose are independently authored.

Arpeggio fingering reference

The triad-inversion drill, cadence, and Alberti study are original exercises. Their suggested fingerings and practice instructions are editorial choices, not claims about a composer's fingering. Teachers may adapt chord fingerings to the player's hand and the musical context.

What this batch does and does not cover

These chapters establish the first playable examples for each topic. They do not yet supply every major and minor key, arpeggio inversion, seventh chord, or accompaniment pattern. The expanded key reference and the remaining Hanon 1–20 material are subsequent batches. No chapter in this review edition is marked publication-ready.

Review the four-octave score's clef and octave-sign transitions, the melodic-minor return, chord-note alignment, and the balance of notation and explanation on each page. Qualified teaching review and a real Kindle Previewer check remain outstanding.

Phase 4: expanding the key reference

The two-octave G-, D-, A-, and E-major scales use the conventional ascending finger sequences documented in Michael Clark's *Baylor Piano Basics*, chapter 30. The major arpeggios were checked against chapter 61; the A-, D-, and E-minor arpeggios against chapter 69. Each source distinguishes the two hands. Our notation, rhythm, registers, page layout, and teaching text are independently authored; no source image or teaching passage is reproduced.

- Two-octave major scale fingers
- Two-octave major arpeggio fingers
- Two-octave minor arpeggio fingers

The reference stores a separate, explicit RH and LH ascent for each example. For these symmetric major scales and root-position triads, the return reverses those fingers without repeating the summit. This rule is deliberately restricted to these examples: it does not define melodic-minor pitches, Hanon descending patterns, or every possible arpeggio variant.

Registers and engraving

The two-octave reference examples place the hands one octave apart and keep treble and bass clefs throughout. Captions give the exact starting and highest pitches. This matches the introductory examples. Register choices are editorial; the figures are not facsimiles of the fingering source.

Review boundary

Pitch spelling, major-scale interval order, triad quality, hand spacing, duration, terminal versus continuation fingers, and complete returns are checked automatically. The actual finger sequences have a named external reference, but source comparison and software checks are not a substitute for qualified teaching review. Other keys, inversions, and seventh-chord families remain work in progress.

The notation-reading example and five-finger studies are original teaching material with editorial fingerings. The opening chapters on technique, practice, and routine-building now contain usable guidance rather than opening-only outlines. Their pedagogical review remains pending.

Hanon No. 2 and the next technique studies

Hanon No. 2 uses the same Mutopia 2037 transcription and Schirmer (1900) source as No. 1. The retained `hanon02.ily` snapshot contains both hands. Our adaptations excerpt measures 1–4 and 15–18, retain pitches, registers, and rhythm, separate the hands onto explicit staves, and complete repeated fingerings editorially. The adapted score masters and generated notation carry **CC BY-SA 4.0**; the surrounding original teaching text is separate.

Mutopia source collection · Transcription files · CC BY-SA 4.0

The repeated-note, measured-trill, neighbor-note, and turn preparations are original studies with editorial fingers. Their fully written rhythms are practice choices, not prescribed realizations of historical ornament signs. Exact ornament realization in repertoire still requires the selected edition, context, and qualified musical review. The chapter deliberately avoids a universal starting-note rule based only on a composer's period.

The separate two-octave C-major score has been removed from the published inventory in favor of a shared continuation lesson and the existing four-octave reference. Its editable master remains available as an unused working example. The source-checked key patterns and one-octave hand-spacing rule remain unchanged.

Mozart scale excerpt and chord studies

The K.545 first-movement excerpt covers measures 5–6, checked against Alejandro Sierra’s Mutopia-2013/09/01-998 LilyPond transcription. An unmodified source snapshot is retained as `music/sources/K545-1.ly`. Mutopia identifies the underlying source only as IMSLP; no specific historical edition or autograph has been independently verified for this excerpt.

Our adaptation retains pitches, durations, rests, and LH staccato dots. It omits dynamics, slurs, and fingering to provide a clearly labeled pitch-and-rhythm study. A fixed LH bass clef replaces the brief treble-to-bass change while preserving sounding pitches. Return to the full edition for expressive details. The adapted notation is licensed **CC BY-SA 3.0**; original surrounding teaching prose is separate.

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The octave fragment, triad-quality comparison, common-tone inversion study, block-and-release drill, broken-shape comparison, and changing Alberti accompaniment are original studies with editorial fingerings. Their explicit note, chord, rest, and duration data share the existing engraving generator. The earlier C-major inversion drill now appears only in the dedicated inversions chapter.

These are developed review drafts, not completed coverage of every key or composer. Further repertoire applications, extended chords, and more advanced octave textures remain planned.

Bach polyphony excerpts

Chapters 40–41 use actual Bach excerpts in three keys: Invention No. 13 in A minor, BWV 784, measures 1–2 and 7–8; Sinfonia No. 11 in G minor, BWV 797, measures 1–7; and the WTC I Fugue in C major, BWV 846, measures 4–7.

The Invention transcription is by Allen Garvin, Mutopia 59, from Bach-Gesellschaft. The Sinfonia is by Olivier Vermersch, Mutopia 200. The Fugue is by Shay Rojansky, updated by Andreas Scherer, Mutopia 4. All three transcriptions are declared public domain by their typesetters. The latter two do not identify their underlying editions.

Source files are retained for comparison. The book preserves pitches, durations, rests, ties, and registers in the selected measures, while changing layout and marking excerpt boundaries. It adds no Bach fingering, dynamics, or articulation. The original short exercises surrounding them have editorial fingers and expressive marks. Practice variations in the prose are explicitly suggestions, not marks attributed to Bach.

The fugue's source code uses unconventional names for its middle voices; the book identifies them by register as soprano, alto, tenor, and bass. Voice names do not imply a fixed hand assignment in every passage.

These are source-checked teaching excerpts, not new critical editions. Comparison with a scholarly edition or autograph remains part of publication review. The K.332 excerpt added earlier likewise retains an unidentified-edition caveat beside its score.

Movement across the keyboard: sources

The original studies in Chapters 43–47 use explicit note and finger data in the shared engraving pipeline. Their fingerings, practice rests, and hand assignments are editorial. They are exercises for particular movements, not universal fingering prescriptions for every scale or broken chord.

Czerny, Op. 299 No. 35 (retained study master)

The RH opening, measures 1–2, is transcribed from the Peters edition edited by Adolf Ruthardt, plate 6966, printed page 83 (PDF page 85). The public-domain score is available in the complete School of Velocity scan. A source-page snapshot is retained locally.

The example deliberately omits the LH. Sounding pitches and rhythms are retained; an octave line is used across the whole excerpt for readability. The source’s *leggiero*, *dolce*, and **p** are retained with consolidated placement. No RH fingering is printed in these source measures, and none is attributed to Czerny here.

Beethoven, Op. 13, first movement

Measures 51–54 follow Peter Samuelson and Chris Sawyer’s Mutopia 299 transcription, which names Schirmer (1894) and Berners (1908) as sources and declares the typesetting public domain. The unmodified LilyPond source is retained locally.

The excerpt preserves sounding pitches, durations, the two independent LH voices, RH staccatos, grace notes, slurs, and **sf** marks. Layout, hand labels, and closing excerpt boundary are editorial. No fingers are added. The C-minor key signature remains as in the source, including local G *b* accidentals in this passage.

These are teaching excerpts checked against the named sources, not new critical editions. Publication review should include comparison with an authoritative complete edition and a pianist’s review of the surrounding musical context.

Mozart finale and pedal studies

K.332, third movement

The opening three measures follow *Mozarts Werke*, Serie XX, Breitkopf & Härtel (1878), plate W.A.M.332, printed page 138. The IMSLP edition record identifies the public-domain scan. A snapshot of the source page is retained. Notes, rests, rhythms, **f legato**, and LH staccatos are transcribed; layout and excerpt boundary change. No fingering or pedal has been added. This historical edition is not presented as a modern critical edition.

Pedal mechanisms and historical context

Yamaha's guide to grand and upright mechanisms and keyboard pedal overview support the distinctions between damper, soft/shift, sostenuto, and practice pedals. Its Disklavier pedal discussion describes continuous pedal control beyond on/off operation. These mechanical descriptions do not prescribe one musical interpretation.

Ernst Herttrich's preface to Henle's K.284 edition discusses Mozart's 17 October 1777 letter about Stein's knee-operated damper mechanism. It supports the caution that absent pedal marks do not establish an absence of sustaining effects in Mozart's playing.

The chapter exercises and timing diagrams are original teaching material. Their delayed changes are deliberately visible slow-practice demonstrations, not composer-specified delays. The whole-tone color study is not a Debussy or Ravel excerpt. Depth, clearing, and style suggestions require listening on the actual instrument and remain subject to pedagogical review.

Repertoire workshop: Bach through Schumann

Chapters 56 and 58 revisit the Bach and Pathétique sources documented earlier. Chapter 58 adds Op. 13/I, measures 1–2 and 11–12, from the same public-domain Samuelson/Sawer transcription (Mutopia 299). Pitches, rhythms, ties, and displayed expression are retained; layout and excerpt boundaries change. Source fingerings are not supplemented.

Schubert: Erlkönig, D.328

Measures 1–3 of the piano introduction follow Ph. Raynaud’s Mutopia 1030 transcription, citing C. F. Peters, Band I. The typesetting is public domain. The excerpt retains pitches, rhythms, forte, the LH slur and wedge articulations. The silent vocal staff is omitted; triplet numbers are repeated for study. No fingering or pedal is added. The separate single-note repetition study is original preparation.

Chopin: Fantaisie-Impromptu, Op. 66

Measures 5–6 follow Guy D. Lederfein’s Mutopia 1693 transcription, naming a Scholtz source; the typesetting is public domain. Notes, rhythm, slurs, and p are retained; pedal is omitted, sextuplets are shown explicitly, and no fingering is added. The first RH sixteenth rest comes from the source’s enclosing opening, outside its reusable phrase variable. This detail is included in our comparison checks.

Schumann: Träumerei, Op. 15 No. 7

The pickup and first two full bars follow Ying-Chun Liu’s Mutopia 504 transcription, citing *Leichte Stucke* (1900), public domain. Notes, grace notes, internal ties, initial p, and the opening crescendo are retained. Fingering and pedal are omitted. Continuing phrase slurs and the RH inner-voice tie leaving the excerpt are omitted at the boundary. The original voicing preparation is not a Schumann quotation.

Unmodified source files are retained locally. These are teaching excerpts, not critical editions; comparison with authoritative editions and a pianist’s editorial review remain part of publication preparation. The short “Listen closer” notes are observations and listening suggestions, not attributed pianist anecdotes.

Additional reference sources

Czerny, Op. 299 No. 1 — scale-to-leap transition

Chapter 43 now uses measures 1–2 of No. 1, RH only, from Peters/Ruthardt plate 6963, first music page of the complete scan. The source page is retained as `music/sources/czerny-op299-no1-source-page.pdf`. RH pitches, rests, forte and printed finger indications are retained; LH and tempo heading omitted. No. 35 remains an unused engraving master for a different leap texture.

Schubert: Impromptu in E $\flat$ major, D.899 No.2

Pickup and measures 1–2, both hands, from Mutopia 1551, Ph. Raynaud, Breitkopf & Härtel 1888, public domain. Full source retained in `music/sources/schubert-d899-2.ly`. Notes, rhythm and initial p retained; legato label repositioned and triplet numbers repeated for study. No fingers or pedal added; tempo heading omitted.

Four-octave arpeggio reference

All 24 root-position major/minor triads use Cadenza's chord-tone catalog. Conventional finger routes were checked independently against the EIU-hosted charts, with optional initial RH2 on selected black-key roots supported by Joy Morin's chart. The local EIU PDF and `review/arpeggio-reference-notes.md` document the review. Engraving is original; no chart layout is reproduced.

Chord construction and symbol terminology for the new chord-color chapter and Appendix C were checked against Open Music Theory: triads and seventh chords, chord symbols, and altered and extended chords. Examples, voicings and suggested fingerings are original editorial studies, not transcribed historical exercises.

Chapters 62–67: repertoire and original mixed studies

Scarlatti K.455, mm.24–26: Knute Snortum, Mutopia 2104, CC BY-SA 4.0. The adapted score retains that license; original teaching prose and independent preparations are separate. Liszt Second Ballade, mm.20–21: Vassily Checkin, Mutopia 236, public domain, source edition unspecified. Debussy Clair de lune, mm.1–2: Keith OHara, Mutopia 1778, public domain, after E. Fromont 1905. Source LilyPond and PDFs are retained in `music/sources/batch62-*`. The chapter captions identify layout changes and omissions. Mixed Studies 1–3 and all three preparations are original editorial exercises, with proposed fingerings; pedagogical review remains pending.