

An introduction to 'modulation'.

Modulation is the term that describes the moment when a piece of music moves / changes from one key to another.

Changing key is a very important art to understand for the serious song-writer, composer and musician.

There are many reasons for wanting to change key within a piece of music. In contemporary music modulations generally occur for practical and / or artistic reasons.

Here are some examples of these 'reasons':

- The physical 'range' constraints and limitations of a singer or specific instrument

Imagine a song where the vocal part in verse will only sound good in two or three different keys as a result of the singer's range. At another point in the song, there may be a guitar part that only works well in one key because of the use of open strings. Each of these parts are in different keys so if you want them to be in the same song, a key change will need to take place – a modulation.

- A key change can also have very dramatic impacts upon the emotional qualities of the music by raising the intensity and drama, or creating an uplifting 'feel good' mood, or backing off like a sigh of relief, switching from one emotional effect to another.

- Common to the music of the baroque and classical style is that two or more different sections of a piece of music may need to be in different keys in order to satisfy specific technical requirements that are related to the 'form'. A detailed study of form is beyond the scope of this tutorial, however for a very rough idea, imagine a certain type of song where the chorus had to be in one of a specific selection of keys with respect to the key of the verse.

Modulation is therefore a very flexible and powerful tool in the hands of a good writer / composer and can add enormous amounts emotional content and diversity.

Before getting into various modulation techniques there are a few things that are well worth understanding. The first thing that needs to be understood is that many chords exist in more than one key. By taking a look at the triads that occur in the key of G we can observe some interesting things:

I	II	III	IV	V	VI	VII
G	Am	Bm	C	D	Em	F#mb5

Note that a major triad occurs three times as chord I, IV and V

Also note that a minor triad also occurs three times as chord II, III and VI

If you reverse this logic, a single major chord can exist as chord I in one key, chord IV in another and chord V in another.

The same therefore applies to a minor chord being able to be thought of as being chord II in one major key, chord III in another major key and chord VI of another [which equates to chords I, IV and V or the relative minor key].

So if we look at the chord of G it can be:

chord I in the key of G

chord IV in the key of D

chord V in the key of C

and also

chord III in the key of Em

chord VI in the key of Bm

chord VII in the key of Am

The chord of Em can be:

chord II in the key of D

chord III in the key of C

chord VI in the key of G

and also

chord I in the key of Em

chord IV in the key of Bm

chord V in the key of Am

If you think back to the minor scales and the modes and how they are related to the major scale then you'll realise that the same thing applies there too.

The chord numbers rotate depending upon the scale / mode.

It is therefore possible to trigger a modulation by considering that the chord in question has a sort of 'dual personality' because it belongs to both the key you're in, and also in the key you're heading for [the 'target key'].

This chord is known as a 'pivot chord' - a pivot to swing between two keys.

The next thing to understand is the idea of a 'close' or 'distant' key. You may well think that the closest keys to C are C# and B [because they are only a semi-tone either side of C]. In fact, the reverse is true. They are the most distant from the key of C.

The key of C contains:

C, D, E, F, G, A, B

The key of C# contains:

C#, D#, E#, F#, G#, A#, B#

Looking at the notes that make up these two keys we can see that every single note is different. This means that no pivot chords can exist between the keys of C and C#. If you want a very smooth transition from C to C# you would have to pass through several keys in succession.

The 'closest' keys to C [all natural notes] are those with the most notes in common.

These are therefore:

F [all natural notes and a Bb]

G [all natural notes and a F#]

The thinking here is that the more notes that the two keys have in common, the greater the chance that pivot chords will exist. Also, if only a single note has to be modified [the note F becomes F# to change from the key of C to G] then the shift in tonality is only small [making it easy on the ears].

Or from a compositional perspective, the modulation is more subtle / less dramatic.

Lastly, nothing establishes a new key better than a perfect cadence [chord V >> I] in the target key. This rule is especially true in classical music. In modern times this is less important than it was prior to 1870-ish but that does not rule it out as 'un-cool'. If you want that authentic Baroque / Classical vibe then it is a must.

Even in my own strange brand of heavy metal, I use a multitude of classical techniques, modulation and cadences being among them.

Let all this sink in for a little while. Just a little something to think about and be aware of before moving deeper into the subject of modulation.

The next tutorial will start looking at some modulation techniques and examples.