




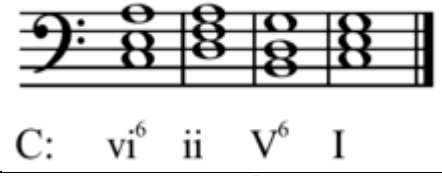




Library specification

1) 8 out of 19 progressions selected among the common ones (from: https://en.wikipedia.org/wiki/List_of_chord_progressions). See table below.

	Name	description	Image	# of chords	Major/Minor/Mixolydian
1	50s progression	The '50s progression (also known as the " Heart and Soul " chords, the " Stand by Me " changes, the doo-wop progression and the " ice cream changes ") is a chord progression and turnaround used in Western popular music. The progression, represented in Roman numeral analysis, is: I–vi–IV–V . For example, in C major: C–Am–F–G. As the name implies, it was common in the 1950s and early 1960s and is particularly associated with doo-wop.		4	Major
2	I–IV– b VII–IV	The I–V–vi–IV progression is a common chord progression popular across several genres of music. It involves the I, V, vi, and IV chords of any particular musical scale. For example, in the key of C major, this progression would be: C–G–Am–F. Rotations include: <ul style="list-style-type: none"> I–V–vi–IV : C–G–Am–F (optimistic) V–vi–IV–I : G–Am–F–C vi–IV–I–V : Am–F–C–G (pessimistic) IV–I–V–vi : F–C–G–Am 		3	Mixolydian Mixolydian mode may refer to one of three things: the name applied to one of the ancient Greek <i>harmoniai</i> or <i>tonoi</i> , based on a particular octave species or scale; one of the medieval church modes; or a modern musical mode or diatonic scale, related to the medieval mode. (The Hypomixolydian mode of medieval music, by contrast, has no modern counterpart.)
3	Backdoor progression (front door is V7)	In jazz and jazz harmony, the chord progression from iv ⁷ to b VII to I (the tonic or "home" key) has been nicknamed the backdoor progression or the backdoor ii–V , as described by jazz theorist and author Jerry Coker. This name derives from an assumption that the normal progression to the tonic, the ii–V–I turnaround (ii–V ⁷ to I, see also authentic cadence) is, by inference, the "front door", a metaphor suggesting that this is the main route to the tonic.		3	Major

	Name	description	Image	# of chords	Major/Minor/Mixolydian
4	Bird changes	<p>The Blues for Alice changes, Bird changes, Bird Blues, or New York Blues changes, is a chord progression, often named after Charlie Parker ("Bird"), which is a variation of the twelve-bar blues.</p> <p>The progression uses a series of sequential ii–V or secondary ii–V progressions, and has been used in pieces such as Parker's "Blues for Alice". Toots Thielemans's "Bluesette" and Parker's "Confirmation" also have similar progressions. Nikka Costa's 1983 song "First Love" also featured the progression on its chorus.</p>			Major
5	Chromatic descending 5-6 sequence (variation of I–IV– b VII–IV)	<p>The I–V–vi–IV progression is a common chord progression popular across several genres of music. It involves the I, V, vi, and IV chords of any musical scale. For example, in the key of C major, this progression would be: C–G–Am–F. Rotations include:</p> <ul style="list-style-type: none"> I–V–vi–IV : C–G–Am–F (optimistic) V–vi–IV–I : G–Am–F–C vi–IV–I–V : Am–F–C–G (pessimistic) IV–I–V–vi : F–C–G–Am 		4	Mixolydian
6	Circle progression	<p>In music, the vi–ii–V–I progression is a chord progression (also called the circle progression for the circle of fifths, along which it travels).</p>		4	Major
7	Folia	<p><i>La Folía</i> (Spanish), or <i>Follies of Portugal</i> (English), also known as <i>folies du Portugal</i> or <i>folies d'Espagne</i> (French), <i>La Follia</i> (Italian), and <i>Folia</i> (Portuguese), is one of the oldest remembered European musical themes, or primary material, generally melodic, of a composition, on record. The theme exists in two versions, referred to as early and late folias, the earlier being faster.</p>		4	Minor

	Name	description	Image	# of chords	Major/Minor/Mixolydian
8	ii–V–I progression	<p>The ii–V–I progression ("two–five–one progression") (occasionally referred to as ii–V–I turnaround, and ii–V–I) is a common cadential chord progression used in a wide variety of music genres, including jazz harmony. It is a succession of chords whose roots descend in fifths from the second degree (supertonic) to the fifth degree (dominant), and finally to the tonic. In a major key, the supertonic triad (ii) is minor, and in a minor key it is diminished. The dominant is, in its normal form, a major triad and commonly a dominant seventh chord. With the addition of chord alterations, substitutions, and extensions, limitless variations exist on this simple formula.</p>		3	Major (cadence)

Chord progressions have been recorded on piano.

For each progression there are three versions with different tempo: 90bpm; 120 bpm; 150 bpm

The midi files have been used to elicit emotions. The corresponding brainwaves have been collected by a Brain-Computer Interface and then classified following Russell's (Russell, 1980) Valence/Arousal model.

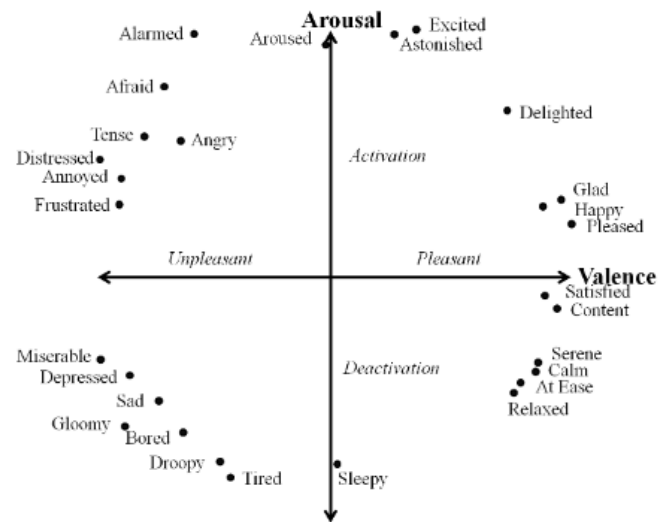


Fig.1 The Valence/Arousal emotion space (Russell, 1980)

J.A. Russell, "A circumplex model of affect", *Journal of personality and social psychology*, Dec, 39(6):1161, 1980