

WAYS TO REMEMBER MUSIC THEORY

Certain things in music theory have to be learned parrot-fashion, just like mathematical tables (2 times 2 =4, etc.) Other things you absorb by coming across them time after time. There are also certain things which can be learnt by a process of deduction or association. This is what we will look at here.

Probably the most important thing to learn parrot-fashion are the notes of the major scales which gives you the notes in every major key.

A major scale consists of 2 sections (tetrachords) joined together. Each section has the same format which is this:

TONE TONE SEMITONE

Remember that a TONE is 2 semitones or **Two Ones** In between the 2 section there is a link which is itself a tone. Think of the initial T here as a bridge. So we end up with this:

TONE TONE SEMITONE - **TONE** - TONE TONE SEMITONE
eg C - D D - E E - F F - G G - A A - B B - C

so this gives you C major scale (all the white notes on a piano from C to C):

C D E F G A B C
1 2 3 4 5 6 7 8

Playing some scales every time you practice will help you remember the different scales/keys and also improve your technique.

From the first-note to the notes below are called **perfect** intervals

1 (unison) 4 (perfect fourth) 5 (perfect fifth) and 8 (octave)
But you can forget about the first and last,
The ones to remember are the **4th and 5th**.

From 1 - 4 in a major scale there are 5 semitones (*5 fingers on a hand*)
From 1 - 5 there are 7 semitones. (*7 days a week*)

All the other intervals (1 to... 2 or 3 or 6 or 7) are major intervals in a major scale.

The simplest **MINOR** scale is the same as the major scale but with a *minor* third instead of a major third. This is called the Ascending Form of the Melodic Minor scale. But I prefer to call it just "the minor scale".

To convert a major scale into this minor scale, you merely have to lower the third by **1 semitone**. There are 4 semitones in a major 3rd interval, so in a minor 3rd there will be 3 semitones.

So Cm (C minor scale) goes like this:

C D F G A B C
Eb

This is a very useful scale and is used a lot.

In the Harmonic Minor scale, the major sixth also is lowered **1 semitone**, so:

C D F G B C
Eb Ab

Notice the pattern (2 up 1 down, 2 up 1 down, 2 up)

CHORDS

Let's return now to the major scale. I will use just C major but everything applies to all keys.

In *major* chords of any kind (triads/major sevenths/6s/ 69s etc) as well as in *dominant seventh* chords **you always have a major 3rd**.

In *minor* chords of any kind (minor triads/minor 6s/minor 69s/ minor sevenths etc) **you always have a minor 3rd** and the symbol **m** or **min** or **minor** is used in the chord symbol eg. Cm Cm7 Cm6 There is also a minor 3rd in *diminished and half-diminished chords*.

BASIC CHORD TYPES

Chords are usually built from 3rds so it is very important to know the difference between major and minor 3rds. If you were to lower the top note of a third by a semitone and it becomes a tone (a major second) you are playing a minor third.

The type of 3rds for some simple chords are shown here.

major triad = major minor eg. C E G

major seventh = major minor major eg C E G B

minor triad = minor major eg C Eb G

minor seventh = minor major minor eg C Eb G Bb

dominant seventh = major minor minor eg C E G Bb

diminished = minor minor minor eg C Eb Gb A

half-diminished = minor minor major eg C Eb Gb Bb

augmented triad = major major eg C E G#

You can see from this that to construct a dominant seventh you add a minor 3rd to a major triad or to construct a minor seventh you add a minor 3rd to a minor triad.

Another way of learning the chords is by referring to the scale chart.

C D E F G A B C
1 2 3 4 5 6 7 8

Where a note is lowered by a semitone it is shown by a "-" sign.

major triad = 1 3 5
major seventh = 1 3 5 7
major sixth = 1 3 5 6

minor triad = 1 -3 5
minor seventh = 1 -3 5 -7
minor sixth = 1 -3 5 6

minor major seventh = 1 -3 5 7

dominant seventh = 1 3 5 -7

diminished = 1 -3 -5 6

half-diminished = 1 -3 -5 -7

INVERSIONS

Inversions can also be found easily by using the chart.

Root position 1 3 5
1st inversion 3 5 1
2nd inversion 5 1 3

For higher chord intervals it is easiest to think of them in the octave below.

A ninth is the same note as a second,
An eleventh is the same note as a fourth
A thirteenth is the same note as a sixth.

Where they are altered a + or a # means raise the note a semitone
and where there is a - or a b means the note has to be lowered a semitone.
eg. C7 +11-9 or C7 +11 b9

THE NEAREST AND DEAREST METHOD OF FINDING CHORDS IN ALL KEYS

The easiest chords to find and remember are those using just the white notes of a piano: the triads of C major, D minor, E minor, F major, G major and A minor.

Extending this to 4-note chords we get:

C maj7, Dm7, Em7, F maj7, G7, Am7 and Bm7-5

Note that the major 7 chords are often written with a triangle,
and the m7-5 (the half-diminished) is often shown as a circle with a diagonal line through it. Thinking of this chord as a minor7-5 chord will help as you can find the minor seven chord and then just flatten the 5th.

By starting off with these chords, you can then find neighbouring chords (a semitone away in both directions) by moving each note a semitone up or down.

So Db maj7 and B maj7 can be found from C maj7, E maj7 and F# maj7 from Fmaj7 and Gb maj7 (same as F# maj7) and Ab maj7 can be found from G maj7.
As all of these are difficult keys it is useful to try this method.

That leaves just D maj7, Eb maj7, A maj7 and Bb maj7. Once you have found and remembered one of the new chords you can do the same to get these ones.

The same method can also be used to find other minor 7th chords, using the easy chords of Dm7, Em7 and Am7. To convert them into half-diminished chords, just flatten their 5ths.

To find other dominant 7th chords, you can use a different approach. Start with the major 7th chords and then flatten the 7th by a semitone.

Once you have "discovered" the notes of a chord, you have to REMEMBER it. Play it several times, saying to yourself "Db major 7" or whatever. Compare it with other chords that you know of the same type of chord by playing them one after another. Listen to the sound it makes - is it happy, sad, stable or unstable, or does it make you think of a certain emotion or image.

Look at your fingers. Is there a pattern there when you play the chord that strikes you. For instance, Ebm7 uses just black notes (the only one that does). You can also associate the chord in question with a certain piece where that chord occurs. Eg. There's an F minor major 7 chord on the second bar of *A taste of honey*.

The other thing to remember is to use your EARS. If the chord you are playing sounds wrong in the context of the other chords, then it probably is wrong so check it out.

MORE ADVANCED THEORY

Scales

Looking at other scales now, we can lay them out in a similar way to that shown above.

The full **MELODIC MINOR** is as follows

up: C D F G A B C
 Eb

Coming down: (start at the right and go to the left)

 C D F G C
 Eb Ab Bb
 -3 -6 -7

So there is a tone between the top note and the 7th and another tone between the 7th and the 6th

Some other scales.

The **WHOLE TONE SCALE**

C D E F# G# A# C
T T T T T T

This is easy as there is a tone between each note. Furthermore, there are only 2 whole tone scales, the other one starts on the C# or Db.

The MAJOR PENTATONIC SCALE

1 2 3 5 6 of the major scale

The MINOR PENTATONIC SCALE

for the relative minor (a minor 2rd down)
start on the 6, giving you 6 1 2 3 5,
which in absolute terms equals:

1 4 5
 -3 -7

The DIMINISHED SCALE

C D Eb F F# G# A B C
 T S T S T S T S

In other words alternating tones and semitones.
There are only 2 diminished scales, the other two
starting on Db and D

Note that some people prefer to start off with a semitone
instead of the tone.

The TRITONE SCALE

C Db E Gb G Bb C
 S m3 T S m3 T

m3 = minor 3rd or 3 semitones

This is like an abbreviated form of the diminished scale
starting off with a semitone.

The ORIENTAL SCALE (Middle Eastern/Hungarian/ Gypsy)

C Db E F G Ab B C
 S m3 S T S m3 S

Think of this as being 2 groups (tetrachords) of 4 notes joined together by a tone.

HARMONY

To find **altered fifths**, first of all think of the natural fifth and then raise or lower it.
So to find the notes of C7-5, concentrate on the G, the natural fifth and then lower it by a semitone.
The natural fifth is usually easy to work out.

To find **altered ninths**, think of them as being seconds. The natural ninth is
equivalent to the second note of the scale, so the flattened ninth (b9) is
a semitone above the root of the chord. The sharpened ninth (#9) is a semitone above the natural
ninth, equivalent to the minor 3rd note.

It may take some time initially, but you can work out complex chords with altered fifths and ninths this way.

To find **thirteenth**s think of them as being equivalent to the major sixth of the major scale.

It is sometimes easier to think of complex chord symbols as superimpositions.

C^{11}	=	$\frac{Gm^7}{C}$	=	up perfect 5th
Cm^{11}	=	$\frac{Gm^7}{Cm}$	=	up pf 5th
Cm^{13}	=	$\frac{B^{\Delta}}{Cm}$	=	down a tone
C^{7-9}	=	$\frac{D^{\circ}}{C}$	=	up a semitone
C^{7+9}	=	$\frac{E^{\flat}}{C}$	=	up a minor 3rd
C^{7-9+5}	=	$\frac{Dm}{C}$	=	up a semitone
C^{7-9-5}	=	$\frac{G}{C}$	=	up a tritone
C^{7+9+5}	=	$\frac{A^{\flat}}{C}$	=	down a major 3rd
C^{7+9-5}	=	$\frac{Em}{C}$	=	up a minor 3rd
C^{13+11} (or C^{13-5})	=	$\frac{D}{C}$	=	up a tone
$C^{13-9+11}$ (or C^{13-9-5})	=	$\frac{F^{\sharp}}{C}$	=	up a tritone
$C^{13+9+11}$ (or C^{13+9-5})	=	$\frac{C^{\circ}}{C}$	=	on same note
$C^{\Delta+11}$	=	$\frac{Bm}{C}$	=	down a semitone
C^{69+11}	=	$\frac{D}{C}$	=	up a tone

Note that in the 4 altered dominant sevenths (6-9 above) it might be helpful to realise that there is a clue in the symbol itself. So in C7-9+5 and C7+9-5 the root of the superimposed triad is the 9th in question, whereas in C7+9+5 and C7-9-5 the root of the superimposed triad is the 5th.

Using this table for C chords, you can transpose it to other chords by applying the interval difference that is shown. Do not attempt to learn all this.