Introduction to Transcribing Music

1. What Does it Mean to Transcribe Music?

What I am talking about here is the process of working out how to play and/or write out a piece of music starting with just a recording of the piece - a commercially released CD perhaps. We would usually be talking about non-classical music as most classical music can be obtained as printed music.

You will also hear classical musicians speak of "transcribing" to mean adapting a piece of music written for one instrument to be played on another. Thus when John Williams plays Scarlatti sonatas (originally written for keyboard) on the guitar, these would be called "transcriptions" although he didn't need to work them out from a recording because you can buy the published sheet music (for keyboard) in a shop. Non-classical musicians don't often use the word this way because they customarily rearrange music for their own combination of instruments all the time anyway.

The effort involved in transcribing music from recordings varies enormously depending on the complexity of the music, how good you ear is and how detailed you want your transcription to be. If you merely want to write down the chords to a very simple song then if your ear is good you may be able to scribble them down in real time while the music is playing. At the other extreme if you are attempting a detailed transcription of complex music then it can take hours to transcribe a single minute of music.

By the way, "the dots" is an abbreviation meaning the written-out music, because of the visual appearance of written music as dots on a stave.

2. Why Transcribe Music?

* Because you want to play a tune but you don't have the dots for it, you only have a recording. Of course you might start by looking for the dots (if it's a jazz tune try the Fake Book Index) but if you can't find them what are you going to do? Also, even if you can find the dots they will often be a disappointment when compared to the version you've been listening to and enjoying. Good players will usually make more out of a piece than the standard published dots will show, so you will have to listen to the recording to find out what they're doing. I'm talking about reharmonisation, embellishing chords, added figures and riffs, good bass-line movement, voice leading, etc.

* Jazz musicians regard transcribing as an important educational method. Jazz has a strong emphasis on listening and improvising. Transcribing other people's improvised solos is good for improving your ear and also for gaining insight into the musical ideas they use.

* There are also quite a number of professional transcribers around. For instance, if you buy the sheet music for a popular song then this music will often have been transcribed from the record by a professional who works for the publisher.

3. Prerequisites

As far as your own musicianship is concerned we could say that there is only one prerequisite which is the ability to tell whether your transcription is right or wrong when you play it and compare it to the original. The extent to which you really can't tell is the extent of possible inaccuracy in your transcription. As long as you *can* tell, you can keep working at it until your transcription sounds right. How long this takes depends on your ear. If you are having difficulty figuring out the chords then it might be they are too complex for you. Don't despair however. Some people seem to develop a good ear very quickly but I think most people can develop a good ear in time as long as they keep working at it. I think that it's very

important to play a chordal instrument (piano or guitar) in order to understand chords and recognise their sound. When I was starting out, a 7#9 (or 7b10) chord sounded to me like a pleasantly scrunchy sound but I wouldn't have a clue what the chord was. After a few years playing the guitar and using such chords, an association develops in the mind between playing a 7#9 and the particular flavour of the sound that comes out. Now when I hear someone play a 7#9 I recognise it immediately as an old friend. I think that almost anyone can learn this kind of familiarity with chords but for most of us it doesn't happen by magic and it doesn't happen overnight, it's the result of years of playing, practicing, listening and indeed transcribing.

Familiarity with the musical style is one of the biggest factors in making it easy to transcribe. If you have played lots of music in the same style as the piece you're transcribing then you'll find it much easier to understand what they're doing. An anecdote : when I was about 15 and knew almost nothing I tried to transcribe Charles Mingus's "Jelly Roll" from the album "Ah Um". Listening to it now it's perfectly obvious that it's a blues (14 bar as far as I remember) but I didn't know that then. I listened hard to what the piano player does, thinking that would tell me what the chords are. What I didn't know is that in this kind of music, jazz piano players typically play all sorts of notes with the right hand which don't obviously belong to the chord. If the basic harmony at some particular point is, say, C7 then almost any note except B can be used to construct a harmony which might work in this style. If you don't understand this then trying to work out the chords from the pianist's right hand is a recipe for disaster (I should have started with the bass line). My final result had the melody correct but the chord symbols I came up with were totally wrong and unusable. I'm not suggesting that it was wasted effort though. You have to accept that your first efforts will be of doubtful value but we all have to start somewhere and if you persevere you will improve.

As far as equipment is concerned, obviously you need a means of playing the recording to listen to it. Some ways are easier than others for the purpose of transcribing and every transcriber has their own favourite way of working. Here are my views.

* Vinyl

This was the only option back in the stone age. No "loop" facility, very difficult to play from a specific point in the piece and a steady hand needed for lifting the needle and putting it back down again without damaging the record. This was transcribing for heroes. On the other hand if you had a player with 16 RPM speed you could slow the music down for the fiddly bits. Some players (the Garrard 401 for instance) allowed fine control over the speed, useful for tuning adjustment.

* Cassette

I considered this to be a big step forward, and used a Walkman quite heavily for the purpose. Advantages : portability, the tape counter which although inaccurate does give some idea of where you are, and the easier start/stop/rewind controls. You could listen to the same bit again by briefly pressing the rewind button while in play mode which was very handy. Slow down was no longer possible but if I really needed it I would copy to my two-speed reel-to-reel machine then copy back to cassette at half speed so my cassette tape would then have two versions, one of them full speed and the other half speed.

* CD/MiniDisc

Finally the digit was discovered (in the Peruvian jungle at the far end of the Andes) and tamed. These devices give accurate timing indication for the first time so you really can find any given point reliably. The more expensive models will also loop and some even permit tuning adjustment and speed adjustment. If you choose the right model then these are excellent transcription tools.

* Computer Software - Transcriber's Assistants

These days pretty much all desktop computers are capable of recording and playing audio and there are various computer based player programs intended to help you transcribe music. You may be aware that we (Seventh String Software) sell one called Transcribe!, and you will find links to various others here.
The features offered by such programs are limited only by the imagination of the program designer (and of course by what is technically possible). It is usual to be able to set multiple loop points, adjust tuning and

slow down the music without pitch change. Transcribe! also offers a feature which is as far as I know unique in such a program, which is to display a spectrum analysis of any chord or note you select, as a wavy line over a piano keyboard graphic. The peaks in the line identify the tones present, so helping to identify chords.

* Computer Software - Automatic Transcription

The most ambitious programs attempt to actually do the transcribing for you, processing an audio file and outputting MIDI or musical notation. I admire their courage in making the attempt, but my impression is that they are not really all that useful. On music where multiple notes are being played at the same time by multiple instruments (i.e. almost all music!) they make so many mistakes that it's difficult to see them as useful for serious purposes. You will find links here, but we will not discuss them further in this document.

This document is a discussion of how to transcribe music regardless of what device you use for playing the music on.

4. Transcribing

First try to get hold of the dots! Some people will tell you you shouldn't because transcribing is "good for you". I certainly agree that transcribing is good for you but if you are at all active musically then there will always be things you want to play for which you can't get the dots, so I think you should save your transcribing time and energy for those. Also, as I mentioned above, if you are listening to a recording you like then the chances are that the sheet music will not show the nice things the musicians are doing which make the recording special. So you will still end up doing some transcribing, but the dots may help as a starting point.

Map out the structure of the piece - verse, chorus, middle section and so on. Even if you don't intend to transcribe the whole thing it's often useful to have a complete map because if the chords are unclear to you at some point then if you know that the same thing happens elsewhere in the piece then you could listen to it there - it may be clearer second time. So listen through the whole thing making a note of what happens where. For instance if you're using a CD player then you could list the sections on a piece of paper with the start time of each section taken from the CD player's display so you can find it again. On Transcribe! or other software which has this capability, you would place markers.

If necessary then adjust the tuning of the playback to match your instrument. If the playback device you are using does not permit this then you may instead be able to adjust the tuning of your instrument to match the piece. By the way, some people recommend transcribing without any instrument in your hands, by the use of pure ear-power. That's great if you can do it but this document is aimed at less experienced transcribers. I would recommend having a guitar or keyboard handy and constantly checking your transcription by playing along and asking yourself if it sounds right.

Now it's time to start transcribing. This is rather like doing a jigsaw. When you do a jigsaw you start with the easy bits. Once enough of these are done then you can hope that the hard bits will fall into place. In the same way, start your transcription with the things you can hear easily. That usually means any prominent single-note instrument (including vocal). Hearing the inner voices of a chord is hard so don't start with that. Start with the melody. Loop it a phrase at a time and play along until you find the notes. Write them down and move on. Then tackle the bass part. If it is murky or unclear then try raising its pitch - Transcribe! and other programs will allow you to raise the pitch by an octave without speeding the music up. This can give the bass part much better definition. The bass part is crucial when you come to figure out the chords because bass players frequently play the root of the chord, or else the 3rd or 5th, so knowing the bass part gives huge clues to what the chord is. Also remember that if in doubt you should listen to other points in the piece where the same sequence occurs, to get a second opinion.

Write down any other prominent riffs and backing figures in the same way.

Now start on the harmonies. This is the hardest part so again we pick away at it bit by bit. Pick out whatever single notes you can hear in the chords - often the top note of a chord is easier to distinguish so write down whatever notes you can hear in any of the chords. Often "voice leading" is used in harmony - this is where you hear a prominent note (a "voice", but not necessarily vocal - could be any instrument) in the harmony, which moves to the next note above or below or stays the same when the chord changes. These are usually easy to hear so work them out and write them down. When you've picked out as many specific notes as you can then you try to identify the chords. This is where your experience and your knowledge of the musical style you're dealing with make a big difference. If you are experienced in the style then you will know what kinds of chords and chord progressions are likely. The bass line, melody line and top line of harmony that you have already worked out will narrow the possibilities right down and you can try out the possible chords on your instrument to see what fits. On the other hand if the chord is an altered dominant and you don't know what an altered dominant is then it won't be so easy, though you may still be able to find something that works even if you don't know what to call it. A useful technique to get further clues is to try playing single notes on your instrument, when the chord comes in the track. Try a C, does it fit? C#? D? When you find a note which fits, perhaps it belongs in the chord. Transcribe!'s spectrum analysis feature is also useful here.

The approach just described assumes that your transcription will include chord symbols but of course sometimes you will be aiming for a complete note-for-note transcription of the performance. In this case it's up to you to listen closely for each note! It can still be helpful to think in terms of chords, to help understand what is happening.

Here's a tip (courtesy of Charles Alexander) for determining the correct key that a piece is in. This often causes confusion because although for many pieces the first chord is also the key, there are many pieces where this is not so. You should look instead at the end of the piece. Play up to the end then whistle a "shave and a haircut" ending like this (written here in C major) :
Whistle it in whatever key sounds right for the piece. The last note of the "shave and a haircut" ending is the key of the piece. This works for major keys. For minor keys I think it's usually true that the starting chord of the melody is the key, unless the title contains the word "Autumn" (Autumn Leaves, Autumn in New York). However just because a piece starts on a minor chord doesn't mean it's in a minor key - for instance "It Don't Mean A Thing" starts on G minor but is in Bb major, as the "shave and a haircut" test reveals.

Here's a tip for determining rhythmic values of fast notes. Suppose someone plays two notes quite quickly, "duh-duh" and you're asking yourself are they eighth notes? Sixteenths? Part of a triplet? The answer is to tap your hand in time with the quarter-note pulse of the piece and sing along with the "duh-duh" notes but extend them to an endless sequence at the same speed "duh-duh-duh-duh...". Then all you have to do is count how many fit into a quarter note. Two? then they're eighth notes. Six? then they're triplet sixteenths. For more complicated phrases learn the phrase so you can sing it accurately, then sing it on your own with your hand tapping the beat (switch off playback) then get slower and subdivide the beat by tapping your hand more rapidly. When you subdivide the beat into small enough pieces then you will find every note of the phrase will be on one of the subdivisions so by noting how many subdivisions per quarter note you are tapping and which subdivision each note falls on, you can work out the rhythm.

Finally, here's a heretical suggestion. If the purpose of your transcription is to perform the piece yourself then remember that it isn't necessary for your transcription to be totally accurate. If there's something complicated going on and you just can't figure it out, remember that it's always an option to just make up something else to play at that point! As long as it sounds good, who's going to complain?