

Scale formulas

A scale is a pattern of tones and semitones, not a list of notes. Learn the pattern once and you can build that scale from any starting note — the whole keyboard opens up.

THE STEP PATTERNS

Wide block = tone · narrow gold block = semitone

Major	T	T	S	T	T	T	S
Natural minor	T	S	T	T	S	T	T
Harmonic minor	T	S	T	T	S	T+S	S
Melodic minor · rising	T	S	T	T	T	T	S
Major pentatonic	T	T	T+S	T	T+S		

SCALE	PATTERN	BUILT ON C	HOW IT SOUNDS
Major	T T S T T T S	C D E F G A B C	Bright, settled.
Natural minor	T S T T S T T	C D E $\flat$ F G A $\flat$ B $\flat$ C	Sad, plain.
Harmonic minor	T S T T S T+S S	C D E $\flat$ F G A $\flat$ B C	Exotic, dramatic.
Melodic minor · rising	T S T T T T S	C D E $\flat$ F G A B C	Minor that leans upward.
Major pentatonic	T T T+S T T+S	C D E G A C	Folk-like. Nothing clashes.
Minor pentatonic	T+S T T T+S T	C E $\flat$ F G B $\flat$ C	Bluesy and grounded.
Blues	T+S T S S T+S T	C E $\flat$ F F $\sharp$ G B $\flat$ C	The extra note is the grit.
Chromatic	S × 12	Every key in turn	No home note at all.

BUILD IT FROM ANYWHERE

Pick a note, then walk the pattern up the keyboard counting keys. Two keys is a tone, one is a semitone.

START WITH PENTATONIC

Five notes, no semitones, no wrong answers — the safest scale to improvise a first melody on.