DASDEC™ Interfacing to Broadcast Devices Inc. GPM-300 Series General Purpose Matrix Switcher

Introduction

The DASDEC-II EAS Encoder/Decoder includes an AES digital audio output[1], with a AES audio loop through. When combined with MultiStation-2 or MultiStation-5 software however a single AES program switch is not sufficient to cover multiple audio program streams. Therefore to expand the audio capabilities, the DASDEC interfaces with the Broadcast Devices Inc. GPM-300 Series General Purpose Matrix Switcher to provide EAS audio insertion on multiple channels.

The GPM-300 switcher is a compact crosspoint switcher providing a simple and low cost method to switch multiple channels of AES digital and/or stereo analog audio signals. The GPM-300 is available in a 4x4 or an 8x8 matrix while scalable, module design lets you purchase only what you need with room to expand and its –DSP architecture provides outstanding flexibility and reliability in a single rack chassis. With a GPM-300 a single DASDEC EAS encoder/decoder can switch the EAS audio—either digital or analog sources up to eight outputs- the simple block diagram in figure 1 depicts this configuration.
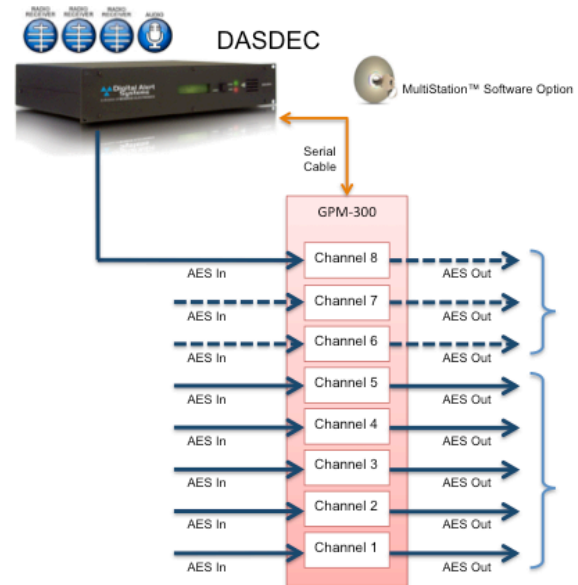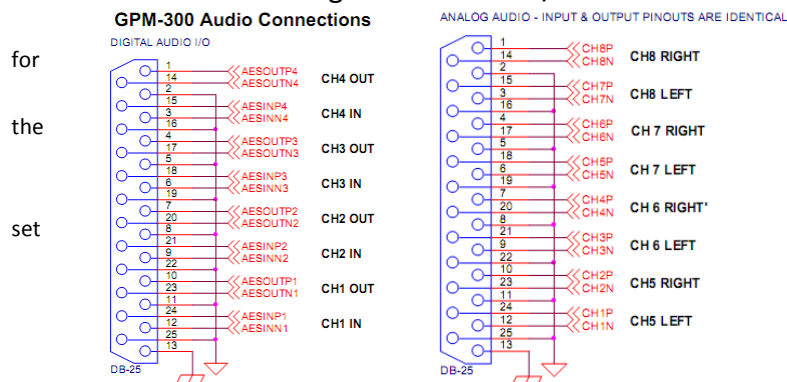
Figure 1. DASDEC and GPM-300 configured for 5 discrete program streams.

Setting up the GPM-300

1. The following are the Audio I/O connections for the GPM-300.[2]

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set

Aside from wiring there is a setting sequence configuring the GPM as a series of A-B switches. As one might surmise from Figure 1 GPM should be configured for each of the A side inputs to correspond to a specific output. The B sides for all channels are then for the same input – channel 8 in the diagram above. The remaining information assumes this is completed and working

1. AES digital audio is not available on DASDEC models DASLC of DASLCR
2. Note: BDI also has an optional breakout panel featuring XLR's or BNC connectors available. Please contact BDI for more information.

2. The GPM-300 is serially controlled by the DASDEC. Simply connect the supplied straight through DB9 serial cable from the DASDEC serial port on the rear of the chassis to the DB9 RS-232 connector of the GPM-300. (for more information please refer to the GPM-300 owner's manual).

3. Log onto the DASDEC box either remotely or locally from the web browser interface. The default is "Admin" as the User Name and "dasdec" as the password. (note: User Name and Password are case-sensitive)


Note:For correct operation cookies & javascript must be enabled on your browser.

4. To set up the activation of the serial port, go to **Setup>Decoder>Forwarding**. Then select your first station. (For this example we will use "ABCD"). (Note- this assumes the DASDEC has either MultiStation-2 or MultiStation-5 installed)
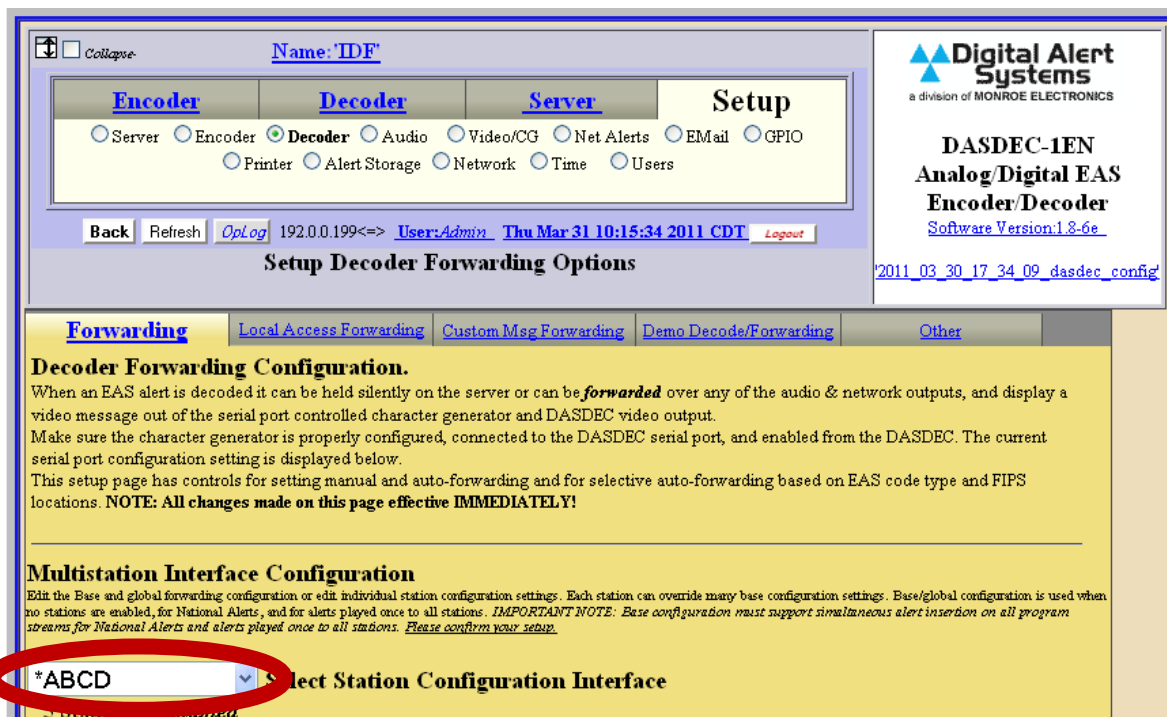
5. Down the page you will see menus for GPI's and GPO's. Pay particular attention to the left side menu for "Active Orig/Fwrd Serial Ports". Select the Main Serial Port that corresponds to the same port the cable was connected in Step 2. Important note: This MUST be done for each station we want to tie to the GPM-300.
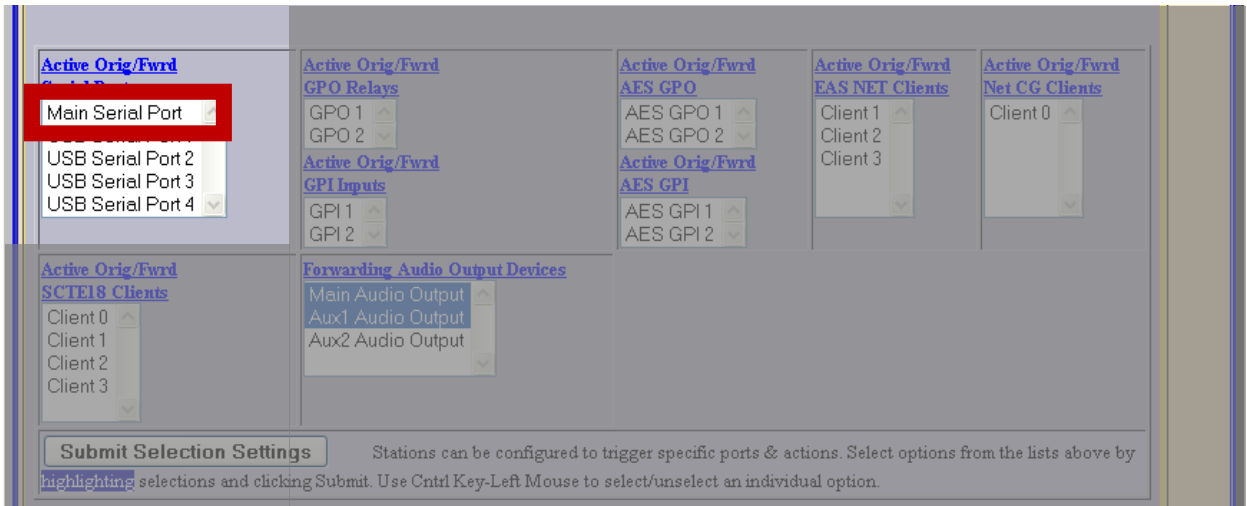
6. Now go to Setup>Video/CG>Main Serial and select the BDI GPM-300 Matrix Switcher.

7. In the section immediately below there are columns corresponding to the MultiStation configuration. (Ie. Under MultiStation-2 there would be only 2 stations options). These settings relate to the channels switched on the GPM-300. Now select which station to go to each switch. (An easy setup is to tie 1 to 1 and 2 to 2.. Audio input from the DASDEC will also be tied to input 8, example 2).

8. **IMPORTANT NOTE:** To assure all channels switch to the Base Station during an EAN or any other master function, you must select all channels in the Base Station column. Do this by holding down the Control key (CNTL) then click (select) each number in the Base Station column.

9. There are other options setting available on this setup screen. The option of setting **Base Station Alert Text Mode** is text, and we are using audio switching so this setting can be left to the default "Use Base Station Alert Text"

10. GPI Filter Configuration is not used for this setup. Default "DO not use GPI triggers" is set.

Do not use GPI triggers ▼	**GPI Filter Configuration** - Optionally designate GPI inputs required to trigger this net interface.
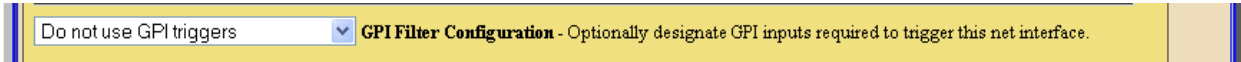
11. If View Advanced Options is checked you will see another setting; "*Global Serial Port Server Timeout (sec)*" which sets the 2 way communication interface timer to time out if there is no response. The default value for this is 7.

☑ **View Advanced Options** *(uncheck to remove view)*.
        Global Serial Port Server Timeout (secs) `7`
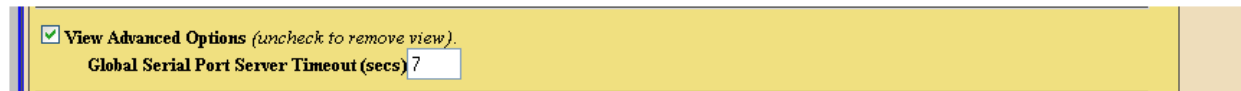
12. FIPS and EAS Codes Filter configuration should already be set up in your MultiStation configuration. Setting these filters are redundant and unnecessary in this configuration. When completed setting up stations click on "Accept Changes"

FIPS and EAS Codes filter configuration. *Only originated or forwarded alerts with matching FIPS and EAS codes will activate this serial device.*

Activating FIPS
[Any FIPS]
[Edit FIPS]

Activating EAS Codes
[All EAS Codes]
[Edit EAS Codes]

Source alert FCC EAS Station IDs Activation filter string
*(only use to filter specific incoming alert station IDs; up to 8 character each, separate each source EAS station ID with a | char; eg. STAT1|STAT2 filters for the two FCC EAS station identifiers STAT1 or STAT2). The * character matches all FCC EAS Station IDs.*
`*`
All EAS Station IDs Activate this port.

Do not use GPI triggers ▼	**GPI Filter Configuration** - Optionally designate GPI inputs required to trigger this net interface.

☑ **View Advanced Options** *(uncheck to remove view)*.
        Global Serial Port Server Timeout (secs) `7`

[Accept Changes] [Cancel Changes]

Setting up the GPM-300 for bonded channels

Another useful setup for the GPM-300 is bonding Channels. As shown in Figure 2. This is very useful for SAP channels and for multiple station insertion. Where you would want to switch multiple channels at one time.
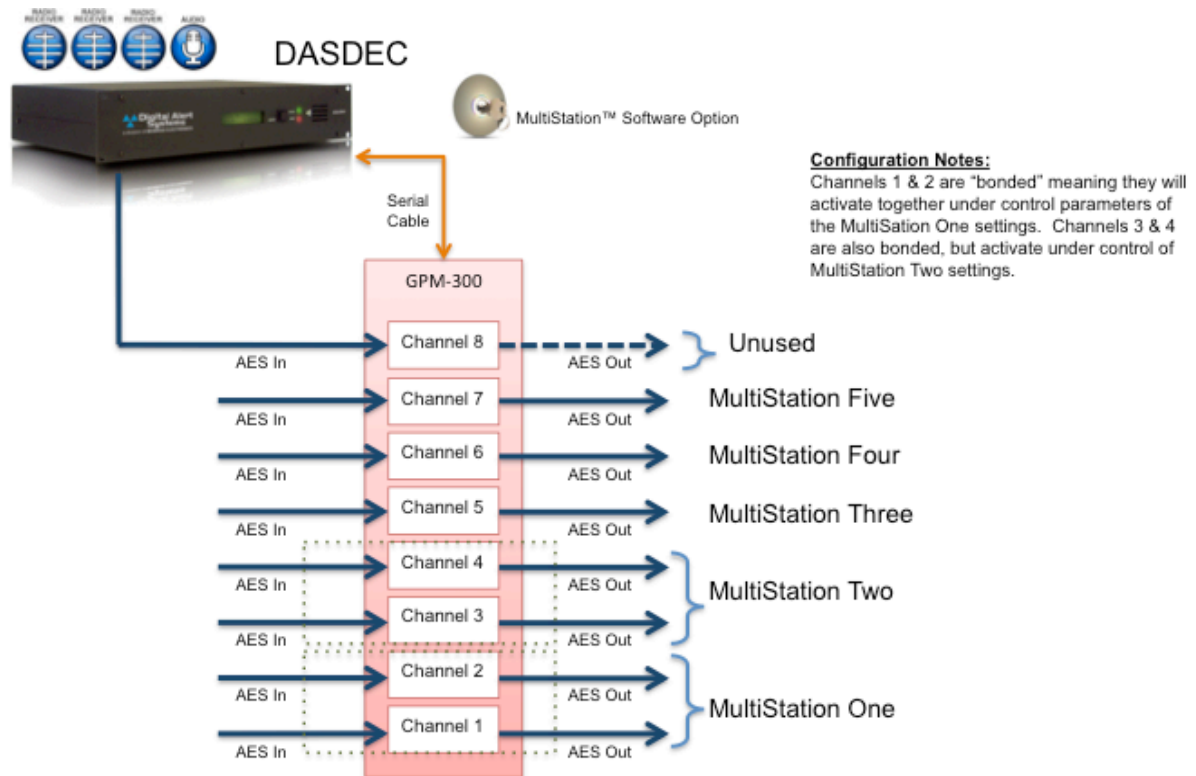

Figure 1 DASDEC and GPM configured with bonded channel pairs.

1. Setting up the DASDEC and GPM for channel bonding is done under the *BDI GPM-300 Audio Channel Selections* area (see example below). To select multiple channels hold down **Ctrl** and click the channel(s) to assign them to a station. Using this method you can assign several channels to activate with a station at the same time.

Accept changes when done.