Tech Talk Application Note #5

Application: Using the ***AES-302*** Digital Audio Switcher/DA with an inexpensive CD/DVD Player to provide automatic back up audio at a transmitter site for stations lacking an alternate path.

Benefits: Interfacing the ***AES-302*** to an inexpensive CD/DVD Player capable of MP3 playback provides hours of playback audio at very little cost. The cost of the player used in this example was less than fifty dollars.

Application Note: The accompanying schematic diagrams on page 3 show the suggested connection of remote control interface and digital audio connection between the BDI ***AES-302*** and a CD/DVD player with coaxial digital output. Audio connection is taken from the coaxial output of the player and connected to the B input of the ***AES-302***. If a player with optical output is available, the ***AES-302*** can be ordered with an optical input for direct connection via a light pipe. It is necessary to modify the player by soldering a pair of wires to the start button of the machine. A player with a wired remote could also be used. Choose a CD/DVD player that is suitable for your needs. If you will be recording MP3 files make sure that the recording CD player and the CD/DVD player that you use for this project are compatible with each other. Also, choose a player that will remain on at all times. Some players go to "sleep" after a certain amount of time. Players suitable for this project can be had for as little as $50.00 making this an inexpensive and easy way to provide many hours of automatic backup audio for a station.

The photos on the next page show how a simple circuit board with DIP relay, resistor, and capacitor can be mounted right inside the player. If you have a player that can be started with a maintained closure, the capacitor and resistor aren't needed. Simply connect pin 7 to the relay coil. We used a DB9 connector for interface but a ¼" or 1/8" tip/ring/sleave phone jack and plug could be used as there are only two remote connections from the ***AES-302*** required. Use the tip and ring for connections to the circuit and add a ground to the sleave if desired. If a DB9 is used, the additional relay contacts could be used to actuate an alarm or auto dialer.

Here is how it works: If your primary feed were to fail, the ***AES-302*** will switch immediately or after predetermined silence depending on the type of failure. Once the ***AES-302*** switches to the B input, the remote control status output will command the CD/DVD player to start playing. Depending on the your recording sample rate and amount of compression, the CD player can provide many hours of playback audio to your transmitter pending restoration of the primary feed. For example, at 128 kB/sec can provide over ten hours of back up audio with this simple and inexpensive setup. BDI can supply the parts necessary for this example or a wired perforated board with components mounted. Call us for availability.

For any questions about this application or any other, feel free to call or email us for further information. Telephone – (914) 737-5032 or email us at Techsupport@Broadcast-Devices.com

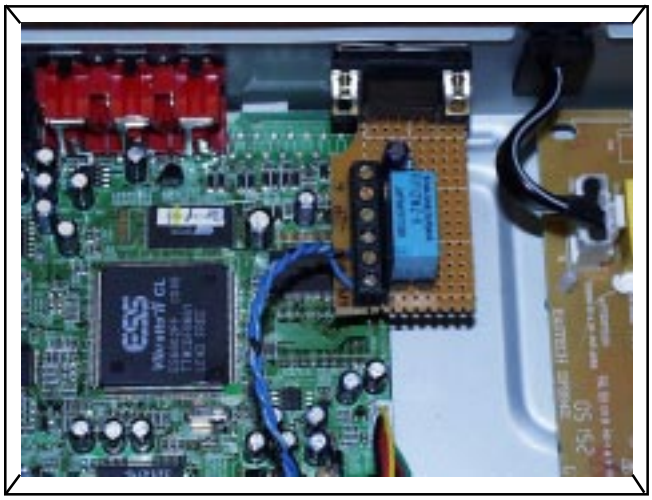


Figure 1

You can install the suggested circuit inside the player. Here we used a DB9 connector for connection and support. You can use a simple 1/4” or 1/8” tip/ ring/sleave phone jack instead as the project only requires two connections to the AES-302.

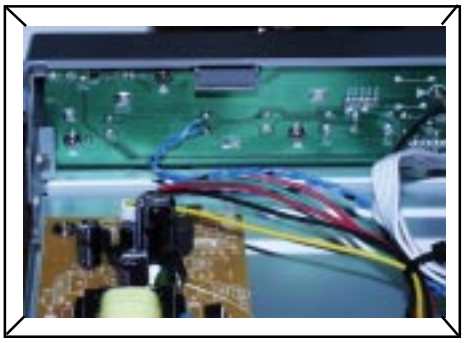
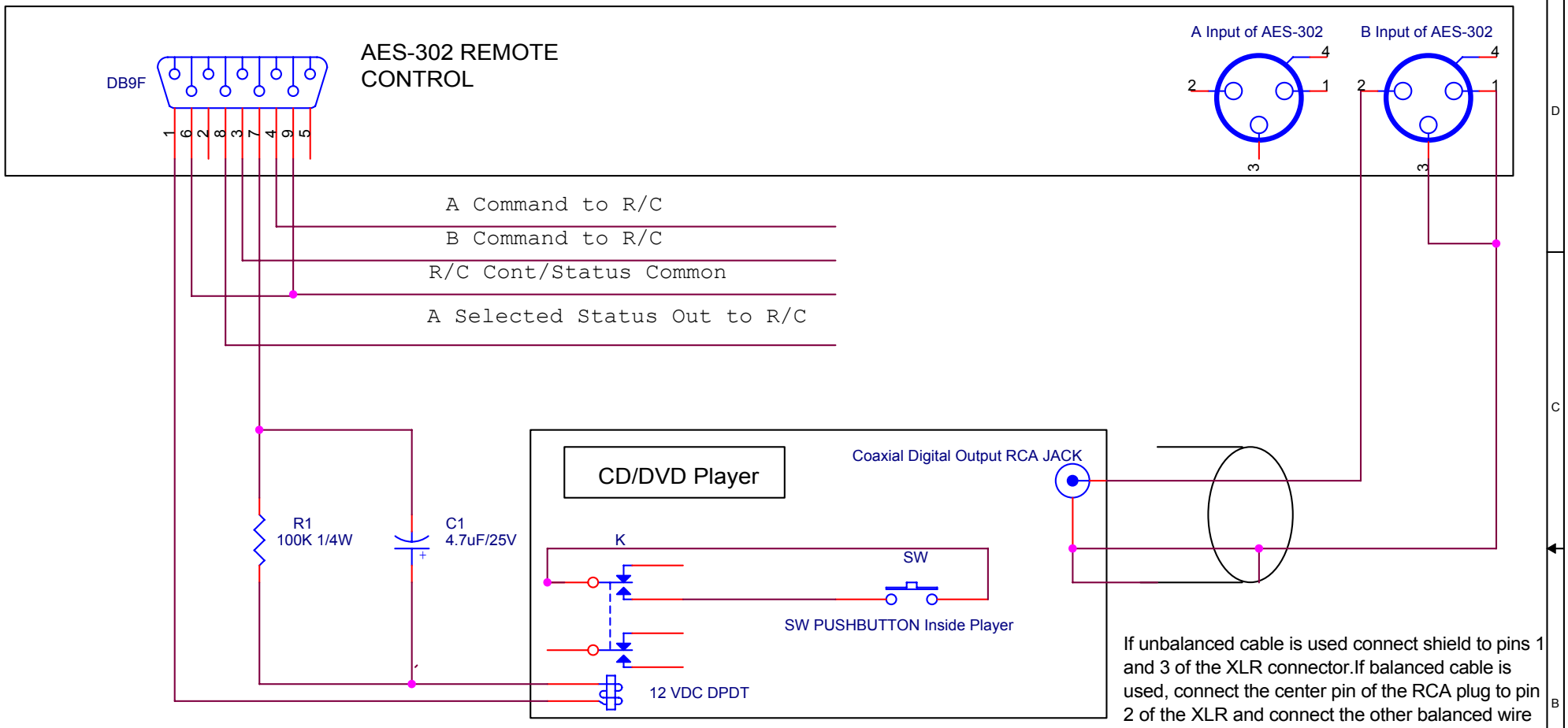


Figure 2

Figure 2 shows a simple two wire solder connection two the front panel start button. These are the only connections to the player. The AES-302 provides power and ground. The on board relay provides a dry closure to the player.

Here a rear panel view shows the DB9 connector protruding from the back. Allow enough clearance so that the cover can be replaced and that nothing touches inside. The player in this example has plenty of room inside so the board could have been mounted to the chassis as an alternate method.

Figure 3



If unbalanced cable is used connect shield to pins 1 and 3 of the XLR connector.If balanced cable is used, connect the center pin of the RCA plug to pin 2 of the XLR and connect the other balanced wire to the shield and then connect the shield to pins 1 and 3 of the XLR connector as shown.

Suggested Digital Audio Cable and Remote Control Wiring Between Player and AES-302

BDI Tech Talk Application Note

AES-302 Application 5

AES-302/CD/DVD Interface

Call BDI Applications Engineering at (914) 737-5032 or email to:
TechSupport@Broadcast-Devices.com