

# SOUND EDITING

BCADES-206



**BLOCK 1:**  
**INTRO TO SOUND EDITING**

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“

*Education is something  
which ought to be  
brought within  
the reach of every one.*”

- Dr. B. R. Ambedkar



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**BCADES-206  
SOUND EDITING**

**Block**

**1**

**INTRO TO SOUND EDITING**

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**UNIT 1      INTRODUCTION TO USAGE OF SOUND**

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**UNIT 2      RECORDING DIALOGUES**

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**UNIT 3      RECORDING NARRATION**



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## **ROLE OF SELF INSTRUCTIONAL MATERIAL IN DISTANCE LEARNING**

The need to plan effective instruction is imperative for a successful distance teaching repertoire. This is due to the fact that the instructional designer, the tutor, the author (s) and the student are often separated by distance and may never meet in person. This is an increasingly common scenario in distance education instruction. As much as possible, teaching by distance should stimulate the student's intellectual involvement and contain all the necessary learning instructional activities that are capable of guiding the student through the course objectives. Therefore, the course / self-instructional material are completely equipped with everything that the syllabus prescribes.

To ensure effective instruction, a number of instructional design ideas are used and these help students to acquire knowledge, intellectual skills, motor skills and necessary attitudinal changes. In this respect, students' assessment and course evaluation are incorporated in the text.

The nature of instructional activities used in distance education self- instructional materials depends on the domain of learning that they reinforce in the text, that is, the cognitive, psychomotor and affective. These are further interpreted in the acquisition of knowledge, intellectual skills and motor skills. Students may be encouraged to gain, apply and communicate (orally or in writing) the knowledge acquired. Intellectual- skills objectives may be met by designing instructions that make use of students' prior knowledge and experiences in the discourse as the foundation on which newly acquired knowledge is built.

The provision of exercises in the form of assignments, projects and tutorial feedback is necessary. Instructional activities that teach motor skills need to be graphically demonstrated and the correct practices provided during tutorials. Instructional activities for inculcating change in attitude and behavior should create interest and demonstrate need and benefits gained by adopting the required change. Information on the adoption and procedures for practice of new attitudes may then be introduced.

Teaching and learning at a distance eliminates interactive communication cues, such as pauses, intonation and gestures, associated with the face-to-face method of teaching. This is particularly so with the exclusive use of print media. Instructional activities built into the instructional repertoire provide this missing interaction between the student and the teacher. Therefore, the use of instructional activities to affect better distance teaching is not optional, but mandatory.

Our team of successful writers and authors has tried to reduce this.

Divide and to bring this Self Instructional Material as the best teaching and communication tool. Instructional activities are varied in order to assess the different facets of the domains of learning.

Distance education teaching repertoire involves extensive use of self- instructional materials, be they print or otherwise. These materials are designed to achieve certain pre-determined learning outcomes, namely goals and objectives that are contained in an instructional plan. Since the teaching process is affected over a distance, there is need to ensure that students actively participate in their learning by performing specific tasks that help them to understand the relevant concepts. Therefore, a set of exercises is built into the teaching repertoire in order to link what students and tutors do in the framework of the course outline. These could be in the form of students' assignments, a research project or a science practical exercise. Examples of instructional activities in distance education are too numerous to list. Instructional activities, when used in this context, help to motivate students, guide and measure students' performance (continuous assessment)

## Unit 1 Introduction to Usage of Sound



### Learning Outcome

After going through this unit, you will be able to:

- Outline the details of sound
- State the importance of Sound in media
- Elaborate on the significance of sound in films
- Detail out information on audio system configuration
- Impart knowledge about film Sound



### Time Required to Complete the Unit

The time required to study this unit is broken as follows:

1. 1<sup>st</sup> Reading: It will need 2 Hrs for reading
2. 2<sup>nd</sup> Reading with understanding: It will need 3 Hrs for reading and understanding
3. Self-Assessment: It will need 3 Hrs for reading and understanding
4. Assignment: It will need 4 Hrs for completing an assignment
5. Revision and Further Reading: It is a continuous process



### Content Map

- 1.1 Introduction to Sound
- 1.2 What is a Soundtrack?
- 1.3 Audio System Configuration

### 1.3.1 Digital Dolby Setup for Theatres

1.4 Film Sound

1.5 Introduction to Sound Forge

1.5.1 Parameters Of Sound

1.6 Interface of Sound Forge

1.6.1 Work Space

1.6.2 Properties

1.7 Basic Editing Options

1.8 Summary

1.9 Self-Assessment Test

1.10 Further Reading

## 1.1 Introduction to Sound

In today's time and even since long sound always played a major role in films as the gaming industry is coming up, sound we all know creates an impact in the game, the 3D films still have sound as a major component in making the audience engrossed into the film. Moreover, why this is so popular is because of the fact that surround sound has been one of the implementations since decades that brings sound "off the screen" and has become a very important part ever since 1970s. However, as you can see the re launch of the 3D films such as avatar, this has been a high budgeted film where the question as to how to use and how much to spend on soundtracks again is the question. However, of course, the need has been created and it has been satisfied as well.

Those of you who have seen avatar think do you hear the sound tracks had any new invention in terms of physical depth or also you can say surround sound. So when you work with sound you really need to address to this question that how much do you spend behind and if you go in for surround sound then the results are best. In addition, this shows that sound plays an important role in 3D films.

## 1.2 What is a Soundtrack?

Soundtrack is the output of the recording made by the Sound editor consisting of a narrow motion picture strip. The soundtrack could be then synchronized with the video to create breath-taking effects. This recorded strip can consist of various audio elements such as narration, dialogue, effects, background compiled into one clip/track or separate. The elements should be mixed and balanced together to produce the desired acceptable result.

### IMPORTANCE OF SOUNDTRACK

Sound has been the life of movies and theatres; without sound it would be difficult to imagine a good play or film, it is just a flower with an alluring scent. Though we might think that movies are only for good virtual experience but we cannot discredit the film music. A right music score can make a bad movie good and a good movie great. Now this important job a Sound editor to add the background scores and make the shots memorable for the audience. Many decades have gone in experimenting with the sound, we have come to

know the way to associate sound with the visuals e.g. A sad scene has a background sound with lower tones.

The points to be remembered for a good soundtrack for movies:


1. The soundtrack must be workable for any audience whether sitting in front, back or middle while watching the movie.
2. The soundtracks must work same and must be workable in any kind of screening theater, in the most premiere theatre to a small town theatre.
3. The requirement of the surround soundtracks in film that is being developed.


Because of the above three reasons the actual use of 5.1 has reduced and diffused. We know that the two surround channels of 5.1 are discrete channels and they are mixed up by mixing and playback. In an actual theatre, the discrete surround Left and surround Right signals are individually fed to a series of speakers and these speakers, some are on the rear side walls and some are on the rear wall and this arrangement or setup makes point location of sounds difficult. with 7.1 discrete channels, which are provided to the left and right side speakers, along with this is the discrete signal for diffuse rear speakers and this set up makes it possible to control each element separately and this diffuses in the rear discretely.


This is what the FX mixer on Avatar has to say on the sound tracks:

“I never felt we had to make radical adjustments [for the 3-D] and I also felt it was very important to just choose certain details to highlight and not get gimmicky because there’s a tremendous amount of information to take in and if we give them too much sonic information at the same time, it will detract from the experience. Jim’s edict to me was: Clarity is king. He was always looking for a focus and clarity to the sound. It was important to him and to me that any sound that went into the film really had to have a reason behind it and be driving the story forward or really selling an environment but not overselling it.

These days as higher end formats have been developed by 10.2 and 22.2, the issue is becoming more prevalent as to how to do the Implementation. So the question is: if these big formats are not used in films than what is the use of it? Therefore, we can say that higher end sound formats are to be used more and more in the future of 3D films.

	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. Define soundtrack and explain its importance.</li><li>2. Explain various types of soundtracks produced for movies with proper examples.</li></ol>	

	Discussion/ Activity
Observe a film shot and write down the various sound effects added.	

### 1.3 Audio System Configuration

With the advance of technology, editing of the sound has also been upgraded. The editing process now a days is digital and non-destructive. The Non-linear editing is the current technique that is been used to mix n match or cut sound tracks as per the requirement. With the introduction of Softwares such as Avid, Composer, Lightworks in the late 1980s, editing of the sound became simpler. These softwares require large amount of

RAM and faster CPU to store the recorded data. Later in the 90s, dedicated software such as Sound Forge was developed for sound recording and editing.

Following are the system requirements:

- ❑ The computer must be custom built or off the shelf PC or a Mac.
- ❑ The Computer must run the specific operating system such as Mac OS or Window XP.
- ❑ Its must have the minimum specified RAM required to run and execute the software.
- ❑ If need be, the expansion cards should be used, to enable quick processing of video and audio task. The configuration of these cards varies from system to system.
- ❑ The system should be high-end, having video cards enable capture of video as well as audio into the system.
- ❑ All system have Sound Cards, which help to send the sound to and fro with the help of software via analogue and digital input and output; referred to as I/O.
- ❑ The Digital Signal Processing card (DSP) should be used to handle all audio processing such as real-time pulgins, effects and mixer operation.
- ❑ The professional editing uses the Sync Card to set the SMPET time code for recorded content.

#### 1.3.1 DIGITAL DOLBY SETUP FOR THEATRES

The Digital Dolby is a six channel digital projection released in 1992. It is a 5.1 discreet channel such as left, centre, right, left surround, right surround and a low frequency sound effect channel that carries lower frequencies below 120Hz. To encode this data and print on a film an AC3 compressor is used.

In theatre projection, this data of 6 channels is decoded and outputted through the playback system. Basically the surround sound and sub woofers boost the sensory experience of a movie in theatre. Same experience can be reproduced through DVD. These days theatres are with 5.1 surround in fidelity but not far are the days when the 3D films are will be having a sound of 7.1, as the 3d films are now not the normal films but they are been



made in a very special manner so even they have to be treated well when it comes to sound quality. So 7.1 sound definitely is the future of sound in 3d films.

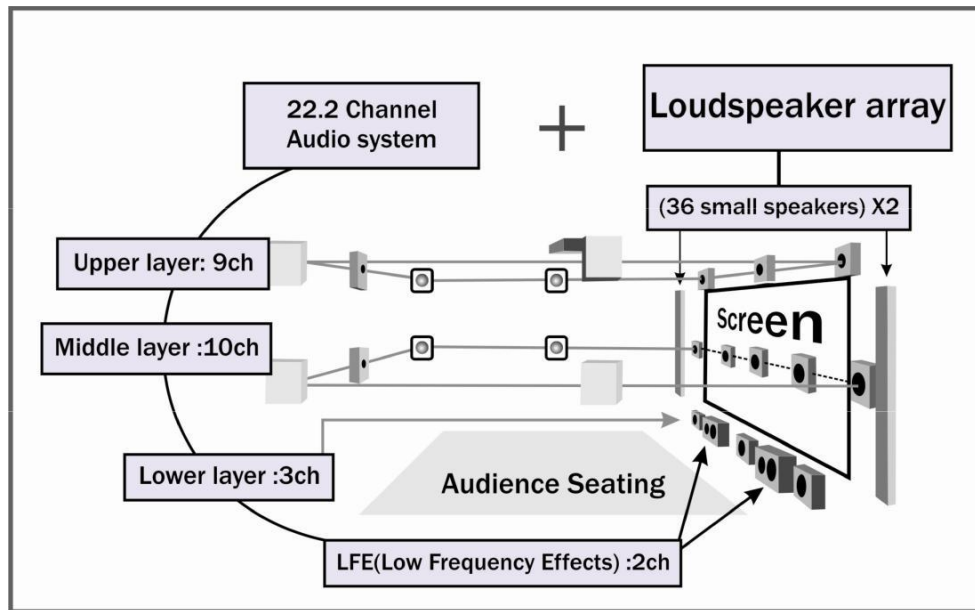


Fig. 1.1: Digital Dolby Setup for Theaters

There is a company called Iosono, which has another solution and this solution is based on wave field synthesis and this has recently become the first sound facility in US that has the ability to mix feature films in the 3d immersive format. One magazine quotes:

“Iosono’s algorithm and large speaker array creates sound waves in free space that audiences perceive as sounds originating from anywhere within the 3D sound space.”

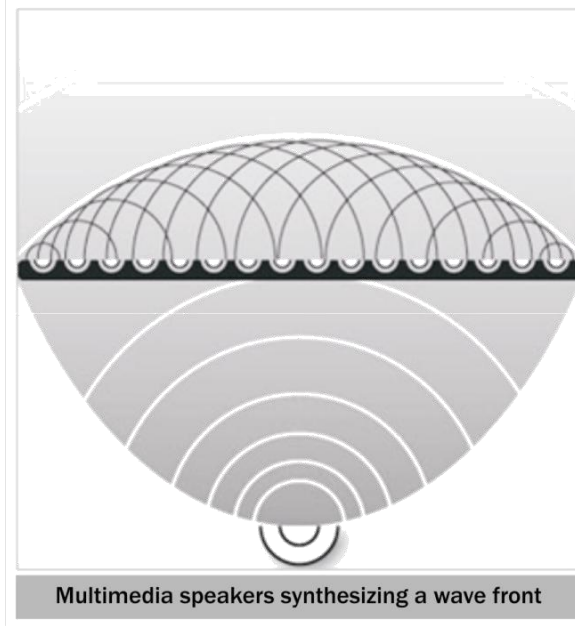


Fig. 1.2: Multiple Speakers Synthesising a Wave Front



Study Notes



## Assessment

1. What are various system configurations for audio set up?
2. Explain Dolby Digital.



## Discussion/ Activity

Discuss the process of encoding the 6 audio channels on a DVD.

### 1.4 Film Sound

We all know that films are generally and essentially a visual experience but definitely we should not forget sound and the importance of sound in the films. If you have a meaningful sound track is as important as an image or any other element of the film on the screen.

The sound track is made up of three important ingredients:

- Human voice
- Sound effects
- Music

Now once you have these three tracks you need to mix these three tracks properly and they must be properly balanced such that you can produce necessary emphasis which in turn then creates desired effects of sound. Now let us study the important topic apart from the above three sound tracks. They are dialogue, synchronous and asynchronous sound and music.

#### 1. The Human Voice: dialogue

With the help of dialogues, you can create authentication of the speaker as an individual and a real person instead of the imaginary creation of a storyteller. When you talk of stage drama, dialogue will server the purpose of telling the story and that expresses the feelings and motivations of characters also. In most of the places when we talk of film

characterisation the audience finds very little difference between the character and the actor.

For example:



Humphrey Bogart is Sam Spade; film personality and life personality seem to merge. Perhaps this is the case because the very texture of a performer's voice supplies an element of character.

You will see that when the quality of voice which you call as voice texture when fits the performer's physiognomy and gestures an entire and very realistic persona takes place and comes out. The audience or the viewer will see not the actor in real but totally another human struggling with life. It is interesting to note that how dialogue is used and the very amount of dialogue used varies widely among films.

For example:

In the film 2001, little dialogue was heard and most of that that was used was banal. In this way, the filmmaker was able to portray the "inadequacy of human responses when compared with the magnificent technology created by man and the visual beauties of the universe."



## 2. SOUND EFFECTS: synchronous and asynchronous sounds

Synchronous sounds are the sounds that are synchronised or are matched with what is seen or viewed.

For example:



If the film reflects a character playing the piano, the sounds of the piano are projected. Synchronous sounds contribute to the realism of film and help to create a particular atmosphere.

For example:

The "click" of a door being opened can simply serve to convince the audience that the image portrayed is real and the



audience-may only subconsciously  
 register of moment  
 attention to the "click" with  
 moment of suspense.

the effect

"click" of an  
 x-mas  
 engage audience

Asynchronous sound effects  
 are not limited to  
 they may add to the realism of the

effect is the sound  
 of the  
 and

For example:



A film might try to imitate the sound of an  
 tray and  
 but this creates the  
 psychic injury of the noise of  
 the film  
 (avowed) cinema

The comedy, *Bringing Up*, on the other hand, presents  
 practically non-stop dialogue at a rapid speed. This use  
 of dialogue underlines the dizzy quality of the character  
 played by Katharine Hepburn but also the absurd duality of the film  
 itself and thus the humor. The alternating between  
 and conversation to conversation is a dialogue  
 reflection. The audience sees



the picture. This presents pure spectacle - largely due to its frenetic dialogue.

### 3. MUSIC: background music

Background music is used to add emotion to a scene. It helps  
 tone or an emotional attitude to the scene. It helps to  
 identify or identified by only our subconscious

For Example: *Disaster*  
 (not visible) menace or disaster.



## Study Notes

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## Assessment

1. Write a short note on human voice.
2. Explain the music element used in films.



## Discussion/ Activity

Observe TV serials and give examples of the 3 sound elements used in it.

### 1.5 Introduction to Sound Forge

Sound forge is the software for sound editing, where you can record the sound but cannot create the sound. Previously, it was the product from Paradox Company under the banner of sonic foundry. From the latest version, i.e., 7<sup>th</sup> version, it has been taken over by Sony Pictures Digital Inc. Therefore, from now it is called Sony Sound forge.

Sound Forge is an award-winning two-track digital audio editor that includes a powerful set of audio processes, tools and effects for manipulating audio. Combine Sound Forge with any Windows-compatible sound card to create, record and edit audio files.

### 1.5.1 PARAMETERS OF SOUND

Sound forge is digital editing software, which work with the detailing of the micro-seconds. Now a day's all the processing of the sound file are digitalized by which we can get more perfect editing and also quality of the sound is very crystal clear. We use the sound forge for editing the sound file for our multimedia presentation.

Sound forge is the most user-friendly software to work upon with the sound files and along with the editing, we can also record the sound for our voice over for the presentation.

The Different parameters for the sounds are as follows:

Hertz (Hz)

The unit of measurement for frequency or cycles per second (CPS)

Decibel (dB)

A unit used to represent a ratio between two numbers using a logarithmic scale. For example, when comparing the numbers 14 and 7, you could say 14 is two times greater than the number 7 or you could say 14 is 6 dB greater than the number 7. Where did we pull that 6 dB? Engineers use the equation  $\text{dB} = 20 \times \log (V1/V2)$  when comparing two instantaneous values. Decibels are commonly used when dealing with sound because the ear perceives loudness in a logarithmic scale.

Bit Depth

1. Bit depth is the number of bits used to represent a single sample.
2. 8- or 16-bit are common sample sizes.
3. 8-bit samples take up less memory.
4. 8-bit are noisier than 16- or 24-bit samples.

Amplitude Modulation


Amplitude Modulation (AM) is a process whereby the amplitude (loudness) of a sound is varied over time. When varied slowly, a tremolo effect occurs. If the frequency of modulation is high, many side frequencies are created that can strongly alter the timbre of a sound.

Adaptive Delta Pulse Code Modulation (ADPCM)


A method of compressing audio data: Although the theory for compression using ADPCM is standard, there are many different algorithms employed. For example, Microsoft's ADPCM algorithm is not compatible with the International Multimedia Association's (IMA) approved ADPCM.


Loop

Loops are small audio clips that are designed to create a repeating or continuity of a beat or pattern to fill the track or produce a desirable effect. Loops are usually one to four measures long.

	Study Notes



	<b>Assessment</b>
<ol style="list-style-type: none"> <li>1. Define Amplitude modulation</li> <li>2. Write a statement on interval</li> </ol>	

	<b>Discussion/ Activity</b>
<p>em t i a d th el adc ti the audio.</p>	

### 1.6 Interface of Sound

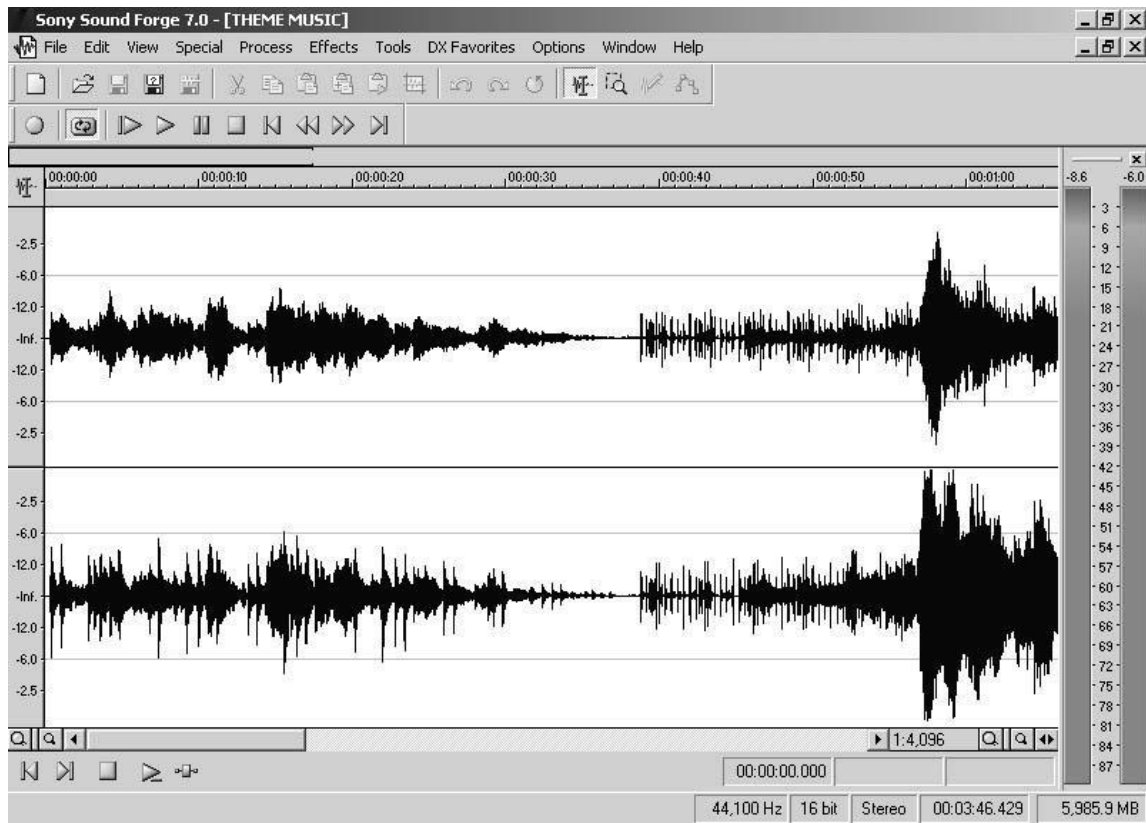


Fig. 1.3: Interface

The interface of Sound Forge can be extensively customised by altering the location of windows, changing colours etc.

Key features include:

- Record multiple sources simultaneously and surround sound.
- Edit down to the sample level.
- Work in high-fidelity 24-bit and 32-bit/64-bit float 192 kHz quality.
- Edit from stereo to native multichannel surround sound
- Clean and enhance tracks with over 40 professional studio effects and processes.
- Tune MIDI sample loops and loops for Sony ACID.
- Model acoustic environments.
- Design sound for multimedia.
- Synchronise to video and export videos at HD.
- Master replication-ready CDs.

The interface is composed of the following menu and panels:

#### 1. New File

When we need to create new file for editing we take this option from the file menu in which we need to set the sample rate, bit depth and the channels, whether you are editing for the stereo or mono sound tracks.

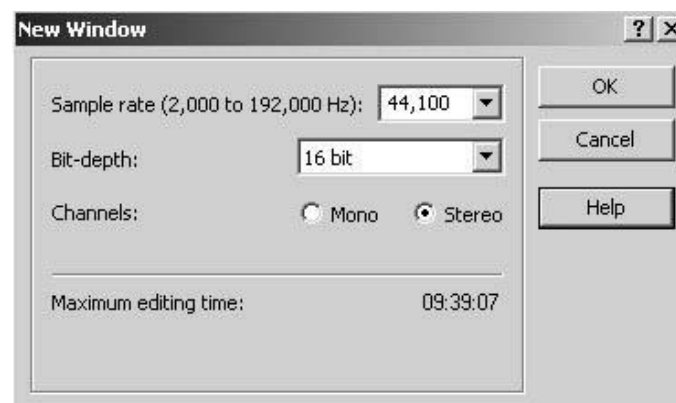


Fig. 1.4: New Window

You can set the sample rate, bit depth and channels of the file as per the requirement. If we require the CD quality minimum requirement of the setting is 44,100 sample rate, 16 bit and the stereo channels.

## 2. Open

For editing, we require opening the file and then with the help of the option of sound forge, we can do the editing. The formats that can be opened in soundforge are wav, MP3, raw, AVI, AIFF, MPEG, CDA (audio tracks), etc. The formats such as wav and mp3 are very easily available, which are regularly being used for the editing purpose especially for multimedia presentation.

Apart from that sound forge also provides you to get the preview of the file before opening, for that just click the file you want to open and it automatically start to play.

## 3. Save, Save As, Save All

**Save:** If any type of editing is done in the file, which has been opened, requires to be saved to maintain the current updation. For this we use the save command. In this option, you can save the file with different format also with the type of sample rate and bit depth options also.

**Save As:** If the file has already been saved and the requirement is that format has to be altered along with the sample rate and bit depth; then we can use this option. Generally talking about the multimedia, we required main of the formats such as mp3, wav, AIFF (generally used in macintosh machines).

**Save all:** Main use of this option is that when you are working with more than one file and you require saving the entire file, which are, open than we use this option.

### 1.6.1 WORK SPACE

Workspace is that you can save your current setting of the files (.sfw) by creating a snapshot of your Sound Forge interface, so you can return to it at any time. Workspace saves the information with their magnification, selection, cursor position and data window size and screen location. Once the workspace has been saved than you can open this working to get the file where you last left.

## 1.6.2 PROPERTIES

**General Properties:** Used for getting the complete information of the file that you are working, you can work upon this command where it displays the filename, location, size of the file, audio length, file type, attributes, to check the few.

**Format:** To get the sample rate and the bit depth of the file along with the channels we can use this option. Actually, we do not require going for this option as we get this information right at the status bar of the interface.

**Video:** While doing the sound editing, especially voice over which is more of synchronising of the sound with the video, we require the video frames to be displayed for the reference. For this, we can use this option to attach the video in the file. Once the video has been attached, frames of the video are visible at the top of the channels where you can adjust the sound wave as per the requirement.

Once the sound editing has been done and you want to remove the video from the file, then again go to the same option where you get the option of detaching the video. But if you want to render or save the file along with the video then also it is possible only by taking the format while saving, which can support the video such as AVI, MPG, etc.

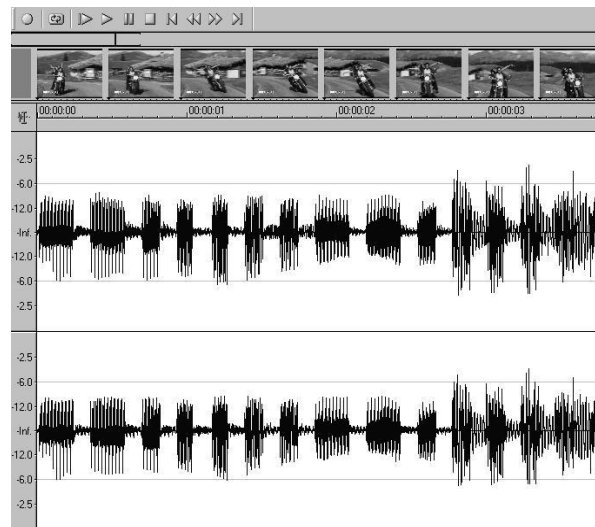


Fig. 1.5: Video Attached to the File

**Display:** With the display option, you can customise the interface of the sound forge where you can switch on/off the options.



## Study Notes



## Assessment

1. List down the key features of Sound Forge.
2. Explain the various options of saving the file.



## Discussion/ Activity

Study the various tabs and panel available in Sound Forge.

## 1.7 Basic Editing Options

**Undo / Redo:** This is the general option of undo and redoes of the last few actions that you have done in your file.

**Cut:** This will remove the sound wav that you have selected and copy it to the clipboard which can be pasted later on as required. (However, it will remove the previous record of the clipboard).

**Copy:** This will copy the sound data on the clipboard. It keeps the selected data as it is.

**Paste:** It will help to copy the content of the clipboard where your cursor location is.

**Trim / Crop:** This command is used to remove all the data of the file except the selected area.

**Select All:** It generates the selection of the complete file.

**Preview Cut/cursor:** It is used to get the preview of the data before and after the selected area. After selecting the portion of the file, take this option. It will play the track, which is before and after the selected data. This helps to check the proper alignment of the sound if the data is remove from between.

**Pre Roll to Cursor:** This enables to play the data before the cursor position for the default pre-roll length.

**Go to:** This option is very using as it helps you get the exact location of the cursor on the timeline. It works with time code with the detailing of the microseconds thus gives best perfection in all types of editing.

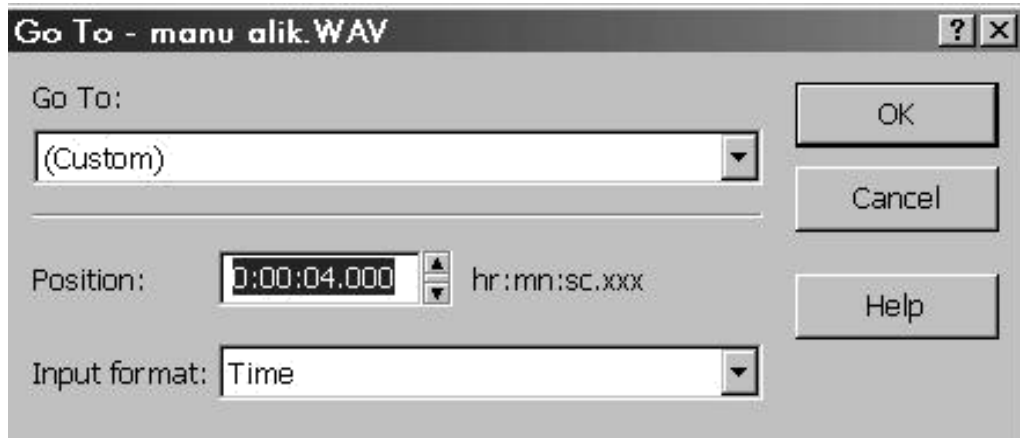



Fig. 1.6: Go To Panel

Tools: a d er a e i e  
 editing mode always so all the ti c n H w er there is also  
 a y g w th a v w in the  
 ag i i th e w tho an  
 disturbance. When the zoom ra higher, that is almost 1:32 approx. The wi p  
 of the pencil tool given you can s t e av f r b l r hissing s nd  
 developed during the time of th

	<b>Study Notes</b>
Empty content area for Study Notes	



## Assessment

1. What are the key features of sound forge?
2. Give the difference between Cut and Trim.



## Discussion/ Activity

Open Sound Forge and try the different Edit functions available.

## 1.8 Summary

### AUDIO SYSTEM CONFIGURATION

These days theatres are with 5.1 surround in fidelity but not far are the days when the 3D films will be having a sound of 7.1, as the 3d films are now not the normal films but they are been made in a very special manner so even they have to be treated well when it comes to sound quality. So 7.1 sounds definitely the future of sound in 3D films.

### FILM SOUND

We all know that films are generally and essentially a visual experience but definitely we should not forget sound and the importance of sound in the films if we have a meaningful sound track is as important as an image or any other element of the film on the screen.

The sound track is made up of three important ingredients:

- Human voice
- Sound effects
- Music

Now, once you have these three tracks, you need to mix these three tracks properly and they must be properly balanced such that you can produce necessary emphasis, which in turn then creates desired effects of sound. Now, let us study the important topic apart



from the above three sound tracks. They are dialogue, synchronous and asynchronous sound and music.

#### THE HUMAN VOICE: DIALOGUE:

With the help of dialogues, you can create authentication of the speaker as an individual and a real person instead of the imaginary creation of a storyteller. When you talk of stage drama, dialogue will server the purpose of telling the story and that expresses the feelings and motivations of characters also. in most of the places when we talk of film characterisation the audience finds very little difference between the character and actor

#### SOUND EFFECTS: SYNCHRONOUS AND ASYNCHRONOUS SOUNDS

Synchronous sounds are the sounds that are synchronised or are matched with what is seen or viewed.

#### MUSIC: BACKGROUND MUSIC

Background music is used to add emotion to a film viewer understanding, by linking scenes.

## 1.9 Self-Assessment Test

### Broad Questions

1. Write a short note on sound effects and how are they used in the film media.
2. Write a note on properties in Sound forge.

### Short Notes

- a. Decibel
- b. Bit Depth
- c. Background music with example
- d. Digital Dolby
- e. Adaptive Delta Pulse Code Modulation (ADPCM)

## 1.10 Further Reading

1. Sound Forge Power, Scott Garrigus, Muska & Lipman, 2001
2. Sound Forge Pro 10, Sony





## Unit 2 Recording Dialogues



### Learning Outcome

After going through this unit, you will be able to:

- Impart information about what dialogues are
- Detail out the process of recording dialogues
- Explain the recording of dialogues
- Discuss the concept of view menu in sound forge software
- Outline the significance of edit menu in sound forge software



### Time Required to Complete the Unit

The time required to study this unit is broken as follows:

1. 1<sup>st</sup> Reading: It will need 2 Hrs for reading
2. 2<sup>nd</sup> Reading with understanding: It will need 3 Hrs for reading and
3. Self-Assessment: It will need 3 Hrs for reading and understanding
4. Assignment: It will need 4 Hrs for completing an assignment
5. Revision and Further Reading: It is a continuous process



### Content Map

- 2.1 Introduction to Dialogues
- 2.2 Editing Sound with Selection Tool
- 2.3 Special Markers

2.4 Controlling Playback

2.5 Menus of Sound Forge

2.5.1 View Menu

2.5.2 Edit Menu

2.6 Illustrations

2.7 Summary

2.8 Self-Assessment Test

2.9 Further Reading

## 2.1 Introduction to Dialogues

Dialogue is a conversation between two or more people or the lines spoken by characters in drama or fiction. If there is only one character, who is talking to himself in his mind, it is known as interior monologue.

Scripts in production (studios) contain the dialogues for the characters in the sense of when they have to speak what in a story.

In animation movies, first, it is needed to develop the scripts, which contain the dialogues of the characters and accordingly lip sync will be done during the production pipeline of the animation. After the production, a vocal artist comes for the dialogues, which now will be recorded in exact timing and style as it was earlier predicted and planned. The recording of the dialogues should be clean, i.e. it should only contain the dialogues of the character with no audio disturbances

Later, these recorded dialogues are mixed with the various sound effects, Foley, ambient sound and big sound, according to the requirement of the scene. For example, if there is a knock on the door and somebody asks “who is there?”, the sound editor will have to record the footsteps, sound of someone walking the steps, followed by a knocking sound on the door and the dialogue; a background music will be added as per the requirement of the film, i.e. whether it is a horror film, comic or drama.

## 2.2 Editing Sound with Selection Tool

The main thing in the editing is creating the good and appropriate selection. There are different ways of creating the selection as follows:

- Create the selection by clicking and dragging on the waves until the desire length. This will select the waves and help to edit them. The selected wave can then be deleted or moved as per the requirement of the project.
- You can also work with the in and out point to create the selection. In this type of selection, you can perform various function such as adding effects or applying tools on the portion between the in and out point.

- You can also place a marker and then create the selection. The marker is used to contain a message for the editor for example, it is used to inform that at this point an echo effect should be added; so this marker can then be used to further make a selection.

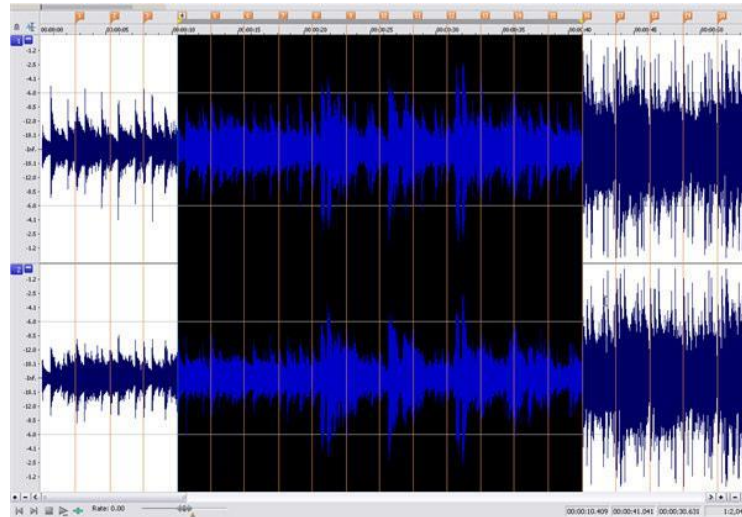





Fig. 2.1: Using Section Tool for Editing Sound

	Study Notes



	<b>Assessment</b>
<ol style="list-style-type: none"> <li>1. Define and explain dialogues.</li> <li>2. Explain the use of selection tool for editing sound.</li> </ol>	

	<b>Discussion/ Activity</b>
Using the software, try out the given illustration.	

### 2.3 Special Markers

Drop Marker: These Markers are important in sound forge, which helps in creating the selection with perfection. If you have to insert the marker, then you have to press M. When the play head is moving and the song is being played, at that time at a specific area you want the selection. At that time, you can place the markers. Markers are displayed with the vertical red dotted line. Right click of the markers displays go to, delete, edit and update options, which help in placing the marker properly. Double clicking between the markers creates the selection.

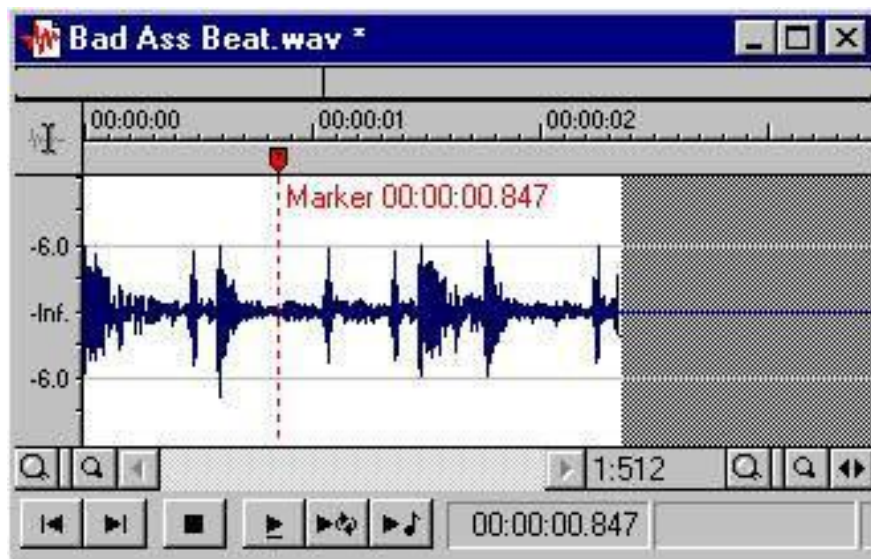


Fig. 2.2: Marker Defined At a Required Place

Mark In and Mark Out: Mark In and Mark Out are the in and out point of the selection. The portion in between the selection or the in and out points is where you can apply the effects or delete that portion or perform any type of editing. You can mark the clip at the playhead creating an edit point Press (I) for the Mark In and when you required to end the selection, you press (O). After pressing (O), you get the area of selection done. You can also start marking when the play head is moving, called on the fly marking.

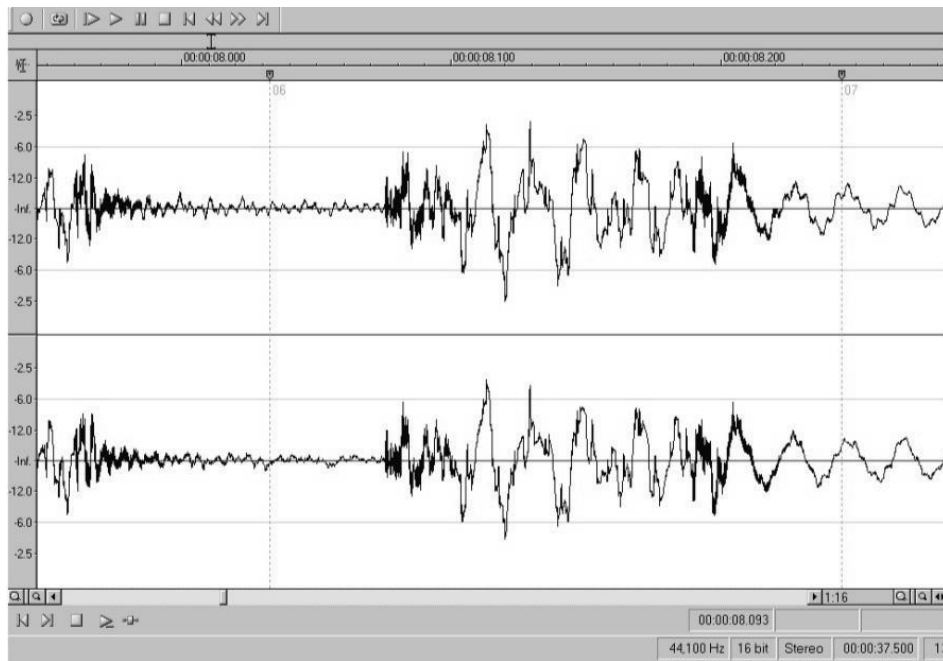
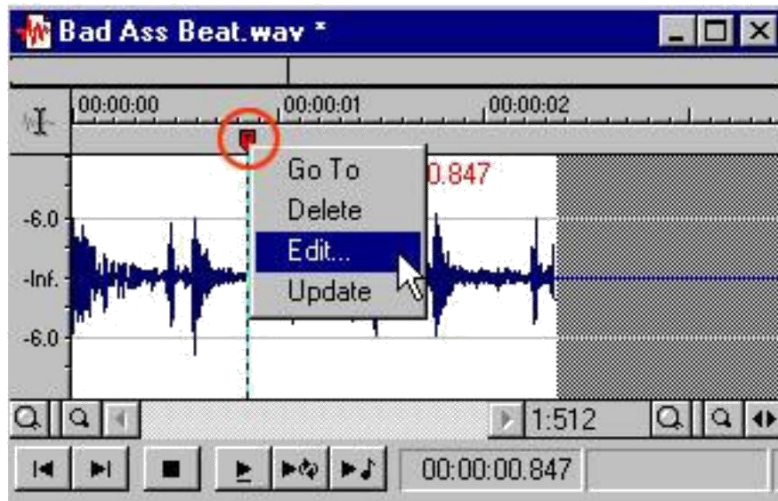




Fig. 2.3: Mark In and Mark Out

Adding a marker is easy as follows:

1. Click somewhere in your sound.
2. On your keyboard, hit M.
3. You can rename the marker by right clicking on its handle and choosing Edit.



	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. Explain the mark in and out point.</li><li>2. Write down the steps to add a marker.</li></ol>	



## Discussion/ Activity

Using the Software, try adding In and out points to a sound clip and delete or move the portion.

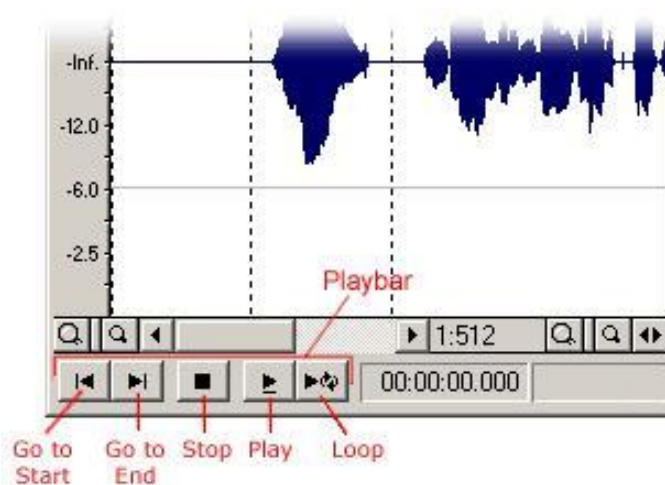
### 2.4 Controlling Playback

There are four ways to play a sound:

- Click on the Transport toolbar to Play All.
- Click on the Transport toolbar to Play. (This will act as a looping playback.)
- Click on the Playbar to Play
- Click on the Playbar to Play Looped





While you are playing the audio, a vertical bar is moving across the sound waves that show you the location or position. For further control of playback, you can also use the other controls, such as Stop, Rewind, Forward, etc.




## Playing part of a Sound

You can play the sound at any point by clicking where you want to start and then clicking Play. To play only a short section of the audio or in the middle, to play click and drag the mouse across the sound, then click Play. (Do not click the Play All button; it will ignore the selection or placement of the cursor and play the entire sound).

	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. What are the steps to play loop a track?</li><li>2. How should one play only a selected part of the track?</li></ol>	

	Discussion/ Activity
Explore the playback controls available in sound forge.	

## 2.5 Menus of Sound Forge

Sound Forge is located in the Multimedia Applications folder. Sound Forge will open to a blank work area. Most of the editing windows have preset options for you to make your life easier. Before beginning, always verify that the source output is playing through the PC speakers. Also, adjust the line-in volume to avoid distorted recording; ensure that your input source is not set too high.

### 2.5.1 VIEW MENU

**Maximum width:** When you open the file and if the file window is not fitting the interface, then you can use this command of maximum width, which will set the window of the file according to the width of the interface.

**Tool Bars:** This option helps you to open different tool bars to work. Individually it can be opened to work as per the requirement. You just need to select the tile of the tool bar which you want to open.

**Clipboard:** Once the sound waves are selected and copied or cut, then this data is directly save on to the clipboard that is memory of the system. If you need to check the data on the clipboard, then use this command. There are two options: content and play. Content option shows the length and time of the data stored. Play option plays the data of the clipboard.

**Zoom:** There are different ways to work upon the zoom. Very basic way of working is with the up arrow and down arrow. If you want full zoom of the file then you can use in full option and normal will bring back the zoom level.

**Time Display:** It shows the digital clock. Therefore, when you start playing the sound then it displays the current position of the cursor. It is called Timecode that is generated by a timing system at regular interval. These are SMPTE timecode (Society of Motion Picture and Television Engineers) a form of media metadata. These timecode are used for used as reference points for identification or synchronising clips. The time code is read as HH:MM:SS: FF i.e. Hours: Minutes: Seconds: Frames.

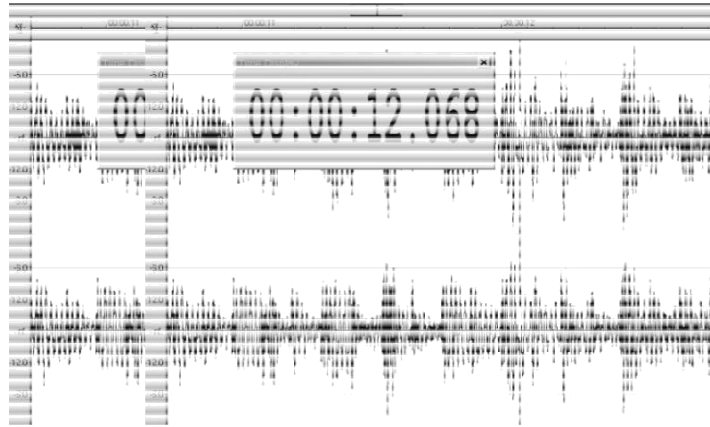


Fig. 2.4: Ti

Region List: s ery d h s d  
 th el ti You s o t s n  
 in the form of region. In additi o between the  
 markers can be s For that, a d to j t add ri ert the  
 to e It  
 in the region list panel to save th



Fig. 2.5: Region List

Once the selectio s  
 l c ng t s ec on f r

the editing. You can also convert the marker into the regions. Regions are displayed by the white markers.

Play list / Cut list: This option also plays an important role in editing. Once the region list is ready, you can drag and drop the selection into the play list. After taking the selections into the play list, you can adjust the sequence of the play list as per the requirement. After adjusting the sequence you can directly check the sequence by playing the first sequence, it will end up playing all of them one by one. This will help you to check whether the flow of the music is ok or not. If you feel that the sequence is ok then you can convert the play list into the new file by command called convert to new in play list option. This will convert the play list data into a new file.

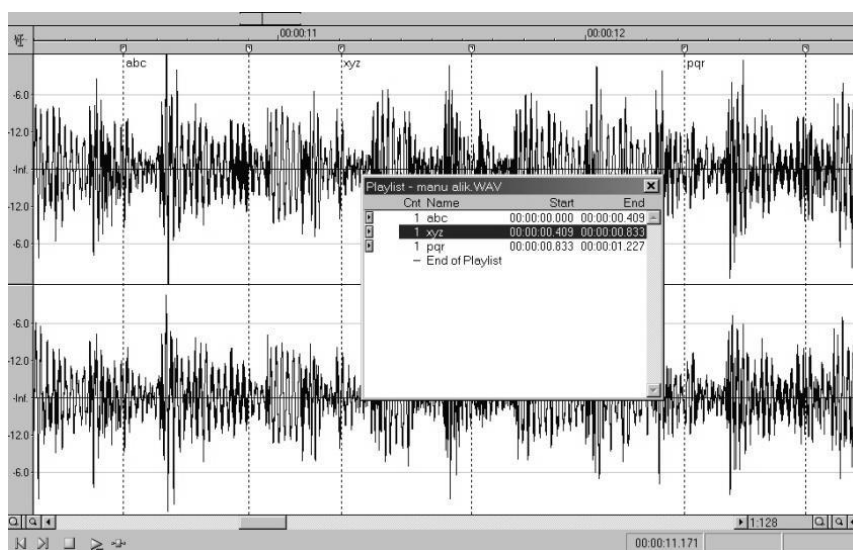


Fig. 2.6: Play List Panel

Cut List: Along with the play list option we also have the cut list option which helps in removing the unnecessary data of the sound. As the procedure of the play list, we have to select the unnecessary data and place it in play list panel. After that, you can convert the play list panel into cut list by the command called treat as cut list. This option gives you cutting line on the screen. To play or preview the file with the cut list, by the button called play as cut list. When you play then it will omit the cut region and play the file.



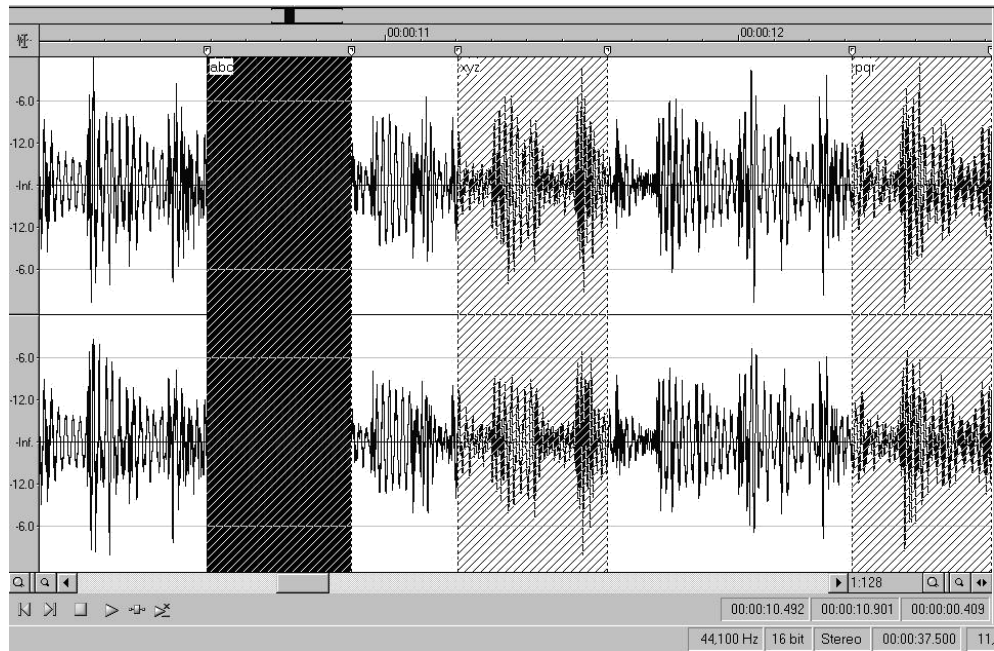


Fig. 2.7: Cut Region

Play Meter: The peak meter allows you to determine the loudest level

Undo / Redo History: This feature allows you to remove or free the clipboard from the undo and redo; In addition, to remove the clipboard smoothly. There are two options for

## 2.52 EDIT MENU

Paste special: This feature allows you to copy and paste audio data. However, you can choose to paste the audio data as a new clip or as a copy of the original clip.

Cross fade: Cross fade is used to smoothly transition between two audio clips. This is done by overlapping the two clips and fading them in and out of each other.

o you can use the cross fade feature to create a smooth transition between two audio clips. This is done by overlapping the two clips and fading them in and out of each other. This can be used to prepare a new audio clip (e.g. a new track or a new album).

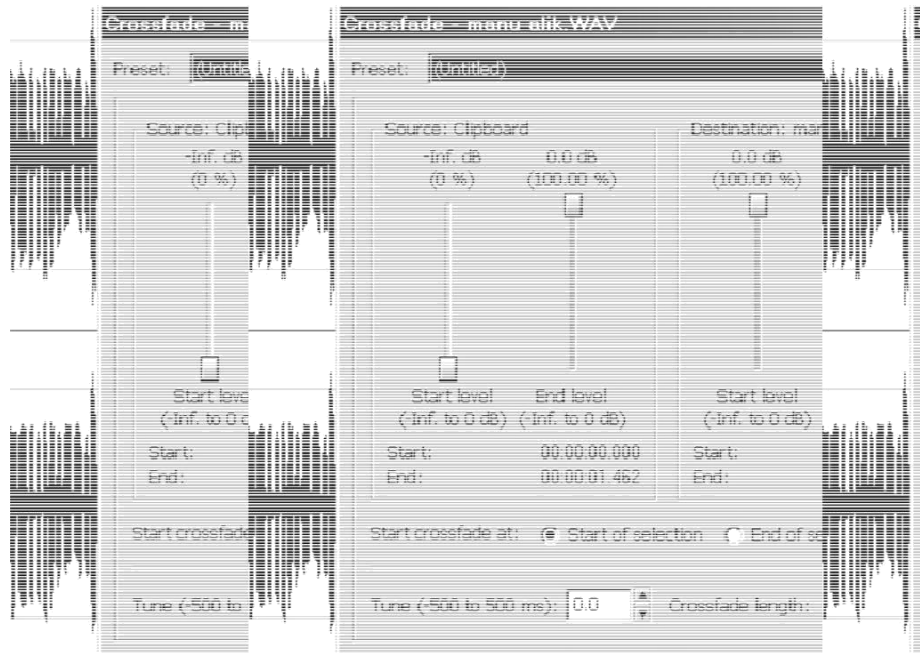


Fig. 2.8: Cross Fade Panel

Mix: This command helps to mix the sound waves of one file to other. When you copy and mix then it will mix the data from the position of the cursor. Therefore, cursor position plays an important role.

Same way like the cross fade we can mix the sound data with the existing file. Here also you have the control of the volume control for the source and destination data. (E.g. cds and cassettes available with additional music which are mixed).

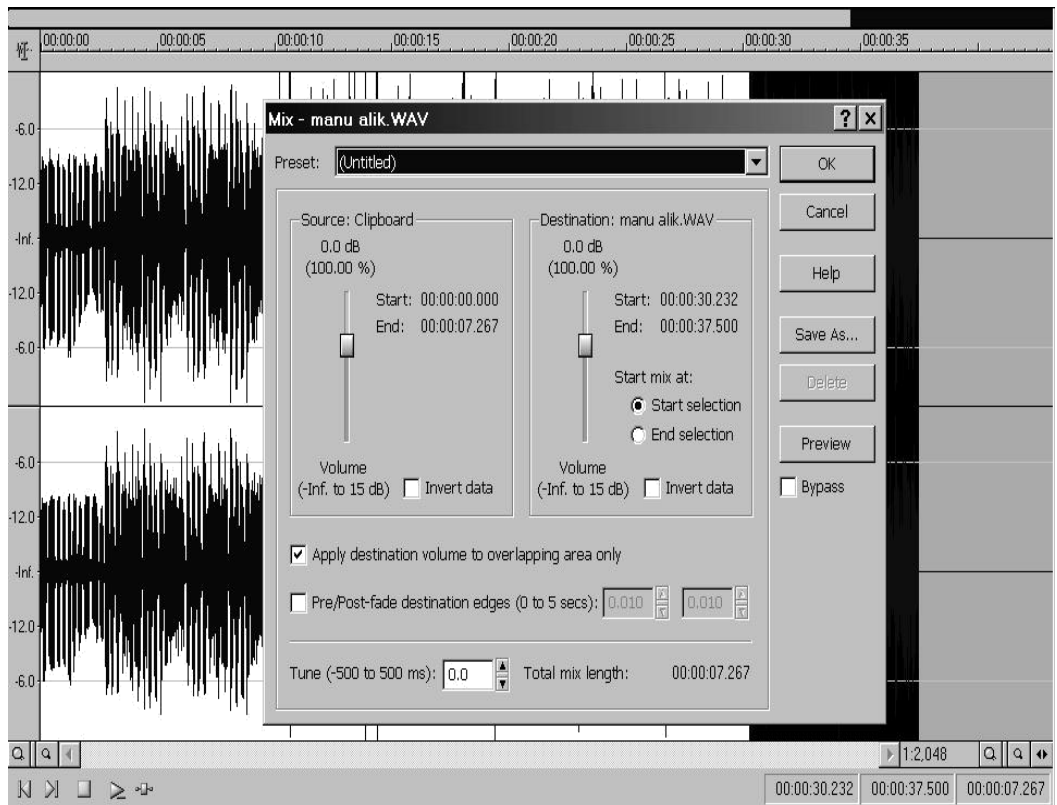


Fig. 2.9: Mix Panel

Replicate: This command is for overlapping replication. This command is pasting of the sound


For this, we required a length, which we need to paste the sound. The selection is perfectly ok with jerks when we copy the loop and open the file folder and replicate command. Here you get the option copy partials and whole copies.


Copy partials are to clipboard if needed. We will paste along the. This is the problem. So best is to use the


Overwrite: is an alternative to the data, which is used to fill the area

which we have to replace and then overwrite the data. Only thing, which has to be checked, is that length of the both the data should match. If it is not matching, then probably you get the jerk. This has to check very precisely.

Paste to New: Sometimes, what we need is that we need to copy the data to the new file. For that, we do not need to create the new file of specific sample rate, bit depth and channels. This command automatically creates the file, which is required by the copied data. So just copy the data and give the command, it will generate the new file.

	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. Define Cross Fade.</li><li>2. Define Cut list and its use.</li></ol>	

	Discussion/ Activity
Open an audio clip in the software and use the edit menu tools to perform changes.	

## 2.6 Illustrations

### Step 1

1. Click FILE > NEW to open the “New Window” window (Figure 1). Set the following and then click OK.
  - a. Sample Rate is 44100
  - b. Bit-depth is 16-bit
  - c. Channels are stereo

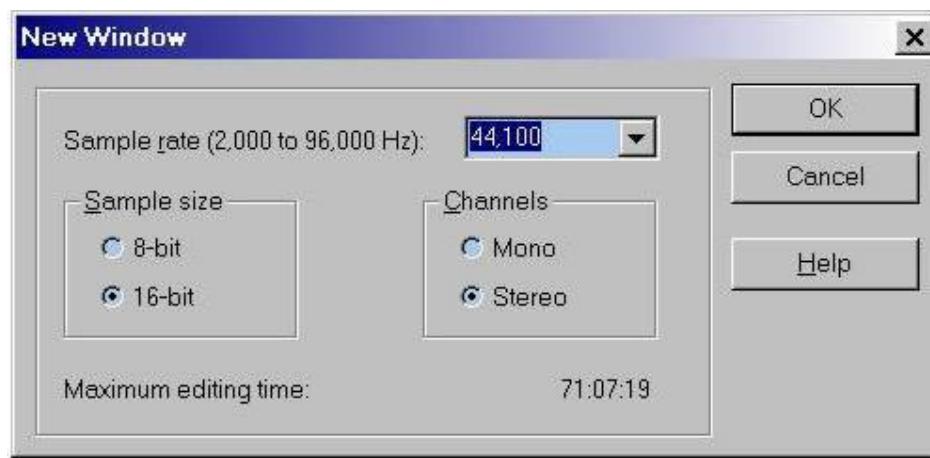
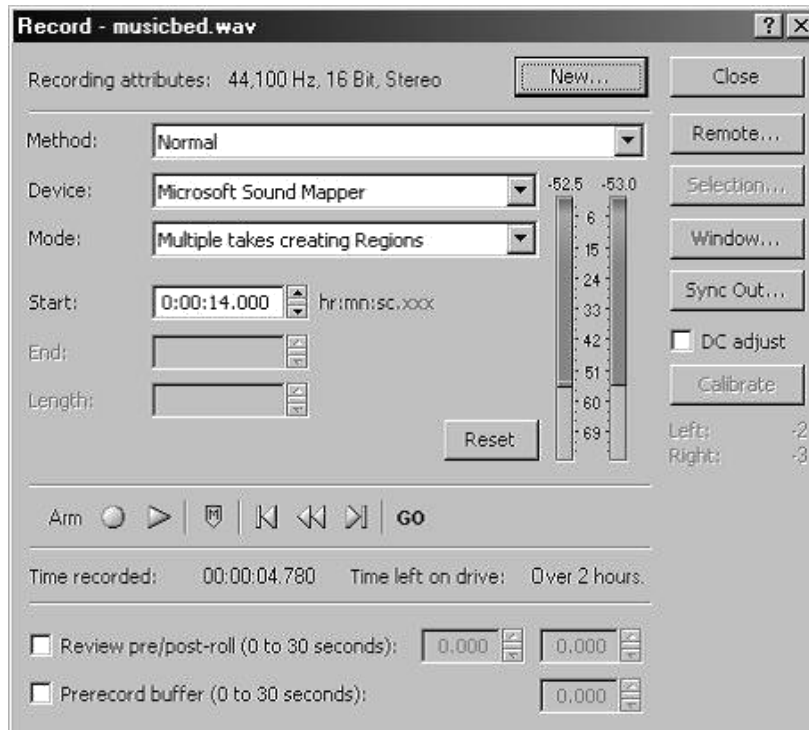


Fig. 2.10: To Create a New Project open New Window

### Step 2

Click the record button on the top left corner of the screen. This will bring up the record window.



### Step 3

Raise the faders on the “ To Editor” channel (this is the audio signal going into Sound Forge).

### Step 4

Raise the faders on the “EDIT” channel (this is the audio signal coming out of Sound Forge to the mixer).

### Step 5

Raise the faders on the Main Mix on the far right of the board (this will allow you to hear the audio).

### Step 6

Adjust the talents voice level by moving the faders up and down on the appropriate “MIC1” and/or “MIC2” and/or “MIC3” channels. The audio booth has 3 microphones, depending on which one and how many you use will determine which channel(s) to adjust. The talents microphone is labelled with the microphone number that corresponds to the microphone number on the mixer.

### Step 7

the left side of the record window

### Step 8

When done recording, click on the play button to display what was just recorded.

### Step 9

To save the recorded file, click on FILE > SAVE AS... In the Save As dialog box, save your recorded file in the high quality format. In the file name dropdown box and select "WAVE" as the file format. Click on SAVE.



Here, we will show you how to use the software.

## 2.7 Summary

### INTRODUCTION

Dialogue is a conversation between two or more people. In a film, dialogue is often written by screenwriters. In a play, dialogue is often written by playwrights. In a novel, dialogue is often written by the author. In a video game, dialogue is often written by the game designers. In a podcast, dialogue is often written by the host. In a radio show, dialogue is often written by the producer. In a television show, dialogue is often written by the scriptwriter. In a movie, dialogue is often written by the screenwriter. In a book, dialogue is often written by the author. In a play, dialogue is often written by the playwright. In a novel, dialogue is often written by the author. In a video game, dialogue is often written by the game designers. In a podcast, dialogue is often written by the host. In a radio show, dialogue is often written by the producer. In a television show, dialogue is often written by the scriptwriter. In a movie, dialogue is often written by the screenwriter. In a book, dialogue is often written by the author.

In a conversation, people have to speak what is on their mind, it is known as interaction. In a conversation, people have to speak what is on their mind, it is known as interaction.

In animation movies, first of all, the storyboard contains the characters and their actions. After the storyboard is completed, the animators create the animation pipeline of the animation. After production, an animator creates the final animation. In animation movies, first of all, the storyboard contains the characters and their actions. After the storyboard is completed, the animators create the animation pipeline of the animation. After production, an animator creates the final animation.

## DROP MARKER

Markers are the main important in sound forge which helps in creating the selection with perfection. If you have to insert the marker, you have to press M. When the play head is moving and the song is being played, at that time at a specific area you want the selection. At that time, you can place the markers. Markers are displayed with the vertical red dotted line. Right click of the markers displays go to, delete, edit and update options, which help in placing the marker properly. Double clicking between the markers creates the selection.

Mark In and Mark Out are the in and out point of the selection. If you want to start the selection when the play head is moving, than you press (I) for the Mark In and when you required to end the selection, you press (O). After pressing (O), you get the area of selection done.

## TOOL BARS

This option helps you to open different tool bars to work. Individually it can be opened to work as per the requirement. You just need to select the tile of the tool bar which you want to open.

## CLIPBOARD

Once the sound waves are selected and copied or cut, than this data is directly save on to the clip board that is memory of the system. If you need to check the data on the clipboard, than use this command. There are two options content and play. Content option shows the length and time of the data stored. Play option plays the data of the clipboard.

## ZOOM

There are different ways to work upon the zoom. Very basic way of working is with the up arrow and down arrow. If you want, full zoom of the file than you can use in full option and normal will bring back the zoom level.

## TIME DISPLAY

It shows the digital clock. So when you start playing the sound than it display the current position of the cursor.



This is very important when you are doing the editing of the sound and working with the selection. You can select the data of sound and you can save the selection in the form of region. In addition, when you insert the marker, this region between the markers can be stored as a region. For that, what you need to do is just add or insert the selection to the region list from the special menu. You can also drag and drop the selection in the region list panel to save the selection as a region.

## 2.8 Self-Assessment Test

### Broad Questions

1. Explain the use of selection tool for editing audio.
2. Write down 5 tools available in Edit menu.

### Short Notes

- a. Playback control
- b. Drop markers
- c. In and out markers
- d. Clip board
- e. Region list

## 2.9 Further Reading

1. Sound Forge Power, Scott Garrigus, Muska & Lipman, 2001
2. Sound Forge Pro 10, Sony



## Unit 3 Recording Narration



### Learning Outcome

After going through this unit, you will be able to:

- Explain what narrations are
- Show how to record narrations
- State how to record narrations through practical implication
- Describe what story telling is
- Narrate what various kinds of scripts are



### Time Required to Complete the Unit

The time required to study this unit is broken as follows:

1. 1<sup>st</sup> Reading: It will need 2 Hrs for reading
2. 2<sup>nd</sup> Reading with understanding: It will need 3 Hrs for reading and understanding
3. Self-Assessment: It will need 3 Hrs for reading and understanding
4. Assignment: It will need 4 Hrs for completing an assignment
5. Revision and Further Reading: It is a continuous process



### Content Map

- 3.1 Introduction to Narration
- 3.2 Recording
- 3.3 Microphones

3.4 Illustrations

3.5 Summary

3.6 Self-Assessment Test

3.7 Further Reading

## 3.1 Introduction to Narration

Narration is a technique, which at its simplest means "telling back". However, in its fullest educational benefit there is more happening than simply comprehension.

Narration is the fundamental ingredient that ties all the other elements of a video production together. Narration provides continuity, structure and vital information. It serves as a tour guide for the audience and an organisational tool for the producer. Narration can clarify, embellish and reinforce key information that may otherwise slip by your audience.

Essentially, narration tells a story or conveys a message verbally. It can be used extensively throughout a video as a running monologue, or it can be used sparsely, to help clarify complex information. However, as simple as narration is, good narration is elusive. All too often, video producers concentrate solely on the visuals, overlook the value of narration and end up putting audiences to sleep with a lifeless, droning monotone.

There are three essential ingredients for creating high-quality narration: a well-written script, smooth delivery and a crisp, clear recording. For this article, we will make a few basic assumptions: 1) you have a camcorder and an external microphone. 2) You have a script. 3) You have someone to read your script into the microphone.

## 3.2 Recording

Sound Recording into your computer is not too hard though it requires knowledge of some key points. Many programs are available to record sound; your computer even comes with a free recorder.

Requirement for recording:

- Recording space is necessary, i.e., free of ambient noise as possible. The lowest noises such as of a moving fan or car or refrigerator running can show-up in your recording as "white noise".
- The windows should be closed and may be soundproof. The mic should be positioned as far away from the computer as possible to minimise recorded fan noise.

- Position your mouth about an inch away and an inch to the side of the microphone to maximise sound absorption without breathing noise, while making vocal recordings,

## Levels

	<ul style="list-style-type: none"> <li>□ You must take special care during recording or adjusting the volume of sound to avoid making the sound vibration stronger as some speakers cannot handle. On the other hand, you want your sounds to be as loud as possible to avoid that "too quiet" sound.</li> <li>□ Always check the audio level in the level meter that is to the left. The topmost level is "0"meter. When recording or playing a sound, you will have to make sure that the level meter never passes zero. You can though for safe volume levels set the audio near "0" but not over. As soon as the volume level touched "0", the top will turn red and meter says "over level".</li> <li>□ To avoid going over level when recording, you can turn down the microphone input or simply speak more softly.</li> </ul>
--	---

## Mic Check; One, Two; One, Two

Before you record anything, always adjust the mic input level so that it does not recording anything scrap before you start-making noise. Basically, the levels should be non-existent! You can adjust the microphone volume for the computer setting by clicking:

Start-> Programs-> Accessories-> Multimedia-> Volume Control Options Properties-> Recording Ok



Some of the sound cards do give you direct control over mic volume. Use the microphone balance volume to set recording volume and remember to adjust the mic level to start out.

	Study Notes



## Assessment

1. Define and explain levels.
2. Explain various types of requirements for recording.



## Discussion/ Activity

Record a scratch tone with the help of a simple mic or inbuilt microphone.


### 3.3 Microphones


There is a variety of ways to capture audio: stereo and surround configurations, mono and Omni directional, underwater and transducer techniques, to name a few.


- Hydrophones: These microphones are hermetically sealed transducers that are designed specifically for underwater or damp capture. They are mostly used to create both a realistic and immersive ambient track. This headphone was first used to capture the flow of the turbulent shore break at Cocoa Beach. The result was a highly detailed and textured soundtrack which post-experience interviews showed to be effective in creating a sense of place within the underwater experience.
- Surround Mics: There are many different approaches to surround mike. These techniques and tools vary from one to another. To capture 'accurate' sound fields, such as the Holophone system is used that is an eight-channel microphone used to captures audio in 360 degrees, especially useful in capturing general ambience. Another type is binaural mics typically worn as ear buds or placed in a dummy head to capture the natural reflections of the ears and skull.
- Transducers and Original Creations: To capture direct vibrations of an object Transducers are a particularly useful. Very dramatic effects can be created when transducer capture is delivered through a subwoofer or "bass shaker" beneath. Original



capture devices can fulfill more specific needs as simply consists of two very small stereo microphones attached back-to-back with rubber bands capable of capturing a four-channel surround.

	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. Define Hydrophones.</li><li>2. Explain Surround Mics.</li></ol>	

	Discussion/ Activity
<p>Study and search the latest sound recording devices and explore the companies producing these devices.</p>	

## 3.4 Illustrations

Here, we will see how we can record our own narration in Sony Sound Forge.

### Step 1

1. Click FILE > NEW to open the “New Window” window (Figure 1). Set the following, then click OK.
  - a. Sample Rate is 44100
  - b. Bit-depth is 16-bit
  - c. Channels are stereo

### Step 2

Click the record button on the top left corner of the screen. This will bring up the record window.

### Step 3

Raise the faders on the “To Editor” channel (this is the audio signal going into Sound Forge).

### Step 4

Raise the faders on the “EDIT” channel (this is the audio signal coming out of Sound Forge to the mixer).

### Step 5

Raise the faders on the Main Mix on the far right of the board (this will allow you to hear the audio).

### Step 6

Adjust the talents voice level by moving the faders up and down on the appropriate “MIC1” and/or “MIC2” and/or “MIC3” channels. The audio booth has 3 microphones, depending on which one and how many you use will determine which channel(s) to adjust. The talents microphone is labelled with the microphone number that corresponds to the microphone number on the mixer.

## Step 7

When satisfied with the audio levels, start to record by clicking the record button on the left side of the record window.

## Step 8

When done recording click the “stop” button and close the record window. This will display what was just recorded.

To save the recorded file, click FILE > SAVE AS to bring up the “Save As” dialog box. Save your recorded file in the high quality WAVE format. To do this go to the “Save as type” dropdown box and select “WAVE” format. Once done click SAVE.

## 3.5 Summary

### INTRODUCTION TO NARRATION

Narration is a technique, which at its simplest means "telling back". However, in its fullest educational benefit there is more happening than simply comprehension?

Narration is the fundamental ingredient that ties all the other elements of a video production together. Narration provides continuity, structure and vital information. It serves as a tour guide for the audience and an organizational tool for the producer. Narration can clarify, embellish and reinforce key information that may otherwise slip by your audience.

Essentially, narration tells a story or conveys a message verbally. It can be used extensively throughout a video as a running monologue, or it can be used sparsely, to help clarify complex information. However, as simple as narration is, good narration is elusive. All too often, video producers concentrate solely on the visuals, overlook the value of narration and end up putting audiences to sleep with a lifeless, droning monotone.

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Sound Recording into your computer is not too hard though it requires knowledge of some key points. Many programs are available to record sound; your computer even comes with a free recorder.

There is a variety of ways to capture audio:

Hydrophones: is used to create both a realistic and immersive ambient track.

Surround Mics: such as the Holophone system is used that is an eight-channel microphone used to captures audio in 360 degrees, especially useful in capturing general ambience.

Transducers and Original Creations: To capture direct vibrations of an object, transducers are a particularly useful. Very dramatic effects can be created

### 3.6 Self-Assessment Test

#### Broad Questions

1. Which are the various types of scripts written in a film industry?
2. Write a note on essential ingredients for creating high – quality narration.
3. Write a note on story telling.

#### Short Notes

- a. Narration
- b. Script
- c. Hydrophones
- d. Surround Mics
- e. Level Metre

### 3.7 Further Reading

1. A beginner's Guide to Storytelling, Katy Rydell, National Story telling press
2. How to tell a Great Story, Sensations Pro Sdn Bhd., Ed. 7
3. Sound Forge Power, Scott Garrigus, Muska & Lipman, 2001
4. Sound Forge Pro 10, Sony



**SOUND EDITING**

**BCADES-206**



**BLOCK 2:  
MAKING SOUNDS**



**Dr. Babasaheb Ambedkar Open  
University, Ahmedabad**



“

*Education is something  
which ought to be  
brought within  
the reach of every one.*

”

- Dr. B. R. Ambedkar



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Chharodi, Ahmedabd-382481





**Dr. Babasaheb Ambedkar  
Open University**

**BCADES-206  
SOUND EDITING**

**Block**

**2**

**MAKING SOUNDS**

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**UNIT 1 UNDERSTANDS NATURAL MUSIC AND SOUND PROCESSING**

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**UNIT 2 MAKING SOUND LOOPS**

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**UNIT 3 MAKING BACKGROUND MUSIC PART 1**



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## **ROLE OF SELF INSTRUCTIONAL MATERIAL IN DISTANCE LEARNING**

The need to plan effective instruction is imperative for a successful distance teaching repertoire. This is due to the fact that the instructional designer, the tutor, the author (s) and the student are often separated by distance and may never meet in person. This is an increasingly common scenario in distance education instruction. As much as possible, teaching by distance should stimulate the student's intellectual involvement and contain all the necessary learning instructional activities that are capable of guiding the student through the course objectives. Therefore, the course / self-instructional material are completely equipped with everything that the syllabus prescribes.

To ensure effective instruction, a number of instructional design ideas are used and these help students to acquire knowledge, intellectual skills, motor skills and necessary attitudinal changes. In this respect, students' assessment and course evaluation are incorporated in the text.

The nature of instructional activities used in distance education self-instructional materials depends on the domain of learning that they reinforce in the text, that is, the cognitive, psychomotor and affective. These are further interpreted in the acquisition of knowledge, intellectual skills and motor skills. Students may be encouraged to gain, apply and communicate (orally or in writing) the knowledge acquired. Intellectual- skills objectives may be met by designing instructions that make use of students' prior knowledge and experiences in the discourse as the foundation on which newly acquired knowledge is built.

The provision of exercises in the form of assignments, projects and tutorial feedback is necessary. Instructional activities that teach motor skills need to be graphically demonstrated and the correct practices provided during tutorials. Instructional activities for inculcating change in attitude and behavior should create interest and demonstrate need and benefits gained by adopting the required change. Information on the adoption and procedures for practice of new attitudes may then be introduced.

Teaching and learning at a distance eliminates interactive communication cues, such as pauses, intonation and gestures, associated with the face-to-face method of teaching. This is particularly so with the exclusive use of print media. Instructional activities built into the instructional repertoire provide this missing

interaction between the student and the teacher. Therefore, the use of instructional activities to affect better distance teaching is not optional, but mandatory.

Our team of successful writers and authors has tried to reduce this.

Divide and to bring this Self Instructional Material as the best teaching and communication tool. Instructional activities are varied in order to assess the different facets of the domains of learning.

Distance education teaching repertoire involves extensive use of self-instructional materials, be they print or otherwise. These materials are designed to achieve certain pre-determined learning outcomes, namely goals and objectives that are contained in an instructional plan. Since the teaching process is affected over a distance, there is need to ensure that students actively participate in their learning by performing specific tasks that help them to understand the relevant concepts. Therefore, a set of exercises is built into the teaching repertoire in order to link what students and tutors do in the framework of the course outline. These could be in the form of students' assignments, a research project or a science practical exercise. Examples of instructional activities in distance education are too numerous to list. Instructional activities, when used in this context, help to motivate students, guide and measure students' performance (continuous assessment)

## Unit 1 Understand Natural Music and Sound Processing



### Learning Outcome

After going through this unit, you will be able to:

- Impart information about the fundamentals of sound
- Explain what natural music is
- Discuss the recording of natural music
- Describe the foundation of sound and its properties
- Enlist the different ways by which you can process your sound for the specific requirement



### Time Required to Complete the Unit

The time required to study this Unit is broken as follows:

1. 1<sup>st</sup> Reading: It will need 2 Hrs for reading
2. 2<sup>nd</sup> Reading with understanding: It will need 3 Hrs for reading and understanding
3. Self-Assessment: It will need 3 Hrs for reading and understanding
4. Assignment: It will need 4 Hrs for completing an assignment
5. Revision and Further Reading: It is a continuous process



### Content Map

- 4.1 Introduction to Natural Sound
- 4.2 Dynamic Range

- 4.2.1 Audio Frequency
  - 4.2.2 Sample Rate
  - 4.3 Role of Equaliser
    - 4.3.1 Types of Equalisers
  - 4.4 Bit Depth
  - 4.5 Processing the Sound
    - 4.5.1 Part 1
    - 4.5.2 Part 2
  - 4.6 Summary
  - 4.7 Self-Assessment Test
  - 4.8 Further Reading
-

## 4.1 Introduction to Natural Sound

When we are recording action sequences, there is sound in the real world and this sound can be that of news reader or a narration or it can be used at full volume such that the picture and sound themselves can tell the story without any track.

We will first see how to capture a high quality audio when we are shooting on location. Then we shall study how to fix, enhance and manipulate sound in postproduction. When you are working for the best quality sound for the films and when you are working with professional film sound, you need to ensure that you get the best quality sound from the source.

In addition, it is quite natural that good sound quality is unnoticed but if the sound quality is poor, it is immediately noticed by the film audience.

Sound designers no doubt play an important role in the film production. At the same time, they have a tough job and on top of that, it is the most thankless job because most people do not recognise the brilliance, difficulty and importance of their work.

## 4.2 Dynamic Range

Dynamic range is the ratio of the loudest part of the sound and the quietest part of the sound that is measured in Decibel level (abbreviated as DB) units. Dynamic range is present in all kinds of sound whether it is any sound, music, ambient noise or dialogue.

When you work with analogue recording the tape noise is always present and this decides the lower limit of the dynamic range which is also known as noise floor. In addition, this extra noise or the hissing sound present when you playback the footage is quite annoying by many film makers. Moreover, because of this noise it immediately leads to a low budget production; hence this should be avoided. But we will learn how this noise can be limited or it can be reduced or it can be totally eliminated in postproduction while you are recording.

Compressors, expanders and noise gates are processing devices used in audio to alter the dynamic range of a given signal. It is done to achieve a more consistent sound when recording or as a special effect.

#### 4.2.1 AUDIO FREQUENCY

Frequency is the measurement of how frequently sound waves hit the human ear. The higher the frequency, the higher the pitch. Frequency is measured in hertz (Hz). A male voice in a conversation normally has a range of about 100 – 8000 Hz (8 kHz). The female voice in the same situation will have slightly higher frequencies ranging from 180 – 10,000 Hz (10 kHz).

Human can decipher sounds as low as 20 Hz but in going lower than that, the sound can only be “felt” by the body, not heard. Likewise, sounds above 20,000 Hz are rarely audible to human and can only be heard by dogs and bats.


Following are the Frequency with description:


- 16 to 32 Hz: The human threshold of feeling and the lowest pedal notes of a pipe organ
- 32 to 512 Hz: Rhythm frequency
- 8192 to 16384 Hz: Brilliance, the sounds of bells and the ringing of cymbals


#### 4.2.2 SAMPLE RATE

- Sample rate is the measurement of how frequently we measure an audio signal. It has been proven that the sample rate must be at least double the frequency that we know that can be captured. This is because the human ear can hear sounds up to 20,000 Hz we need to be able to sample at least 40,000 times a second (40 kHz).
- You will find that different recording devices will record at differ sample rates. If the audio device records at too low a sample rate it will result in “aliasing” with poor quality high frequency sounds.
- CDs have a sample rate of 44.1 kHz. Many video recorders use sample rates of about 48 kHz. Again there are even high quality devices which use higher sample rates such as 96 kHz or 192 kHz.



	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. Define and explain dynamic range.</li><li>2. Define audio frequency.</li></ol>	

	Discussion/ Activity
Observe and discuss various shots requiring the high or low dynamic range.	

### 4.3 Role of Equaliser

Equalisers are sometimes found in the sound recording devices and they can be edited during production or they can be found in Non Linear Editing Systems (NLE) in postproduction also. When you edit low frequencies, you can make deep noises even deeper. For example, the sound of a low grumbling noise like that of an engine can be exaggerated by editing the low frequencies. Also at the same time, you can increase high frequencies to make high frequencies such as the sound of a violin sound even 'brighter'.

If you want to create audio effects that are similar to the sound that you hear and you put your ear plugs for that you would have to lower the higher frequencies without changing the bass. This will make the sound a bit muted and dull.

If you want to create an audio effect where you want to make feel that someone is speaking on the other end of a telephone, you need to turn down both the high and low frequencies and can boost the mid frequencies.

You will also learn that the human voice occupies these mid ranges. Telephones have a narrow frequency response (mid range) allowing you to mimic the sound in your postproduction by altering the high and low frequencies accordingly.

#### 4.3.1 TYPES OF EQUALISERS

There are different types of ways to work upon this option like graphic, Parametric and parametric.

1. **Graphic:** It is a best way that allows you to adjust the sound with pre-defined bands or a user-definable envelope graph. Graphic EQ is divided into three pages: Envelope, 10 band and 20 band.

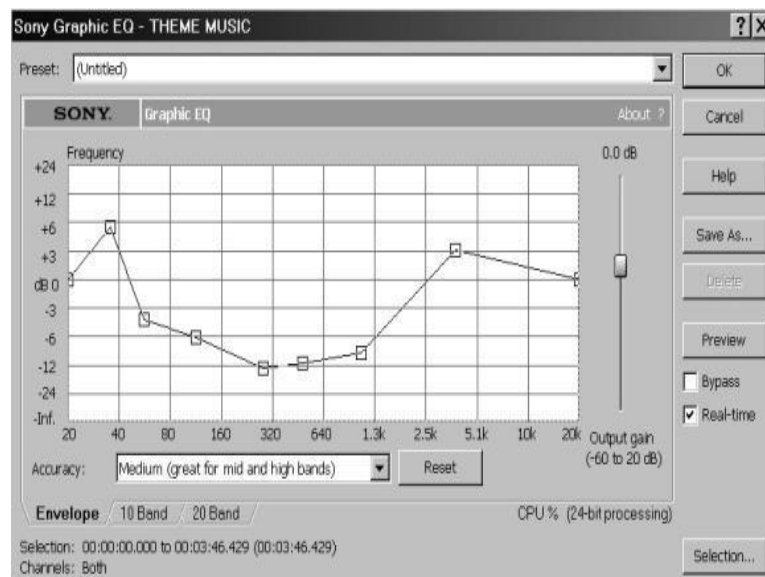
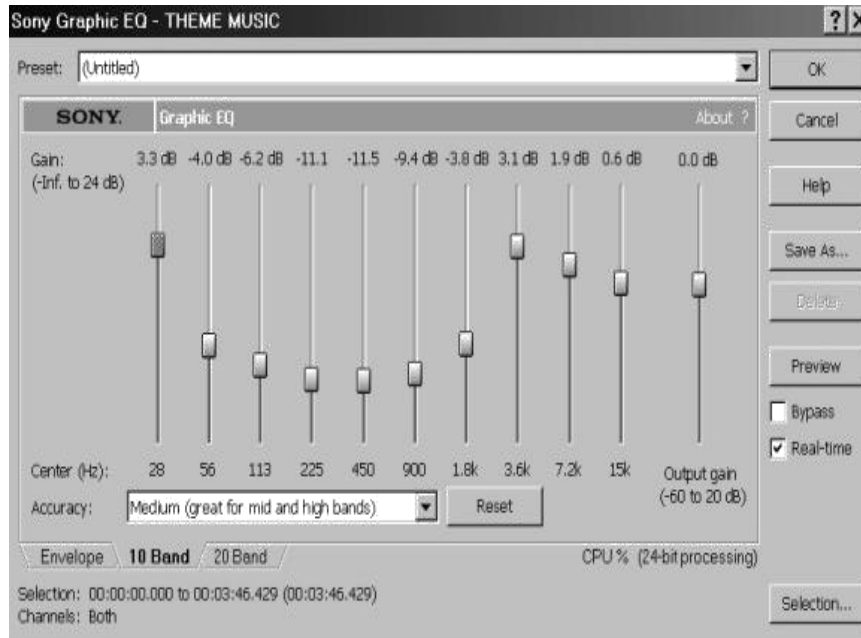


Fig. 4.1: Working With Envelope Way



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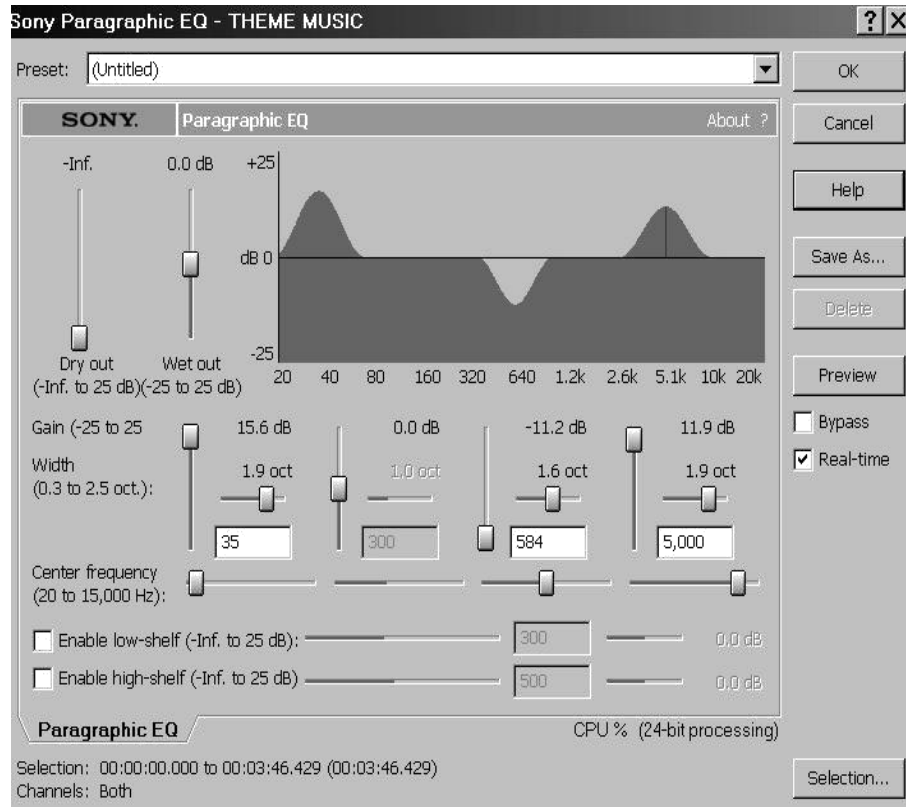
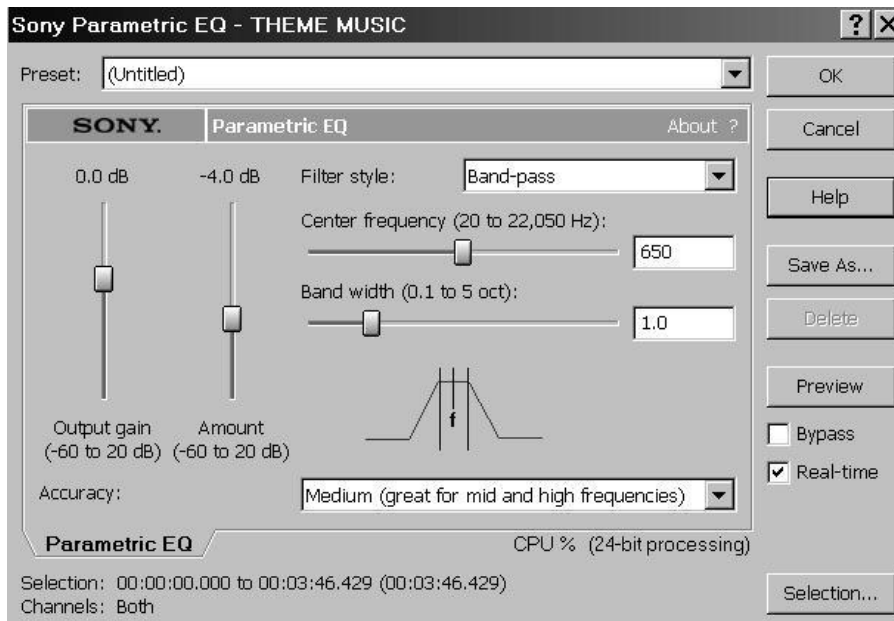



Fig. 4.3: Para Graphic EQ



2. Parametric: The Parametric Equaliser is a set of four frequency-selective filters that allow for very precise changes in the frequency content of a sound signal.
- A high-frequency shelf filter is useful for removing high-frequency noise such as wind, tape hiss, or computer noise.
  - A low-frequency shelf filter is useful for removing low-frequency rumbles such as electrical hum, or traffic noise.
  - A band-pass filter is useful for removing hiss and low frequency rumble simultaneously or boosting a specific frequency range.
  - A band-reject is useful for removing to remove narrow-bandwidth noise such as amplifier/microphone.

	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. Write a note on parametric equaliser.</li><li>2. What is the role of equalizer?</li></ol>	



## Discussion/ Activity

Open the equaliser window and observe various changes during recording.

### 4.4 Bit Depth


Sample rate is the measurement of how frequently we measure the audio, while the Bit depth is how accurately we measure that sample.


Now in order to understand bit depth in a easier manner let us consider an example. Suppose you have to measure the height of your friend but to do this you want to use the cricket bat as the unit of measurement device, you will be able to quickly figure out that your friend is exactly 2-cricket bat tall. Now if you perform this exercise on another friend who is taller than your previous friend is, you will then have to round down. This second friend is actually two and a half cricket bats tall. So then you have to measure him at either 2 or 3 cricket bats tall as you can not use a half cricket bat as a measurement device.


With the “bit system”, you have two common methods of measurement. First, there is the 8 bit system which has 256 levels. Quiet sounds are recorded at level 1 and loud sounds are recorded at 255. Your sound therefore can only have a range of 256 levels. There is no measurement for a sound that registers at 145.5 or 77.3. They would simply be recorded as 145 and 77 respectively. As you can see this poses a problem with measurement accuracy.

However, there is another bit system which is called the 16-bit system. This is the most common bit system in most video cameras. The 16-bit system has 65,536 levels. This allows filmmakers to measure sound more accurately since they have a wider range of measurement gauges. This allows for a more precise measurement of sound.

It should also be noted that increasing your bit system from 8 bit to 16 increases the amount of data that needs to be stored. Together, your sample rate and bit depth combines to create what we call the ‘resolution’ of a digital sound recording.

	Study Notes

	Assessment
Define and explain bit depth.	

	Discussion/ Activity
Explore more about bit depth and its calculation.	

## 4.5 Processing the Sound

There are many different ways by which you can process you sound for the specific requirement.

Note: While you are working with process or effect menus than you will get the option of previewing the process or effects that you are going to apply. However, these previews are only available when sufficient ram of the machine is available.

## 4.5.1 PART 1

### AUTO TRIM/CROP

This command is used for either removing the blank space left at the end or starting point of the file. Therefore, when we apply this command then the blank space is removed.

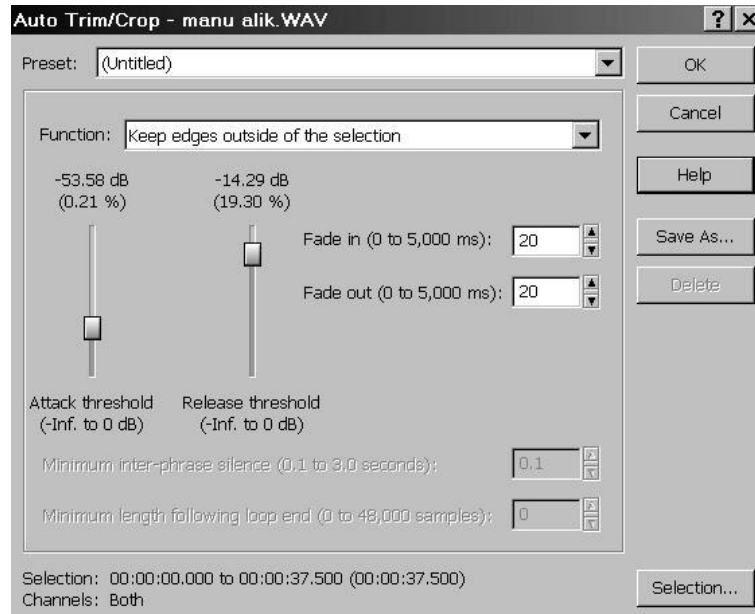


Fig. 4.4: Auto Trim/Crop

### THRESHOLD

Drag the fader to set the threshold level used for the detection of the trim/crop start point. -Inf. is complete silence; 0 dB is the maximum amplitude level.

### BIT – DEPTH CONVERTER

This option is used to convert the bit depth of the file. Sometimes noise signals are problems, which can be eliminated by decreasing the bit levels. So lesser the bit level lesser will be noise and there are different methods of dithering to remove the noise.



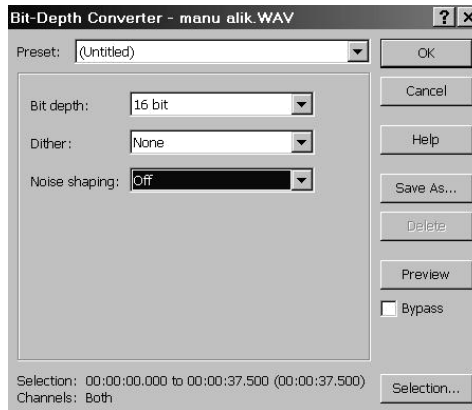


Fig. 4.5: Bit Depth Converter

## C AL CONVERTER

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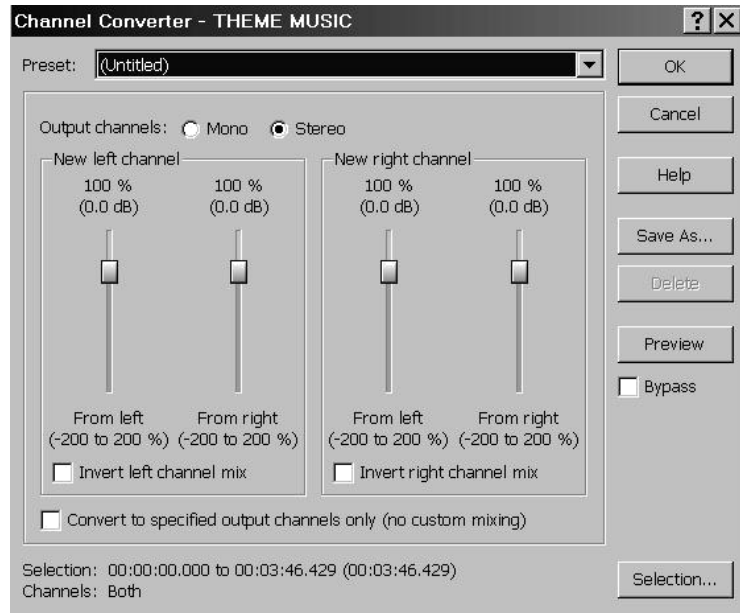


Fig. 4.6: Channel Converter

## FADE

This processing of the sound is used to vary the sound volume at the different levels of selection. There are different ways to work upon like envelop and also ready setting like fade in and fade out. When you need to fluctuate, the sound volumes it can be done with envelop way. Where, you need to set the points randomly as per the requirement.

Fade in will gradually increase the volume of the sound. This can be used at the starting of the file. Fade out will gradually decrease the volume of the sound. This can be used at the end of the file

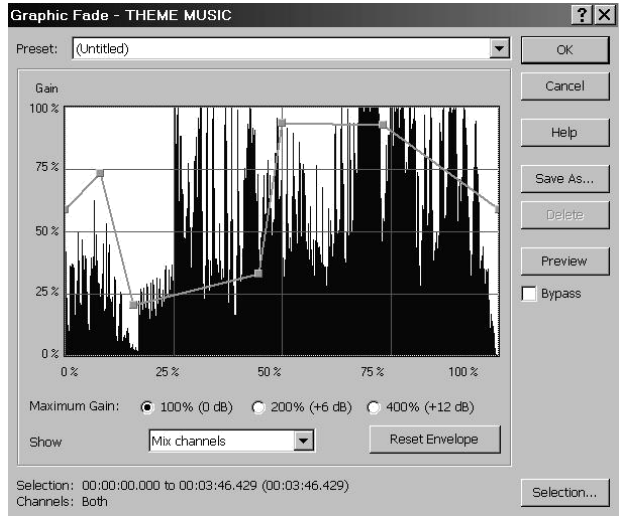


Fig. 4.7: Fade Envelope

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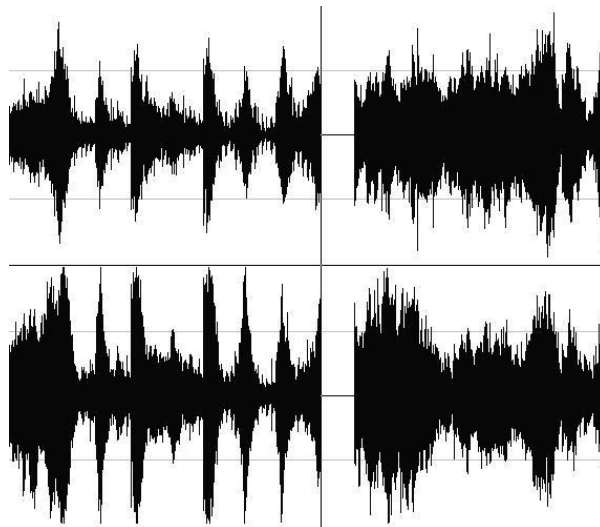


Fig.

## INVERT/FLIP

Invert/Flip is used to reverse the part of the sound data. Although inverting data does not make an audible difference in a single file, it can be useful for matching a sample transition when executing certain pastes, mixes, or loops.

## MUTE

Mute will remove the sound waves and keeps that area empty so that that area is of no sound. For that, you need to select the area that you want to mute and apply this command. Here the sound waves that you have selected will be deleted. You will get the blank area that will work as a mute as there is not sound.

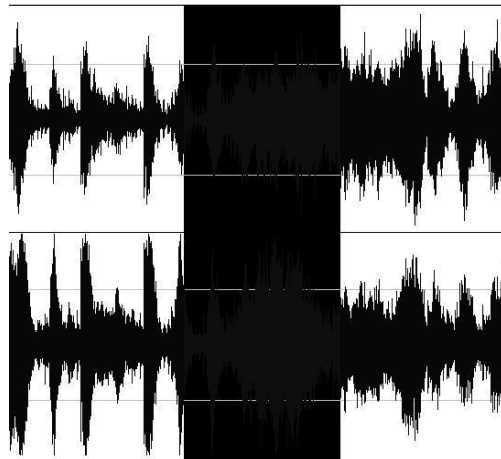


Fig. 4.9: Before Mute

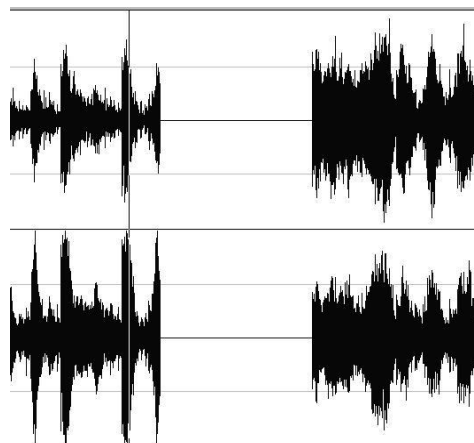


Fig. 4.10: After Mute

## 4. PART 2

### NORMALIZE

Normalized level is the level that the signal reaches a user-defined level. If the normalization is initiated, the maximum value is applied to both. If a single channel is selected, the waveform is converted to compressed form with the default level normalized before the conversion.

### PAN EXPAN

panning is used to adjust the volume of the sound, which will have the effect of sound travelling from the speaker. In a multi-track recording, panning is used to increase the volume of the sound in it.

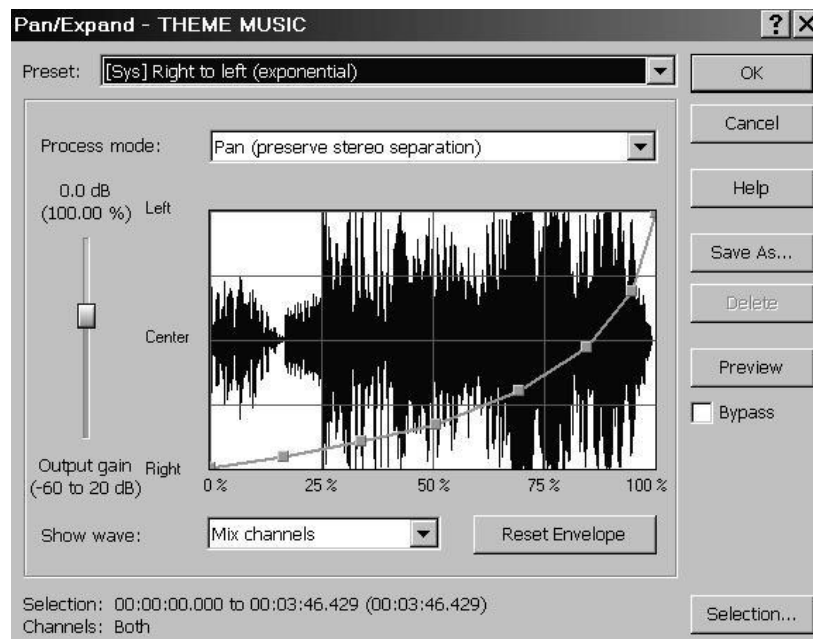


Fig. 4.11: Pan/Expand

## RESAMPLE

Resample option helps to change the sample rate of the file per second. Higher the sample rate, it will increase the file size and vice versa. There are different sample rate given as a preset, which can be used as per the requirement.

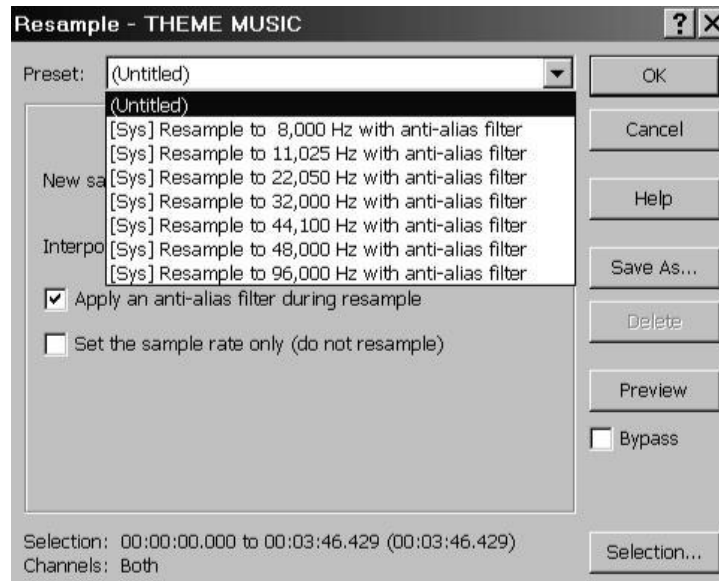


Fig. 4.12: Sample Rate

## REVERSE

Reverse option will reverse the sound waves, which are selected. If the sound waves are not selected then complete file is reverse. It gives flip horizontal to the sound waves changing the output completely.

## SMOOTH/ENHANCE

It is used to edit the signal that has too much high end or is a low end that needs to be processed. When we use equalizer, it can eliminate or boost a high end but it is often too sharp. The Smooth/Enhance helps to give the right amount of frequency adjustment to level or down your signal.

- Smooth will smooth out fast-changing transformations in a sound and is useful for removing roughness.

□ n ea e  
more vibrant.

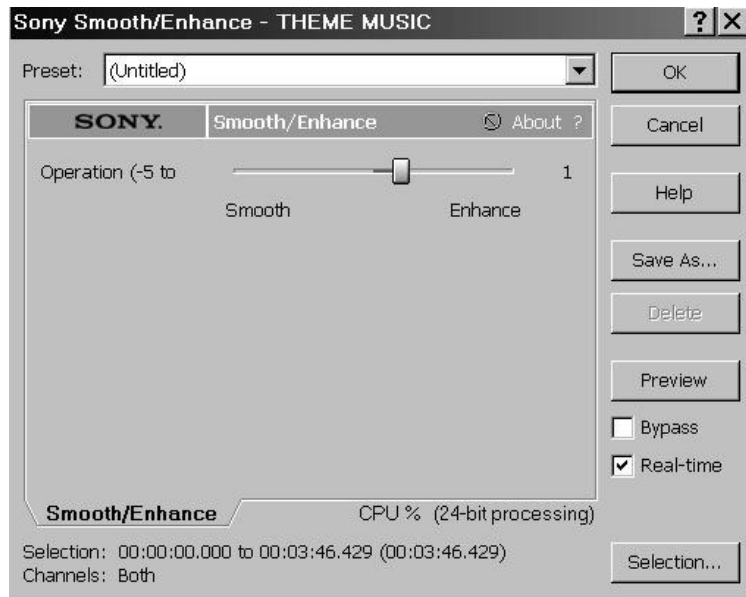


Fig. 4.13: Smooth Enhanced

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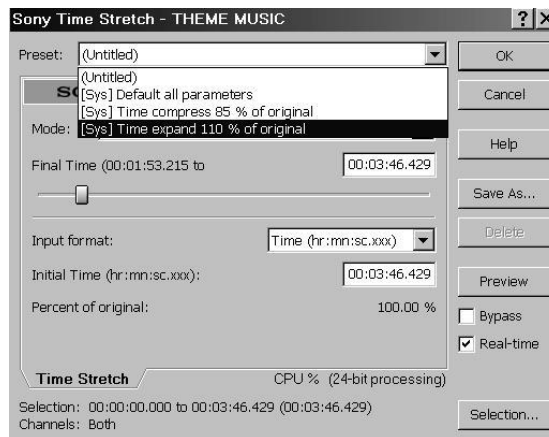


Fig. 4.14: Time Stretch

## VOLUME

This option is used to increase the volume level of the selected area. If the selection is not made then volume level of the complete file is being affected.

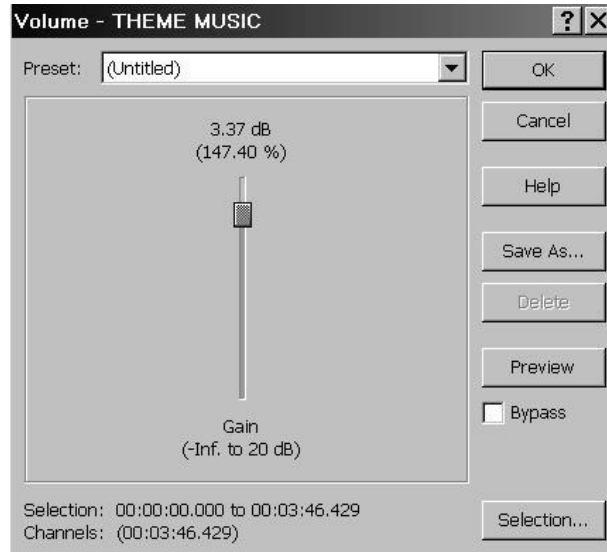


Fig. 4.15: Volume

## DC OFF SET

DC Offset is used to change the baseline of a sound file to adjust the electrical mismatches between your sound card and input device. Due to this your sound might give unexpected results when sound effects are applied to files that contain DC offsets.

Automatic detect and remove DC offset will try to set the DC offset automatically to make your file proper.

Compute DC offset from first 5 seconds only check box. Sound Forge will analyze only the first five seconds of a sound file when measuring the DC offset. The only time that five seconds is not sufficient is if a long fade-in or mute has been applied at the beginning of the file.





## Study Notes



## Assessment

1. Define and explain Normalise.
2. Write a note on channel convertor.



## Discussion/ Activity

Open the audio in sound forge and study the panning of the sound.

## 4.6 Summary

### DYNAMIC RANGE

Dynamic range is the difference between the loudest part of the sound and the quietest part of the sound. Dynamic range is present in all kinds of sound whether it is any sound, music, ambient noise or dialogue.

When you work with analog recording the tape noise is always present and this decides the lower limit of the dynamic range, which is also known as noise floor. Moreover, this extra noise or the hissing sound present when you playback the footage is quite annoying by many film makers. And because of this noise, it immediately leads to a low budget production; hence this should be avoided. But we will learn how this noise can be limited or it can be reduced or it can be totally eliminated in postproduction while you are recording.

### FREQUENCY

It is the measurement of how frequently sound waves hit the human ear. The higher the frequency, the higher the pitch. Frequency is measured in hertz (Hz). A male voice in a conversation normally has a range of about 100 – 8000 Hz (8 kHz). The female voice in the same situation will have slightly higher frequencies ranging from 180 – 10,000 Hz (10 kHz).

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If you want to create audio effects that are similar to the sound that you hear and you put your ear plugs for that you would have to lower the higher frequencies without changing the bass. This will make the sound a bit muted and dull.

If you want to create an audio effect where you want to make feel that someone is speaking on the other end of a telephone for that you need to turn down both the high and low frequencies and can boost the mid frequencies.

You will also learn that the human voice occupies these mid ranges. Telephones have a narrow frequency response (mid range) allowing you to mimic the sound in your postproduction by altering the high and low frequencies accordingly.

#### SAMPLE RATE

Sample Rate is the measurement of how frequently we measure an audio signal. It has been proven that the sample rate must be at least double the frequency that we know that can be captured. This is because the human ear can hear sounds up to 20,000 Hz we need to be able to sample at least 40,000 times a second (40 kHz).

You will find that different recording devices will record at differ sample rates. If the audio device records at too low a sample rate it will result in “aliasing” with poor quality high frequency sounds.

CDs have a sample rate of 44.1 kHz. Many video recorders use sample rates of about 48 kHz. Again, there are even high quality devices which use higher sample rates such as 96 kHz or 192 kHz

#### BIT DEPTH

Sample rate is the measurement of how frequently we measure the audio. While the Bit depth is how accurately we measure that sample.

Now in order to understand bit depth in a easier manner let us consider an example. Suppose you have to measure the height of your friend but to do this you want to use the cricket bat as the unit of measurement device. Therefore, you will be able to quickly figure out that your friend is exactly 2 cricket bat tall. But now if you perform this exercise on another friend who is taller that your previous friend you will then have to round down. This

second friend is actually two and a half cricket bats tall. So then you have to measure him at either 2 or 3 cricket bats tall as you can not use a half cricket bat as a measurement device.

With the “bit system”, you have 2 common methods of measurement. First, there is the 8 bit system which has 256 levels. Quiet sounds are recorded at level 1 and loud sounds are recorded at 255. Your sound therefore can only have a range of 256 levels. There is no measurement for a sound that registers at 145.5 or 77.3. They would simply be recorded as 145 and 77 respectively. As you can see this poses a problem with measurement accuracy.

But there is another bit system which is called the 16 bit system. This is the most common bit system in most video cameras. The 16 bit system has 65,536 levels. This allows filmmakers to measure sound more accurately since they have a wider range of measurement gauges. This allows for a more precise measurement of sound.

It should also be noted that increasing your bit system from 8 bit to 16 increases the amount of data that needs to be stored. Together, your sample rate and bit depth combine to create what we call the `resolution` of a digital sound recording.

## 4.7 Self-Assessment Test

### Broad Questions

1. What do you mean by resolution of a digital sound recording?
2. Explain and write a note on frequency.

### Short Notes

- a. Bit depth
- b. DC Offset
- c. Dynamic range
- d. Sample rate
- e. Equaliser

## 4.8 Further Reading

1. Sound Forge Power, Scott Garrigus, Muska & Lipman, 2001
2. Sound Forge Pro 10, Sony



## Unit 2 Making Sound Loops



### Learning Outcome

After going through this unit, you will be able to:

- Impart information on looped sounds
- Explain how to sustain and release loops
- Discuss the looping techniques
- Enumerate methods to create looped sounds



### Time Required to Complete the Unit

The time required to study this unit is broken as follows:

1. 1<sup>st</sup> Reading: It will need 2 Hrs for reading
2. 2<sup>nd</sup> Reading with understanding: It will need 3 Hrs for reading and understanding
3. Self-Assessment: It will need 3 Hrs for reading and understanding
4. Assignment: It will need 4 Hrs for completing an assignment
5. Revision and Further Reading: It is a continuous process



### Content Map

- 5.1 Introduction to Loops
- 5.2 Understanding Loops
- 5.3 Looping Techniques
- 5.4 Summary

5.5 Self-Assessment Test

5.6 Further Reading



## 5.1 Introduction to Loops

A loop is a sample or region in an audio file that is repeated during playback. Samples are finite and frequently very short in length. Therefore, they must be repeated (or looped) to create longer or sustaining sounds.

Loops can be repeated by using tape loops, delay effects, cutting between two record players, sampling, sampler or computer software.

Many musicians now a days use digital hardware and software devices to create and modify loops, often in conjunction with various electronic musical effects and instrument. These loops are one of the most important features of video game music used for the background.

Some of the most widely used Software are, Digidesign's Pro Tools, Sony's ACID and Sound Forge, Cakewalk Sonar, ReCycle, GarageBand, FL Studio (formerly Fruity Loops), Propellerhead's Reason and Ableton Live.

Loops are also available on net, so for homemade projects, one can search for free loops in formats like Wav, MP3, Aif, and Midi Sound Format. There are also paid loops available created by professionals that can be used more in professional work.

## 5.2 Understanding Loops

A sound envelope contains four elements:

- Attack
- Decay
- Sustain
- Release

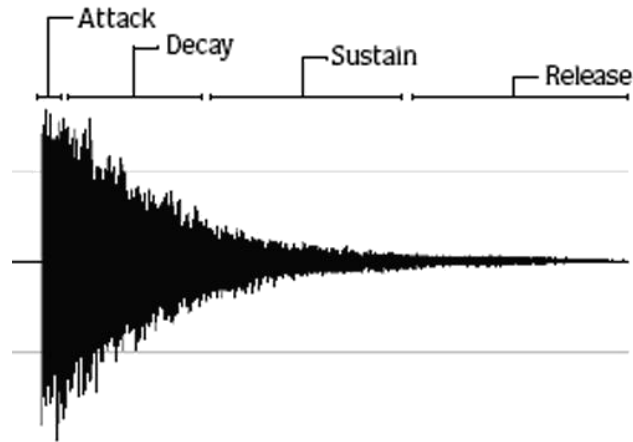


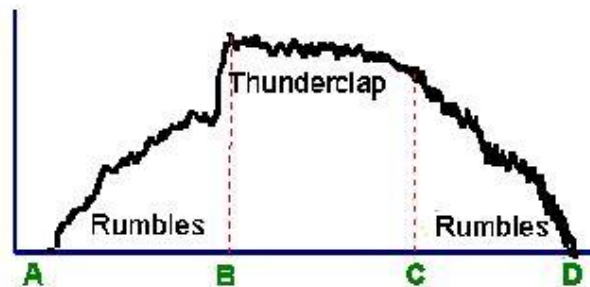
Fig. 5.1: Elements of Sound envelope

Typically, the sustain portion of the envelope is looped to lengthen the duration of a sound. This is referred to as the sustaining loop. While sustaining loops are useful, it is frequently necessary to create a second loop, taken from later in the envelope. This allows you to reproduce longer, more complex sounds, such as a piano chord struck with the

Sustain pedal depressed:  
This second type of loop is referred to as the release loop.

### 1. Attack

The way a sound is initiated is called attack.



There are two types of attack:

- Fast
- slow

Fast attack:

The closer the attack of a sound (A) is to the peak (B) of a sound, the faster its attack is.

Example:

- Gunshots
- Footsteps

- Door slams

Slow attack:

Sounds that have a slow attack take longer to build to the sustain level.

Example:

- A dog's short warning growl prior to bark
- Stepping on a dry leaf
- Slowly tearing a sheet of paper
- Closing a door slowly
- An entire thunderclap

## 2. Decay

The actual time it takes for a sound to diminish to silence is the decay time. In simpler words, the decrease in amplitude when a vibrating force has been removed is called decay and when this sound decays is its rate of decay.

Example:

- Indoors (small enclosed area)

little decay and with very little or no reverberation

- outdoors (open area)

long decay with an echo

The end of a sound is often referred to as the "tail" of a sound and conversely, the beginning of a sound is its "head".


## 1. Sustain


The Sound length of time that the sound will sustain is dependent upon the energy from the source vibrations on reaching its peak. When the source sound stops, the sound will begin to decay.


Manipulating the sustain time by modifying a sound or create a totally new one.

## 2. Release time

It is the time taken for the level to decay from the sustain level to zero after the key is released.

	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. Define loops.</li><li>2. Explain various types of sound envelope elements.</li></ol>	

	Discussion/ Activity
Explore the various types of sound envelope elements.	

### 5.3 Looping Technique

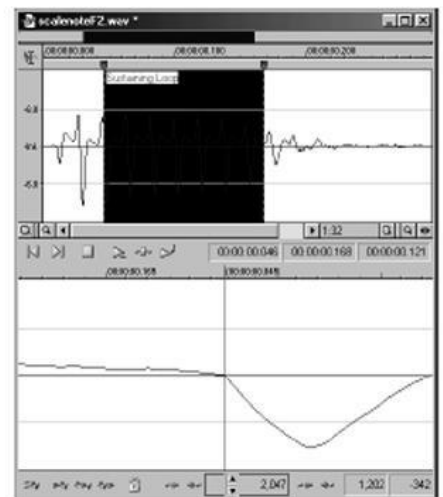
Depending upon the source recording loop playback is difficult to take into account and gives the odd effect of practice and experimentation on the sound.

#### 1. Match endpoint amplitudes

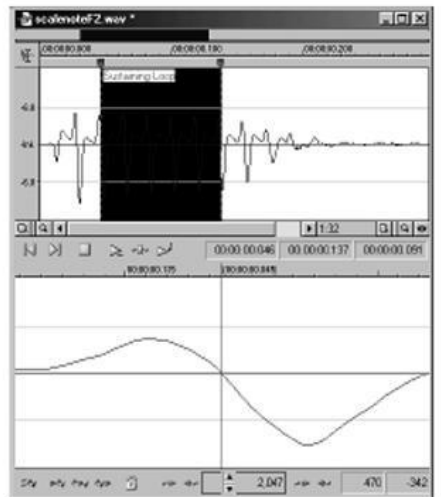
One of the easiest ways to achieve this is to ensure that the waveform crosses the zero line at the start and end of the loop. This is done by adjusting the amplitude of the waveform so that it starts and ends at zero.

#### 2. Match endpoint waveforms

Another technique for matching the loop points is to ensure that the waveform has the same slope at the start and end of the loop. This is done by adjusting the waveform so that it has the same slope at the start and end of the loop.



Non-matching slope



Matching slope

Fig.

### 3. Match endpoint sound levels.

The overall amplitude (or loudness) approaching the loop's endpoints should be as similar as possible to prevent distracting glitches. Unfortunately, it is frequently difficult to avoid this problem, particularly with rapidly decaying source material.

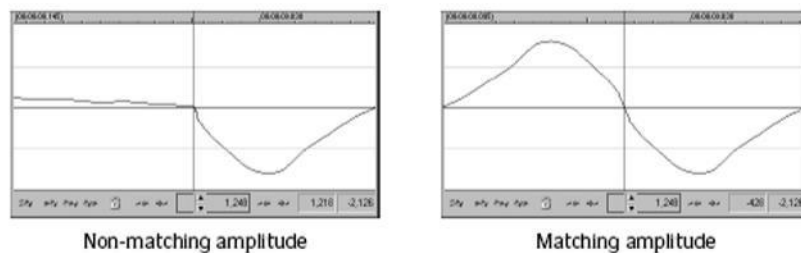



Fig. 5. 3: Matching and Non-matching amplitude

### 4. Avoid very short loops.

If the loop is shorter than  $\sim 50$  ms ( $1/20$  Hz), the pitch of the loop may not equal the sample pitch. Pitch tuning a loop is accomplished by creating short loops with a length equal to  $1/\text{frequency}$ . For example, a sample of pitch 440 Hz corresponds to A5 on the keyboard, meaning the loop can be pitch-tuned 2.27 ms. However, pitched loops do not sound like the original sample.

	Study Notes



## Assessment

1. How should endpoint amplitudes be matched?
2. How should endpoint sound levels be matched?



## Discussion/ Activity

Try out the looping techniques explained in this topic.

## 5.4 Summary

### LOOP

A loop is a sample or region in an audio file that is repeated during playback. Samples are finite and frequently very short in length. Therefore, they must be repeated (or looped) to create longer or sustaining sounds.

### SUSTAINING AND RELEASING LOOPS

A sound envelope contains four elements: attack, decay, sustain and release. Typically, the sustain portion of the envelope is looped to lengthen the duration of a sound. This is referred to as the sustaining loop.

While sustaining loops are useful, it is frequently necessary to create a second loop, taken from later in the envelope. This allows you to reproduce longer, more complex sounds, such as a piano chord struck with the

### SUSTAIN PEDAL DEPRESSED

This second type of loop is referred to as the release loop.

Depending upon the source material, creating a natural-sounding loop can be a difficult task. Many factors beyond your control may produce distracting pops and glitches, thereby calling unwanted attention to the loop. Although looping skill is largely the product of practice and experimentation, there are some guidelines to consider.

- Match endpoint amplitudes.
- Match endpoint waveform slope.
- Match endpoint sound levels.
- Avoid very short loops.

## 5.5 Self-Assessment Test

### Broad Questions

1. Explain: Sound envelope contains four elements.
2. Write a note on sustaining and releasing loops.

### Short Notes

- a. A loop
- b. Reasons for avoiding very short loops
- c. Match endpoint waveform slope

## 5.6 Further Reading

1. Sound Forge Power, Scott Garrigus, Muska & Lipman, 2001
2. Sound Forge Pro 10, Sony



## Assignment

Write down the process of using the looping techniques in Sound Forge.

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## Unit 3 Making Background Music Part 1



### Learning Outcome

After going through this unit, you will be able to:

- Give details of background music
- Explain the composition of various types of background music
- State the importance of background music
- Discuss the effects that can be given on the sound waves
- Elucidate on the process menu that plays an important role in editing



### Time Required to Complete the Unit

The time required to study this unit is broken as follows:

1. 1<sup>st</sup> Reading: It will need 2 Hrs for reading
2. 2<sup>nd</sup> Reading with understanding: It will need 3 Hrs for reading and understanding
3. Self-Assessment: It will need 3 Hrs for reading and understanding
4. Assignment: It will need 4 Hrs for completing an assignment
5. Revision and Further Reading: It is a continuous process



### Content Map

- 6.1 Introduction to Background Music
- 6.2 History of Background Music
- 6.3 Types of Background Music

6.4 Adding Sound Effects

6.5 Dynamics Effect

6.6 Summary

6.7 Self-Assessment Test

6.8 Further Reading

## 6.1 Introduction to Background Music

In this unit, you will understand what background music is. When you watch films, background music is what makes the impact on your ears and your mind and heart. Background music forms the theme of the film, the concept, the story and the idea is enhanced with the help of appropriate and good background music. If a film is a success, major credit of the film also goes to background music. Background music adds life to a film. Good background music is always remembered for ages and even when you hear that piece of music after ages or after many years, it reminds you of that film you had viewed one upon a time.

## 6.2 History of Background Music

Background music is used to add emotion and rhythm to a film. Usually you will find that the background music is not normally noticeable but it provides a tone, an emotional attitude towards the story and the character depicted. These dwell in your mind and heart for many years. In addition, the background music many a times foreshadows a change in mood. For example, inharmonious music may be used in a film to indicate an approaching but still not visible danger or calamity.

Background music helps the viewer understand by linking scenes. For example, a particular musical theme associated with an individual character or situation may be repeated at various points in a film and that is done in order to remind the audience of salient motives and ideas. It sets relatedness to the theme, character, idea, concept, situation, etc.

Film sound comprises conventions and innovations. We have come to expect an acceleration of music during car chases and creaky doors in horror films and melodious music that reminds you of romantic situations. Yet, it is important to note as well that sound is often brilliantly conceived. The effects of sound are often largely subtle and often are noted by only our subconscious minds. Yet, it necessitates us to foster an awareness of film sound as well as film space in order to truly appreciate a twentieth century art form, the modern film.



## Study Notes

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## Assessment

1. Define and explain background music.
2. Give proper examples of background music.



## Discussion/ Activity

List various movies without background music.

### 6.3 Types of Background Music

#### 1. Antecedents

In the Baroque and Classical music era, music was mainly performed as a background to other activities.

Examples:

- French kings of the baroque era used to have music performed during their stately dinners.
- Opera and other public music performances had very high "social function" that few people would actually listen to the music being performed.

## 2. Incidental Music

Incidental music is the music in a play, radio, TV program or any other form that is not mainly musical. It adds an atmosphere to the action. It can be dated back at least as far as Greek drama. You will find that classical composers have written incidental music for various types of plays.

## 3. Furniture Music

Furniture music was invented in 1920 by Erik Satie. This type of "background music" fell into forgetfulness when the composer died a few years later and was not again executed until it was rediscovered several decades after. Typical of Furniture music are short musical passages that are with an indefinite number of repeats.

## 4. Elevator Music

Elevator music is a more general term that shows music that is played in rooms where many people come together and these people come with no intention whatsoever to listen to music. There is a specific sound associated with elevator music and normally it involves themes from "soft" popular music or "light" classical music being worked over by slow strings. This type of music was produced around 1970s by the Mantovani Orchestra and conductors such as Franck Pourcel and James Last.


## 5. Ambient Music

The term Ambient music is used when more but often less distinguishable influences like elements of Jazz or sounds from nature are mixed together in the "soundscape." However, some producers and composers of "ambient music" or "soundscapes" or similar types of music; might not have any intention to use the qualifier "background" for their music.

## 6. Foreground Music

In contrast to background music, foreground music is projected to be listened to actively. Lifestyle Companies, in particular, like to employ foreground music, individually compiled and scheduled to increase customer loyalty and time spent in their stores. However, sometimes the opposite effect is achieved: if the music proves to be too intrusive, it may drive people out of the store. Very often, these companies have professional DJs select music matching their brand. In most cases, currently popular chart music is used.

	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. Explain elevator music.</li><li>2. Define and explain antecedents.</li></ol>	

	Discussion/ Activity
List the types of background music available.	



## 6.4 Adding Sound Effects

There are many different effects, which be used with the process menu, this also plays

### 1. Acoustic Mirror

Impulse devices to current sound. Acoustic Mirror can simulate different environments.

Sound Forge includes a variety of quality acoustic signatures (in the form of impulse responses) of many different environments.

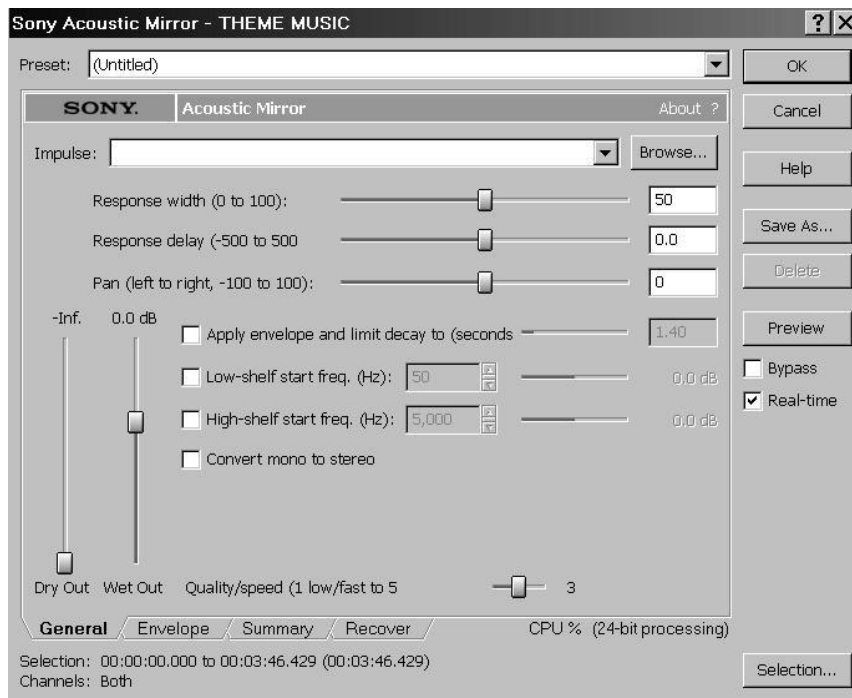


Fig. 6.1: Acoustic Mirror

### 2. Amplitude Modulation

Amplitude Modulation (AM) is used to create tremolo effects. It is used to create a rhythmic variation in the amplitude of a recording.

- Dry out fader is use to set th e level of the unprocessed signal that will be mixed into the output.
- Wet out fader is use to set t he level of the modulated signal that will be m ixed into the output.
- Amplitude fader is use to set the minimum gain of the modulated signal.
- Mod freq. slider is use to sp cify the frequency of the gain waveform that will be applied to the input signal. To achiev e a slow tremolo, use a low frequency.

It is also used for stereo panning. Drag the Stereo pan slider to offset the phase of the two channels' amplitude gain envelopes by the specified percentage. T his creates a back-and-forth panning effect b etween the two channels.

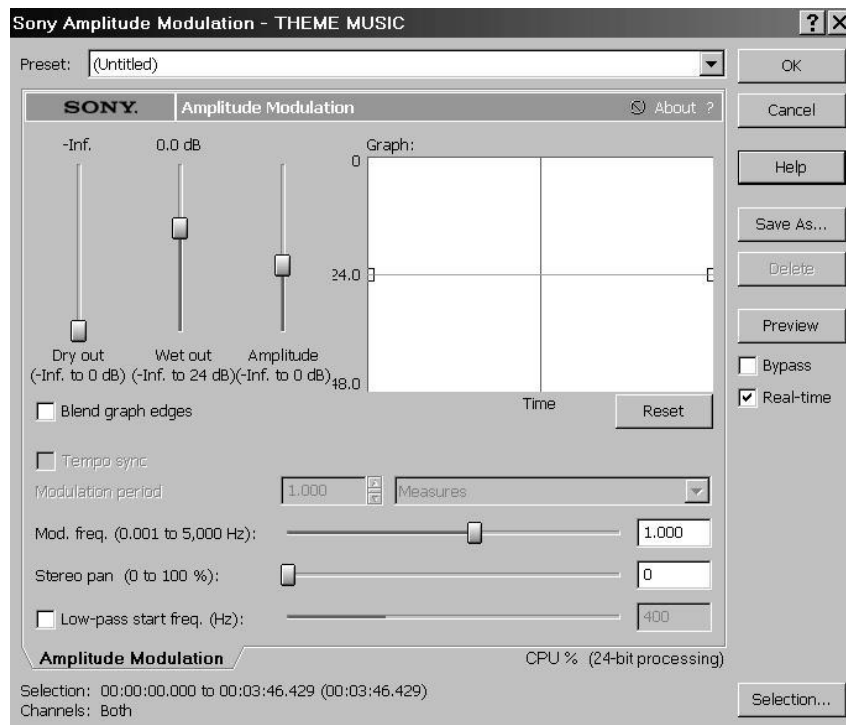


Fig. 6.2: Amplitude Modulation

### 3. Chorus

The Chorus effect proces ses the sound of several of the same instrument playing the same notes. Chorus effect wor ks by adding very short delays and modulating the delay

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vocals and other instruments.

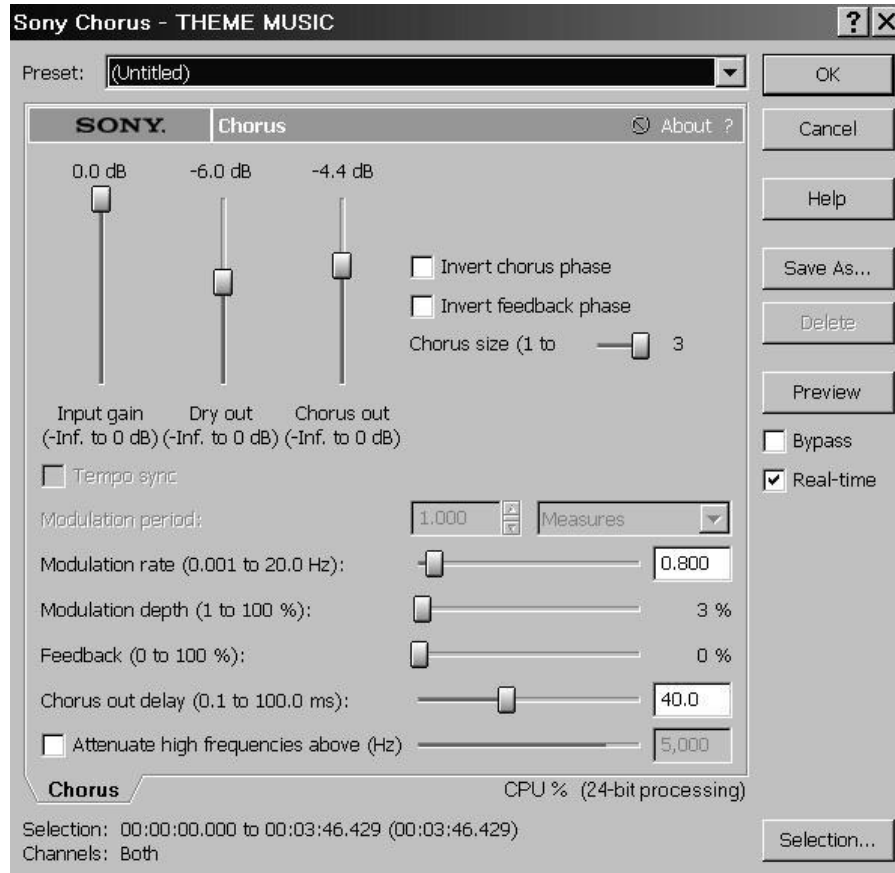


Fig. 6.3: Chorus Panel

#### 4. Delay/Echo

f w s

r

It Delay

allows you to create complex de  
its own delay time, amplitude an

using l el s c delay tap a  
stereo panning controls.

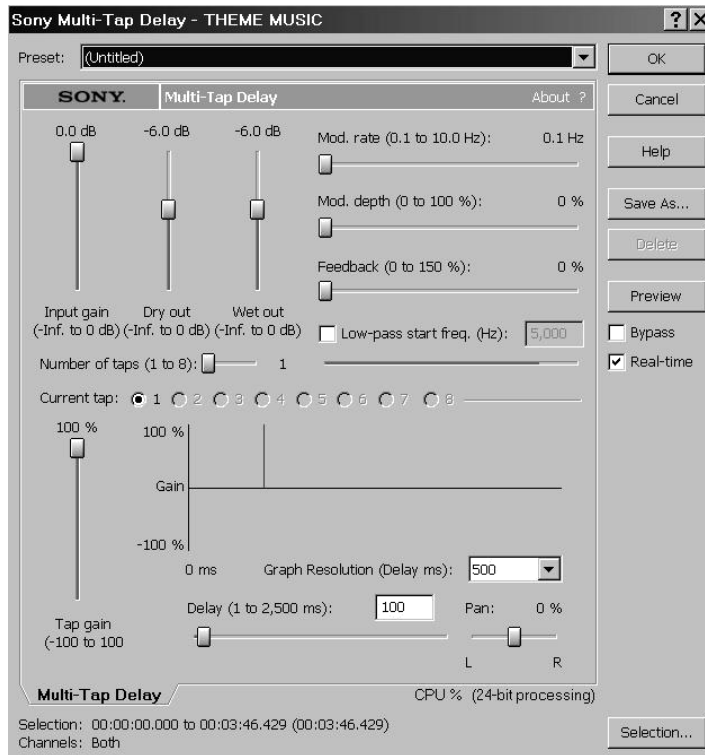


Fig. 6.4: Delay/Echo

There is a second way of defining the echo, which is easier than the previous option. This can be done with the options of simple echo. Only thing that you will have to control is the time duration. Here, you can adjust the decay time and multiple delays to get really good effects.

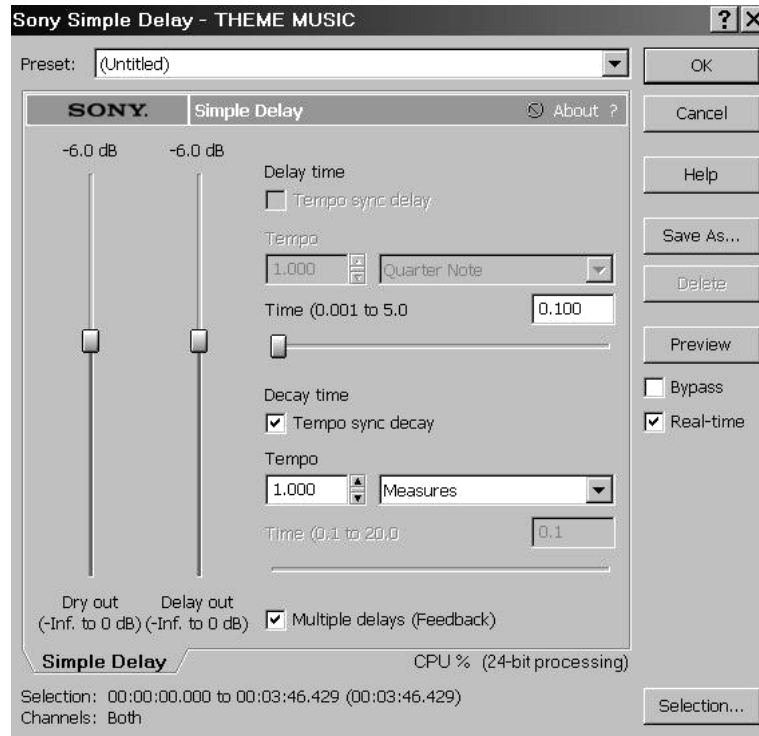


Fig. 6.5: Simple Echo

## 5. Distortion

Distortion helps create a sense of depth and compression. The expansion and compression of the signal are what give it its "bite" and "bite" is a few ready-made presets such as transistor, fuzz, and resonance. For particular sounds, you can compress, mix, and gate the signal manually.

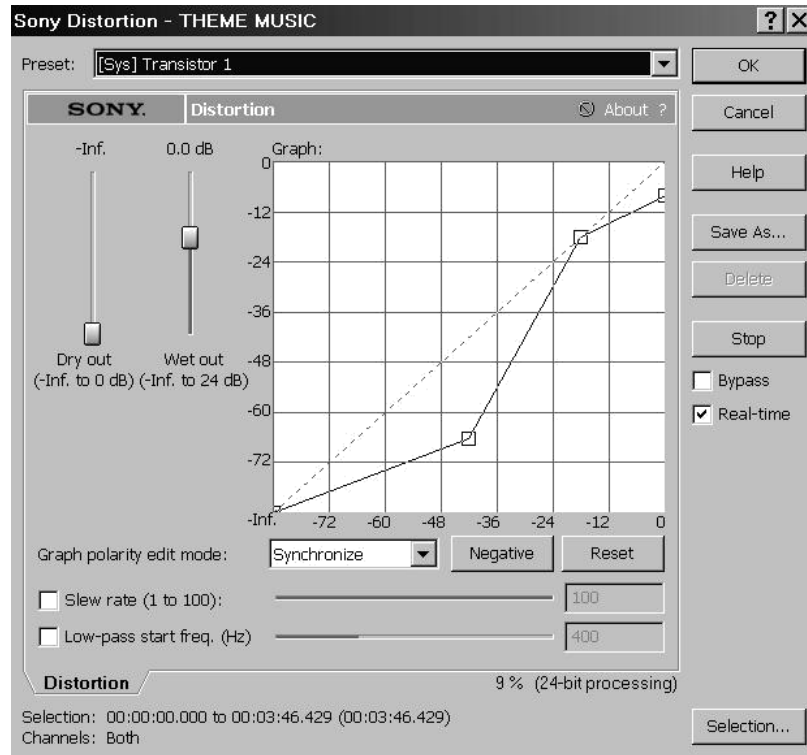





Fig. 6.6: Distortion Panel

	<h2 style="margin: 0;">Study Notes</h2>
Empty area for study notes	

	Assessment
1. Define and explain delay/echo. 2. Define and explain acoustic mirror.	

	Discussion/ Activity
Explain the five types of sound effects given above.	

## 6.5 Dynamic Effect

There are two method of working on this effect. They are:

- Graphic
  - Multi-Band
1. Graphic dynamics: The Graphic dynamics effect allows you to precisely adjust the gain at all input levels of a signal. Use graphic dynamics to create remarkable to slight compression and expansion.
    - Attack Slider: Attack slider is use to set the time required for the dynamics processor. Increasing this value will gradually increase the volume level.
    - Release Slider: Release slider is use to set the time it takes the increase the dynamics processor to change from one to zero once the level falls below the threshold.
    - Threshold: Threshold fader is use to set the level at which the dynamics processor begins to affect the signal.
  2. Multi-Band Dynamic: The multi-band dynamics is essential compressor that only affects certain frequency bands. The possibilities for this type of compressor are endless but the most common uses are for reducing slow sounds and to tighten the bass in a mix without using EQ.

- Amount slider: Amount slider is to set the compression ratio applied to a band when it is above the threshold level.
- Gain: Gain is set the overall gain applied to a band after it has been compressed. Set the fader above 0 dB to compensate for the level lost due to compression.
- Attack Time: Attack time is to set the time, in milliseconds, required for the dynamics processor to start acting on the signal when the input level rises above the threshold.
- Release: Opposite to the attack time, it is to stop acting on the signal when the input level drops below the threshold.

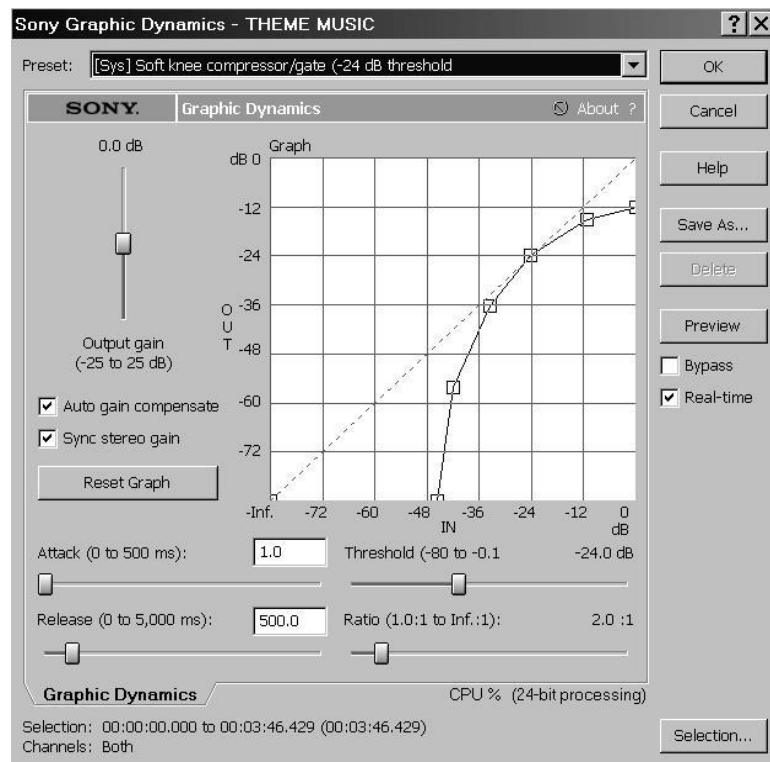


Fig. 6.7: Graphics Dynamics



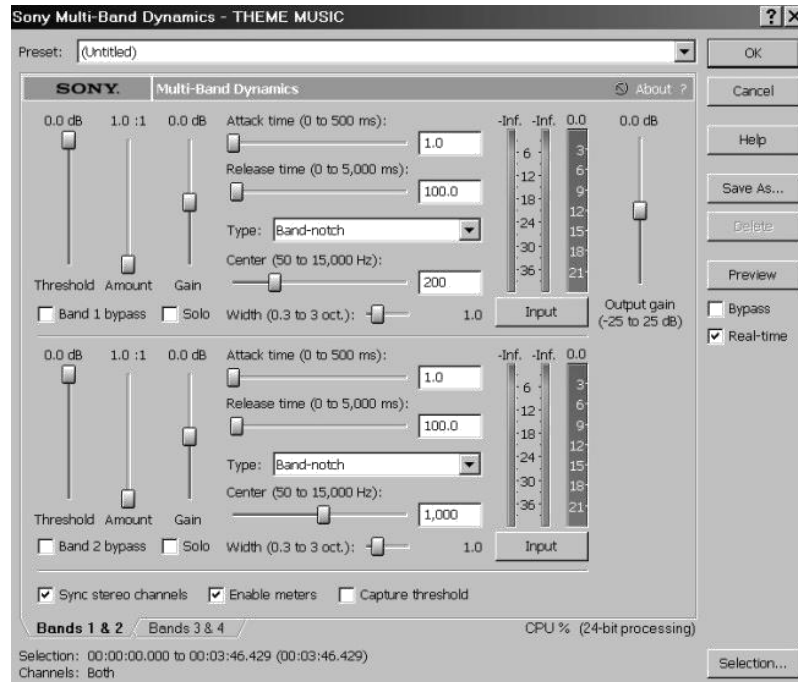


Fig. 6.8: Multi- Band Dynamics

□ Envelope v o to ap  
t mpl a f  
dynamically calculated to ac

o i  
When the segment between t straight, it gives normal in- t ade effec  
However, o m re pr i t c i k e  
point to get fast, fade slow, etc.

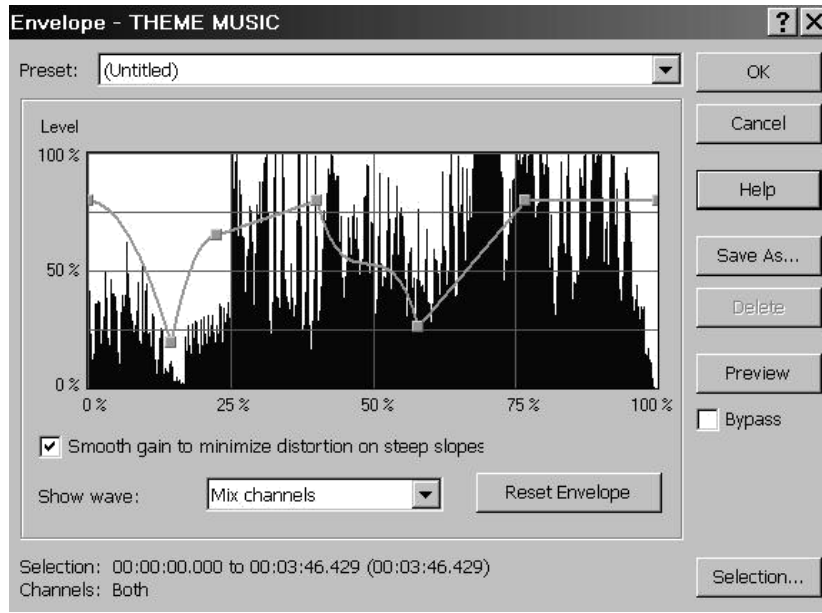




Fig. 6.9: Envelope Panel

	<b>Study Notes</b>

	Assessment
<ol style="list-style-type: none"> <li>1. Define and explain graphic dynamic effect.</li> <li>2. Define and explain multi-band effect.</li> </ol>	

	Discussion/ Activity
Study the slider and setting available in the multi-band effect.	

## 6.6 Summary

### BACKGROUND MUSIC

Background music is used to add emotion and rhythm to a film. Usually you will find that the background music is not normally noticeable but it provides a tone, an emotional attitude toward the story and the characters depicted. And these dwell in your mind and heart for many years. In addition, the background music many a times foreshadows a change in mood. For example, inharmonious music may be used in film to indicate an approaching but still not visible danger or calamity.

### FURNITURE MUSIC

Furniture music was invented in 1920 by Erik Satie. This type of "background music" fell into forgetfulness when the composer died a few years later and was not again executed until it was rediscovered several decades after. Typical of Furniture music are short musical passages that are with an indefinite number of repeats.

### ELEVATOR MUSIC

Elevator music is a more general term that shows music that is played in rooms where many people come together and these people come with no intention whatsoever to listen to music.

The term Ambient music is used when more but often less distinguishable influences such as elements of Jazz or sounds from nature are mixed together in the "soundscape."

## 6.7 Self-Assessment Test

### Broad Questions

1. Write a note on ambient music with example of a shot.
2. What is acoustic mirror?

### Short Notes

- a. Shift
- b. Bend
- c. Distortion
- d. Chorus
- e. Furniture music

## 6.8 Further Reading

1. Sound Forge Power, Scott Garrigus, Muska & Lipman, 2001
2. Sound Forge Pro 10, Sony

## Assignment

Explain and give examples of different sound effects applied to a movie.

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**BLOCK 3:**  
**MAKING BACKGROUND MUSIC**





“

*Education is something  
which ought to be  
brought within  
the reach of every one.*

”

- Dr. B. R. Ambedkar



**Dr. Babasaheb Ambedkar Open University**  
'Jyotirmay' Parisar, Sarkhej-Gandhinagar Highway,  
Chharodi, Ahmedabd-382481





**Dr. Babasaheb Ambedkar  
Open University**

**BCADES-206  
SOUND EDITING**

**Block**

**3**

**MAKING BACKGROUND MUSIC**

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**UNIT 1      MAKING BACKGROUND MUSIC PART 2**

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**UNIT 2      MAKING TITLE SCORES**

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**UNIT 3      MAKING SOUNDS FOR CREATING MOODS AND FEEL IN THE FILM**

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**UNIT 4      UNDERSTANDING THEME MUSIC AND REMIX**



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## **ROLE OF SELF INSTRUCTIONAL MATERIAL IN DISTANCE LEARNING**

The need to plan effective instruction is imperative for a successful distance teaching repertoire. This is due to the fact that the instructional designer, the tutor, the author (s) and the student are often separated by distance and may never meet in person. This is an increasingly common scenario in distance education instruction. As much as possible, teaching by distance should stimulate the student's intellectual involvement and contain all the necessary learning instructional activities that are capable of guiding the student through the course objectives. Therefore, the course / self-instructional material are completely equipped with everything that the syllabus prescribes.

To ensure effective instruction, a number of instructional design ideas are used and these help students to acquire knowledge, intellectual skills, motor skills and necessary attitudinal changes. In this respect, students' assessment and course evaluation are incorporated in the text.

The nature of instructional activities used in distance education self-instructional materials depends on the domain of learning that they reinforce in the text, that is, the cognitive, psychomotor and affective. These are further interpreted in the acquisition of knowledge, intellectual skills and motor skills. Students may be encouraged to gain, apply and communicate (orally or in writing) the knowledge acquired. Intellectual- skills objectives may be met by designing instructions that make use of students' prior knowledge and experiences in the discourse as the foundation on which newly acquired knowledge is built.

The provision of exercises in the form of assignments, projects and tutorial feedback is necessary. Instructional activities that teach motor skills need to be graphically demonstrated and the correct practices provided during tutorials. Instructional activities for inculcating change in attitude and behavior should create interest and demonstrate need and benefits gained by adopting the required change. Information on the adoption and procedures for practice of new attitudes may then be introduced.

Teaching and learning at a distance eliminates interactive communication cues, such as pauses, intonation and gestures, associated with the face-to-face method of teaching. This is particularly so with the exclusive use of print media.

Instructional activities built into the instructional repertoire provide this missing interaction between the student and the teacher. Therefore, the use of instructional activities to affect better distance teaching is not optional, but mandatory.

Our team of successful writers and authors has tried to reduce this.

Divide and to bring this Self Instructional Material as the best teaching and communication tool. Instructional activities are varied in order to assess the different facets of the domains of learning.

Distance education teaching repertoire involves extensive use of self-instructional materials, be they print or otherwise. These materials are designed to achieve certain pre-determined learning outcomes, namely goals and objectives that are contained in an instructional plan. Since the teaching process is affected over a distance, there is need to ensure that students actively participate in their learning by performing specific tasks that help them to understand the relevant concepts. Therefore, a set of exercises is built into the teaching repertoire in order to link what students and tutors do in the framework of the course outline. These could be in the form of students' assignments, a research project or a science practical exercise. Examples of instructional activities in distance education are too numerous to list. Instructional activities, when used in this context, help to motivate students, guide and measure students' performance (continuous assessment)

## Unit 1 Making Background Music Part 2



### Learning Outcome

After going through this unit, you will be able to:

- Narrate the steps involved in making background music
- Enumerate different effects which can be given on the sound waves
- Explain the process menu and its role in editing



### Time Required to Complete the Unit

The time required to study this unit is broken as follows:

1. 1<sup>st</sup> Reading: It will need 2 Hrs for reading
2. 2<sup>nd</sup> Reading with understanding: It will need 3 Hrs for reading and understanding
3. Self-Assessment: It will need 3 Hrs for reading and understanding
4. Assignment: It will need 4 Hrs for completing an assignment
5. Revision and Further Reading: It is a continuous process



### Content Map

- 7.1 Introduction to Background Music
- 7.2 Types of Sound Effects Part 1
  - 7.2.1 Flange/Wah-Wah
  - 7.2.2 Gapper & Snipper
  - 7.2.3 Noise Gate

- 7.2.4 Pitch
- 7.3 Types of Sound Effects Part 2
  - 7.3.1 Reverb
  - 7.3.2 Vibrato
  - 7.3.3 Wave Hammer
- 7.4 Summary
- 7.5 Self-Assessment Test
- 7.6 Further Reading

## 7.1 Introduction to Background Music

When you sit down to watch a film, you are immediately bombarded by an introduction that usually contains at least some sound in the background. Sometimes the opening scene includes dialogue, someone doing something or going somewhere and all the sound effects associated with that activity.

Many of these are postproduction sound elements that were added after the film was shot. Blades of grass sway in the breeze as a steady rumble grows in the distance. Butterflies flit through flowerbeds in the sunny field. The rumbling gets louder amid the peace of the serene summertime scene. Suddenly, a hundred men on horseback appear over the rise, their screams echoing eerily across the plains as they charge into battle in slow motion. Hoofs pound the earth, kicking up dirt.

Make background music as the basis for a song by recording the drums, bass and guitar before adding different layers of sound to make the song more interesting. Consider adding a catchy guitar solo or strings to the background of a song with advice from a musician and band member in this free video on making music.

## 7.2 Types of Sound Effects Part 1

- Flange/Wah-Wah
- Gapper & Snipper
- Noise Gate
- Pitch

### 7.2.1 FLANGE/WAH-WAH

Flange / Wah-Wah are used to create the sweeping effects often heard in guitar recordings and techno-sounds of today. With this effect, you can recreate the sounds that flanges, Wah-Wah and phaser guitar pedals are famous for.

There are different presets given for the different type of effects for flanger, wah-wah and phaser. You can readily work on the preset.

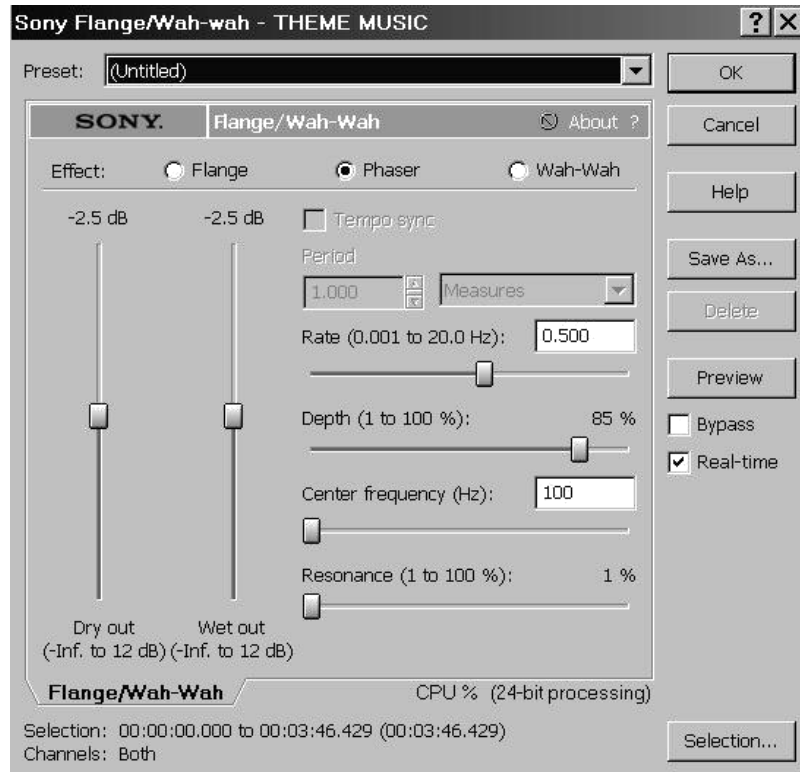


Fig. 7.1: Flange Panel

## 7.2.2 GAPPER AND SIPPER

The Gapper / Snipper allows you to produce tremolo and warble effects by cutting sections from the sound file or inserting silence at a set frequency.

You can adjust the frequency and the length of the effect with the sliders. Length is checking the amount of effect that you required.



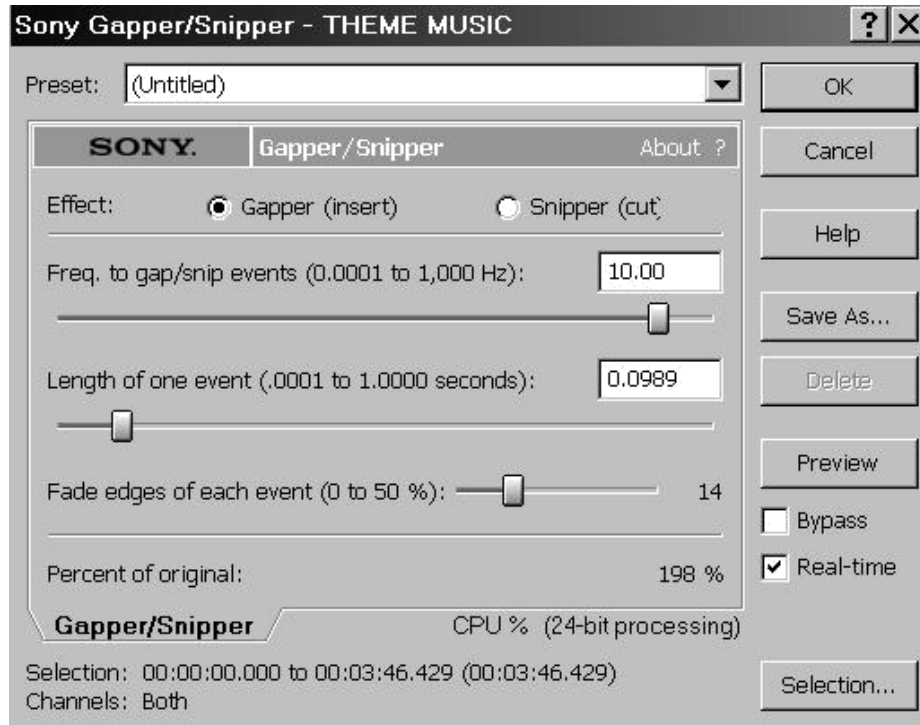


Fig. 7.2: Gapper and Snipper

. NOISE GATE

The Noise Gate effect is the y- ro g eff ts ing noise gates eliminates s b le n i hi and low- c. recordings p remo e n rec rdi a audi e much ouder than this bac ground n c old leve that will remove noise from the silent

Threshold: Thres lde  
Noise levels are typically near -4

Attack Time: Attack time es to f om ero o o the level ri bove the thresho d.

Release Time: R e ti ne to once the level falls below the thr

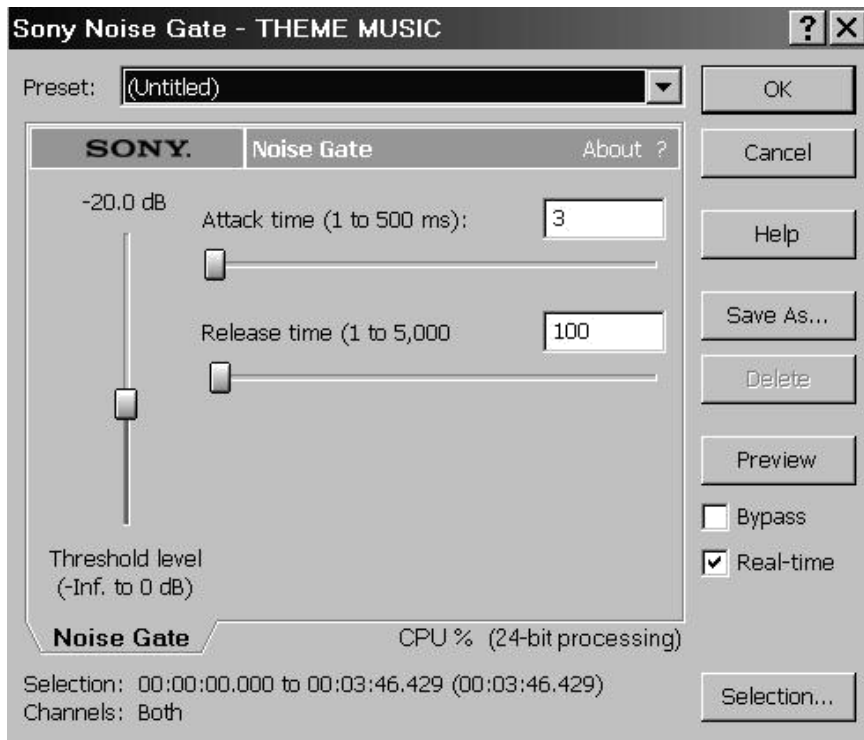


Fig. 7.3: Sony Noise Gate

## 7.2.4 PITCH

This effect is used to change the pitch of the sound. By working with envelope shown in the panel, you can directly make the changes. In addition, you can work upon the presets. There are two method of working like bend and shift. Thick or thin type of sound can be altered as per the required with the pitch.

**Bend:** This feature allow s working with envelop. You can also set the point in envelop by double clicking it.

**Shift:** The feature allow s you to change the pitch of a sound with or without preserving the duration of the s election.

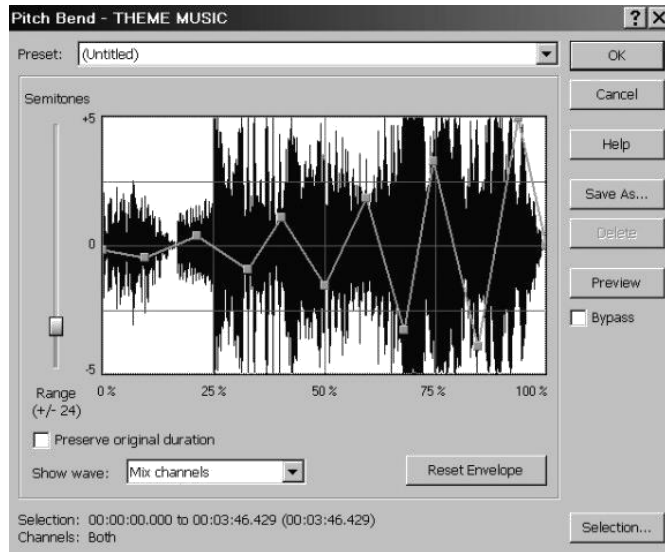


Fig. 7.4: Pitch-Bend

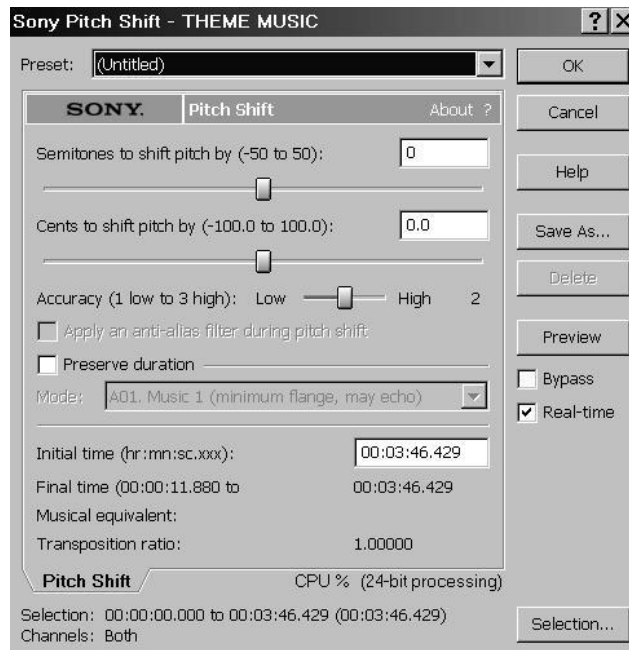


Fig. 7.5: Pitch-Shift



## Study Notes



## Assessment

1. Define and explain flange/wah-wah.
2. Define and explain noise gate.



## Discussion/ Activity

Explain and explore the different types of sound effects available.

### 7.3 Types of Sound Effects Part 2

Following are the set of sound effects available:

- Reverb
- Vibrato
- Wave Hammer

## 7. EVERB

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would normally never be heard.

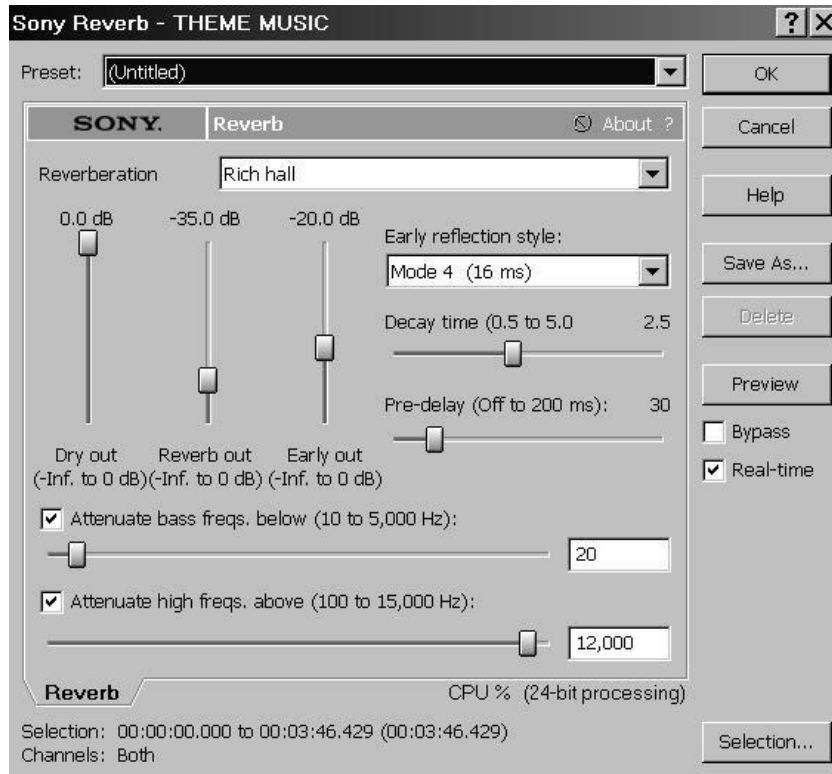


Fig. 7.6: Reverb Panel

## VIBRATO

This effect works as the p s e s of th pi h  
e f eq r i. brati

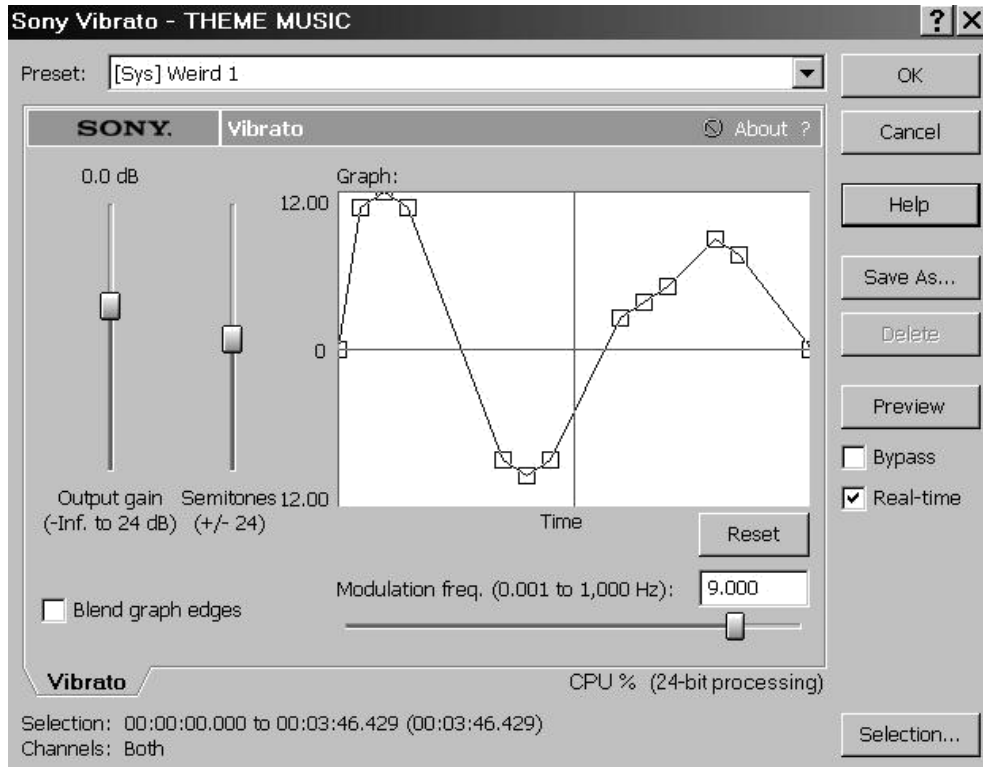


Fig. 7.7: Vibrato Panel

### 7.3.3 WAVE HAMMER

It is to boost the level of an audio signal for mastering or mixing. There are two methods:

- Compressor
- Volume Maximiser

**Compressor:** It is used to limit the dynamic range of your audio. Compression can add punch to your audio or it can be used to create analog-like distortion when overused.

**Volume Maximiser:** It is used to boost the overall level of a signal without clipping or distorting the sound or to limit the signal's peak amplitude.

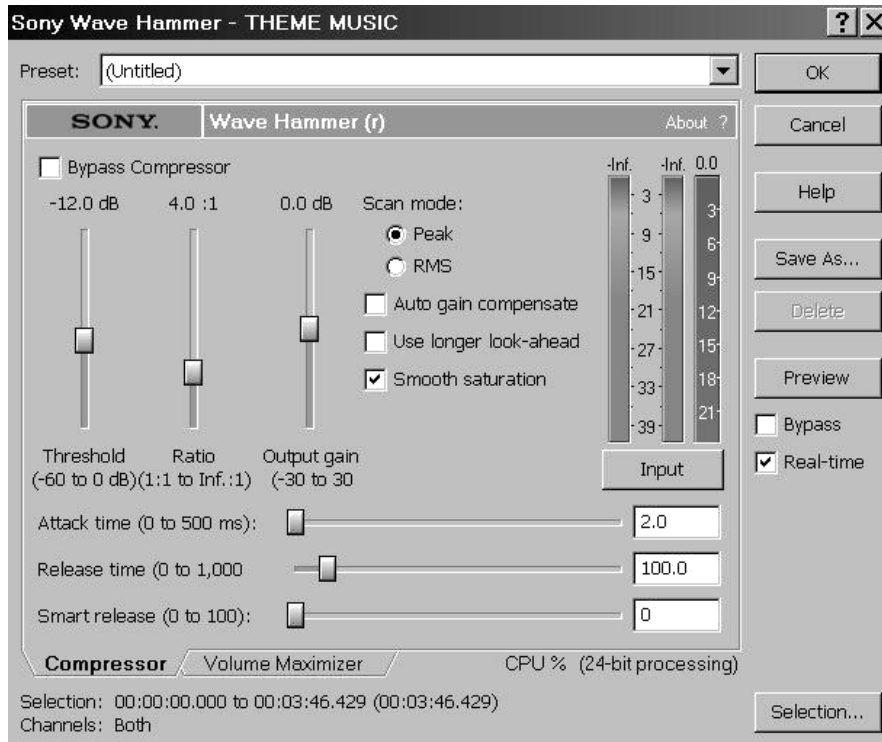


Fig. 7.8: Working with Compressor

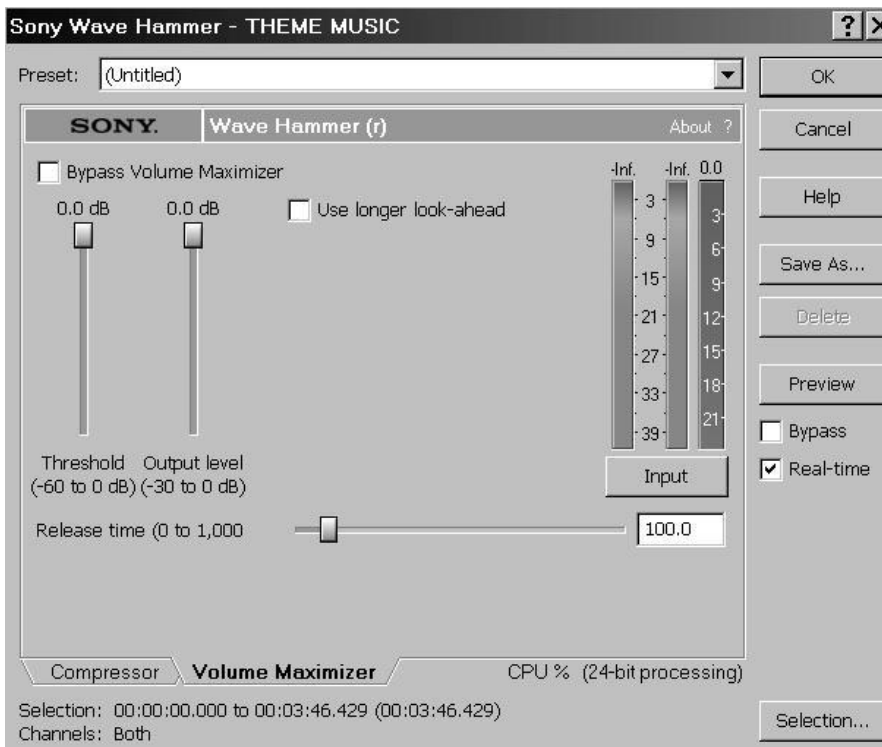


Fig. 7.9: Working with Volume Maximiser



## Study Notes



## Assessment

1. Define and explain reverb.
2. Explain methods adjusting audio signals for wave hammer with proper examples.



## Discussion/ Activity

Study the process windows and setting required for adjusting the given sound effects.



## 7.4 Summary

Many of these are postproduction sound elements that were added after the film was shot. Background music forms the basis for a song by recording the drums, bass and guitar before adding different layers of sound to make the song more interesting.

### Types of Sound Effects Part 1

- Flange/Wah-Wah
- Gapper & Snipper
- Noise Gate
- Pitch

Flange / Wah-Wah: are used to create the sweeping effects often heard in guitar recordings and techno-sounds of today.

The Gapper / Snipper: allows you to produce tremolo and warble effects by cutting sections from the sound file or inserting silence at a set frequency.

The Noise Gate: effect is the most basic of all dynamics-processing effects. A simple noise gate removes all audio below a set threshold level.

Pitch: thick or thin type of sound can be altered as per the required with the pitch.

### Types of Sound Effects Part 2

- Reverb
- Vibrato
- Wave Hammer

Reverb: It allows you to recreate the space that is typically lost with close miking.

Vibrato: This directly gives an effect of vibration.

Wave Hammer: It is to boost the level of an audio signal

There are two methods:

- Compressor: It is used to limit the dynamic range of your audio.
- Volume Maximiser: It is used to boost the overall level of a signal without clipping.

## 7.5 Self-Assessment Test

Broad Questions

1. How should background music be created?
2. Write a script of a shot\scene where background music is to be applied.

Short Notes

- a. Wave hammer
- b. Noise gate
- c. Write a short note on Vibrato
- d. Pitch

## 7.6 Further Reading

1. Sound Forge Power, Scott Garrigus, Muska & Lipman, 2001
2. Sound Forge Pro 10, Sony





## Unit 2 Making Title Scores



### Learning Outcome

After going through this unit, you will be able to:

- Impart information on the origin of title scores
- State the significance of movie and TV sound tracks
- Explain the concept of video game sound tracks
- Describe the details of book sound tracks
- Outline the process involved in making film scores, score music and TV Score



### Time Required to Complete the Unit

The time required to study this unit is broken as follows:

1. 1<sup>st</sup> Reading: It will need 2 Hrs for reading
2. 2<sup>nd</sup> Reading with understanding: It will need 3 Hrs for reading and understanding
3. Self-Assessment: It will need 3 Hrs for reading and understanding
4. Assignment: It will need 4 Hrs for completing an assignment
5. Revision and Further Reading: It is a continuous process



### Content Map

- 8.1 Introduction to Title Score
- 8.2 Origin of Title Scores
- 8.3 Types of Sound Tracks
  - 8.3.1 Movie and TV Sound Tracks

- 8.3.2 Video Game Sound Tracks
- 8.3.3 Book Sound Tracks
- 8.4 Score Music
  - 8.4.1 Film Scores
  - 8.4.2 TV Score
- 8.5 Summary
- 8.6 Self-Assessment Test
- 8.7 Further Reading

## 8.1 Introduction to Title Score

A soundtrack can be a recorded music that accompanies and is synchronised to the images of a motion picture, to a television program or even a video game. A soundtrack album of music that is commercially released can be featured in the soundtrack of a film or TV show or the physical area of a film that contains the synchronised recorded sound.

## 8.2 Origin of Title Scores

In movie industry, the use of title scores consist of "sound track" and it is an audio recording created or that is used in film production or post-production region.


The contraction soundtrack came into public consciousness with the arrival of "soundtrack albums" in the early 1950s. First, developed by movie companies as a promotional publicity stunt for new films, these commercially available recordings were then labelled and advertised as "music from the original motion picture soundtrack." This phrase was soon shortened to just "original motion picture soundtrack." More accurately, such recordings are made from a film's music track because they usually consist of the isolated music from a film and not the composite sound track with dialogue and sound effects.


Initially the dialogue, sound effects and music in a film each has its own separate track and these are mixed together to make what we call the composite track, that is then heard in the film. A dubbing track is then later created when the films are dubbed into another language. This is also known as a M & E track known as music and effects containing all sound elements excluding dialogue which is then supplied by the foreign distributor in the native language of its


The short form OST is generally used to describe the musical soundtrack on a recorded medium, such as CD and it stands for Original Soundtrack. However, it is also used to differentiate the original music heard and recorded versus a rerecording or cover of the music.

Soundtracks and "cast albums" are not same. Original cast recordings are studio made recordings of the songs from a stage musical. The performers sing the score live every

night. They do not lip-synch to pre-recorded tracks.

	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. Define and explain title scores.</li><li>2. Explain the origin of title scores.</li></ol>	

	Discussion/ Activity
List the famous title scores of movies.	



## 8.3 Types of Sound Tracks

Through centuries, various types of sound tracks are developed and categorised as follows:

- Movies and Television Sound Track
- Video Games Sound Track
- Book Sound Track

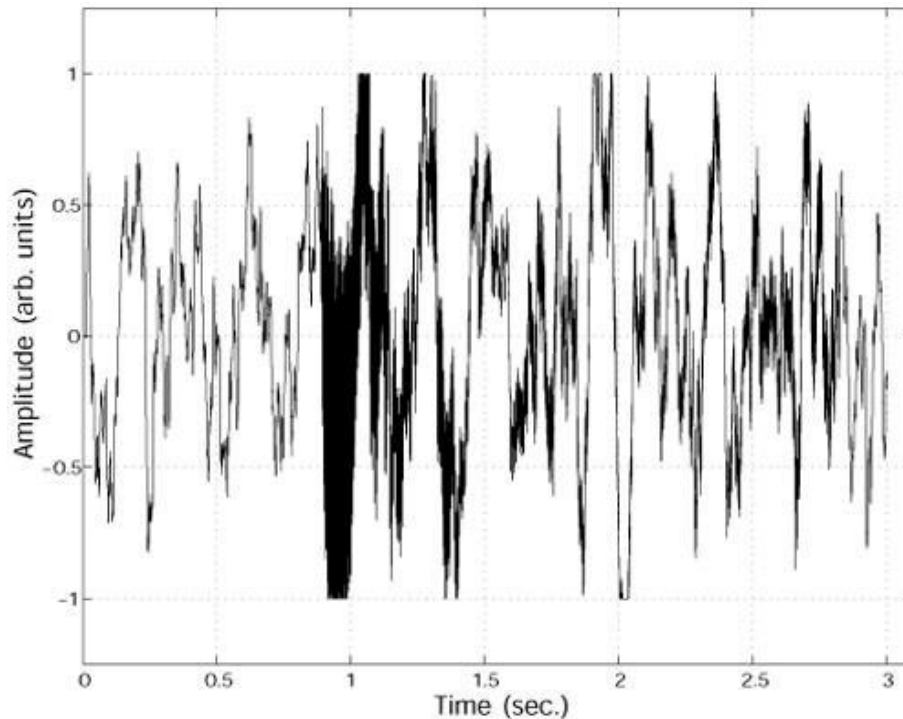


Fig. 8.1: Sound Wave

### 8.3.1 MOVIE AND TV SOUND TRACKS

The music used in a movie or a television show or an album sold containing music is known as soundtrack.

Sometimes the music is recorded just for the film or album. However, most of the time depending on the type of movie the soundtrack album contains portions of the score, music that is composed for dramatic effect as per the movie's plot.

In 1908, Camille Saint-Saëns composed the first music specifically for use in a motion picture and releasing recordings of songs used in films became prevalent in the 1930s. Henry

Mancini who won an Emmy Award and two Grammys for his soundtrack to Peter Gunn was the first composer to have a widespread hit with a song from a soundtrack.

By convention, a soundtrack record can contain all kinds of music including music that can be inspired by but not actually appearing in the movie, the score contains only music by the original film's composer.

### 8.3.2 VIDEO GAME SOUND TRACKS

Soundtrack can also be the one that is used in video games. Though sound effects were mostly and all across used for action happening in the game, the music to accompany the gameplay was the later development.

Rob Hubbard and Martin Galway were the composers of music especially for video games for the 1980s Commodore 64 computer. Koji Kondo was the early and important composer for Nintendo games.

With improvement of technology, polyphonic and often orchestral soundtracks replaced simple monophonic melodies starting in the late 1980s and the soundtracks to popular games such as the Dragon Quest and Final Fantasy series were released separately.

Apart from the compositions written specially for video games, the arrival of CD technology gave access to developers to include licensed songs into their soundtrack. Again then, when Microsoft released the Xbox in 2001 it included an option that allowed the users to customise the soundtrack for certain games by ripping a CD to the hard-drive.

### 8.3.3 BOOK SOUND TRACKS

There are a very few cases that exist where an entire soundtrack is written specifically for a book.

A soundtrack for J. R. R. Tolkien's The Hobbit and The Lord of the Rings was composed by Craig Russell for the San Luis Obispo Youth Symphony. Commissioned in 1995, it was finally put on disk in 2000 by the San Luis Obispo Symphony.

For the 1996 Star Wars novel Shadows of the Empire written by author Steve Perry, Lucasfilm chose Joel McNeely to write a score. This was an unusual, experimental project, in contrast to all other soundtracks, as the composer was allowed to convey general moods

and themes, rather than having to write music to flow for specific scenes.


A project called "Sine Fiction" has made some soundtracks to novels by science fiction writers like Isaac Asimov and Arthur C. Clarke and has thus far released 19 soundtracks to science-fiction novels or short stories. All of them are available for free download.


Author L. Ron Hubbard composed and recorded a soundtrack album to his novel *Battlefield Earth* entitled *Space Jazz*. He marketed the concept album as "the only original sound track ever produced for a book before it becomes a movie". There are two other soundtracks to Hubbard novels, being *Mission Earth* by Edgar Winter and *To the Stars* by Chick Corea. The 1985 novel *Always Coming Home* by Ursula K. Le Guin originally came in a box set with an audiocassette entitled *Music and Poetry of the Kesh*, featuring three performances of poetry and ten musical compositions by Todd Barton.


In comics, Daniel Clowes' graphic novel *Like a Velvet Glove Cast in Iron* had an official soundtrack album. The original black-and-white *Nexus #3* from Capitol comics included the "Flexi-Nexi" which was a soundtrack flexi-disc for the issue. *Trooper* by Jim Woodring included a soundtrack album composed and performed by Bill Frisell and the Absolute Edition of *The League of Extraordinary Gentlemen: Black Dossier* is planned to include an original vinyl record.

With the access to internet, a similar practice developed of accompanying a printed work with a downloadable theme song instead of a complete and physically published album.

There are many audio books that have some form of musical accompaniment but then these audio books are generally not extensive enough to be released as a separate soundtrack.

	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. Explain TV sound track.</li><li>2. Explain video game sound track with examples.</li></ol>	

	Discussion/ Activity
Explore the given three types of soundtrack and list the movies or TV drama using it.	

## 8.4 Score Music

Most films have between 40 and 120 minutes of music. However, some films have very little or no music; others may feature a score that plays almost continuously throughout.

Dogme 95 is a genre that has music only from sources within a film, such as from a radio or television. This is called "source music" (or a "source cue") because it comes from an on screen source that can actually be seen or that can be inferred (in academic film theory such music is called "diegetic" music, as it emanates from the "diegesis" or "story world").

A famous example of "source music" is the use of the Frankie Valli song "Can't Take My Eyes off you" in Michael Cimino's "The Deer Hunter". Alfred Hitchcock's 1963 thriller The Birds is a rare example of a Hollywood film with no non-diegetic music whatsoever.

#### 8.4.1 FILM SCORES

A film score is the background music of a film, which is normally separated from songs used within a film. We often confuse the term soundtrack with film score but a soundtrack also includes anything else that is audible in the film such as sound effects and dialogue. Soundtrack albums can also include songs featured in the film as well as previously released music by other artists. A score is written by the original film composer that is specifically to accompany a film.

Each individual piece of music within a film's score is called a cue and is typically a composition for instruments e.g. orchestra and non-individually featured voices. Since the 1950s a growing number of scores are electronic or a hybrid of orchestral and electronic instruments. Since the invention of digital technology and audio sampling many low budget films have been able to rely on digital samples to imitate the sound of real live instruments.


#### 8.4.2 TV SCORE


A television score is a broad term referring to the music in a television programme, which is generally categorically separated from songs used within a television.


The term television score is frequently synonymous with television soundtrack, though a soundtrack may also include the songs used in the television program while the score does not. A score is sometimes written specifically to accompany a television program but may also be compiled from previously written musical compositions.

Each individual piece of music within a television's score is called a cue and is

typically a composition for instruments (e.g. orchestra) and/or non-individually featured voices. Since the 1950s, a growing number of scores are electronic, or a hybrid of orchestral and electronic instruments. Since the invention of digital technology and audio sampling, many low-budget television programs have had to rely on digital samples to imitate the sound of live instruments.

	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. Define scores with examples.</li><li>2. Explain TV scores.</li></ol>	

	Discussion/ Activity
Explain in detail film scores and their importance in film.	

## 8.5 Summary

### INTRODUCTION

A soundtrack can be a recorded music that accompanies and is synchronised to the images of a motion picture, to a television program or even a video game. A soundtrack album of music that is commercially released can be featured in the soundtrack of a film or TV show or the physical area of a film that contains the synchronised recorded sound.

### ORIGIN

In movie industry, terminology usage of soundtrack is opposite to "sound track" and it is an audio recording created or that is used in film production or post-production. Initially the dialogue, sound effects and music in a film each has its own separate track and these are mixed together to make what we call the composite track, that is then heard in the film. A dubbing track is then later created when the films are dubbed into another language. This is also known as an M & E track known as music and effects containing all sound elements excluding dialogue which is then supplied by the foreign distributor in the native language of its region.

The contraction soundtrack came into public consciousness with the arrival of "soundtrack albums" in the early 1950s. First developed by movie companies as a promotional publicity stunt for new films, these commercially available recordings were then labelled and advertised as "music from the original motion picture soundtrack." This phrase was soon shortened to just "original motion picture soundtrack." More accurately such recordings are made from a film's music track, because they usually consist of the isolated music from a film and not the composite sound track with dialogue and sound effects.

The short form OST is generally used to describe the musical soundtrack on a recorded medium, such as CD and it stands for Original Soundtrack. However, it is also used to differentiate the original music heard and recorded versus a rerecording or cover of the music.

Soundtracks and "cast albums" are not same. Original cast recordings are studio made recordings of the songs from a stage musical. The performers sing the score live every

night. They do not lip-synch to pre-recorded tracks.

#### MOVIE AND TV SOUND TRACKS

The music used in a movie or a television show or an album sold containing music is known as soundtrack. Sometimes the music is recorded just for the film or album. But most of the time depending on the type of movie the soundtrack album contains portions of the score, music that is composed for dramatic effect as per the movie's plot.

By convention, a soundtrack record can contain all kinds of music including music that can be inspired by but not actually appearing in the movie, the score contains only music by the original film's composer.

### 8.6 Self-Assessment Test

#### Broad Questions

1. What is video game sound track?
2. What are movie and TV sound tracks?

#### Short Notes

- a. Sound track
- b. Film scores
- c. Score music
- d. Book sound tracks
- e. TV Score

### 8.7 Further Reading

1. Sound Forge Power, Scott Garrigus, Muska & Lipman, 2001
2. Sound Forge Pro 10, Sony





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## Unit 3 Making Sounds for Creating Moods and Feel in the Film



### Learning Outcome

After going through this unit, you will be able to:

- Detail out the significance of sound effects
- Explain the making of a good film in terms of sound



### Time Required to Complete the Unit

The time required to study this unit is broken as follows:

1. 1<sup>st</sup> Reading: It will need 2 Hrs for reading
2. 2<sup>nd</sup> Reading with understanding: It will need 3 Hrs for reading and understanding
3. Self-Assessment: It will need 3 Hrs for reading and understanding
4. Assignment: It will need 4 Hrs for completing an assignment
5. Revision and Further Reading: It is a continuous process



### Content Map

- 9.1 Need of Sound
- 9.2 Sound Editing
- 9.3 Digital Audio Editing
  - 9.3.1 Non-Destructive Editing
  - 9.3.2 Destructive Editing
  - 9.3.3 Editing Method
- 9.4 What Makes a Good Film?

9.5 Summary

9.6 Self-Assessment Test

9.7 Further Reading

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## 9.1 Need of Sound

Sound effects are present in almost every media that you see and hear on a daily basis. From television, movies and shorts to web sites and digital music sound effects help bind together the pieces for your brain to understand. Their importance can easily be measured by their absence when our mind quickly picks out the inconsistency.

Our brain does not think on one sense only; there are several senses that combine and pick up the contents of each moment that can be perceived in the time. When we see a gun, we imagine that fire shot will be done and then we expect a gunshot sound to come that gives us the experience of entire scene. However, if we do not hear the gun shot, then we feel that the experience is somehow broken, it appears as unreal and that does not make sense to us at all.

Hence, we can say that good quality sound effects are very essential. Your audience will have a memorable experience if you present a good quality and appropriate sound i.e. the exact right sound for and your audience will be totally engulfed in the experience.

Sometimes the sounds can be isolated or even symbolic like the ceiling fan in the beginning of "Apocalypse Now". Much of the other sound effects are removed to focus on the ceiling fan, which is a combination of blades moving quickly past the microphone and the blades of a helicopter. The symbolism here is that the whirling blades of the fan are reminding Capt. Willard of the call of the jungle.


## 9.2 Sound Editing


Sometimes, we can make sounds more collaborative and can mix them together to make a scene sound more realistic. Sounds of leather coat , mixed with the jingle of change in the pockets, laid over the sound of a busy airport can create the unconsciously expected realism that your brain is expecting.

Montage theory, at least one of its aspects, includes juxtaposition of images in order to create new meaning. E.g.: Show a black and white picture of a sad looking old man and then show a picture of an empty bowl. Most often, our brains put the images together and tell us "this old man is starving". When in reality the two images have nothing to do with one

another. The same thing holds true for sounds, especially when they are blended with images. An obviously imaginary bolt of magic blasts out of a character's fingertips, we hear some burning lightening magic sound and suddenly we are immersed in pure fantasy; believing that this person is able to shoot magic from their fingertips. The icing on the cake, the thing that sells it, is the sound.

The importance of sound in your production is vital. Cheap sounds pull your audience out of the realism of the experience. This is why high quality sounds should be collected at any price. Good well-made sound effects will pay for themselves, though they will never make their financial contribution known. It all comes down to the final product. Does it immerse your audience? If not, then maybe some tweaking and enhancement of your sound is exactly what's missing.

	Study Notes

	Assessment
Explain the need of sound.	



## Discussion/ Activity

Discuss if sound in videos is needed.

### 9.3 Digital Audio Editing

We can access any part of a recording instantly, once audio data is recorded to disk. This is unique to disk-based recording. There are three ways to edit audio once it is stored on disk:

- Without actually changing the original file, non-destructive editing changes how data stored on disk is played back, Destructive editing changes the actual data stored on disk.
- Constructive editing writes a new file that saves the changes made in some types of editing

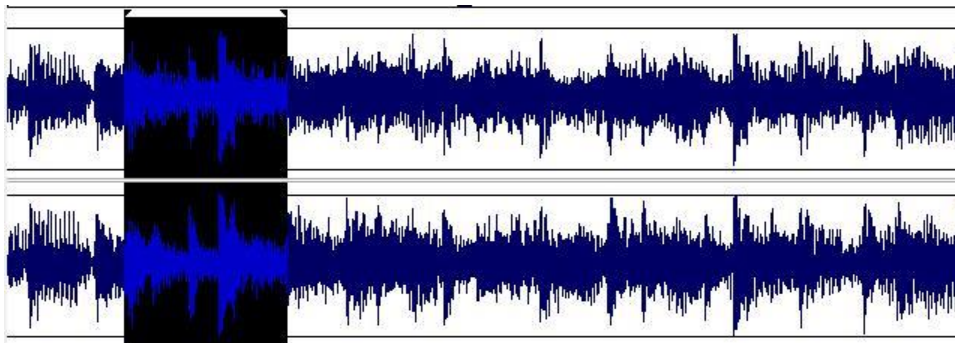


Fig. 9.1: Non- Destructive sound editing

#### 9.3.1 NON-DESTRUCTIVE EDITING

The most common types of editing done with audio are rearranging the order of audio events. The similar way done with a word processor, where as the digital editing allows us to copy and paste sections of audio to revise a musical performance.

Some of the things we can do with digital audio editing include:

- Creating of different versions from an original audio file, short or long,

- replacing them with better versions and remove weak sections of a performance
- creating loops from sections of a song to create new musical material

The power of digital editing helps in defining a region. This region has pointers to the beginning and end of a section of a file called in and out point. Once defined, that section can be accessed at any time. These can then be stored in a file and reused where required. Since we are not changing any of the actual audio data in a file, this type of editing is non-destructive.

### 9.3.2 DESTRUCTIVE EDITING

The word "destructive" may sound ominous to you but it really means you are rewriting a file. These non-destructive editing techniques are very powerful tools for manipulating musical ideas, by saving the edits and rearranging them.

Most of the non-destructive edits we make need to be played in the software and make them into file that is will be used as a master file or final, completed version for distribution. We can process an audio file to permanently change its fundamental characteristics to edit them further.

Destructive editing and processing techniques:

- Editing the form or a song
- Eliminating unused portions of a file to conserve storage space
- Changing the level of a recording
- Changing the pitch, length or direction of a the sound
- Preparing audio files to be used in a sampler

Far from being "destructive", these types of edits can help reinvent the sounds or tune.


### 9.3.3 EDITING METHOD


The common method to edit a song form using standard cut, copy, paste, delete and trim commands. Cut, paste, delete and trim functions will basically change the length of a file. There are techniques that are used to remove audio without changing the length of a file.




The commands menu used to process the audio data are as follows and using these, we can perform the following functions:

- Change amplitude
- Change pitch
- Reverse
- Fade in or out

	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. Explain non-destructive editing.</li><li>2. Describe destructive editing.</li></ol>	


	Discussion/ Activity
Explain and explore the various destructive audio editing methods.	


## 9.4 What Makes a Good Film?


What makes a good film? A good story, yes. Good acting, yes. Good sound, again yes. However, what about sound effects? Something that we do not really think much about at first but the subtlety of it can make or break a moment on screen. A video's sound is just as important as its picture. The use of sound effects in any type of video, whether it is instructional or fictional, reinforces the story by enhancing its realism or adding comedic effect.

Horror movies emphasise sound to draw attention. When the audience is attached to the sound, they lean forward and listen more intently. Sudden changes in the score make them jump back and up the scare factor. The sound mixer for *I Am Legend*, a zombie horror flick, overused sound effects to the point that everything had a definite sound transcending the screen. Clicking on an iPod, rolling up a car window and tearing down curtains all have distinguished sounds that keep the audience engaged in Will Smith's everyday actions. By the time the character approaches an intensifying scene, the audience is already so drawn into the sound that its onset scares them. The reality of the film is reinforced with sound by giving the audience the feeling that they are right next to the character, hearing what he hears.

For comedic purposes, sound effects are used to highlight moments on screen, which cue the audience to laugh. A good example of this is on the reality TV show *Girls Next Door*. Kendra, the sporty one, is not as dumb as she sounds but her sound effects do not do much to disprove it. When she jumbles her words or misuses a phrase, a cartoon "boing" or screeching tires sound effects underscore her mistake. It translates as a cue for the audience to laugh and reflect on what they just heard, aiding the comedic value of the show. Comedies, such as horror films, make the most of their sound via underscores and highlights. In this example, the use of sound effects creates a more entertaining show for the viewer.

	Study Notes

	Assessment
Explain the requirements of a good film.	

	Discussion/ Activity
Note down various hit films in the market and discuss the same.	

## 9.5 Summary

### INTRODUCTION

Sound effects are present in almost every media that you see and hear on a daily basis. From television, movies and shorts to web sites and digital music sound effects help bind together the pieces for your brain to understand. Their importance can easily be measured by their absence when our mind quickly picks out the inconsistency.

Our brain does not think on one sense only there are several senses that combine together and pick up the contents of each moment that can be perceived in the time. When we see a gun we imagine that fire shot will be done and then we expect a gun shot sound to come that gives us the experience of entire scene but if we do not hear the gun shot, then we feel that the experience is somehow broken, it appears as unreal and that does not make sense to us at all.

Hence, we can say that good quality sound effects are very essential. Your audience will have a memorable experience if you present a good quality and appropriate sound i.e. the exact right sound for the scene and your audience will be totally engulfed in the experience. Sometimes the sounds can be isolated or even symbolic like the ceiling fan in the beginning of "Apocalypse Now". Much of the other sound effects are removed to focus on the ceiling fan, which is a combination of blades moving quickly past the microphone and the blades of a helicopter. The symbolism here is that the whirling blades of the fan are reminding Capt. Willard of the call of the jungle.

#### SOUND EFFECTS

Sometimes, we can make sounds more collaborative and can mix them together to make a scene sound more realistic. Sounds of leather coat , mixed with the jingle of change in the pockets, laid over the sound of a busy airport can create the unconsciously expected realism that your brain is expecting.

Nevertheless, you will never get fortunate enough to find a prefabricated sound byte that has everything you need laid into it at exactly the right time. That is why clean, individual sounds are really necessary to create the feel that you will need. In this way, you can mix and match a multitude of various sounds together to create completely new sounds and a series of orchestrated sounds that complete a collage.

Montage theory at least one of its aspects includes juxtaposition of images in order to create new meaning. E.g.: Show a black and white picture of a sad looking old man and then show a picture of an empty bowl. Most often, our brains put the images together and tell us "this old man is starving". When in reality the two images have nothing to do with one another. The same thing holds true for sounds, especially when they are blended with

images. An obviously imaginary bolt of magic blasts out of a character's fingertips, we hear some burning lightening magic sound and suddenly we are immersed in pure fantasy; believing that this person is able to shoot magic from their fingertips. The icing on the cake, the thing that sells it, is the sound.

The importance of sound in your production is vital. Cheap sounds pull your audience out of the realism of the experience. This is why high quality sounds should be collected at any price. Good well-made sound effects will pay for themselves, though they will never make their financial contribution known. It all comes down to the final product. Does it immerse your audience? If not then maybe some tweaking and enhancement of your sound is exactly what is missing.

#### WHAT MAKES A GOOD FILM?

What makes a good film? A good story, yes. Good acting, yes. Good sound, again yes. But what about sound effects? Something that we do not really think much about at first but the subtlety of it can make or break a moment on screen. A video's sound is just as important as its picture. The use of sound effects in any type of video, whether it be instructional or fictional, reinforces the story by enhancing its realism or adding comedic effect.

Horror movies emphasize sound to draw attention. When the audience is attached to the sound, they lean forward and listen more intently. Sudden changes in the score make them jump back and up the scare factor. The sound mixer for *I Am Legend*, a zombie horror flick, overused sound effects to the point that everything had a definite sound transcending the screen. Clicking on an iPod, rolling up a car window and tearing down curtains all have distinguished sounds that keep the audience engaged in Will Smith's everyday actions. By the time the character approaches an intensifying scene, the audience is already so drawn into the sound that its onset scares them. The reality of the film is reinforced with sound by giving the audience the feeling that they are right next to the character, hearing what he hears.

For comedic purposes, sound effects are used to highlight moments on screen, which cue the audience to laugh. A good example of this is on the reality TV show *Girls Next Door*.

Kendra, the sporty one, is not as dumb as she sounds but her sound effects do not do much to disprove it. When she jumbles her words or misuses a phrase, a cartoon “boing” or screeching tires sound effects underscore her mistake. It translates as a cue for the audience to laugh and reflect on what they just heard, aiding the comedic value of the show. Comedies, like horror films, make the most of their sound via underscores and highlights. In this example, the use of sound effects creates a more entertaining show for the viewer.

## 9.6 Self-Assessment Test

### Broad Questions

1. Write down the various types of sound effects that you hear around you.
2. Make a list of films that have beautiful sound effects and write a note as to why you like them.

### Short Notes

- a. Importance of sound effects
- b. Constituents of a good film
- c. Destructive editing
- d. The need of sound editing

## 9.7 Further Reading

1. Avid Editing: A Guide for Beginning and Intermediate Users, Sam Kauffmann
2. Making media, Foundations of Sound and Image Production, Jan Roberts-Breslin
3. Sound for Film and Television, Ed. 2, Tomlinson Holman
4. Sound-on-film, Interviews with Creators of Film Sound, Vincent LoBrutto
5. Sound Theory, Sound Practice, Rick Altman
6. Writing and producing for Television and Film, Esta De Fossard, John Riber, 2005

Assignment

Discuss and explain why a particular movie became a hit.

Lined writing area consisting of 22 horizontal lines.





## Unit 4 Understanding Theme Music and Remix



### Learning Outcome

After going through this unit, you will be able to:

- Explain the usage of theme music
- Discuss the importance of utility
- Describe making of theme music
- Clarify the concept of remixes
- Outline the process of remixes



### Time Required to Complete the Unit

The time required to study this unit is broken as follows:

1. 1<sup>st</sup> Reading: It will need 2 Hrs for reading
2. 2<sup>nd</sup> Reading with understanding: It will need 3 Hrs for reading and understanding
3. Self-Assessment: It will need 3 Hrs for reading and understanding
4. Assignment: It will need 4 Hrs for completing an assignment
5. Revision and Further Reading: It is a continuous process



### Content Map

- 10.1 Introduction to Theme music
- 10.2 Utility
- 10.3 Why So Famous

## 10.4 Remixes

### 10.4.1 Electronic Music

### 10.4.2 Urban Music

## 10.5 Summary

## 10.6 Self-Assessment Test

## 10.7 Further Reading

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## 10.1 Introduction to Theme Music

Theme music is a piece of music that is specifically written for a radio program, television program, video game or movie and usually played during the title sequence and end credits is known as the theme music. If the theme music is accompanied by lyrics then mostly it is associated with the show and then it is known as theme song.

The phrase theme song or signature tune may also be used to refer to a song that has become especially associated with a particular performer or dignitary; often used as they make an entrance.


Examples of this association include: the President of the United States with "Hail to the Chief"; Bob Hope with "Thanks for the Memory"; Billy Joel with "Piano Man"; Frank Sinatra with "Autumn in New York" and "My Way"; Liberace with "I'll Be Seeing You"; Alice Faye with "You'll Never Know"; and Judy Garland with "Over the Rainbow"


The purpose of a theme song is often similar to that of a leitmotif.


## 10.2 Utility

The purpose of the music is to establish a mood for the show and to provide an audible cue that a particular show is beginning, which was especially useful in the early days of radio. In some cases, including *The Brady Bunch*, *Gilligan's Island*, *The Fresh Prince of Bel-Air* and *The Beverly Hillbillies* the lyrics of the theme song provide some necessary exposition for people unfamiliar with the show.

In addition, some theme music uses orchestra scores or original music set mood for the show. One of the most notable of these is the *Batman: The Animated Series* theme song, which was drawn from the theme for the 1989 *Batman* film created by Danny Elfman. Others use remixes or covers of older songs, such as the theme song of *Spider-Man: The Animated Series* (1994-1998), which featured a reworked cover of the theme song from the classic *Spider-Man* cartoon from the 1960s. The song was performed by Aerosmith lead guitarist Joe Perry.

	Study Notes

	Assessment
Explain utility of sound.	

	Discussion/ Activity
Make a list of the famous movie theme songs.	

### 10.3 Why So Famous

Theme music has been a feature of the majority of television programs since the medium's inception, as it was for the ancestral radio shows that provided their inspiration. Programs have used theme music in a large variety of styles, sometimes adapted from existing tunes and with some composed specifically for the purpose. A few have been released commercially and become popular hits; examples include -

- The title theme from Rawhide, performed and recorded by popular singer Frankie Laine
- The theme to Happy Days (from 1974-84), performed by Pratt & McClain (in Top 5, 1976)
- The theme to Laverne & Shirley, performed by Cyndi Grecco (#25, 1976)
- The theme to Friends, "I'll Be There For You", which was a hit for The Rembrandts
- The theme from S.W.A.T., which was a hit for Rhythm Heritage
- The theme song from Drake and Josh, which was a hit for Drake Bell; Jan Hammer had a major hit with the theme from Miami Vice in the 1980s
- "Theme from Dr. Kildare (Three Stars Will Shine Tonight)", recorded by Richard Chamberlain, the star of the television series, was in 1962 a top 10 hit in the U.S. and a top 20 hit in the UK.

Other themes, such as the music for The Young and the Restless, Days of our Lives and Coronation Street have become iconic mostly due to the shows' respective longevities. Unlike others, these serials have not strayed from the original theme mix much, if at all, allowing them to be known by multiple generations of television viewers.


In the United Kingdom, iconic sports shows have such strong associations with their theme music that the sports themselves are synonymous with the theme tunes, such as


- Football (Match of the Day theme)
- Cricket (Booker T. & the M.G.'s, "Soul Limbo")
- Motor racing (Roger Barsotti's Motor Sport and the bassline from Fleetwood Mac's The Chain)
- Tennis (Keith Mansfield's Light and Tuneful)
- Snooker (Drag Racer by the Doug Wood Band)
- Skiing (Pop Goes Bach, the theme to Ski Sunday)


Themes in the United States that have become associated with a sport include Johnny Pearson's "Heavy Action" (used for many years as an intro to Monday Night Football), "Roundball Rock" (composed by John Tesh as the theme for the NBA on NBC

during the 1990s and early 2000s), "Bugler's Dream" (used in ABC and NBC's coverage of the Olympics) and the theme to ESPN's nightly sports highlight show, Sports Centre

Most television shows have specific, melodic theme music, even if just a few notes (such as the clip of music that fades in and out in the title sequence for Lost, or the pulsing sound of helicopter blades in the theme music for Airwolf). One exception is 60 Minutes, which features only the ticking hand of a Heuer stopwatch.

	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. Why are themes famous?</li><li>2. Where are theme songs used?</li></ol>	

	Discussion/ Activity
Study the reason the theme songs are famous.	

## 10.4 Remixes

Remix is to produce an alternate version of the original songs by adding different loops. There is also a famous series called the Law & Order that started out with one theme song for Law and Order and then was remixed it for its three spinoffs Law & Order: Special Victims Unit, Law & Order: Criminal Intent and Law & Order: Trial by Jury. There was a related reality show Crime and Punishment that also aired with a remix of the theme.

A remixer composes an alternate master recording of a song by using audio mixing to add or subtract tunes or changing the properties like, pitch, tempo, playing time, or other aspect of musical components. Some remixes totally changes the arrangement of a recorded work but many are harmonic and cut that emphasises the lead singer's voice.

Songs are remixed for a variety of reasons:

- To popularise songs at radio and club play
- To add a stereo or surround sound version to a simple song
- To improve the fidelity of original master recording an older song that has been lost or degraded
- To alter a song to suit a specific music genre or radio format
- To alter a song for artistic purposes

Another distinction should be made between a remix and a cover. Remixes should not be confused with edits, which involve shortening a final stereo master for marketing or broadcasting purposes. A remix song is used to recombines audio pieces from a recording to create an altered version.

### 10.4.1 ELECTRONIC MUSIC

In the 1980s, early pop remixes were fairly simple "extended mixes" of songs were released to clubs and commercial outlets. These usually had duration of six to seven minutes

"Art of Noise" took the remix styles to an extreme, creating music entirely of samples. They were among the first popular groups to truly harness the potential that had

been unleashed by Kraftwerk and Giorgio Moroder (as well as composer Jean Michel Jarre) with their synthesizer-based compositions.

In the 1990s, there was a rise home computer with audio capabilities. Remix created by "underground remixers" who edit two or more recordings (often of wildly different songs) together. "Girl Talk" is perhaps the most famous of this movement, creating albums using sounds entirely from other music and cutting it into his own.




Fig. 10.1: Synthesizer


#### 10.4.2 URBAN MUSIC


Many of the people who create cutting edge music in such genres as synthpop and aggrotech are solo artists or pairs. Remixing has been experimented with heavily synthesized electronic and experimental music circles.

The hip-hop remixes arose either from the need for a pop/R&B singer to add more of an urban, rap edge to one of their slower songs, or from the need for a rapper to gain more pop appeal by getting an R&B singer to sing some lines here and there.



	Study Notes

	Assessment
<ol style="list-style-type: none"><li>1. Define remix.</li><li>2. Give some example of good remix songs in Hindi.</li></ol>	

	Discussion/ Activity
Discuss the reason remix songs are so popular.	

## 10.5 Summary

### INTRODUCTION

A piece of music that is specifically written for a radio programme, television programme, video game or movie and usually played during the title sequence and end credits is known as the theme music. If the theme music is accompanied by lyrics then mostly it is associated with the show and then it is known as theme song.

The phrase theme song or signature tune may also be used to refer to a song that has become especially associated with a particular performer or dignitary; often used as they make an entrance.

#### UTILITY

The purpose of the music is to establish a mood for the show and to provide an audible cue that a particular show is beginning, which was especially useful in the early days of radio. In some cases, the lyrics of the theme song provide some necessary exposition for people unfamiliar with the show.

In addition, some theme music uses orchestra scores or original music set mood for the show. One of the most notable of these is the Batman: The Animated Series theme song, which was drawn from the theme for the 1989 Batman film created by Danny Elfman. Others use remixes or covers of older songs, such as the theme song of Spider-Man: The Animated Series (1994-1998), which featured a reworked cover of the theme song from the classic Spider-Man cartoon from the 1960s. The song was performed by Aerosmith lead guitarist Joe Perry.

#### WHY SO FAMOUS

Theme music has been a feature of the majority of television programs since the medium's inception, as it was for the ancestral radio shows that provided their inspiration. Programmes have used theme music in a large variety of styles, sometimes adapted from existing tunes and with some composed specifically for the purpose. A few have been released commercially and become popular hits.

Other themes have become iconic mostly due to the shows' respective longevities. Unlike others, these serials have not strayed from the original theme mix much, if at all, allowing them to be known by multiple generations of television viewers.

In the United Kingdom, iconic sports shows have such strong associations with their theme music that the sports themselves are synonymous with the theme tunes.

Most television shows have specific, melodic theme music, even if just a few notes. One exception is 60 Minutes, which features only the ticking hand of a Heuer stopwatch.

There is also a famous series called the Law & Order that started out with one theme song for Law and Order and then was remixed it for its three spinoffs Law & Order: Special Victims Unit, Law & Order: Criminal Intent and Law & Order: Trial by Jury. There was a related reality show Crime and Punishment that also aired with a remix of the theme.

## 10.6 Self-Assessment Test

### Broad Questions

1. Which are some of the famous remixes that you have heard? Make a list.
2. What do you have to keep in mind while making remixes?

### Short Notes

- a. Remixes
- b. Urban music
- c. Electrical music
- d. Theme music

## 10.7 Further Reading

1. Avid Editing: A Guide for Beginning and Intermediate Users, Sam Kauffmann
2. Making media, Foundations of Sound and Image Production, Jan Roberts-Breslin
3. Sound for Film and Television, Ed. 2, Tomlinson Holman
4. Sound-on-film, Interviews with Creators of Film Sound, Vincent LoBrutto
5. Sound Theory, Sound Practice, Rick Altman
6. Writing and producing for Television and Film, Esta De Fossard, John Riber, 2005



## Glossary

Dialogue	With the help of dialogues, you can create authentication of the speaker as an individual and a real person instead of the imaginary creation of a storyteller.
Music: Background Music	Background music is used to add emotion to a film viewer understanding, by linking scenes.
Drop Marker	Markers are the main important in sound forge which helps in creating the selection with perfection. If you have to insert the marker, you have to press M.
Mark In and Mark Out	Mark In and Mark Out are the in and out point of the selection. If you want to start the selection when the play head is moving, than you press (I) for the Mark In and when you required to end the selection, you press (O).
Zoom	Basic way of working is with the up arrow and down arrow. If you want, full zoom of the file than you can use in full option and normal will bring back the zoom level.
Time Display	It shows the digital clock. So when you start playing the sound than it display the current position of the cursor.
Recording	Sound Recording into your computer is not too hard though it requires knowledge of some key points. Many programs are available to record sound; your computer even comes with a free recorder.
Microphones	There is a variety of ways to capture audio:
Hydrophones:	It is used to create both a realistic and immersive ambient track.

Surround Mics:	It is useful in capturing general ambience sound.
Dynamic range	Dynamic range is the difference between the loudest part of the sound and the quietest part of the sound.
Frequency	It is the measurement of how frequently sound waves hit the human ear. Frequency is measured in hertz (Hz).
Equalizers	Equalisers are sometimes found in the sound recording devices and they can be edited during production or they can be found in Non-linear Editing Systems (NLE) in post production also.
Sample rate	Sample Rate is the measurement of how frequently we measure an audio signal.
Bit Depth	Sample rate is the measurement of how frequently we measure the audio. While the Bit depth is how accurately we measure that sample.
Loop	A loop is a sample or region in an audio file that is repeated during playback.
Furniture music	Furniture music was invented in 1920 by Erik Satie. Typical of Furniture music are short musical passages that are with an indefinite number of repeats.
Elevator music	Elevator music is a more general term that shows music that is played in rooms where many people come together and these people come with no intention whatsoever to listen to music.
Ambient music	The term Ambient music is used when more but often less distinguishable influences such as elements of Jazz or sounds from nature are mixed together in the "soundscape."

Flange / Wah-Wah	Are used to create the sweeping effects often heard in guitar recordings and techno-sounds of today.
The Gapper / Snipper	Allows you to produce tremolo and warble effects by cutting sections from the sound file or inserting silence at a set frequency.
The Noise Gate	effect is the most basic of all dynamics-processing effects. A simple noise gate removes all audio below a set threshold level.
Pitch	thick or thin type of sound can be altered as per the required with the pitch.
Analog-To-Digital (A/D) Converter	A circuit that converts an analog audio signal into a stream of digital data (bit stream).
Compressor	A signal processor that reduces dynamic range or gain by means of automatic volume control. An amplifier whose gain decreases as the input signal level increases above a preset point.
Decibel	The unit of measurement of audio level. Ten times the logarithm of the ratio of two power levels. Twenty times the logarithm of the ratio of two voltages.
Fade-Out	To gradually reduce the volume of the last several seconds of a recorded song, from full level down to silence, by slowly pulling down the master fader.

