

Music theory, decoded

Recognize the patterns, understand what you hear, and use it to make music.



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Before you begin

An invitation to listen

Music theory helps you notice what you hear and choose what to play next. You do not need to memorize a wall of rules before making music. Start with a small idea, play it, listen, and give it a name.

This book takes you from the notes on a keyboard to scales, chords, rhythm, harmony, and your own musical ideas. The focus is the language used in much Western tonal music, with an introduction to modal and jazz harmony. It is a useful system, not a description of every musical tradition.

At Chord Compass Academy, our approach in these lessons is simple: hear the idea, understand the pattern, and use it in a short piece of music. A keyboard makes the examples easy to see, but the relationships apply to other pitched instruments too.

A clear path through each lesson

Each lesson follows a practical route. The idea gives you the explanation. The picture makes the pattern visible. In your hands, you play, sing, tap, or write it. The check shows what to revisit. Work slowly enough to hear what changes.

The written checks have answers at the back. Creative tasks have sample approaches rather than one correct result. Return to a lesson when you can recognize its idea in something you play or hear.

A few conventions

C4 means middle C. Higher octave numbers mean higher notes. A sharp raises a written note by a semitone; a flat lowers it. In plain text, C# means C sharp and Bb means B flat. W means a whole step and H means a half step. Scale examples show both upward and downward movement.

When a rhythm example says “one beat,” check the stated meter. A quarter note is the beat in the book’s simple-meter examples; a dotted quarter is the main beat in its compound-meter examples.

Your first goal

After the first six lessons, aim to find notes, build a major scale, and explain a simple interval. After the chord lessons, aim to turn those notes into a short progression. Understanding grows through use.

Your course map

Contents

Your route through the course	6
1 Sound, pitch and musical attention	7
2 Finding notes on the keyboard	9
3 Rhythm before notation	11
4 Intervals that you can see and hear	13
5 The major scale	15
6 Minor scales without the confusion	17
7 Keys and the circle of fifths	19
8 Triads are three-note structures	21
9 Inversions and smooth chord changes	23
10 Seventh chords and added color	25
11 Chords inside a key	27
12 Progressions, cadences and musical sentences	29
13 Melody motifs and phrase shape	31
14 Pentatonic scales, blues and improvisation	33
15 Modes and the sound of home	35
16 Borrowed chords and temporary destinations	37
17 Rhythm that creates movement	39
18 Texture, form and arrangement	41
19 Tuning and harmony beyond the basics	43
20 Your first complete piece	45
21 Hearing overtones and octaves	47
22 Tuning systems in practical terms	49
23 Spelling difficult intervals	51
24 Inverting intervals by ear and on paper	53
25 Building scales in unfamiliar keys	55

Your course map

Contents continued

26 Choosing the form of a minor scale	57
27 Finding a key from musical evidence	59
28 Harmonic rhythm changes the pace	61
29 Bass lines that explain the harmony	63
30 Guide tones make seventh chords clear	65
31 Extensions without crowded chords	67
32 Suspended chords and delayed resolution	69
33 Passing tones and neighbor tones	71
34 Anticipations and appoggiaturas	73
35 Pedal points under changing harmony	75
36 Sequences that develop an idea	77
37 Secondary leading-tone chords	79
38 Diminished sevenths and their symmetry	81
39 Augmented triads and chromatic motion	83
40 Borrowed chords with a clear purpose	85
41 Pivot chords and gradual modulation	87
42 Direct modulation and common tones	89
43 The Neapolitan chord in minor	91
44 Augmented-sixth chords as voice leading	93
45 Tritone substitution in context	95
46 Modal harmony beyond one scale	97
47 Modes of melodic minor with a musical goal	99
48 Quartal harmony and open structures	101
49 Independent voices in a duet	103
50 Rhythmic displacement and irregular groups	105
51 A melody with one clear high point	107

Your course map

Contents continued

52 A question and answer phrase	109
53 A sentence with a shorter continuation	111
54 An ostinato with a changing top line	113
55 A bass descent that holds common tones	115
56 A minor line with a raised leading tone	117
57 One borrowed chord in a bright phrase	119
58 A temporary visit to the dominant	121
59 A cadence built from guide tones	123
60 A dominant pedal before the return	125
61 A waltz accompaniment plan	127
62 A melody over a slow harmonic rhythm	129
63 A melody with silence at its center	131
64 Register as an arranging decision	133
65 A three-section miniature	135
66 A variation that preserves identity	137
67 A blues-inspired phrase with careful labels	139
68 A pentatonic melody with changing roles	141
69 An ending that avoids the expected tonic	143
70 A complete sketch ready for revision	145
Answers for lessons 1 to 10	147
Answers for lessons 11 to 20	148
A compact theory reference	149
Glossary	150

Before you begin

Your route through the course

The first twenty lessons build the basic language of music. Chapters 21–30 deepen the foundations through acoustics, tuning, spelling, key recognition, bass lines, and guide tones. Chapters 31–50 explore richer harmony and more deliberate voice leading. Chapters 51–70 turn those ideas into complete scored studies and revision tasks.

Choose a useful pace

Work through the foundations in order if the vocabulary is new. After that, follow the chapter sequence or choose a focused route below. Play every example slowly enough to hear the relationship being discussed. A written answer and a musical demonstration test different kinds of understanding.

Your goal	Suggested route
Understand chord symbols	Chapters 8–11 then 30–32
Write stronger melodies	Chapters 13–15 then 33–36 and 51–53
Explore richer harmony	Chapters 16 and 19 then 37–48
Arrange a small piece	Chapters 18 and 20 then 29 and 49–70

Use the studies actively

Each later study gives an opening, a continuation, analytical checkpoints, and a revision brief. Play the original before changing it. Make one intentional revision at a time and keep a copy of the starting version. You should be able to say which note, rhythm, or voice changed the effect.

The written checks for the first twenty lessons remain near the back. Later concept chapters place their answers beside the practice discussion, so cover that section until you have tried the questions. Creative tasks allow several valid solutions; judge them by clarity, playability, and the musical purpose you set.

Keep a listening journal

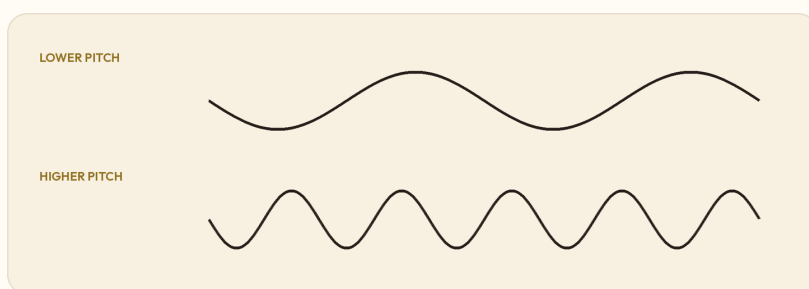
Save short sketches, chord spellings, and a sentence about what you heard. Revisit an older sketch after learning a new idea. At Chord Compass Academy, the aim of this course is usable understanding: knowing enough to hear a possibility, write it clearly, and decide whether it serves the music.

Musical foundations · Chapter 01

Sound, pitch and musical attention

A note starts with a vibration. When that motion repeats regularly, you hear a pitch: something you can compare, sing back, or find on an instrument. Music theory begins with paying attention to that sound, before giving it a name.

Frequency describes how often a vibration repeats each second. It is measured in hertz, written Hz. Faster repetition generally means a higher pitch. A note at 440 Hz and a note at 880 Hz are an octave apart. We hear them as closely related even though one is higher.



The second wave repeats twice as often over the same time span. The drawing compares frequency rather than loudness.

Four things to listen for

Pitch tells you how high or low a sound seems. Duration tells you how long it lasts. Loudness tells you how strong it seems. Timbre is the sound quality that helps you tell a piano from a flute playing the same note.

These qualities can change independently. Play one key gently and then firmly. The note name stays the same, although the volume and tone may change. Hold the key longer and you change duration without choosing a new pitch.

One note is already a lesson

Play a comfortable note, let it fade, and hum it back. Then play a higher note. You are already comparing pitch. Now repeat the original note with long and short durations. You are already shaping rhythm.

Theory becomes easier when each new word connects with something you can hear. If an explanation feels abstract, reduce it to two sounds and compare them.

Chapter 01 • Practice

Put sound into practice

Play the same note four times: quietly, firmly, briefly, and for a longer duration. Name the feature you deliberately changed. A real instrument may change more than one feature at once; a harder piano attack also changes timbre.

Next, play C4 and C5. Then play C4 and D4. Which pair feels like two versions of the same note name? The octave pair does. This similarity is one reason note names repeat across the instrument.

Why instruments sound different

Most instrumental notes contain a fundamental and additional frequency components called partials. When the partials fall at whole-number multiples of a fundamental, they are harmonics. Their relative strengths, together with the start and decay of the sound, help shape timbre.

You do not need acoustic mathematics to use this. Compare a sustained keyboard tone with a plucked string. Listen to the beginning of the sound, then to how it changes. A musical arrangement becomes clearer when different parts occupy different registers or use contrasting tone qualities.

The check

- A tone changes from 220 Hz to 440 Hz. What interval relates the two frequencies?
- You play the same key for twice as long. Which musical feature did you deliberately change?
- Two instruments play the same pitch at similar loudness. What word describes their different sound qualities?

Apply the idea

Create a short phrase using just one pitch. Change its rhythm and loudness so it has a clear beginning and ending. This is a useful reminder: interesting music does not require a large collection of notes.

Listening habit

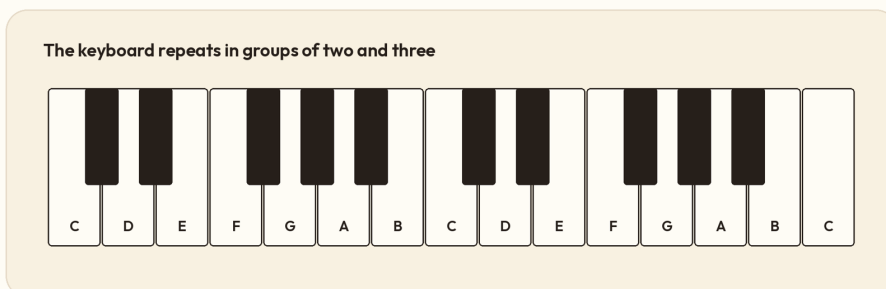
Choose a short passage from music you know. Listen once for the highest sound, once for the lowest sound, and once for the rhythm. You are training attention, not trying to identify everything at once.

Musical foundations · Chapter 02

Finding notes on the keyboard

The keyboard has a map built into it. Groups of two and three black keys repeat from one end to the other; the seven letter names, A to G, repeat with them. Learn a few landmarks and the rest of the instrument becomes much less mysterious.

Find a pair of black keys. The white key immediately to its left is C. The white key just to the left of a group of three is F. Use these two landmarks to orient yourself in any register.



The octave number changes at C. C4 is middle C and C5 is the next C above it.

Half steps and whole steps

A half step, or semitone, is the distance from one piano key to the very next key, including black keys. C to C# is a half step. E to F is also a half step, even though both keys are white.

A whole step is two half steps. C to D is a whole step because C# lies between them. E to F# is a whole step because F lies between them.

Different names for the same key

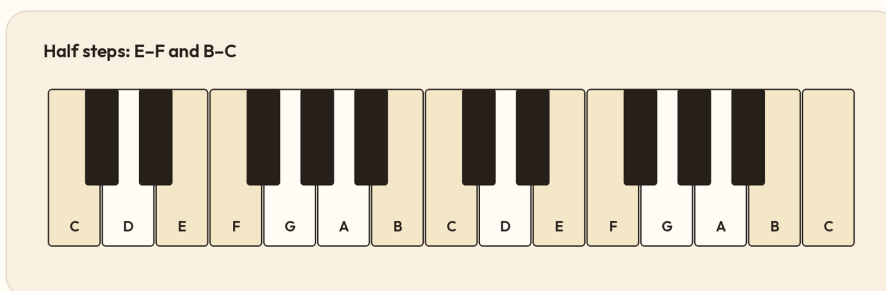
The black key between C and D can be called C# or Db. These are enharmonic names. On a normally tuned equal-tempered piano, they point to the same sounding key. Their spelling still matters when we describe scales, intervals, and chords.

A sharp does not always mean a black key. E# is played on the key usually called F. Likewise, Cb is played on the key usually called B. The symbol changes the written letter, not the color of a key.

Chapter 02 · Practice

Build a reliable note map

Find every C, starting low and moving upward. Then find every F. Choose a random white key and name it by moving from the closest landmark. Gradually reduce how much counting you need.



There is no black key between E and F or between B and C.

The chromatic collection

The twelve pitch classes in one octave can be written C, C#, D, D#, E, F, F#, G, G#, A, A#, B. The next note is C again, an octave higher. Another spelling uses flats: C, Db, D, Eb, E, F, Gb, G, Ab, A, Bb, B.

Play upward through every key from C4 to C5, then downward through every key back to C4. This is a chromatic scale. Keep the speed comfortable enough that you hear the equal spacing.

The check

- What note is a half step above E?
- What note is a whole step above Bb?
- Give another name for F# on an equal-tempered piano.

A useful distinction

A step on the staff and a half step on the keyboard are different ideas. Moving from one letter to the next may produce a whole step or a half step. Later, interval names will account for both letter distance and sounding distance.

Apply the idea

Use C, D, and E to make a four-note idea. Repeat it an octave higher. Notice what stays recognizable: the note relationships and rhythm. The register changes, but the basic identity can remain clear.