

# MUSIC OFFICE - SONGWRITING SESSIONS

## SESSION 1 - HARMONY

### Introduction

All songwriters will use harmony in some form or another. It is what makes up the harmonic footprint of a song. Chord sequences and melodies are the most recognisable parts of our songs, and can portray a wide range of moods and emotions (from a catchy pop hook to an ambient art song).

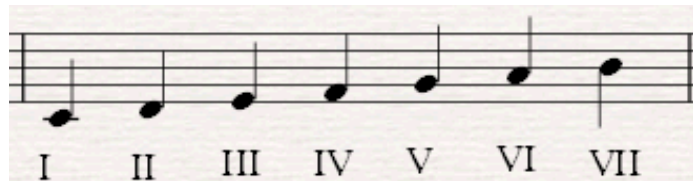
Most songwriters use traditional 'Western Harmony' techniques as the basis of their music.), which essentially all boils down to knowing your scales. The chords, and chord sequences, then just fall into place.

### Scales and Chords in a Major Key

If we are writing a song in a major key, then we will be using the corresponding major scale. As an example let's take C Major. The notes of the scale are made up of a sequence of intervals. For a major scale this is:

**tone, tone, semi-tone, tone, tone, tone.**

Starting on a C, this set of intervals ascending gives us our C major scale (the white notes on the keyboard).



We can number these degrees of the scale from I - VII (as seen above).

Now, to build up chords in any major key, we will only ever use the notes of this scale. So for our chord I (or Tonic Chord) we will add a third, by missing a note in the scale and taking the next one (E) and add the fifth by missing another note in the scale and taking the next one (G). We can do this for each of the seven chords, giving us 7 different triads in C major.



Intervals
Major Triad = 4, 3
Minor Triad = 3, 4
Diminished Triad = 3, 3

As you can see above, these triads each fall into one of three different chord types. Major (shown on the diagram just by the Roman numeral), Minor (shown with an 'm') and Diminished (shown with a 'dim'). The reason these triads sound different is due to the intervals between each note.

In a major chord the gap between the 'Root' and the 'Third' is 4 semitones. The gap between the 'Third' and the 'Fifth' is 3 semitones. In a minor chord the semitone gaps are 3 and then 4. In a diminished chord the semitone gaps are 3 and 3.

Things then get even more interesting when we add the 'sevenths' onto the chords. Again, we just miss a note in the scale and add on the next one.



Intervals	
Major 7	= 4, 3, 4
Minor 7	= 3, 4, 3
Dominant 7	= 4, 3, 3
Diminished 7	= 3, 3, 3

As you can see, we now have four different chord types; Major 7 (maj7), Minor 7 (m7), Dominant 7 (dom7 or '7') and Diminished 7 (dim7). The semitone intervals between the fifth and the seventh are shown above. So, although chords I, IV and V are all major triads, adding the seventh alters the genetics of chords V, as the seventh is 3 semitones from the fifth rather than 4 semitones in chords I and IV. We call this V7 chord a 'dominant 7' and will be exploring it further later.

At this stage, it is useful to ensure you can talk about each chord using numbers and intervals. This makes it easier when writing in more complex keys. For example; the **third** of chord IV in **C major** is an **A**. The **fifth** of chord III in **C major** is a **B**. This may take some time to work out to begin with, but after a while, it will take you no time to work out the "seventh of chord VI in F# major" (which is a C# coincidentally)!

## Transposing

As a side note, let's look at transferring the above to different key signatures. The principles are all the same - Chord I will always be a major 7, chord II will always be a minor 7 etc. The only thing that makes it tricky is working out where to put sharps and flats.

Whatever key you are in, the notes of the scale will always follow the repeated sequence:

A B C D E F G A B C D E F G etc.

Obviously you start on the tonic note of your key. Let's say we are in D major, we will write out the notes of the scale starting on a D:

**D E F G A B C**

Now remember, what defines a major scale is the pattern of intervals - **tone, tone, semi-tone, tone, tone, tone**. So we need to check that the above notes conform to these rules. **D** to **E** is a tone. Fine. **E** to **F** is a semi-tone. Wrong. The second interval should be a

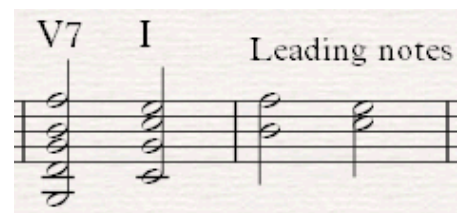
tone so we know this **F** needs to be sharpened. If you do this for the whole scale you will see that F and C both need to be sharpened to fit in with the major rules, so D major has two sharps.

**D E F# G A B C#**. (note - you will never have a mixture of sharps AND flats in a key. If you have this, you've gone wrong somewhere!) Once we know this, we can build up the chords again and work out that in D major we have Dmajor7 (I), Emin7 (II), F#min7 (III), Gmaj7 (IV), A7 (V), Bm7 (VI), C#dim7 (VII).

## Chord V and the Tritone

Anyway, back to the importance of the Dominant 7 chord (chord V7). The power of the chord lies not in the root note, but in its third and seventh. Let's go back to working in C major. Chord V is a G dominant 7. The third of this chord is a B and the seventh is an F. The gap between these two notes is 6 semitones (also known as a 'Tritone', down to the fact there are 3 whole tones between the notes). This is the furthest interval between two notes you can get. If you go up to 7 semitones, you are then only 5 semitones away from the note above. The tritone is very dissonant when played on its own. This dissonance is aching to be resolved, by shifting the B up to a C and the F down to an E (creating a C major chord). This is why the 'V7 - I' chord progression holds so much power in composition; the listener will always feel that they know where the V7 chord is heading. Whether you give the listener that resolution or send them somewhere unexpected is up to you as a composer.

The example to the right shows how this tritone is hidden in a V7 chord, but leads nicely into a chord I. This is known as a perfect cadence.



Try picking any note on a piano and find the note a tritone away (6 semitones up or down). Playing these together you should instinctively feel it drawing you towards the chord I in whichever key you are in.

## Chord Sequences

So, with these seven different chords in the major scale you could compose a countless number of songs just by picking chords more or less at random. They will all work, although of course some progressions sound better than others. Your chord I and V are important chords as discussed, as is chord IV, being the only other major chord at your disposal. Hundreds of hit songs have been written using just these three chords alone. Similarly chord II, chord VI and chord III can be used to add a minor edge to a progression, giving some (if still somewhat basic) harmonic variation to a chord sequence.

Try playing some of these common progressions and see if you can work out any songs that have used them.

1. I - VI - IV - V
2. I - IV - V - V
3. IV - II - V - I
4. IV - I - V - VI

There is nothing wrong with using common progressions. There are lots of other points of interest in a song that come from melody, rhythm, timbre, structure, lyrics etc, however if you can put *something* unusual into your harmony the song *may* be better for it.

Chord VII is slightly less forgiving when just thrown into a chord sequence. Its diminished sound is dissonant, which is not necessarily a bad thing, but is rarely used in 'popular music' (which could be a good reason to try and use it!).

## Modulations and Variations

Although using only the chords from within a key can work nicely, this is by no means the only chords and harmony at your disposal. A song can be vastly improved by altering these basic chords and introducing chords from different keys. The possibilities are endless and it will be down to personal opinion and context as to what works for you. Some examples are as follows:

### Key Modulation:

You can modulate key at any point in a song, be it for one bar, one section, or longer/multiple modulations (*Beyonce's 'Love On Top'* modulates up by a semi-tone four or five times in the outro). Commonly, modulations work best to keys that are closely related to your starting key. These related keys can be found by creating a cycle of fifths - a sequence where each key is a fifth below the next key in the sequence:

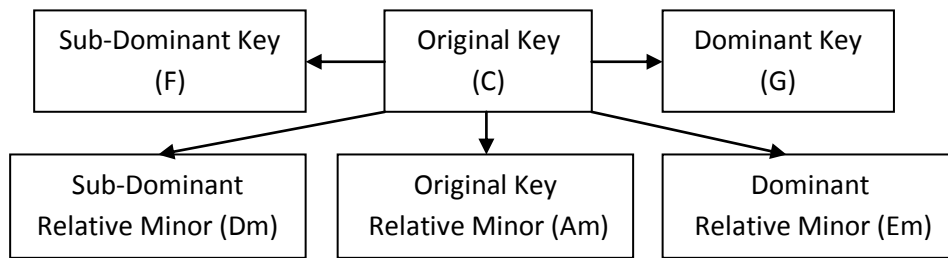
**Gb - Db - Ab - Eb - Bb - F - C - G - D - A - E - B - F# - C# - G# - D# - A#**

The keys either side of a chosen key are closely related, as each has just one more or one less sharp or flat (as seen in the below table):

Cb	Gb	Db	Ab	Eb	Bb	F	C	G	D	A	E	B	F#	C#
7b	6b	5b	4b	3b	2b	1b	0	1#	2#	3#	4#	5#	6#	7#

Note - You could extend this table further, for example adding G# to the right of the table, but then we get into the territory of adding double sharps, so you would nearly always use the enharmonic equivalent (G# = Ab).

So to modulate from C major, you would normally go to either F major, G major, or the relative minors of these three keys, A minor, Dm minor and E minor. These keys share the most chords, so make for a more subtle transition.



There are many ways to modulate to related keys. The easiest is to go to the dominant of the new key before moving. For example, in C major you could go to a D7 chord which would act as a V7 in the key of G.

You can also modulate to unrelated chords. It is fun to experiment with these, and finding ways to get from one to another – it may be that to get from C to Ab you go through the cycle of fifths, creating a series of V -> I progressions until finally landing in your new unrelated key.

### **Chord modulation:**

As discussed, in a major key, each chord is set to major, minor or diminished. However, by changing some of these chords to a different chord type you can get some really nice, unexpected chord sequences. Some popular examples of this include changing a chord IV to a minor chord and chord III to a major chord. An example of both of these can be found in *Radiohead's 'Creep'*. The chord sequence is as follows – G, B, C, Cm. So in terms of chord numbers this would be I, III (major!), IV, IV (minor!) where the second and fourth chords of the progression have been altered from what the listener would expect. Although subtle, this technique adds a mysterious feel to the chords, and puts the listener slightly on edge as the progression is more unexpected.

### **Unrelated chords:**

Another technique to break away from the standard major chords/key is to use a chord where the root note doesn't even appear in the key. A common example of this is to move to a 'flattened VII chord' (not a perfect description of what the chord is). In C major, this chord would be a Bb major chord, so it is a tone below the tonic chord. This chord sounds unexpected, but leads nicely into a chord IV or V. An example of this being used in popular music would be *Lorde's 'Royals'*. The 'flattened VII' chord is more or less the only harmonic element of interest in the whole song, but it is enough to keep it driving forward. The chord sequence in the Pre-Chorus and Chorus is as follows:

C, C, Bb, F. or – I, I, flat VII, IV.

Now of course, the 'flattened VII' is not actually how the chord is functioning here. In fact, we have modulated into the subdominant (F), and the sequence is V, V, IV, I. However in the context of the song, which for the most part is cemented in C major, it is easier to describe this chord as a 'flattened VII'.

Play around with using unrelated chords and see what works for you, but remember that too many unrelated chords can lose the songs harmonic centre.

### **Theory in Practice**

These are all techniques for understanding how harmony functions in songs, what the conventions are and some ways to break those conventions. Try analysing songs you like or that have inspired your song-writing. When you realise “that bit of the song that you really like” is actually because the songwriter modulates into the subdominant for a pre-chorus (for example) you can then use these techniques in your own work.