Unit 9

For this assignment in the BTEC First Certificate in Music was to produce a completed mix of a multi-track music recording. The song had to have a maximum of 16 tracks and consist of audio recordings only with the exception of a piano track being sequenced. In my group there was: myself, Gregory and Mario. The song we all decided to cover was 'Teach Me' by Musiq Soulchild. In our cover the song was made up of five parts: the drums, lead guitar, bass guitar, piano and vocals. For this assignment we could only use Logic Pro to record the tracks however not mix, automate or use effects from within the application. We had to use reverb and compression appropriately when you mix, as well as careful use of panning and level selection for balance.

For this assignment I used computer-based music creation systems. For recording the drum tracks and the vocal tracks we used was a Dual-Core Intel Mac Pro (Fig.1) running Mac OS X 10.4. The software used was Logic Pro 8. The mixing desk used was the Soundcraftt Ghost 16 and the soundcard was MOTU 828 MkII Firewire interface (Fig.2).

Fig.1

Fig.2

For recording the bass track, guitar track and piano track we used an Intel iMac with a 2.0 GHz Core 2 Duo processor and 1GB RAM running Mac OS X 10.4 The keyboard was a Roland XP-10 MIDI keyboard (Fig.3) connected to the iMac via: two five pin DIN cables which were plugged into an Edirol UA-25 USB powered Audio/MIDI interface (Fig.4) which is connected to the iMac via a USB A-B cable.

Fig.3

Fig.4

To record the drum part my group got Mr Newton-Grant, for the bass part Mr Broadbent, the guitar part Mr Cumberbatch, the piano part Gregory from our group and for the vocal part, Teni.

Firstly, in my group we put together a track sheet [See enclosed Track Sheet]. Then we got to finding out the tempo of the original track.

In the studio we first recorded the drum track. The drum kit was set up as follows: the bass drum was recorded using the AKG D112 (Fig.1) microphone. We used this microphone because it is a large-diaphragm dynamic microphone suitable for bass instruments.

Fig.1

Fig.2

The snare drum and the hi-tom were recorded using two Sennheiser E 604 (Fig.2) microphones. We used this microphone because it is ideal for close miking techniques, which is what we used when recording these parts of the drum kit.

The drum over-heads were recorded using the RØDE NT4 (Fig.3) microphone. We used this microphone because it is a stereo condenser microphone with two cardioid capsules mounted at 90 degrees. Therefore it removes the need for two identical microphones to record in stereo. It can be battery or phantom powered.

All the microphones were connected using XLR male-female cables.

Fig.3

After we had set up with drum kit with microphones, I started the Logic Pro 8 application, set the core audio driver to the 'motu 828 mkII' and applied the change. I created 5 audio tracks; I went to File> Save As and saved the project into a folder named: 'Teach Me Cover' on the Audio drive so that as I progressed through the recording and an error was to occur, many backups would automatically have been created while I made changes to the project. I also selected the option to copy external audio files to project folder so any files I use during the project get saved automatically in one place. I selected each track and set the correct input for each track. The next step was to sound check. Using the talk back on the mixing desk we told Ian to play each part of the kit one at a time while we check the levels. At first we found the over heads and the hi-tom was peaking so we reduced the gain (Fig.1) until it stopped.

Fig.1

Before we went for a take, Mr Newton-Grant played through the entire song while we checked for any problems and found that the levels were acceptable. Unfortunately, whilst recording the first take an internal error in Logic occurred and nothing was being recording to the hard drive. The cause was most likely due to an audio driver error which

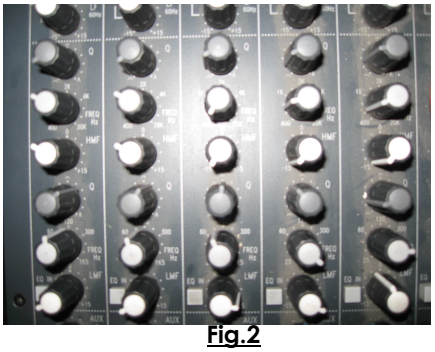

Fig.2

caused a system overload. We did not have time for another take so we had to book the studio for the next day. I took a picture (Fig.2) of the EQ settings and levels we used so we could set them up exactly the same next time and try recording again.

Fig.1

The next day we went through the same procedures and used the picture taken to set the levels and EQ for each track and once we were happy with the sound, we went for a take. It only took one take and we had completed the initial drum track. Next, we mixed down. We were not satisfied with the sound of the kick drum. We had to use the mixing desk and in order to do so we had to change the outputs of the tracks in Logic to go back into the mixing desk. This meant for example, to mix down the over heads which were in stereo, we changed the both tracks to 'Output 3-4' then on the mixing desk, selected the 'Rev' button (Fig.1) so the signal could pass back in.

We repeated the procedure for the other tracks we had recorded changing the outputs to '5-6' 7-8' etc. During the mix down procedure an example would be the kick drum. It sounded too much like a 'click' so we increased the low frequencies and reduced the high frequencies until we had a better sound.

We decided to add compression on the track as this was required. For this we used the Behringer Tube Composer T1952 Processor (Fig.1). To add the compression, we used the patch bay with two balanced cables with 1/4" phone plugs. One of the cables ends was plugged into '3' on the top row and '24' on the top row of the second part of the bay. We repeated this with another cable however this time on the bottom rows. This would compress all the tracks. When we mixed down each part of the kit we were ready to record back into Logic. It was simply creating 5 new audio tracks, setting there inputs and clicking record. After this was done we deleted the old tracks as they were not needed anymore.

Fig.1

Fig.2

Fig.3

To record the bass part we started the Logic Pro 8 application, set the core audio driver to the UA-25 Audio/MIDI interface and restarted the application. The bass guitar was plugged into the second input on the interface because that input had the Hi-Z function (Fig.2). First we created 3 audio tracks; I went to File> Save As and saved the project into a folder named: 'Teach Me Cover' in Gregory's user area, and also selected the option to copy external audio files to project folder so any files I use during the project get saved automatically in one place. We dragged in the original song onto one of the audio tracks and then set input on another track to 'Input 2'. We

did a sound check and asked Mr Broadbent to play through the song and found that we just had to increase the 'SENS' (Fig.3) on the interface. We were then ready for a take. During the first take the verses were just recorded and then on the second take the choruses. On the final take the bridge and the outro were recorded. We bounced the bass part and selected AIFF as the file format and checked joint-stereo because. We copied this over to the audio drive where we dragged it into the Logic save with the drum tracks.

To record the guitar part we repeated the procedure to recording the bass part however an electric guitar was plugged into the second input on the interface. We did a sound check and asked Mr Cumberbatch to play through the song and found that it was peaking so we reduced the 'SENS' on the interface. In the first take one verse was recorded and on the second the chorus was recorded once. ON the final take the bridge and outro were recorded. We then copied the verse twice and the chorus twice. We bounced the guitar part and selected AIFF as the file format and checked joint-stereo. We copied this over to the audio drive where we dragged it into the Logic save with the drum tracks

In the studio we recorded the vocals. The vocals were recorded using the Audio-Technica AT4033 cardioid condenser microphone. We used this microphone because it has a 80Hz high-pass filter which helps with closely-miked vocals.

After we had set up with microphone I started the Logic Pro 8 application, set the core audio driver to the 'motu mkII' and restarted the application. We re-opened the project from the Audio drive and created 4 new audio tracks. I selected each track and set them each to 'Input 3'. Then we did a sound check and asked Tenny to sing through the entire song. It began to peak a certain points during the song so we reduced the gain. During the first take we recorded a chorus and then on the second take one verse. In the third take we recorded the backing vocals for the verse and on the final take we recorded backing vocals for the chorus. This was all we had time for during that session and Tenny was not available any other times so we had to repeat the first verse for the second and just copy the chorus for the send time. We did not have any vocals during the bridge. We found that some vocal parts were louder than others so we had to mix down. WE repeated the same procedure as for mixing the drum tracks and we adjusted the levels of each track until we were satisfied and also compressed all the vocals.

Finally we recorded the piano part. To record the bass part we started the Logic Pro 8 application, set the core audio driver to the UA-25 Audio/MIDI interface and restarted the application. First we created one new software instrument track and then selected the EXS24 sampler and used the

'Grand Piano' sample. Gregory then began playing the verse for one bar and then we looped it until the end of the verse. Next was the chorus which we copied for the chorus the second time around and then finally the bridge and outro was recorded. We copied this Logic project to the Audio drive where we dragged the recorded piano part into the Logic save with the other tracks.

We were now ready to bounce it to an AIFF. I selected the bounce option in Logic and selected AIFF as the file format and checked joint-stereo. The bit-rate was 2116kbps. When this was complete I burnt the file to a CD.