

Lesson 5

STUDENT NAME: Malecia Bynum

STUDIO NAME: House

NAME OF MENTOR(S): Jake

Patch Bay and Signal Flow

Q & A

1. Connecting hardware or software within the console or virtual console, signal processing is accomplished through the use of a patch bay. (page 449)
2. The patch bay may also be used to pass a signal to several other sources, such as the effects processor or compressor (page 451).
3. The studio patch bay can be configured in four ways. List them below and be ready to explain them to your instructor. (page 422- 423, 450)
 - a. Open - No electrical connection, I/O connection independent
 - b. Half Normalled - I/O connection electrically connected (top = intact, bottom = broken)
 - c. Normalled - top = broken, bottom = broken but both allow signal to pass
 - d. Parallel - top or bottom both intact and allows you to tap into both signal passes
4. To hook up a commercial studio in a multi-room facility, a normalled connection patch bay is used (page 451).
5. The balanced plug has three components: Common, cold, hot. (page 128)
6. What is the difference between a balanced versus an unbalance audio input / jack?

A balanced line uses 3 wires to properly carry the audio signal. 2 of the wires are used to carry the signal voltage, while a 3rd lead is used as a neutral ground wire.

In an unbalanced ~~line~~ circuit, a signal lead carries a positive current potential to a device, while a second, grounded shield (which is tied to the chassis ground) is used to complete the circuit's return path.

NOTES:

- Patch bays can be divided into 3 categories:
 - Open "de-normalled"
 - "Full normalled"
 - Parallel "half normalled"
- A patch bay allows you to patch in the audio signals in your studio from a central point and send them to other gear in your recording setup
- Avoid routing digital signals over a patch bay as the pulse used for the transmission of digital audio causes heavy interference in analog signals
- An audio signal is a representation of sound waves in a different form; Typically this is an electrical voltage, but it can be magnetic
- An audio signal can be manipulated, stored, transmitted and reproduced in ~~waves~~ ^{ways} that a sound wave cannot
- Electric energy flows through a circuit as voltage; The opposition to voltage is impedance
 - Impedance is measured in ohms
 - The lower the impedance the better
- Signal flow is the term used to describe the path an audio signal will take from source (mic) to the speaker or recording device