

Lesson 7

Consoles Part 2

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STUDIO NAME: House
NAME OF MENTOR(S): Take

Q & A

1. When used in audio, the amplifier, with additional components, may be designed to:
(page 415)

- Amplify
- Equalize
- Combine
- Distribute
- Isolate
- Match signal impedances between devices

2. Explain the differences between types of current: AC-- alternating current and DC direct current.

- Single Direction
- Switching Directions

3. Define Noise and Saturation: (page 415-417)

Thermal electron movement within the transistor and other circuitry
Input signal is so large that its DC output supply isn't large enough to produce
the required output signal

4. What are some examples of alternating current and direct current?

- Direct - Battery
- Alternating - Wall Outlet

5. The equalization / EQ amplifier achieves its tone control through the use of a Resistor / Capacitor network. (page 418)

6. Summing amplifiers are called "active combining amplifiers" (ACA) and provide two functions: (page 419)

Combine any number of discrete inputs into a single output bus
Provides a high degree of isolation between them

^{Snake?}
7. An example of a distribution amplifier is a headphone. (page 419-420)

8. Power amplifiers boost the audio output of a signal. (page 420)

9. Draw a basic signal flow routing map from the aux out to the monitor in for a live stage scenario, and explain the importance of this. _____ (Do a search).

10. Draw a basic signal flow routing map from a microphone to your MBox to your PC. (Do a search)

NOTES:

Tubes vs. Solid State Preamps

Look into all the elements of your signal path. Tube and solid-state preamps ~~can~~ ^{when} ~~properly designed~~ ^{properly designed} exhibit low distortion throughout their normal amplitude range. It's the nature of the distortion that make the 2 types sound different. Solid state = gross distortion. Tube circuit = harmonic distortion. Use your ears and choose which sound is best to you.

The hidden secrets to matching mic and preamp impedance

Every mic has output impedance, and every mic preamp has input impedance. It is mostly the interaction between the output impedance of the mic and the input impedance of the mic preamp that causes audible differences as the result of an EQ effect. For dynamic and condenser mics, the preferred preamp input impedance is generally about 10 times that of the mic output.

How can multiple preamps help me and my studio

Beginning in the 1960s a new breed of designers (2 notable ones were Joe Meek and the living legend Rupert Neve) began to focus on the individual components of the mix chain and a new species of "boutique" outboard devices appeared. A preamp can be: A utility device that's necessary to bring mic and instrument signals into your mixer; And a creative device that you can use to add color to individual tracks

A preamp can be used to help with the following things:

- Increasing the gain
- Changing the tone
- Lowering the output impedance
- Converting from unbalanced to balanced

