



MUSIC EDUCATIONAL RESOURCE by N. Peterson

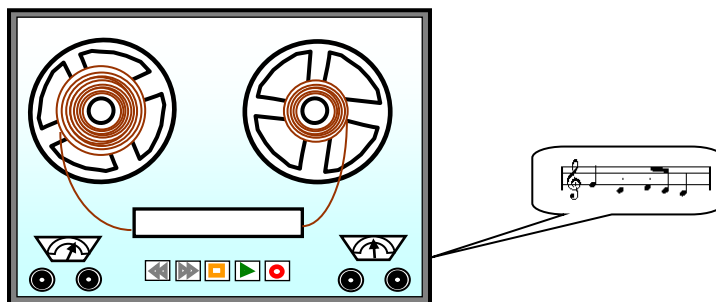
THE LOOP PEDAL

A **loop pedal** is a digital recording device. It is one of many electronic devices which musicians can use to manipulate or control sounds. Essentially a loop pedal has two main functions:

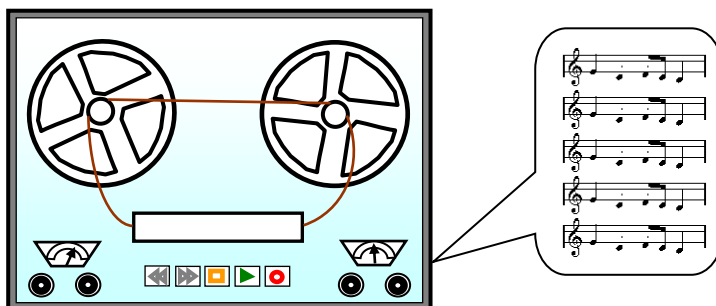
1. It enables recorded sounds to be endlessly repeated (*looped*).
2. It allows recorded sounds to be laid over each other (*overdubbed*).

A single musician can use a loop pedal to record accompanying instruments for his or her playing (or singing) and sound like a 'one-man band'. This is fun on its own, but it is particularly convenient when other musicians are unavailable.

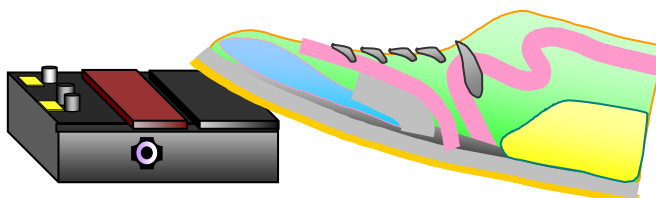
Although now done digitally, the term *looping* derives from the days when the process was achieved using an analogue tape recorder. Instead of having tape wind from one spool on to another (which played back a sound just once),



a recorded sound could be endlessly repeated using a section of tape that was spliced (joined) to form a loop. This was a *tape-loop*. The recorded sound would be replayed as the tape continually revolved:



When the recorded sounds are melodies, harmonies and rhythms, the resulting effect is of repeated music. Since most musicians make music using their hands, the digital looping device is designed to be in the form of a pedal.



THE LOOP PEDAL QUESTIONS

Q1. A loop pedal is a:

- a) An analogue tape recorder
- b) A digital recording device

Answer:

Q2. What are the two main functions of a loop pedal?

- 1.
- 2.

Q3. Why might musicians use a loop pedal?

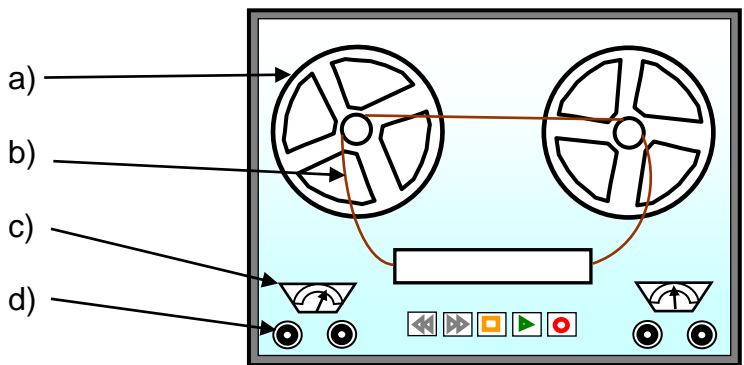
- a) To create an accompaniment for their playing or singing
- b) To practise playing in a band, without other musicians
- c) To experiment with how sounds fit together
- d) All of the above

Answer:

Q4. Where does the term 'loop' come from?

.....

Q5. Which letter identifies the tape-loop in the following diagram:



Answer:

Q6. Overdubbing occurs when a sound is recorded and:

- a) replaces the previously recorded sound
- b) is heard in addition to the previously recorded sounds

Answer:

Q7 Why is the digital looping device in the form of a pedal?

.....

THE LOOP PEDAL AND THE CONCEPTS OF MUSIC

The **concepts of music** is a reference to all the different musical facets which combine to make a piece of music. Sometimes they are called the '*components*' and at other times they may be referred to as the '*elements*'. They are the musical ingredients which composers use to create any piece of music. Each concept relates to different aspects of music:

Concept	What each concept entails
Texture	-encompasses the various layers of sounds and how they relate to each other
Duration	-refers to the arrangement of the sounds in relation to time and how time is divided into beats and rhythms
Pitch	-deals with the arrangement of sounds in terms of the use of frequencies and how these are combined to make melodies and harmonies
Tone Colour	-relates to the orchestration of the music; the kind of ensemble used, the particular choice of instruments and the specific sound chosen from each instrument
Structure	-deals with the design of the composition; how its sections and sub-sections are organized
Dynamics and Expressive Techniques	-refers to how aspects of any concepts contribute to the communication of the music's character or mood

Just as a chef uses different ingredients to produce tasty snacks or even banquets, a composer similarly uses the musical concepts to create music ranging from catchy jingles to symphonies. The more familiar composers are with the workings of the concepts, the better prepared they are to create music. Likewise the more familiar listeners are with the concepts, the better prepared they are to appreciate music.

THE CONCEPTS OF MUSIC QUESTIONS

Q1. Match the concept with its appropriate word.

- | | | |
|------------------------------------|--------|---------------|
| Texture | -----> | Time |
| Duration | | Layers |
| Pitch | | Frequencies |
| Tone Colour | | Orchestration |
| Structure | | Mood |
| Dynamics and Expressive Techniques | | Design |

Q2. True or False?

Understanding the concepts of music is important for composers because it helps them to understand how music works.
 Answer:

Q3. How might an understanding of the concepts help listeners?

.....

Using a loop pedal to *loop* and *overdub* affects the musical concepts in various ways.

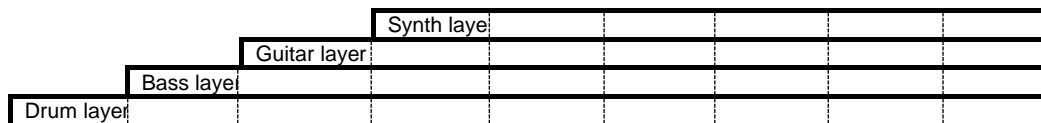
THE LOOP PEDAL AND TEXTURE

Staggered Entry

When a loop pedal is used, layers of sound are usually added one at a time. The musical term for this is staggered entry.

Layer Identification

Each layer can be identified by the instrument used (sound source). This diagram shows layers identified as they appear in staggered entry:



Density

The density (thickness) of the music increases as each new layer of sound is recorded and overlaid on to the previous layer. As the density thickens, the musical tension increases.

Prominence

In music, there are two kinds of layers:

1. **Dominant layer.** A dominant layer has the main part. It has the tendency to feature.
2. **Subordinate layers.** These layers offer musical support. They are the accompanying layers.

When musicians use a loop pedal they usually build subordinate layers which contribute to the accompaniment. Once the accompaniment has been created, they allow it to repeat (loop), and use the repetitions as a foundation upon which they supply featuring material.

TEXTURE QUESTIONS

Q1. What occurs if layers appear in staggered entry?

- a) All the layers come in at once
- b) The layers leave one at a time
- c) The layers come in gradually

Answer:

Q2. How may layers be identified?

.....

Q3. True or False?

The density of the music becomes thicker as layers are taken away.

Answer:

Q4. How does a dominant layer differ from subordinate layers?

.....
.....

THE LOOP PEDAL AND DURATION

Ostinato

The repeated musical patterns created by looping are known as **ostinati** (the plural of ostinato). These often occur in accompanying layers. An ostinato satisfies listeners because it creates a sense of musical familiarity. Good composers are careful not to overuse ostinati because of the danger of monotony.

Types of ostinati include the:

- **Rhythmic ostinato** -a repeated rhythmic pattern
- *Melodic ostinato* -a repeated melodic pattern
- *Harmonic ostinato* -a repeated chord pattern

All ostinati have a rhythmic pattern. Following is an example of a rhythmic ostinato:



Polyrhythm

When a loop pedal is used, recorded rhythms are laid over each other (overdubbed). If each layer's rhythm is different, a rhythmic device known as polyrhythm is created. This is the sound of two or more *different* rhythms played at once. Polyrhythms sound more complicated as more rhythmic layers are added, even if the rhythms used are simple. Each instrument in the following polyrhythm has been given a relatively simple rhythm:

maracas	$\frac{4}{4}$:	♩	♩	♩	♩	:
cow bell	$\frac{4}{4}$:	♩	♩	♩	♩	:
tambourine	$\frac{4}{4}$:	♩	♩	♩	♩	:
guiro	$\frac{4}{4}$:	♩	♩	♩	♩	:

When looking at the score vertically you can see why the rhythms sound complex:

- The density (thickness) always varies
- The different combinations of instruments constantly change the sound

DURATION QUESTIONS

Q1. True or False?

An ostinato is a repeated musical pattern.

Answer:

Q2. How does an ostinato affect the listener?

.....

Q3. A polyrhythm occurs when:

- two or more different rhythms are played simultaneously
- a rhythm is repeated over and over

Answer:

Q4. Why do polyrhythms sound complicated?

.....

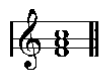
THE LOOP PEDAL AND PITCH

Melodic Ostinato

When the loop pedal is used to repeat a small tune, the result is a melodic ostinato (a repeated melodic pattern). Melodic ostinati are often used in accompaniments. In rock music a melodic ostinato is called a **riff** and is commonly played by the bass guitar and electric guitar in **unison** (both instruments playing the same notes at the same time). Once recorded and looped, a riff provides a bold foundation for the musician's live playing.

Harmony

When a note in one layer sounds at the same time as one in another layer, the result is harmony. If it sounds pleasant it is said to be **consonant** harmony, but if it sounds jarring the harmony is described as being **dissonant**.



Consonant chord



Dissonant chord

Harmonic Ostinato

A loop pedal can also be used to record a series of chords. Once recorded and looped, the repeated chord pattern is a harmonic ostinato. For the listener, the regularly repeated chord pattern creates a sense of harmonic familiarity.

PITCH QUESTIONS

Q1. True or False?

A melodic ostinato is a repeated melodic pattern.

Answer:

Q2. Rock musicians refer to a melodic ostinato as a:

.....

Q3. A bass guitar and electric guitar often play riffs in unison. What does this mean?

.....
.....

Q4. Harmony occurs when:

- a) two or more different notes are played simultaneously
- b) all the instruments play the same notes at the same time

Answer:

Q5. Consonant chords sound (pleasant /harsh):

.....

Q6. A repeated chord pattern is a:

- a) rhythmic ostinato
- b) melodic ostinato
- c) harmonic ostinato

Answer:

THE LOOP PEDAL AND TONE COLOUR

Ensembles

A musician recording with a loop pedal has the potential to create contrasting **bands** by using different types of instruments. If the instruments are available, ensembles as varied as an orchestra, steel drum band, rock band or choir could be formed. A simple way to do this is with a synthesizer. This one keyboard instrument has the capacity to replicate the sound of almost every other instrument, and so virtually any ensemble may be formed.

Rhythm Section

A rhythm section is the part of the band which accompanies. Since the loop pedal is mainly used in building accompaniments for live playing, musicians regularly record the instruments of a rhythm section. A rhythm section contains chord, bass and percussion instruments supplying harmonic, bass and rhythmic parts. The various combinations of instruments form the rhythm sections of contrasting ensembles.

- *Chords* could be provided by an acoustic or electric piano, electric organ, synthesizer, acoustic or electric guitar, or by a banjo
- *A bass part* might be supplied by a double bass or electric bass, synthesized bass or even a tuba
- *Rhythms* may be presented by a beat boxer or played on a drum kit or electric drums, drum machine, congas, timbales, cow bell or by a tambourine

Lead instrument

Once the rhythm section's accompaniment has been recorded, the live playing delivers the dominant part with the featuring (lead) instrument or voice.

TONE COLOUR QUESTIONS

Q1. *True or False?*

Another name for an ensemble is a band.

Answer:

Q2. *Why is a synthesizer considered to be versatile?*

.....

Q3. *The rhythm section is the part of the band that:*

- a) plays the featuring melody
- b) provides the accompaniment

Answer:

Q4. *When accompanying, supporting instruments supply:*

.....

Q5. *When a loop pedal is used, the lead part is often (played live/recorded & looped):*

.....

Q6. *A lead instrument (features/supports):*

.....

THE LOOP PEDAL AND STRUCTURE

Sections

When using a loop pedal the musician builds the initial accompaniment. This presents the piece's *tempo* (speed), *key*, *instrumentation* and *style*, for the first time. This opening section of music is the **introduction**. By establishing various aspects of the concepts, the introduction reveals the kind of sound that the music will have. The featuring material played live is part of the next section of music.

Sub-sections

Sections of music can be divided into sub-sections. All the looped (repeated) material creates melodic, harmonic and rhythmic ostinati which divide a section into subsections.

	Section			
Melodic Ostinato				
Harmonic Ostinato				
Rhythmic Ostinato				

Looping produces sub-sections of equal length. This regularity creates for the listener a sense of structural familiarity.

Unity/Contrast. Repeating musical ideas creates unity. A loop pedal creates lots of unity but too much can make the music sound monotonous. New musical ideas must be added to create contrast.

Delicately balancing unity and contrast involves supplying:

- just enough **repetition** – to provide a comfortable sense of familiarity, and
- just enough **variety** – to provide the freshness of the new

STRUCTURE QUESTIONS

Q1. True or False?

The section that establishes various aspects of the concepts is called the introduction.

Answer:

Q2. What aspects of music might an introduction set up?

.....

Q3. True or False?

The repeated material in ostinati divides a section into sub-sections.

Answer:

Q4. Ostinati contribute to (unity/contrast):

.....

Q5. What problem may arise from using too much repetition?

.....

Q6. How can a musician prevent music from becoming monotonous?

.....

THE LOOP PEDAL AND DYNAMICS AND EXPRESSIVE TECHNIQUES

Dynamics

Dynamics refers to the levels of **volume** at which music is played. It affects the excitement level of the music. Although volume levels result from how loudly or softly each instrument is played, with music that is looped, volume increases with the addition of each layer.

Expression

Expression involves communicating the music's **mood**. The musician might create music which is: *calm, exciting, lazy, energetic, weak, powerful, cheerful, sad, tender, suspenseful, timid, proud, aggressive, grand, clumsy or graceful*. When looping, the musician creates the mood by mixing aspects from the concepts (including dynamics). For example from the concept:

- **Duration**, the musician chooses the music's tempo. A fast tempo makes it feel *exciting* while a slower tempo makes the music *calmer*
- **Texture**, the musician decides how many layers to loop. Adding layers gradually increases the density and volume, making the mood *bolder* and *stronger*.
- **Tone Colour**, the choice of instruments to be recorded can determine whether the music sounds *cheerful* or *gloomy*
- **Pitch**, the quality of the chords used affects the expression. Music accompanied by dissonant harmonies feels *edgy* while consonant harmonies feel more *relaxed*. Finally when performing the live melody the musician contributes further to the mood by the way the melody is played.
All the musical aspects are carefully blended to express the emotions of the piece.

DYNAMICS AND EXPRESSIVE TECHNIQUES QUESTIONS

Q1. Which of the following statements is correct?

- a) Dynamics is related the music's speed
- b) Dynamics is a reference to the music's volume

Answer:

Q2. How does the number of layers affect the volume?

.....

Q3. True or False?

Expression involves the communication of emotions.

Answer:

Q4. Name five different moods:

1. 2. 3. 4. 5.

Q5. How might each of the following concepts contribute to the music's mood?

Duration:

Texture:.....

Tone Colour:

Pitch:

NOTES