Digital Alert Systems DASDEC MultiPlayer Installation Guide

Quick Start Guide

Contents

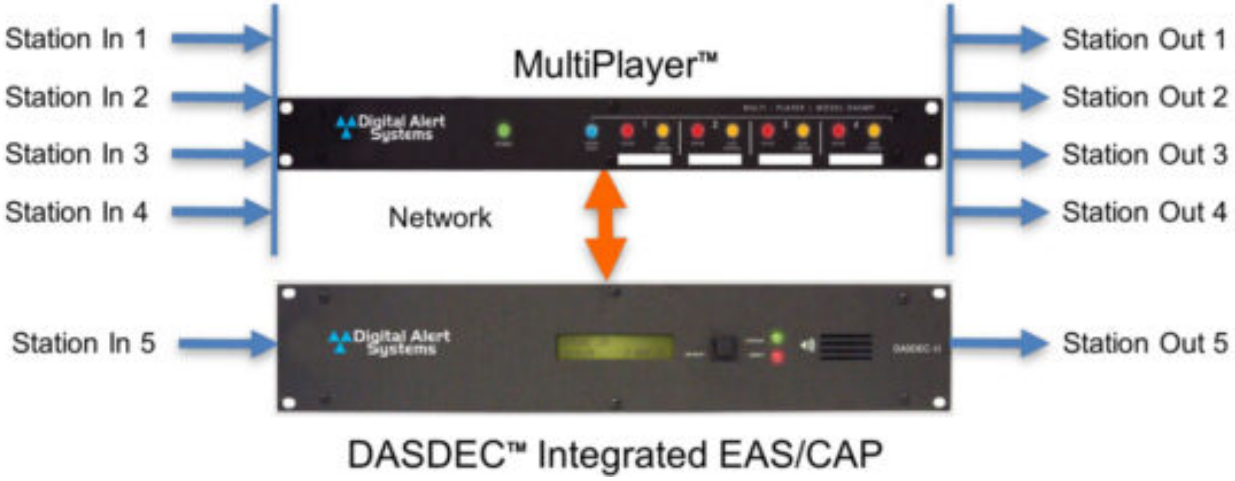
1 DASDEC MultiPlayer
2 Introduction
3 Configuring MultiPlayer Network settings
4 Setting/Modifying MultiPlayer IP address for Switch/router Connection to DASDEC
5 Resetting to Factory Default IP
6 Audio Port Configuration
7 Wiring the MultiPlayer
8 MultiPlayer GPI's & GPO's
9 Documents / Resources
9.1 References
10 Related Posts

DASDEC MultiPlayer

Digital Alert Systems MultiPlayer™ Installation and DASDEC™ Integration

Introduction

The Digital Alert Systems MultiPlayer (model DASMP) is uniquely designed four-channel (designated as Ports 1 thru 4) audio player and program switcher for either radio or television facilities serving multiple program streams. The MultiPlayer works in conjunction with a DASDEC and optional MultiStation™ software to provide completely independent EAS audio playout for up to four discrete channels of EAS playback and program switching either simultaneously, sequentially, or with staggered start times the DASDEC handles EAS playout and switching for the 5th channel. This means a DASDEC and DASMP combination can air any of the five channels at any time The DASDEC host communicates to character generators for television applications and since MultiPlayer is a network based device it can be placed anywhere on a network accessible by the host DASDEC.
Each port on the MultiPlayer can be configured for either AES digital or analog mono, playback and program switching. Both options use standard XLR's. In addition the MultiPlayer expands the number of DASDEC GPI/O's with four GPI's and two GPO's per port available on a 10 position removable terminal strip.



IMPORTANT CONFIGURATION NOTES
Under DASDEC MultiStation™ control Station 1 is hardcoded to MultiPlayer Port 1. Station 2 is hardcoded to MultiPlayer Port 2 and so on. Station 5 is tied to the DASDEC internal audio program switch(es) as depicted in Figure 1.
Current MultiPlayer software supports AES at 48KHz, 32 KHz, and 44.1KHz.

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Configuring MultiPlayer Network settings

The MultiPlayer's factory default IP Address is 192.168.0.220. If connecting the MultiPlayer directly to the DASDEC via one of the network expansion ports no change is necessary by configuring the DASDEC network port to use a similar address. If using a network switch/router to connect the MultiPlayer and DASDEC the IP address will most likely need to be changed.
The MultiPlayer ships with a CAT-5 network crossover cable; this cable allows you to connect directly to the network port on the MultiPlayer. Before directly connecting the MultiPlayer verify you are using a crossover cable by referencing the picture in Figure 4. By not using a crossover cable the connection will not work and one or both

network ports may be damaged.

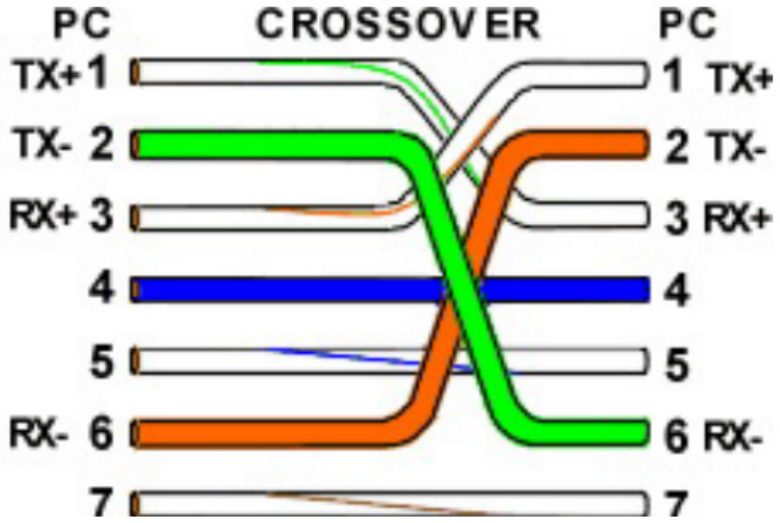


Figure 2 Ethernet crossover cable wiring

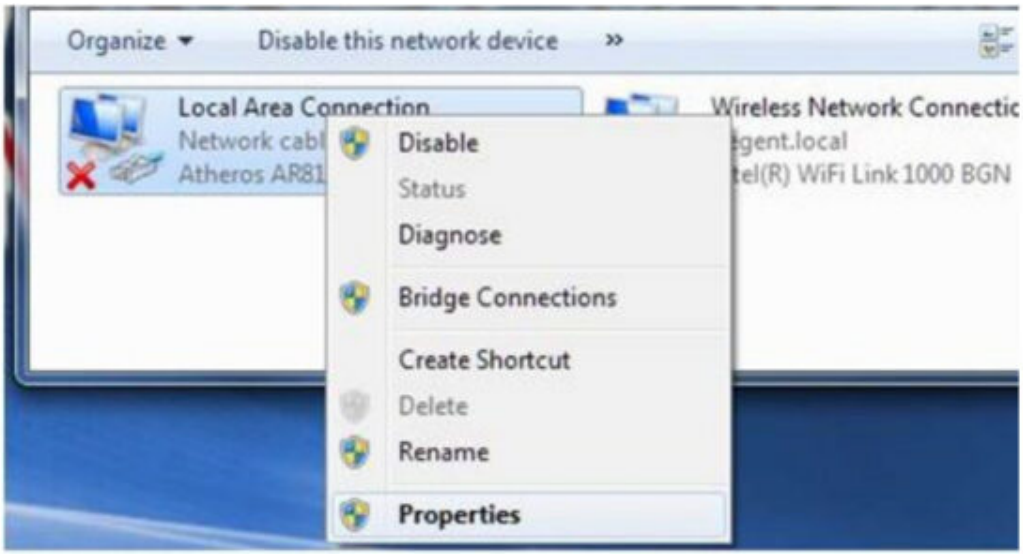
MultiPlayer Direct Network Connection to DASDEC

1. Connect the Ethernet crossover cable from the network connection on the MultiPlayer into an open DASDEC Ethernet port, then skip to Wiring the MultiPlayer

Setting/Modifying MultiPlayer IP address for Switch/router Connection to DASDEC

To assure connection with the DASDEC, the MultiPlayer should be configured with a static IP address. Consult your IT department to determine the following information:

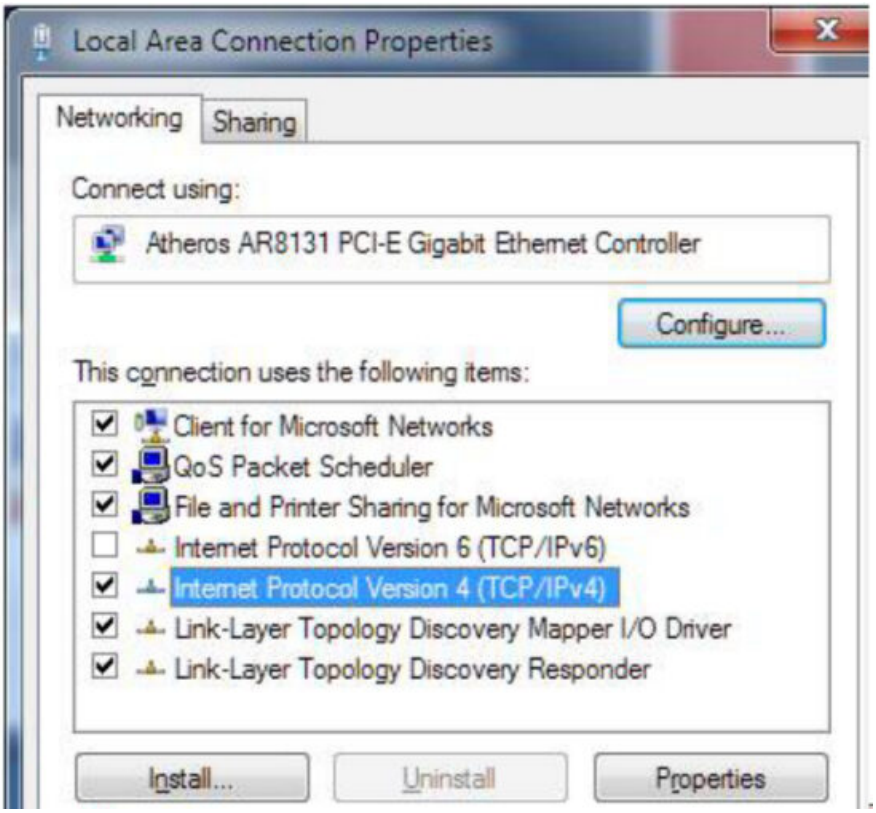
Static IP Address _ _ _ . _ _ _ . _ _ _ . _ _ _
Gateway _ _ _ . _ _ _ . _ _ _ . _ _ _ . _ _ _
Subnet Mask _ _ _ . _ _ _ . _ _ _ . _ _ _ . _
To change the MultiPlayer's IP address you will need a computer whose IP settings can be modified. The following instructions are for a PC with Windows 7 .



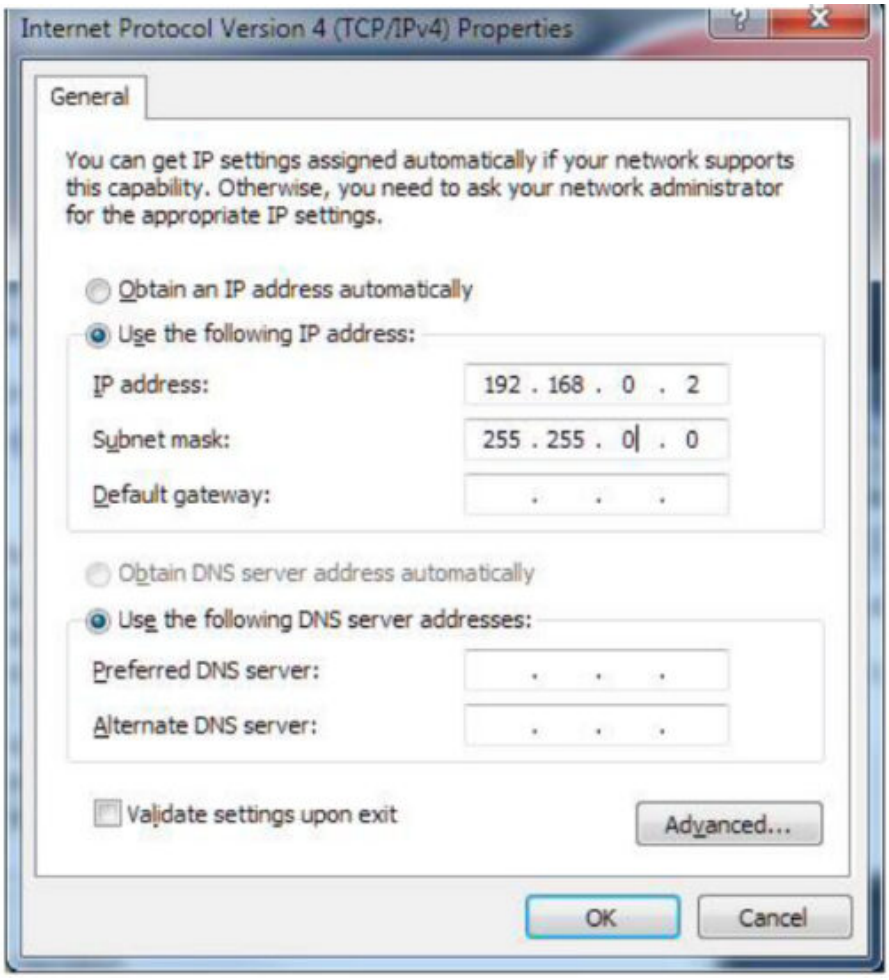
1. On the computer open "Control Panel", then open "Network Connections". Right-click on the network connection you will be using to complete the setup and select properties.
2. From the Network Connection Properties screen click on "Internet Protocol Version 4 (TCP/IP), then click on the "Properties" button.

   Make a note of the current settings in the "Internet Protocol Version 4 (TCP/IP)" properties page that opens so

you can reset the computer to these settings after setting the IP Address of the MultiPlayer.



3. Next click the Radio Button for “Use the Following IP Address”.
4. In the “IP Address” field enter 192.168.0.200.
5. In the “Subnet Mask Field” enter 255.255.0.0. Leave the “Default Gateway”, “Preferred DNS Server” and “Alternate DNS Server” fields blank. Cick OK.



6. Connect the crossover cable from the MultiPlayer to the computer

7. Power up the MultiPlayer by inserting the AC cord and attaching to 100 – 240 VAC power source
8. While the MultiPlayer is booting (approximately 10 sec) open a web browser on the PC
9. In the address line type 192.168.0.220 and press Enter. You should be greeted with the MultiPlayer Home page as shown in Figure 5.
10. Click the link TCP/IP Configuration on the left side of the page. The screen will change to the TCP/IP configuration page shown in Figure 6

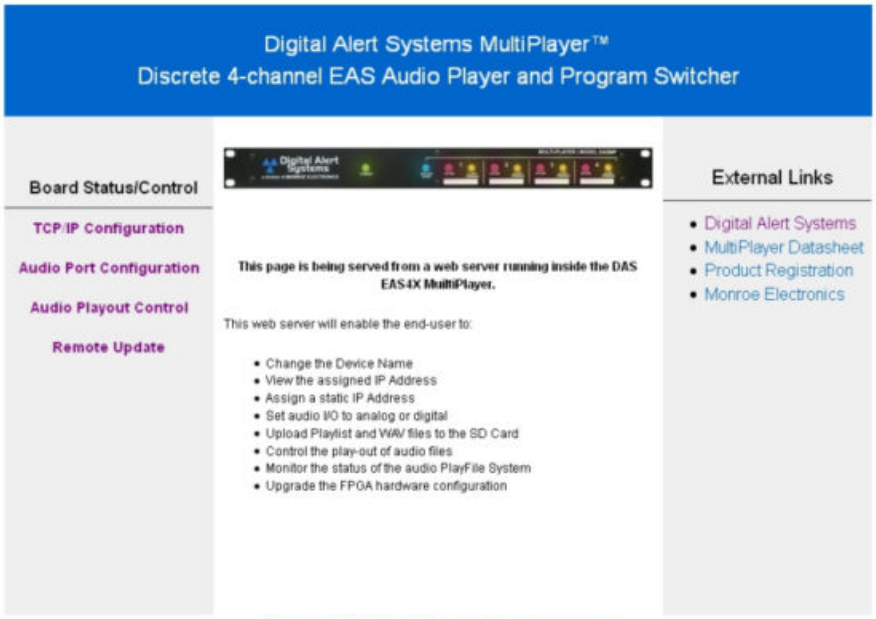


Figure 3 MultiPlayer Home page

11. Enter the previously obtained information for IP Address, Gateway Address and Subnet Mask in the associated fields.
12. Click Save Changes to store the values

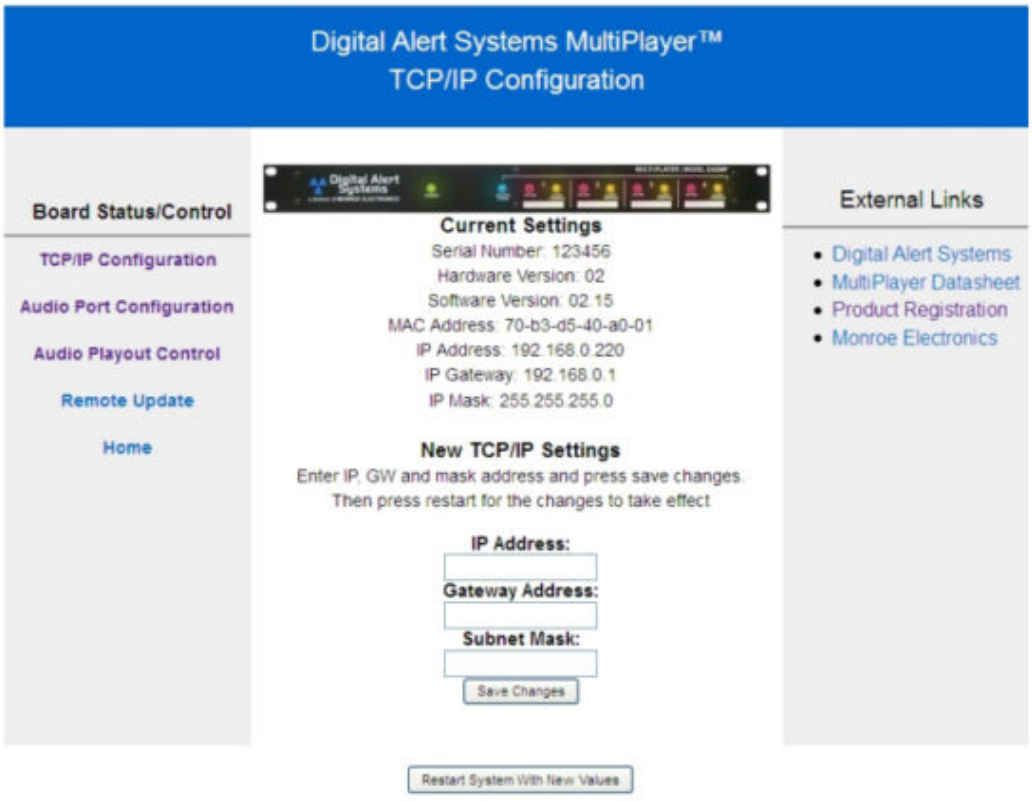
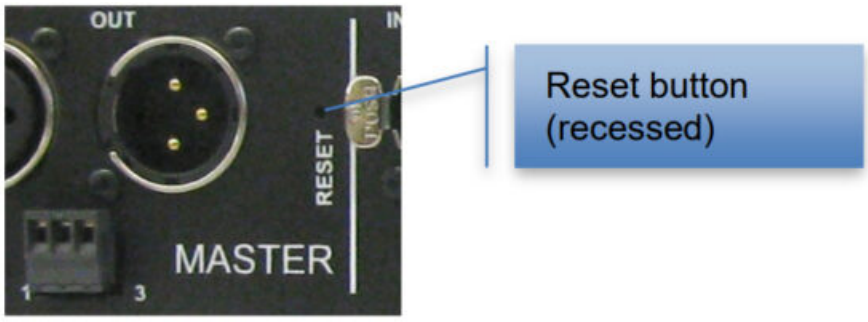


Figure 4 MultiPlayer TCP/IP Configuration screen

13. Click Restart System with New Values which will restart the MultiPlayer with the new values.
14. Disconnect the network connection and plug into the network switch/router
15. Restore the computer's previous TCP/IP valuesby reversing the steps 1 – 6 above.

Resetting to Factory Default IP

Should it be necessary to reset the MultiPlayer to the default IP Address (192.168.0.220), press and hold the RESET button, on the back panel, for 10 seconds.



Audio Port Configuration

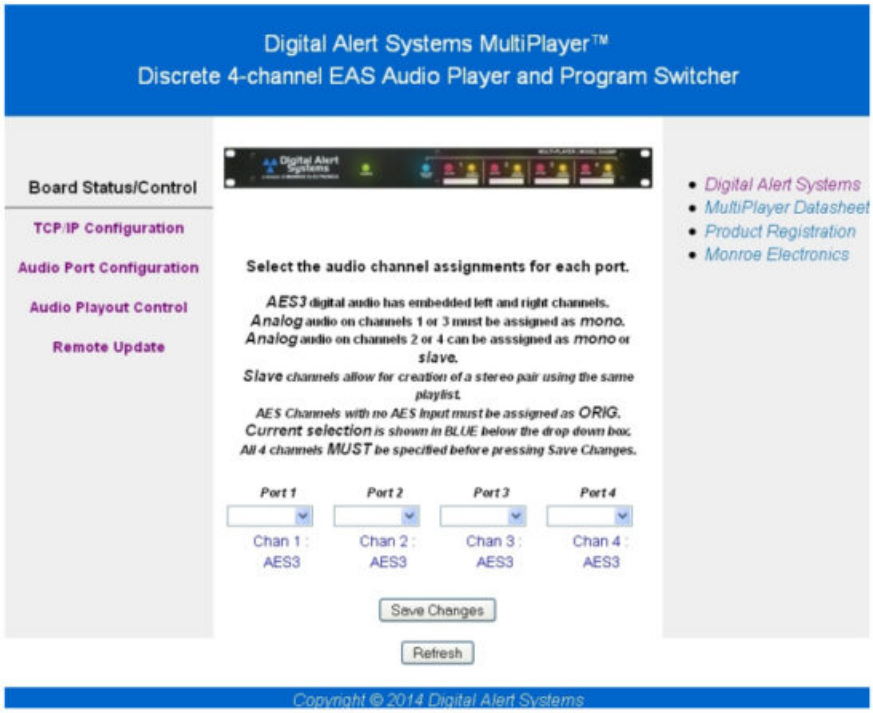
Units are shipped preset for AES playback on all ports. If all stations are using AES playback skip to Wiring the MultiPlayer.
The main point: Ports are assigned a channel, and channels are linked to a station in the DASDEC MultiStation interface.
Each MultiPlayer's audio input/output ports can be configured to conform to the following signal types:

1. AES digital with input(stereo pair)-AES3
2. AES digital without input(stereo pair)-ORIG
3. Analog mono – ANALOG
4. Analog stereo – ANALOG + SLAVE combination

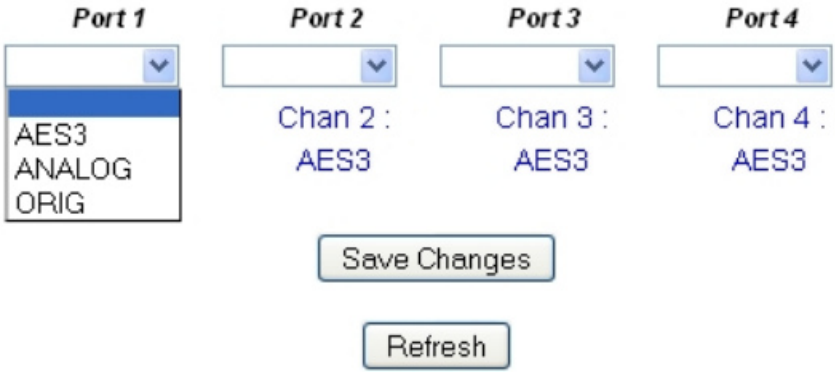
The different channels created by the MultiPlayer are linked to the different MultiStation stations in the DASDEC web interface (do not confuse channels with ports). These rules and guidelines are explained below by use of screenshots from the MultiPlayer web interface.
The screen shot in Figure 7 below is the home webpage for the MultiPlayer. To get to this page just type the IP address of the MultiPlayer into a network connected web browser. Click Audio Port Configuration text link on the left to navigate to the Audio Port Configuration page.

Figure 5 MultiPlayer Home page

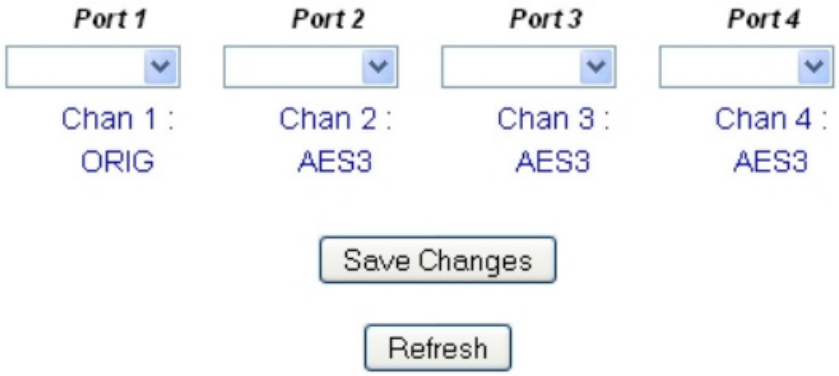
The next screenshot is the Audio Port Configuration page of the MultiPlayer. In this configuration, all of the channels are AES digital channels. Port 1 is channel 1, port 2 is channel 2, port 3 is channel 3, and port 4 is channel 4. Each port is individual and is not bonded to another port. In the DASDEC MultiStation interface, channel 1 would be seen as station 1, channel 2 would be seen as station 2, channel 3 would be seen as station 3 and channel 4 would be seen as station 4. Therefore, 4 stations can be configured in the MultiStation interface of the DASDEC.



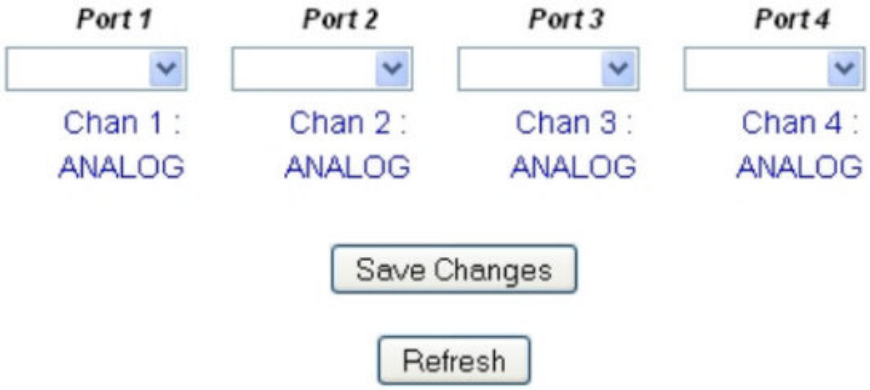
The screenshot to the right shows the different channel types that can be selected for port 1 using the dropdown menu under each port name. While Port 1 was already configured to be AES from earlier it can easily be changed to Analog, or Originator.



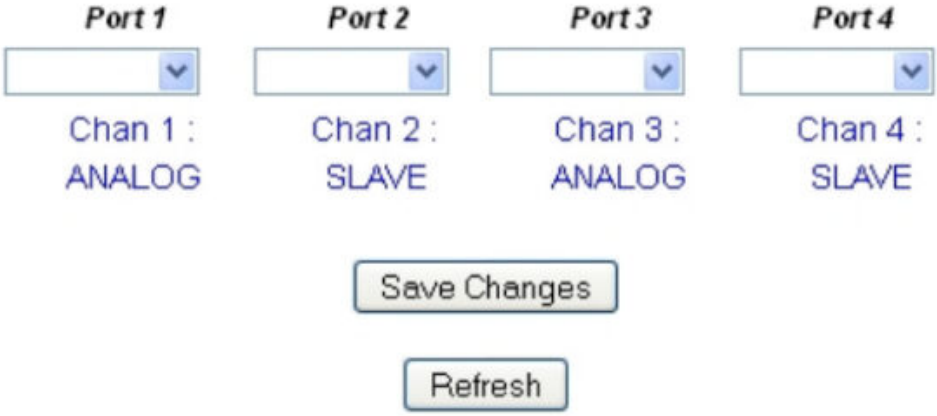
With AES3 selected for the Port configuration, an input source is required on the desired Port.
To use AES audio without an input source, “ORIG” must be selected from the drop down menu, shown on the right.



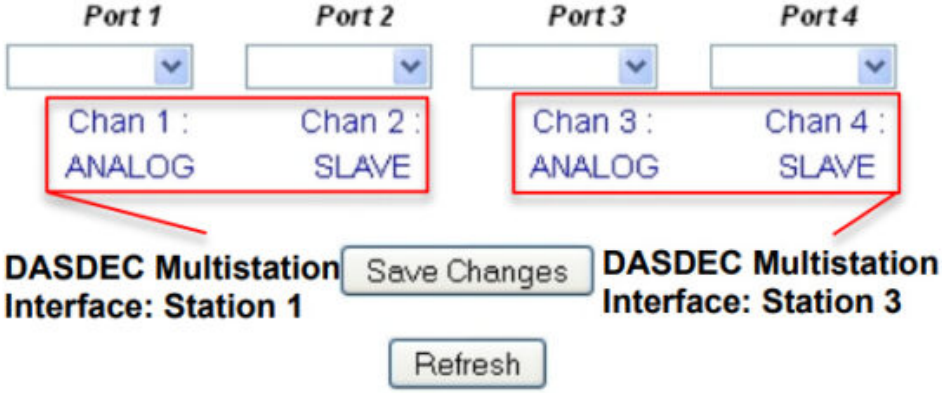
Analog audio can be used as a mono source for any port, as shown to the right.



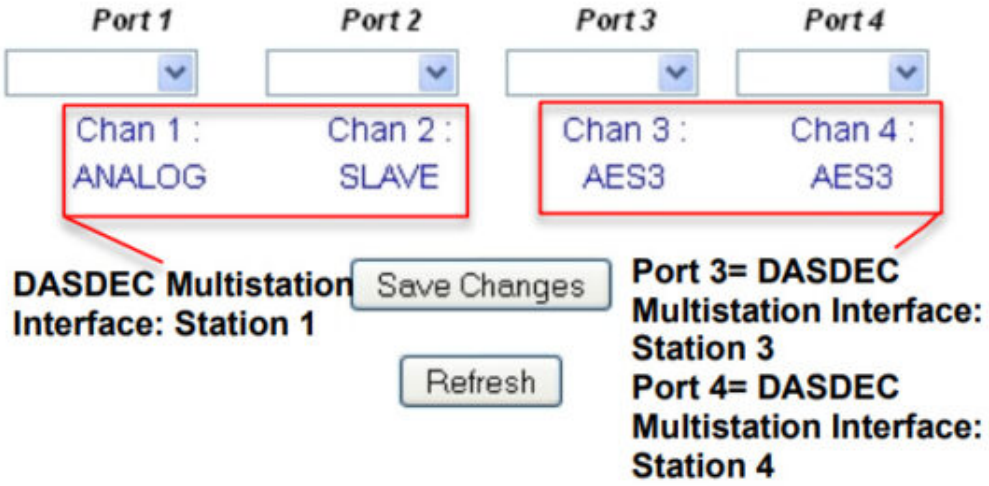
Analog audio can also be used as a stereo left and right source. To use Analog audio as a stereo source, Port 1 would need to be set to “ANALOG” and Port 2 would need to be set to “SLAVE”. This forms a bonded pair.
An analog stereo source can also be configured for ports 3 and 4. Port 3 would need to be set to “ANALOG” and Port 4 would need to be set to “SLAVE”. This forms a bonded pair.
The screenshot on the right shows 2 Analog stereo sources being used.
*The Slave option can only be selected for Ports 2 and 4



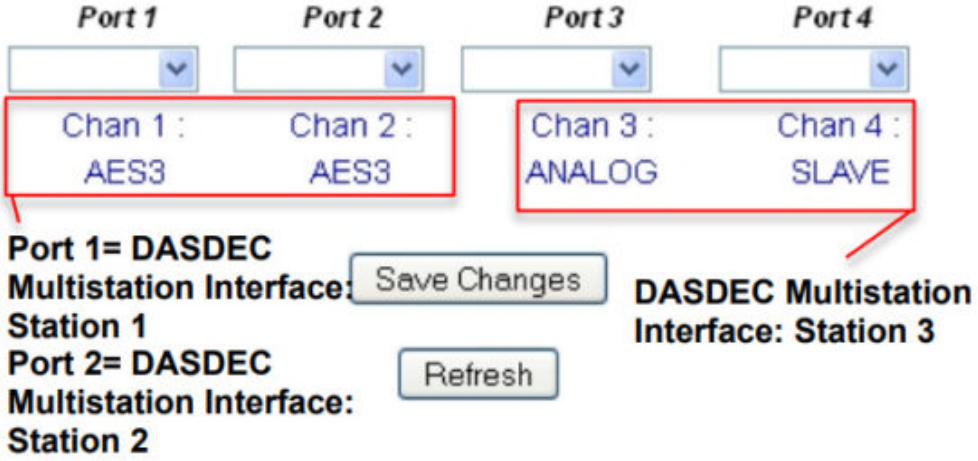
With 2 Analog stereo sources set for the Multiplayer, Ports 1 and 2 are now Station 1 in the DASDEC Multistation Interface. Ports 3 and 4 would be Station 3 in the DASDEC Multistation Interface.



If only one Analog Stereo source is to be used, then the Ports can be arranged in one of 2 ways.
If Ports 1 and 2 are configured as an Analog Stereo source, Ports 1 and 2 are now Station 1 in the DASDEC Multistation Interface. Port 3 is Station 3 in the DASDEC Multistation Interface and Port 4 is Station 4 in the DASDEC Multistation Interface.
Ports 3 and 4 can be set to AES, Analog, or ORIG depending on the sources being used.



If Ports 3 and 4 are configured as an Analog Stereo source, Ports 3 and 4 are now Station 3 in the DASDEC Multistation Interface. Port 1 is Station 1 in the DASDEC Multistation Interface and Port 2 is Station 2 in the DASDEC Multistation Interface.
Ports 1 and 2 can be set to AES, Analog, or ORIG depending on the sources being used.



You must make your selections for each Port when you would like to make a change. Once a selection has been made for all of the ports, click on Save Changes. To ensure that your settings have saved, click the refresh button. If your configuration remains the same below the pull down menus, then your settings have been saved.

Wiring the MultiPlayer

Program Audio

Wiring the MultiPlayer is very straightforward. Audio connections are made for each of stations through the ports. Recall Under DASDEC MultiStation control Station 1 is hardcoded to MultiPlayer Port 1. Station 2 is hardcoded to MultiPlayer Port 2 and so on with Station 5 is tied to the DASDEC internal audio program switch(es) as depicted in Figure 1.

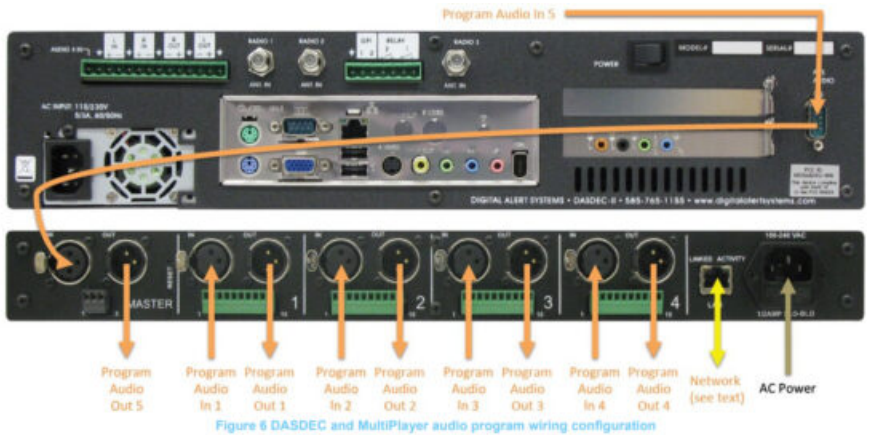


Figure 6 DASDEC and MultiPlayer audio program wiring configuration

The MultiPlayer features automatic program bypass in the event of power fail. In this way the program input will automatically be routed to the program output should power be loss or by command from the DASDEC.
1. For a digital or mono audio connection, make the program audio connections as follows

MultiPlayer Connection	DASDEC MultiStation Number (Order in the MultiStation pull-down menu after Base Station) *Setup > Decoder > Forwarding*
Port 1	DASDEC MultiStation 1
Port 2	DASDEC MultiStation 2
Port 3	DASDEC MultiStation 3
Port 4	DASDEC MultiStation 4
MASTER	DASDEC MultiStation 5 (DASDEC AES output loops through the MultiPlayer's MASTER port to prov ide "live" audio during an EAN)

MultiPlayer GPI's & GPO's

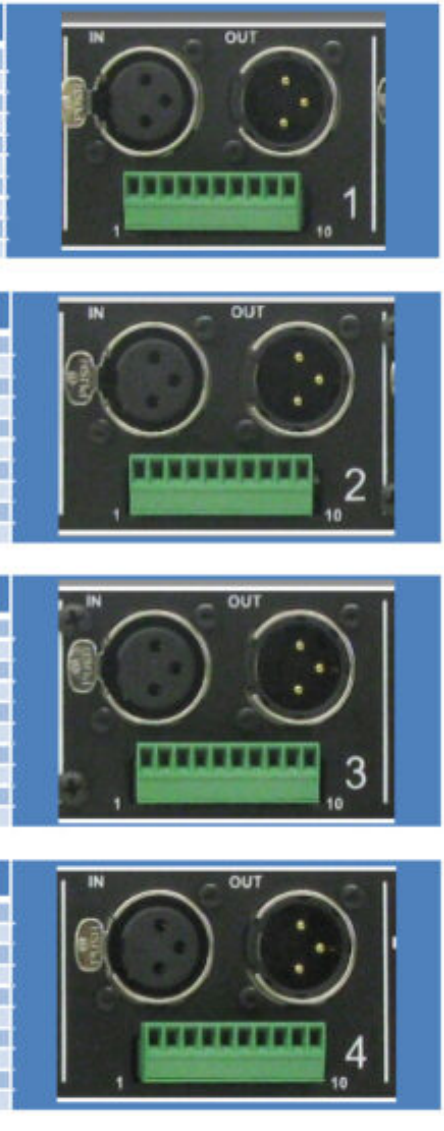
The MultiPlayer features four (4) General Purpose Inputs and two (2) General Purpose outputs per each port. The table and picture below define the wiring locations and the corresponding labeling in the DASDEC. It is important to match the connection and labeling in the next section STEP 4 – Configuring the MultiPlayer GPI's and GPO's. Note: GPO's are not grounded, having two connections (Pins 1 and 2). The terminal strip is removable to facilitate ease of wiring.

Port 1	Connection	DASDEC Label (Setup > GPIO > MultiPlayer GPIO)
Pin 1	GPO 1	MP Port 1: Relay 1 Pin 1
Pin 2	GPO 2	MP Port 1: Relay 2 Pin 1
Pin 3	GPI 1	MP Port 1: Input 1
Pin 4	GPI 2	MP Port 1: Input 2
Pin 5	GND	Ground
Pin 6	GPO 1	MP Port 1: Relay 1 Pin 2
Pin 7	GPI 3	MP Port 1: Input 3
Pin 8	GND	Ground
Pin 9	GPO 2	MP Port 1: Relay 2 Pin 2
Pin 10	GPI 4	MP Port 1: Input 4

Port 2	Connection	DASDEC Label (Setup > GPIO > MultiPlayer GPIO)
Pin 1	GPO 1	MP Port 2: Relay 1 Pin 1
Pin 2	GPO 2	MP Port 2: Relay 2 Pin 1
Pin 3	GPI 1	MP Port 2: Input 1
Pin 4	GPI 2	MP Port 2: Input 2
Pin 5	GND	Ground
Pin 6	GPO 1	MP Port 2: Relay 1 Pin 2
Pin 7	GPI 3	MP Port 2: Input 3
Pin 8	GND	Ground
Pin 9	GPO 2	MP Port 2: Relay 2 Pin 2
Pin 10	GPI 4	MP Port 2: Input 4

Port 3	Connection	DASDEC Label (Setup > GPIO > MultiPlayer GPIO)
Pin 1	GPO 1	MP Port 3: Relay 1 Pin 1
Pin 2	GPO 2	MP Port 3: Relay 2 Pin 1
Pin 3	GPI 1	MP Port 3: Input 1
Pin 4	GPI 2	MP Port 3: Input 2
Pin 5	GND	Ground
Pin 6	GPO 1	MP Port 3: Relay 1 Pin 2
Pin 7	GPI 3	MP Port 3: Input 3
Pin 8	GND	Ground
Pin 9	GPO 2	MP Port 3: Relay 2 Pin 2
Pin 10	GPI 4	MP Port 3: Input 4

Port 4	Connection	DASDEC Label (Setup > GPIO > MultiPlayer GPIO)
Pin 1	GPO 1	MP Port 4: Relay 1 Pin 1
Pin 2	GPO 2	MP Port 4: Relay 2 Pin 1
Pin 3	GPI 1	MP Port 4: Input 1
Pin 4	GPI 2	MP Port 4: Input 2
Pin 5	GND	Ground
Pin 6	GPO 1	MP Port 4: Relay 1 Pin 2
Pin 7	GPI 3	MP Port 4: Input 3
Pin 8	GND	Ground
Pin 9	GPO 2	MP Port 4: Relay 2 Pin 2
Pin 10	GPI 4	MP Port 4: Input 4



Configuring the DASDEC for MultiPlayer Audio Playout

Step 1 – Install the MultiPlayer supported software

The DASDEC must have version 2.5-1_a07 software or higher to work with the MultiPlayer. To download this version, click this link: **www.digitalalertsystems.com/MultiPlayer_documents.html** and follow the table information to get the necessary DASDEC software file then go to Setup > Server > Upgrade and follow standard DASDEC upgrade procedures to install this new software version.

Once the DASDEC is upgraded with the proper software version it can be configured to control the MultiPlayer.

Step 1B – Configure the Network Interface

(Direct MultiPlayer Connection Only)

If using a direct MultiPlayer to DASDEC connection via one of the expansion Ethernet ports you need to be sure it is enabled and configured properly.

Configuring a Network Interface

1. Log In to the DASDEC

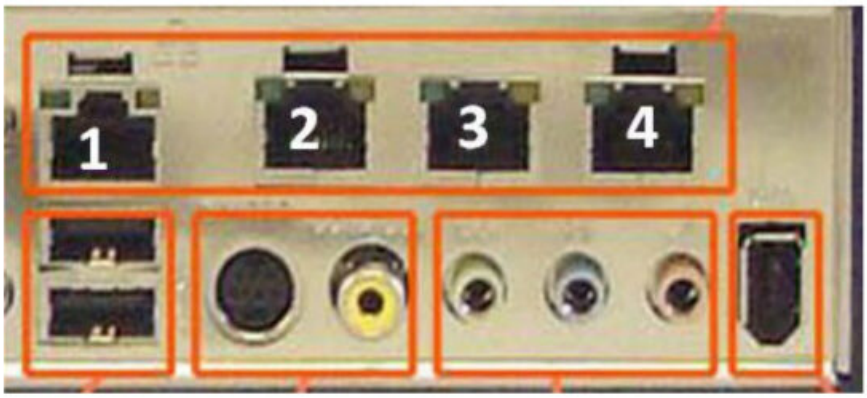


Figure 7 DASDEC with optional Ethernet expansion

2. Go to Setup > Network > Configuration
3. Enable the proper network interface connecting the MultiPlayer by clicking the check box. See example in Figure 10 using the Third Network Interface shown
4. Enter 192.168.0.200 in the IP Address field (or any IP address in the same range as the MultiPlayer – DO NOT ENTER THE MULTIPLAYER IP ADDRESS HERE)
5. Enter 255.255.255.0 in the IP Netmask field
6. Leave the Hostname field alone. It should read dasdecnicX.net where “X” is the port number being configured.
7. Scroll down the page and click Accept Changes / Restart Network
8. The DASDEC will restart and the box will change to green as shown in Figure 11

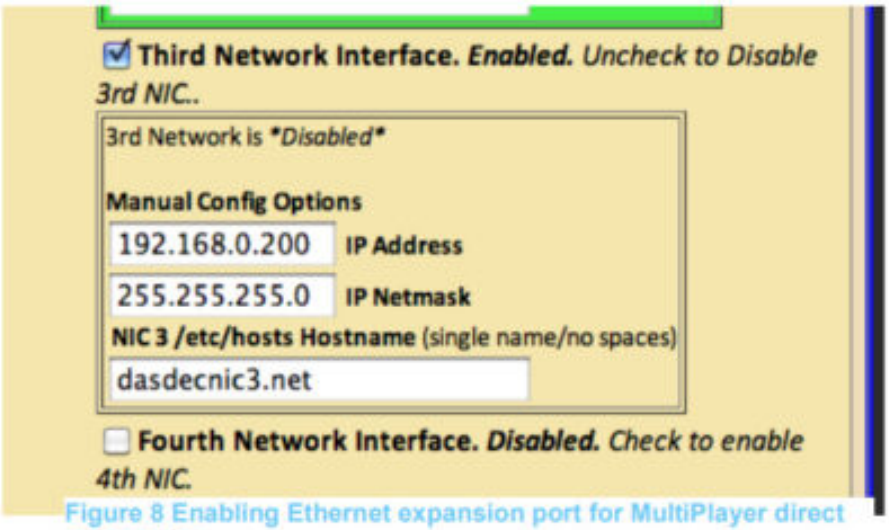


Figure 8 Enabling Ethernet expansion port for MultiPlayer direct connection

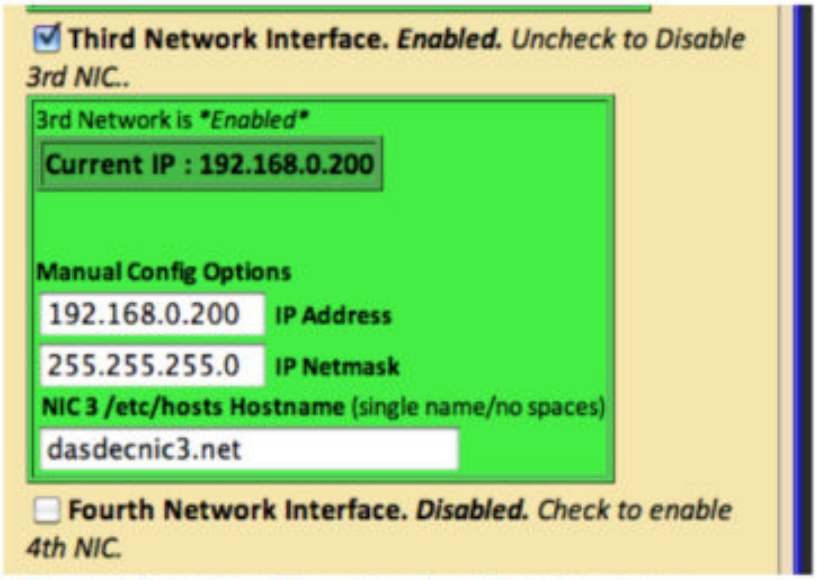


Figure 9 Expansion Ethernet port enabled indicated by *Enabled* message and green outline

Step 2 – Enabling MultiPlayer Support on the DASDEC

1. Log in to the DASDEC
2. Go to Setup > Audio > MultiPlayer (the MultiPlayer tab only appears in the latest version of DASDEC software featuring MultiPlayer support, with the Multistation License Key enabled)
3. Enable the MultiPlayer by checking the box Enable MultiPlayer Interface. The screen will expand to allow additional entries.
4. Enter the MultiPlayer's IP address in the MultiPlayer IP Address field. (If using the Direct Multiplayer to DASDEC Connection, enter the Multiplayer's default IP of 192.168.0.220)
5. Enter the word "guest" (all lowercase, no spaces and no quotations) in BOTH the MultiPlayer FTP User Name and MultiPlayer FTP Password fields

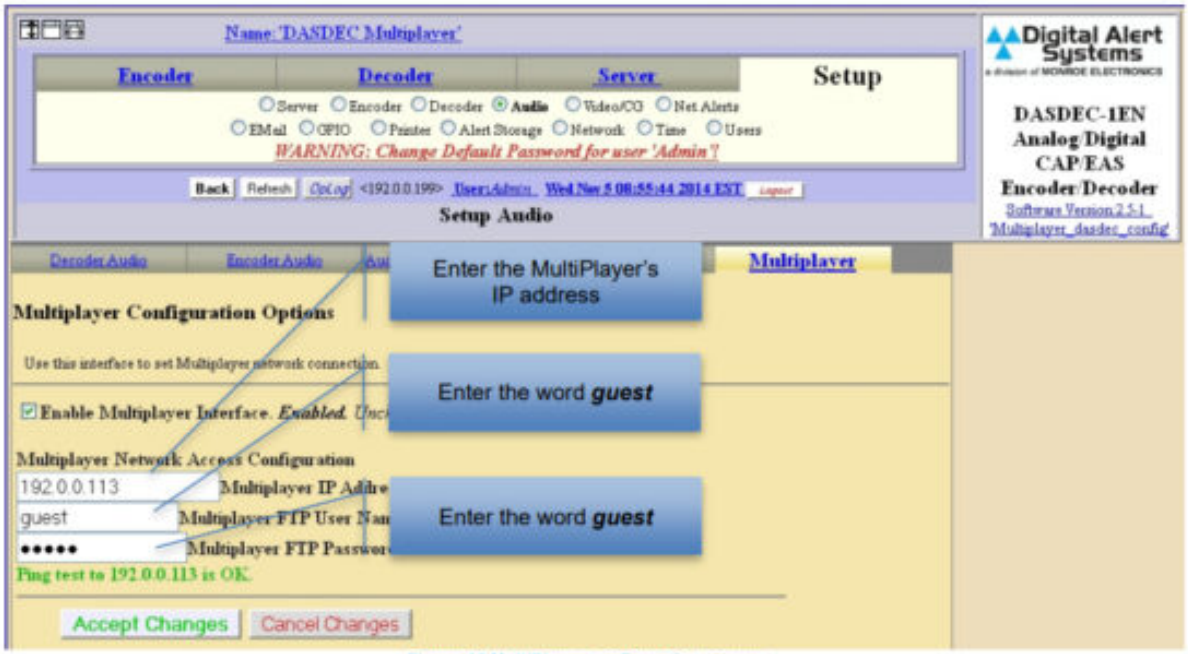
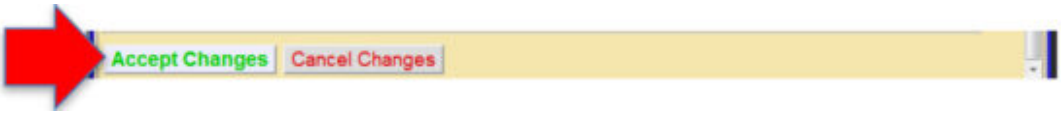


Figure 10 MultiPlayer configuration screen

6. Once the network information is entered, the DASDEC will attempt to verify connection to the MultiPlayer. If there is a connection issue the message Ping test to xxx.xxx.xxx.xxx Failed! (where xxx.xxx.xxx.xxx is the IP address entered in the MultiPlayer IP Address field above) will appear. If the test fails, verify the MultiPlayer's IP Address is entered correctly, recheck all cables are properly connected, and verify the network settings for the connection to the MultiPlayer are correct. If the MultiPlayer is on a network switch/router you can access it from any web-browser by typing its IP address in to the address field and seeing if the MultiPlayer Home page is reachable.
7. Click Accept Changes



8. Switch to the Setup > Audio > Audio Output Levels/Test tab
9. Ensure the Audio Output Sample Rate is set at 16000 Sample/sec by selecting it in the pull- down menu. **(Note:** This merely sets the sampling rate for the monophonic EAS audio and DOES NOT impact the AES input and output rates.)

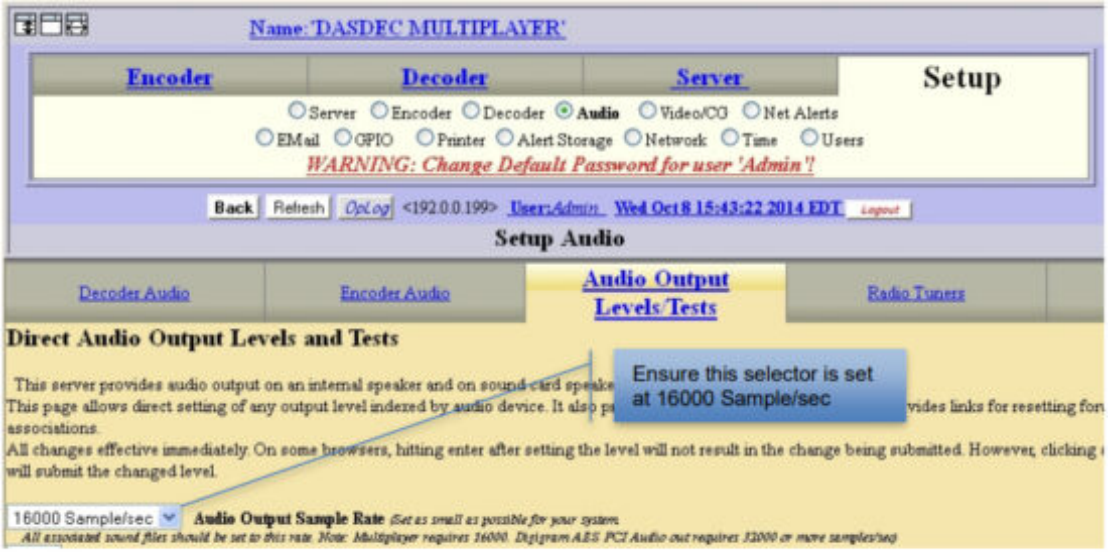
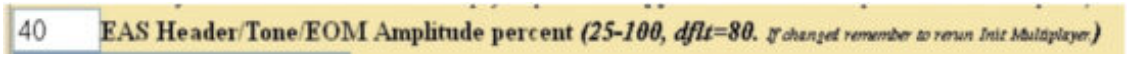


Figure 11 Setting the audio sample rate for EAS audio. See text for more information.

10. Once selected the change is immediately applied.
11. If you are using Analog Audio for the MultiPlayer, you must set the EAS Header/Tone/EOM Amplitude percent to 40. Once you have changed the value press enter. The changes will be applied.



12. If you have changed the EAS Header/Tone/EOM Amplitude percent from the default value of 80, you must go to the Setup > Audio > Multiplayer page. Scroll to the bottom and click the Init Multiplayer button. This will load a new Attention Signal and End of Message Tone, using the new amplitude percent you have set.

Step 3 – Configuring the stations for MultiPlayer audio playout

1. Log in to the DASDEC
2. Go to Setup > Decoder > Forwarding
3. Scroll down to the MultiStation Interface Configuration section
4. Use the Select Station Configuration Interface pull down to select the station to activate
5. Click the check box Run alert audio on MultiPlayer.

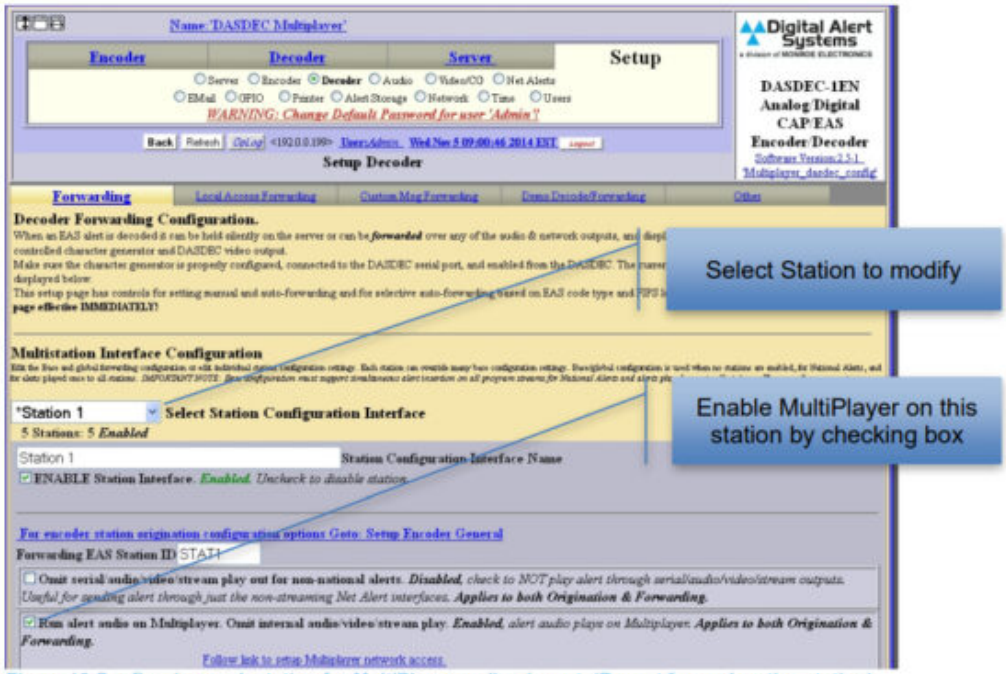


Figure 12 Configuring each station for MultiPlayer audio playout. (Repeat for each active station)

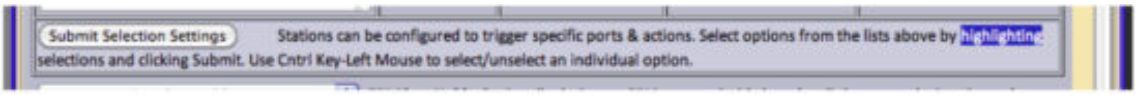
6. If the MultiPlayer is not connected to the DASDEC you will see the warning message as shown in Figure 15. (If necessary follow the steps in STEP 2 -6 above to verify connectivity.)

Figure 13 Warning message if MultiPlayer is not connected or inoperative.

7. Scrolling down to the station action table there's an additional field for assigning the MultiPlayer GPI and GPO's to a station. You may want to skip to STEP 4 – Configuring the MultiPlayer GPI's and GPO's where specific actions are assigned before assigning the ports.

Figure 14 MultiStation action table assignments.

8. Select any of the MultiPlayer GPI's or GPO's you wish to assign to this station holding the SHIFT key or Control key (Command key for Mac users) for multiple selections.
   Refer to the MultiPlayer GPI's & GPO's section of this document for more on ports
9. Click .Submit Selection Settings to save the station settings.



10. Repeat Steps 3-4 thru 3- 9 for each station.

Step 4 – Configuring the MultiPlayer GPI's and GPO's

1. Log in to the DASDEC
2. Go to Setup > GPIO > MultiPlayer GPIO
3. Using the pull down selections to define the action for each input or output.
   SELECTIONS ARE IMMEDIATE
4.

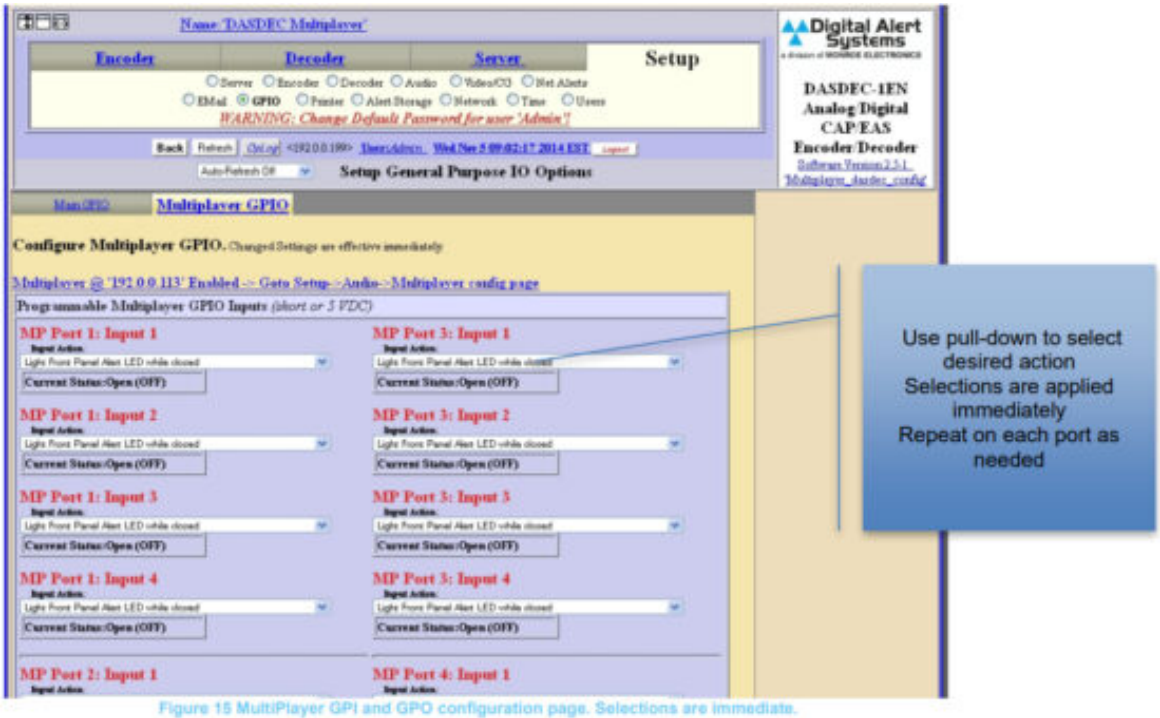


Figure 15 MultiPlayer GPI and GPO configuration page. Selections are immediate.

If you haven't assigned the MultiPlayer GPI's or GPO's to a station you may want to return to STEP 3 -7 and complete the station action table assignments.

Digital Alert Systems

Documents / Resources

	Digital Alert Systems DASDEC MultiPlayer [pdf] Installation Guide DASDEC MultiPlayer, DASDEC, MultiPlayer

References

- EAS | Digital Alert Systems
- User Manual