

## DASDEC™ Interfacing to DM Engineering MSRA/MSRE Series Switchers

### Introduction

The DASDEC-II EAS/CAP Encoder/Decoders include a single analog balanced-stereo audio switch for inserting an EAS/CAP audio message into the program stream<sup>1</sup>. However, a single program switch is not sufficient to cover multiple audio program streams therefore combining the MultiStation-2 or MultiStation-5 software with an additional audio switch like the **DM Engineering Multi Station Relay Adapter (MSRA)** provides individually controlled audio insertion on multiple channels expanding the audio capabilities up to a total of four discrete channels. The MSRA is a compact three (3) channel stereo switcher providing a simple and low cost method to switch multiple channels of stereo analog audio signals with the EAS audio from a DASDEC without requiring an external audio distribution amplifier and cabling. Similarly the **DM Engineering Multi Station Relay Expander (MSRE)** provides three pairs (six total) of additional Form-C relays for controlling a wide variety of devices during and EAS event.

A special cable (included with the MSRA) connects the DASDEC and MSRA for serial and audio inputs, while a multi-turn recessed front panel “Input Gain” trim potentiometer and individual multi-turn “Station Gain” controls on the MSRA provide control over the active stereo distribution amplifier sections of each channel. A recessed front panel “Test” switch is also provided for aiding the setup of the audio levels.



Figure 1 DASDEC and MSRA configured for 4 discrete program streams (requires MultiStation-5 for more than two channels).

An optically isolated open emitter and collector “Tally” output is provided and is active when any of the three MSRA controlled stations are activated, and remains active until the end of the EAS activation.

The MSRA is available standard desk top or 2 RU rack mount configuration.

<sup>1</sup> DASEC models DASLP\*\*\*, DASRAD\*. DASTV\* also include a separate single balanced AES digital audio program switch.

**Setting up the MSRA/MSRE**

1. The MSRA includes a special interconnecting cable combining both serial communications and audio inputs into a single RJ-11 connector as shown in **Figure 2**. Use this cable to connect the DASDEC main serial port and the audio output of the DASDEC (Please refer to the MSRA/MSRE owner’s manual for more information on wiring connections).

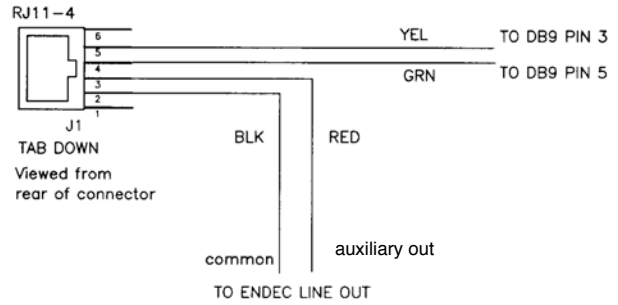
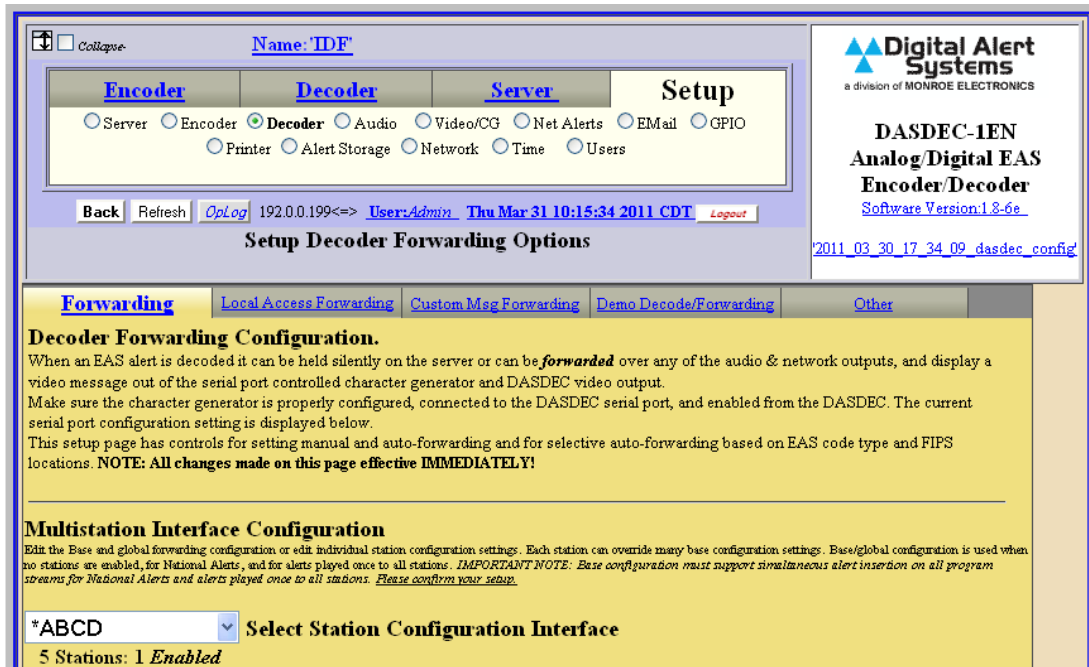


Figure 2. MSRA interconnecting cable.

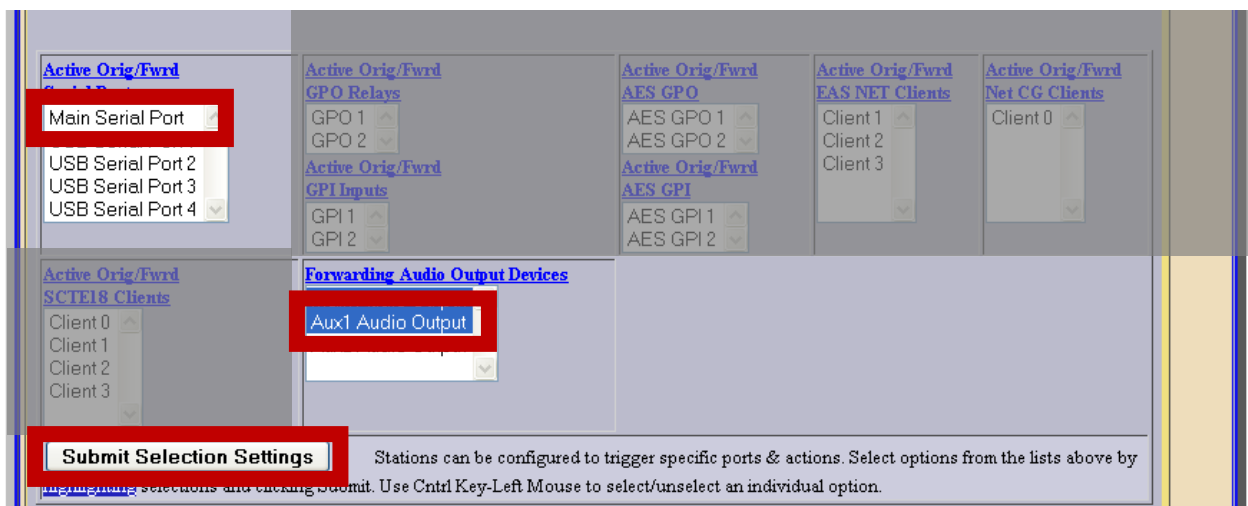
2. Connect the MSRA cable to the DASDEC’s Main Serial DB-9 (RS-232) connector port on the rear of the chassis.
3. If the DASDEC supports an auxiliary audio output (all models except DASLC or DASLCR) connect to the other side of the cable to the 1/8” mini plug Auxiliary Audio Output jack. Although the Auxiliary Audio is stereo either left or ride side and ground will work.
4. Wire other audio or connections per MSRA/MSRE instructions and power the device.
5. Log onto the DASDEC from the web browser interface. The default **User Name** is “**Admin**” with the **Password “dasdec”**. (Note: User Name and Password are case-sensitive)



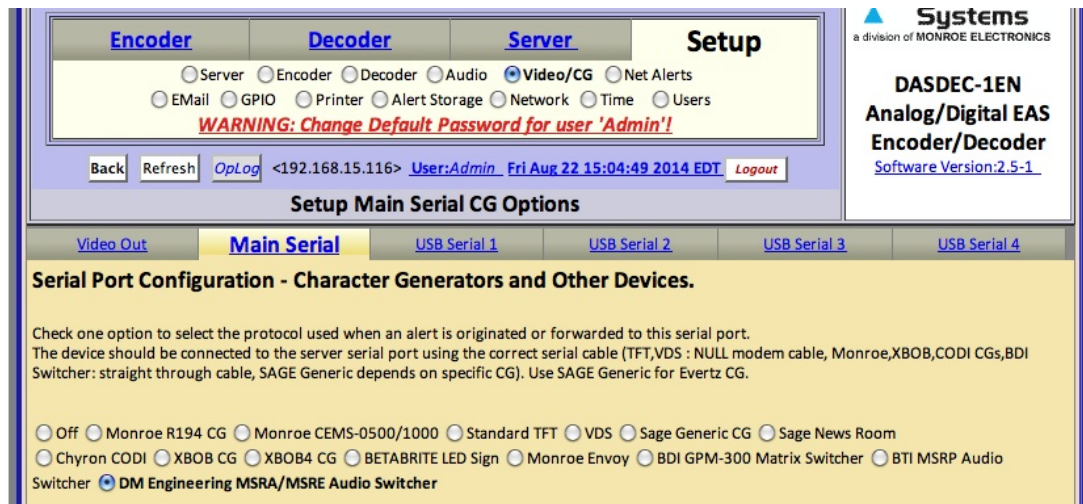
- To activate the serial port for each station (assuming either MultiStation-2 or MultiStation-5 has already been installed) go to **Setup > Decoder > Forwarding** then select the first station from the pull down menu – the example below uses station named “ABCD”.



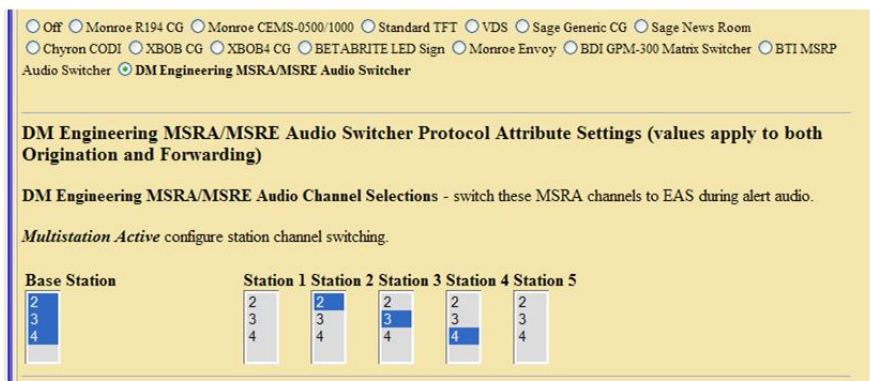
- Once a station is selected scroll down the page for the activation table showing the various port and GPI's /GPO's paying particular attention to the left side menu for “Active Orig/Fwr Serial Ports”. Select **Main Serial Port** that corresponds to the port the cable was connected in Step 2 and **Aux1 Audio Output**, and then click **Submit Selection Settings** to store the assignments. Important note: The same selection MUST be done for each station connected to the MSRA.



- Next go to **Setup > Video/CG > Main Serial** and select the **DM Engineering MSRA/MSRE Audio Switcher** button.



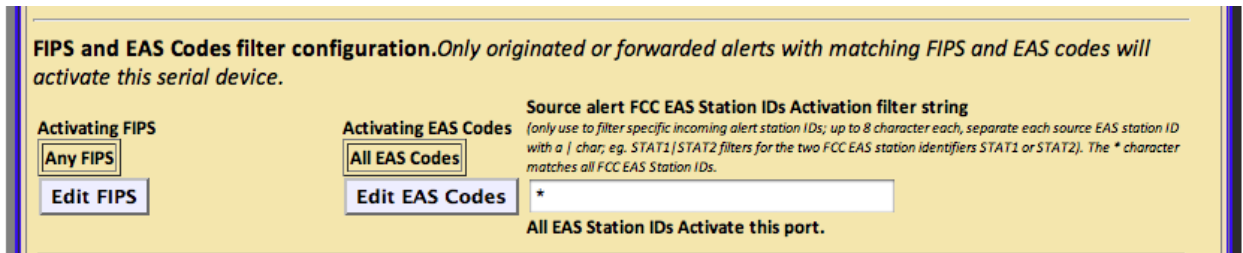
- In the section immediately below are columns corresponding to the MultiStation configuration labeled Base Station and Station 1 through Station 5 depending on which MultiStation license is active (e.g. under MultiStation-2 there would be only 2 station options). Within each column are numbers 2, 3 & 4 relating to the MSRA channels, understanding channel 1 is the DASDEC’s internal switch.
- Select the Station and MSRA switch combination by clicking on the switch number in each station column. An easy configuration idea is to assign Station 2 to switch 2, Station 3 to switch 3 and so on as shown below.



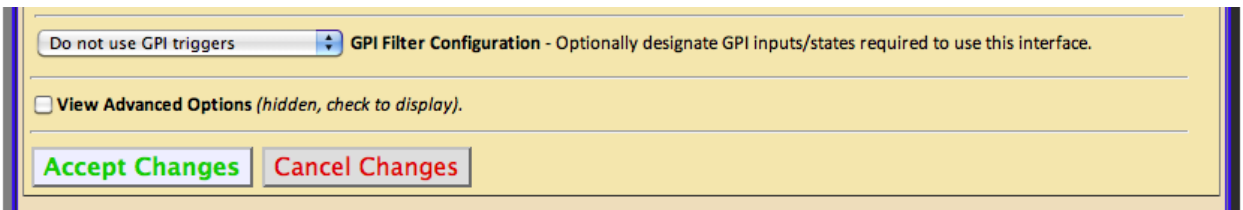
While it may appear strange for Station 5 to appear it is shown because under MultiStation 5 the DASDEC will show all options.

- IMPORTANT NOTE:** To assure all channels switch to the Base Station 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 clicking (select) each number in the Base Station column.

12. Each serial port has the ability to specifically trigger based on FIPS and EAS event codes. Since these filters are most likely already in the MultiStation configuration it is most likely setting these filters are redundant and unnecessary. Changes here should only be done if the serial port control to the MSRA is desired for a very specific FIPS location or EAS event code, otherwise it is best to leave them in the default configuration.



13. In the same manner the triggering for the serial communication can be gated using a GPI Filter Configuration and unless there is a specific need it is best to leave it with the default  selected as shown below.



14. When completed with stations and switch selections click on .

### Setting up DASEC and MSRA for bonded channels

Another useful setup for the DASEC and MSRA combination is bonding switches together. This configuration is useful when simultaneous switching of more than one channel is desired such as a television Secondary Audio Program (SAP) channel, or when programs may be fed from alternate sources, but the EAS message should go out at the same time. This can be simply depicted as shown in **Error! Reference source not found.** and can be configured anytime multiple station insertion or wanting to switch multiple channels associated with a station.

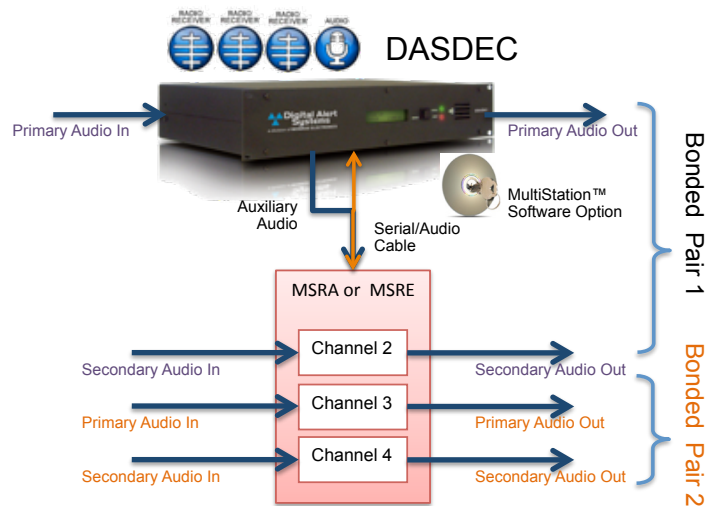
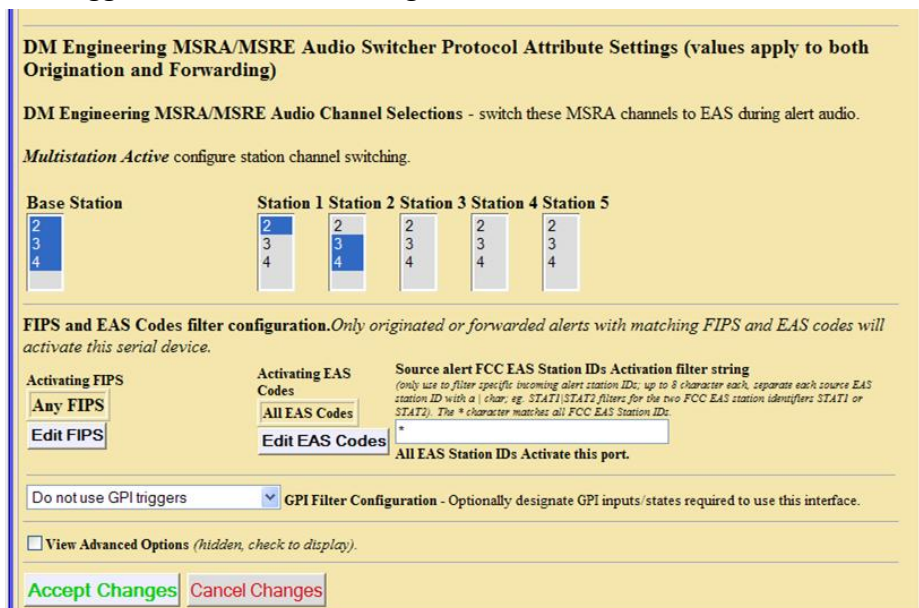


Figure 3 DASDEC and MSRA configured for bonded switch pairs – Primary and Secondary channels switch at the same time

1. After logging in to the DASDEC go to **Setup > Video/CG > Main Serial** and to the Station / Switch assignment section. By holding down the Control (CTL) key multiple switches may be selected in each Station column. Using this feature the DASDEC will trigger the switches as assigned to each station.



The example above will have Station 1 triggering both the DASDEC internal program switch AND the MSRA channel 2 switches at the same time. Station 2 will simultaneously trigger MSRA switches 3 and 4. Stations 3, 4, and 5 are not assigned an external switch in this example, or may be configure on another device.

2. After selecting (or deselecting) station / switch pairs click on **Accept Changes** to store the configuration