

Common Scales & Their Intervals

by Dennis Winge

Anyone can learn scale patterns on their instrument, but only mature musicians recognize what intervals they are playing. The importance of knowing the intervals rather than just blindly playing scales cannot be overstated. The ultimate goal is to hear an idea, whether self-generated from your imagination, or from someone a song or other instrumentalist, and be able to execute it flawlessly on your instrument without prior preparation.

This requires three elements. First, it involves ear training, wherein you recognize the intervals of the idea against the key or tonic or root of the piece or section. Second, you must be able to visualize the intervals on your instrument, which, for guitar, for example, is known as fretboard theory. Lastly, by recognizing the theoretical framework of the idea, you will be able to both hear it and visualize it much quicker than if you were relying solely on your ear and ability to visualize.

To address this last point is why it's important to know the scale chart below. After you study it, read the description below wherein the correlation between each scale is evaluated. Note: there are many other scales used in music, but these are the most common.

Chromatic Scale												
1	b2	2	#2/ b3	3	4	#4/ b5	5	#5/ b6	6	b7	7	8
I. Major Scales												
Ionian (pure major)												
1		2		3	4		5		6		7	8
Lydian (4 th mode of major scale)												
1		2		3		#4	5		6		7	8
Mixolydian (5 th mode of major scale)												
1		2		3	4		5		6	b7		8
Major Pentatonic												
1		2		3			5		6			8
II. Minor Scales												
Aeolian (pure minor) (6 th mode of major scale)												
1		2	b3		4		5	b6		b7		8
Dorian (2 nd mode of major scale)												
1		2	b3		4		5		6	b7		8
Phrygian (3 rd mode of major scale)												
1	b2		b3		4		5	b6		b7		8
Locrian (7 th mode of major scale)												
1	b2		b3		4	b5		b6		b7		8
Minor Pentatonic												

1			b3		4		5			b7		8
Blues Scale												
1			b3		4	b5	5			b7		8
Melodic Minor												
1		2	b3		4		5		6		7	8
Harmonic Minor												
1		2	b3		4		5	b6			7	8
III. Other Scales												
Diminished (whole-half)												
1		2	b3		4	b5		b6	6		7	8
Diminished (half-whole)												
1	b2		b3	3		#4	5		6	b7		8
Whole Tone												
1		2		3		#4		#5		b7		8

The chromatic scale is every note in our Western world. Other places around the globe such as Turkey and India divide the octave into more than 12 equal parts, but that is by and large what we use in the West.

The major scales are those with a major third. The pure major, known as Ionian is the basic “do re mi” scale on which most Western music theory is built. Compared to the basic major scale, Lydian has a sharp 4, Mixolydian has a flat 7, and the major pentatonic leaves out 4 and 7.

The minor scales have a flat 3rd. Aeolian is the pure minor to which all the other minor scales are compared. For example, Dorian has a natural 6, Phrygian has a flat 2, Locrian has both a flat 2 and a flat 5. The minor pentatonic leaves out 2 and flat 6; and the blues scale adds the flat 5 to the 5 notes that remain. There are also two other common types of minor scales: the harmonic minor, which, when compared to Aeolian, has a natural 7, and the melodic minor, whose 6 and 7 are both natural.

Diminished scales are constructed using alternating half and whole steps. Because you can start with either a half step or a whole step, there are two varieties of diminished scales, which function quite differently in practice, just as all the other modes of the major scale sound quite different from each other. They are both “symmetrical scales” as their intervallic construction is a simple arrangement of whole- and half-steps that get repeated. For example, the whole-half diminished scale is simply a whole followed by a half four times over. The half-whole diminished is a half followed by a whole, also 4 times.

The whole tone scale is the only one above that is not a 7-note scale. Its intervallic construction is, as the name implies, only a whole step followed by another followed by another until the octave is reached.

Memorizing and playing these scales is well worth the effort because, as previously discussed, you will be able to recognize the unique sound of each one, executed it on your instrument, and know the theoretical context in which it is being used. Have fun and good luck.