

1. List the career opportunities in this field: (Page 19-23)

- a. The artist
- b. Studio musician
- c. Studio arranger
- d. Producer
- e. Engineer
- f. Assistant engineer
- g. Maintenance engineer
- h. Mastering engineer
- i. DJ (disc jockey)
- j. VJ (video jockey)

2. The distance a sound, as seen on a computer display, varies from the "centerline" is called it's Amplitude. (page 43)

3. When we look at an audio sound bite in a digital audio workstation, the horizontal left-to-right image is called it's wave length (page 46)

4. The speed at which a wave travels through a medium is called it's Velocity. (page 46)

5. The basic three wave forms used to create synthesizer sounds are named Square, Triangle, sawtooth. (page 54)

6. To create a sound from scratch, four parameters are needed to construct a new sound. A Musical Waveform Envelope is made up of four parts (Page 57)

- a. Attack
- b. Decay
- c. Sustain
- d. Release

7. The scale for measuring the volume of a sound is called the Decibel. (page 57-61)

8. The volume of a whisper is approximately 30dB. The volume of an airplane taking off is approximately 120dB. (page 60).

9. A popular graph for measuring our ear's sensitivity to loudness is known as the Fletcher-Munson curve. (page 64)

10. The recommended volume for mixing is 85 to 95 dB. (page 65)

11. Why is it so important not to mix too loudly or too softly? too loud will result in harmonic distortion (page 57-64). (production of harmonics that do not exist in original sound). Too loud will damage ears. Too low mix will end up having too much bass & highs, difficulty in locating direction etc.

MANDATORY SUPPLEMENTAL READING

Lesson 1 - Safety in Hearing.

Use the internet to find examples of the following level of sound pressure.
Find common examples of the following levels of "noise" in our daily lives. For example, 150 db equals a gun shot, a jet engine at take off, etc.

200 Decibels - Immediate Danger to Hearing

Cannon at 12 feet

125 Decibels - Pain Threshold

Diesel engine

Jet engine at 100ft.

120 Decibels - Risk of hearing damage in 75 minutes.

Fender guitar amplifier at 10 inches

115 Decibels - Risk of hearing damage in 15 min.

Pneumatic riveter

110 Decibels - Risk of hearing damage in 30 min.

Auto horn at 2 meter

105 Decibels - Risk of hearing damage in 1 hr.

Power mower at 3 feet

100 Decibels - Risk of hearing damage in 2 hrs.

Jet take off at 305 meters

95 Decibels - Risk of hearing damage in 4 hrs.

Hand Drill

90 Decibels - Risk of hearing damage in 8 hrs.

Food blender at 3 ft.