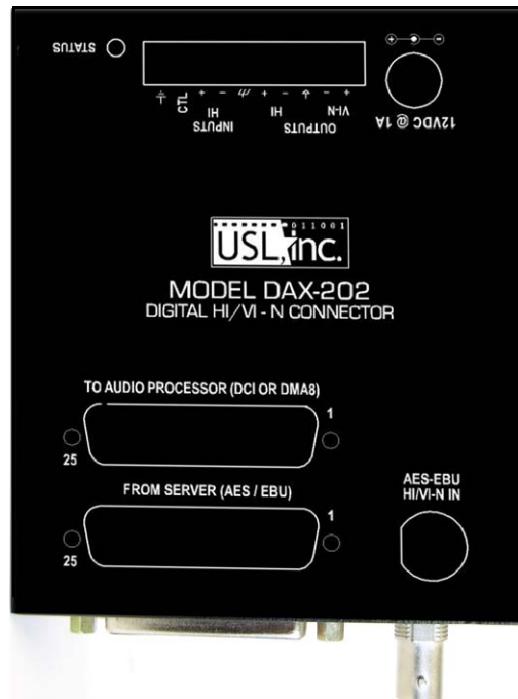


# **DAX-202**

## **User Manual**

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## **DAX-202 USER MANUAL**

### **Introduction**

Hearing impaired audio has traditionally been generated by the cinema processor as a mix of the left, center, and right audio channels. With digital cinema, it is possible to include a separate hearing impaired (HI) and visual narration (VI-N) track in the digital cinema package. Most digital cinema servers place the HI/VI-N pair on AES channels 7/8 or AES channels 15/16. If your existing cinema sound processor does not convert these AES signals to analog to drive your HI/VI-N system, a digital to analog converter such as the DAX-202 is required.

AES audio using either the Dolby DMA8 or DCI pinouts is looped through the DAX-202 on its way to the cinema sound processor. Typically, the DAX-202 is located near the sound processor. The existing AES cable is unplugged from the cinema processor and plugged into the DAX-202. A 25 conductor jumper cable then connects the DAX-202 to the sound processor. The AES audio is "looped through" the DAX-202.

DIP switches inside the DAX-202 determine which pins on the DB25 connector the HI/VI-N audio will be connected to. As mentioned above, this is typically 7/8 or 15/16, but the DAX-202 provides several other options as well.

The HI track in a digital cinema package is "dialog centric" audio that may include the dialog at a higher level than the main audio, may include special equalization, or may include compression. However, not all content includes an HI track. Because of this, it is currently "safer" to use the existing HI output of the cinema processor to drive the HI portion of the HI/VI-N transmitter. The DAX-202 includes a terminal that must be grounded to use the HI audio from the AES pair. If this terminal is not grounded, the DAX-202 audio output is driven by the HI audio output from the sound processor. The control terminal may be permanently open or grounded, or may be driven by an open drain output or contact closure from the server or cinema sound processor to change the source of the HI audio "on the fly."

### **Description**

The DAX-202 is designed to process signals for Hearing Impaired (HI) and Visual Narration (VI-N).

AES sources may be selected from a DB25 or BNC connector. The DB25 connectors are pass-through configured; either may be used as an input or output.

The HI/VI-N signals can be sourced from either DCI or Dolby pin configurations.

## **Setup**

1. Using the chart below, determine where the HI/VI-N AES sources will come from.

| <b>Source</b> | <b>DB25 pins</b> |
|---------------|------------------|
| Dolby 7/8     | 6 / 19           |
| DCI 7/8       | 7 / 20           |
| DCI 15/16     | 1 / 14           |
| DCI 9/10      | 18 / 6           |
| DCI 13/14     | 15 / 3           |
| BNC           | —                |

2. Remove the four cover screws holding the DAX box together.
3. Close the PAIR of DIP switches that correspond to your source selection. See Figure 3.
4. Replace the cover screws.
5. Connect the HI output of the cinema processor to the HI input on the Phoenix connector.

### **Assemble the Phoenix Connector Plug as Required:**

| <b>Pin</b> | <b>Function</b>  | <b>Comments</b>               |
|------------|------------------|-------------------------------|
| 1          | VI-N + (Output)  |                               |
| 2          | VI-N - (Output)  | Connect to Gnd for unbalanced |
| 3          | Gnd              |                               |
| 4          | HI - (Output)    | Connect to Gnd for unbalanced |
| 5          | HI + (Output)    |                               |
| 6          | Earth Gnd        |                               |
| 7          | HI - (Input)     | Connect to Gnd for unbalanced |
| 8          | HI + (Input)     |                               |
| 9          | HI CTL (Control) | Connect to Gnd for AES        |
| 10         | Gnd              |                               |

6. Connect the VI-N and HI outputs to the IR or RF transmitter. If the system has an unbalanced input, be sure to jump the “ - ” signal output

to the Gnd pin.

7. The HI signal can be sourced from either the cinema processor or the cinema server. With no connection to the HI CTL (Pin 9 Phoenix Connector), the HI source will be the cinema processor. If HI CTL is grounded, the source will be the cinema server. The cinema automation system can also be used to select HI sources.

### **Connect and Test**

8. Plug in the Phoenix connector, BNC, DB25 input and output as needed.
9. Plug in the power supply into the DAX and into the line.
10. Check the LED for the correct HI source: Green = Analog, Red = AES
11. Run source material and verify proper levels and audio quality at the user end.

### **Specifications**

Input Voltage: 12VDC, 1A

HI/VI-N AES Source:

-20dBFS reference

Internally selectable choice between

Dolby 7/8

DCI 7/8, 9/10, 13/14, 15/16

BNC

HI Analog Input: 300mVrms = 0dBr via Phoenix type connector

HI Source selection: via Phoenix type connector

Analog Outputs: 300mVrms = 0dBr via Phoenix type connector

Frequency Response (all inputs): 20-20kHz +/- 0.5dB

Noise (A wt'd'd) (all inputs): <-80dBr

THD (all inputs): <0.005%

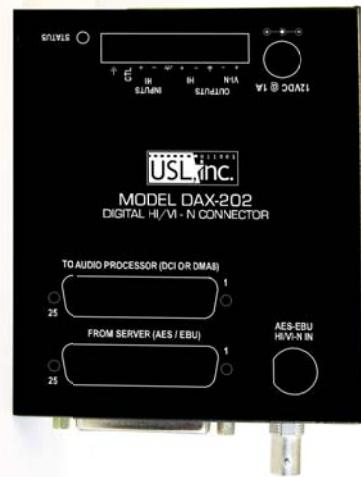


Figure 1 - Connection Description on Cover



Figure 2 - AES Connectors

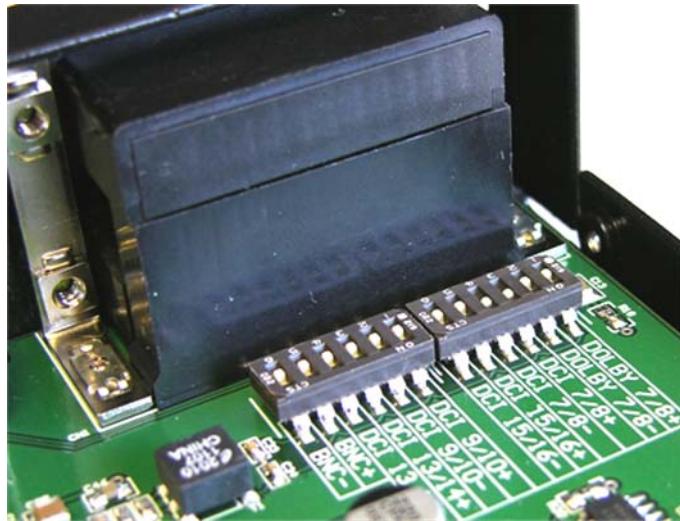


Figure 3 - AES Source DIP Switches (DCI 7/8 Shown)

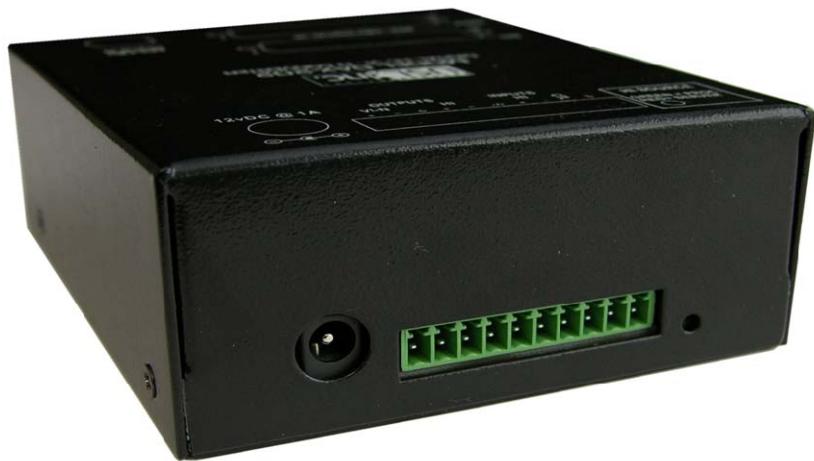


Figure 4 - Power and HI / VI-N I/O Connectors

**Additional DAX-202 User Manuals may be  
viewed / downloaded at: [www.uslinc.com](http://www.uslinc.com)**





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