



DASDEC-1EN Digital Audio Insertion with BDI AES-302

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Introduction

The DASDEC-1EN EAS Encoder/Decoder is controlled via a web browser over a LAN or by using a connected keyboard/monitor/mouse and the built-in desktop browser interface. The unit has 3 built-in radios for FM/AM/NOAA reception. It also has a fourth analog audio decoder input that can be connected to an external receiver. The DASDEC offers both traditional analog Emergency Alert System (EAS) and digital EAS via serial and LAN control protocols, with MPEG streaming, AES audio output and using third party equipment.

The DASDEC can be interfaced to the Broadcast Devices, Inc AES-302 Digital Audio System to reliably insert EAS audio into an AES program stream.

Digital Audio Insertion

The **DASDEC** with AES option provides a single balanced AES digital audio output for Emergency Alert System audio. *The DASDEC does NOT offer a built-in passthrough feature for digital audio.* Rather, the DASDEC can be easily interfaced to other platforms built especially for robust digital audio switching and insertion. The **Broadcast Devices, Inc AES-302 Digital Audio System** is a Digital Alert Systems recommended 1RU platform for achieving EAS audio insertion into an existing AES program stream. This unit offers fail-safe pass-through of the main input AES program stream even when power is removed from the platform. The unit also is a 4 channel digital distribution amplifier providing 4 AES outputs from the selected input. It also has a digital to balanced analog converter, providing a fifth output channel.

Interfacing a DASDEC to the AES-302 is simple. Your station provides the main on-air AES audio to channel A of the AES-302. The DASDEC provides other digital audio input to channel B of the AES-302. During an EAS alert event, the DASDEC provides EAS audio out of its AES and analog audio output ports. Through the use of two GPI output relays from the DASDEC, the AES-302 unit is switched between program audio to alert audio during an EAS origination or forwarding event. It is then switched back to program audio at the end of the alert notification. See Diagram 1. The AES-302 also features manual override switches to easily switch from the DASDEC audio channel B back to the program channel A.

System Integration

Audio Connection:

Connect the DASDEC AES card digital breakout XLR cable for AES output to input channel B on the back of the AES-302. Connect your program audio via XLR to channel A of the AES-302. Connect the XLR connector for your main AES program output to the Output 1 on the back of the AES-302. Connect duplicate outputs to the any of AES output 2 through 4.

Table 1 :- DB9 Pinout on AES-302.

| PIN # | FUNCTION |
|--------------|------------------------|
| 1 | +15 VDC @ 100mA. |
| 2 | No connection |
| 3 | Select channel B input |
| 4 | Select channel A input |
| 5 | Error Reset |
| 6 | Status relay common |
| 7 | Status - "B" selected |
| 8 | Status - "A" selected |
| 9 | Ground |

Command input pins 3, 4, and 5 requires a momentary closure to ground. However, constant closure to ground will also switch from channel A to B. This allows DASDEC Relay 1 to be used to switch from program audio on channel A to EAS audio on channel B. The status connections are to dry contacts. Use no more than 24VDC on these contacts or damage to the relay can occur. The DASDEC does not provide any interfaces to the status connections.

Status input lines are not supported on the DASDEC as of 1.6-1 software.

Table 2 :- DB9 Pinout on Titus Technologies WebREM-300 or on Monroe R190.

| PIN # | FUNCTION |
|--------------|--|
| 1 | Relay 2 contact – Programmable on DASDEC under Setup->Net Alerts->Net GPIO |
| 2 | Relay 1 contact “ “ “ “ “ “ “ |
| 3 | Relay 4 contact “ “ “ “ “ “ “ |
| 4 | Relay 3 contact “ “ “ “ “ “ “ |
| 5 | Relay common and status input common – Wire to ground connection. |
| 6 | Status 2 input Unused by DASDEC. |
| 7 | Status 1 input “ “ “ |
| 8 | Status 4 input “ “ “ |
| 9 | Status 3 input “ “ “ |

Relay output is normally open and is rated at 1 Amp @ 5 VDC. The status inputs are TTL level (5 VDC true). Care should be taken to not exceed these ratings.

Status input lines on pin 6-9 are not supported on the DASDEC as of 1.6-1 software.