Broadcast Devices, Inc.

PAS-200 Passive Programmable SNMP Controlled Audio Switcher

TECHNICAL REFERENCE MANUAL

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I. Introduction

The PAS-200 Switcher series are designed to accept balanced audio pairs on A and B inputs to that can be switched individually or by programmable group from 1 to 16 channels in a grouping. Setup of groups, control and status are performed by Simple Network Management Protocol (SNMP) and local control via GPIO. Access to the control and status of the switcher can be performed using the supplied BDI PAS-200 APP Software third party SNMP enabled remote control or any commercially available MIB browser.

A. Unpacking and Inspection

Carefully unpack the unit after receipt and inspect for damage that may have occurred during shipping. If damage is noted, contact the shipper immediately and file a damage claim. The contents of the package have been insured to cover total replacement cost. Make certain that the package contents are the same as noted on the packing slip. If not, contact Broadcast Devices, Inc. Check to make sure all mechanical parts are secure.

B. General Description

The PAS-200 series switchers can accept as many as two sets of 16 monaural balanced inputs which can be selected to a single set of 16 outputs. All grouping of channels, control and status are performed by the BDI PAS-200 APP supplied on the CD ROM supplied with the unit. Updates when made available to the APP are also available from our website under the Support tab. Visit www.broadcast-devices.com for more information on downloading the software by clicking on support and then clicking on software downloads.

II. Specifications

Input Connectors:	DB25 Female
Output Connector:	DB25 Female
Remote CTL. Local Connector:	DB25 Female
Remote CTL. Local Command	Momentary to common
Status Local:	Open Collector +5 VDC pullup available on connector
IP Remote CTL./Status	SNMP v2.
Number of A/B inputs:	16 balanced pairs
Number of Outputs:	16 balanced pairs
Power Requirements:	100 - 240 Volts A.C. 50 - 60 Hertz
Operating Temperature Range:	0 - 60° Celsius non condensing atmosphere
Physical Dimensions:	1.75 H X 19 W X 10 D (inches)
Shipping Weight:	15 lbs.

III. Installation

A. Initial Configuration

The unit as configured from the factory is set to accept 100 to 240 Volts A.C. 50 - 60 Hertz electrical power. No changes are necessary to change voltage selection.

B. Location and Hookup Considerations

Locate the PAS-200 in a 19-inch E.I.A. standard rack enclosure in close proximity to the equipment that it is going to interface between. Allow sufficient airflow space between equipment to allow for proper cooling. Make all desired input and output connections to your external equipment using the pin out provided for the DB25 connectors. Optional DB25 to XLR breakout panels are available from BDI. The audio connector pin assignments which can be found in the schematics section of this manual conform to the Tascam™ DSUB-25 format. This is a commonly used worldwide standard for which cable assemblies are available from multiple sources including BDI. Call us for more information about availability and pricing.

Always make sure that the PAS-200 is plugged in to a properly grounded A.C. receptacle. A common practice to break ground loops is to isolate the chassis from electrical ground. **THIS IS NOT RECOMMENDED AND WILL VOID THE WARRANTY IF DONE IN THE FIELD.** An alternate method to break ground loops is to break the signal grounds on one side of the equipment.

C. Remote Control/Status Connection

There are two ways to remote control the PAS-200 switcher. The recommended and most versatile way to utilize the PAS-200 switcher remote control and status functions is through the use of the supplied Windows BDI PAS-200 application software. All communication between the APP and the unit are via SNMP commands and status. Alternatively, the PAS-200 can be controlled and monitored via SNMP remote controls and third party software. Use the APP software to set up modes of the channels and to test the unit's functionality. Once the modes are set using the APP software you can then assign names to the buttons on screen using the APP. A good thing to have at hand as well is a MIB browser using a standard commercially available MIB browser allows you to interrogate the unit for troubleshooting purposes. We recommend the Ireasoning MIB browser available from their web site: www.ireasoning.com

A rear panel remote control GPIO is available to control up to 8 modes configured using the APP software. Once a GPI pin is assigned to a mode each time that pin is momentarily held low that mode will be initiated. Selection of a new mode is done by holding the desired mapped GPI pin low. Status of each mode is provided on the same connector.

IV. Network Setup

1. To setup the PAS-200 on a network log into the unit using the default IP settings:

IP address: 192.168.1.160

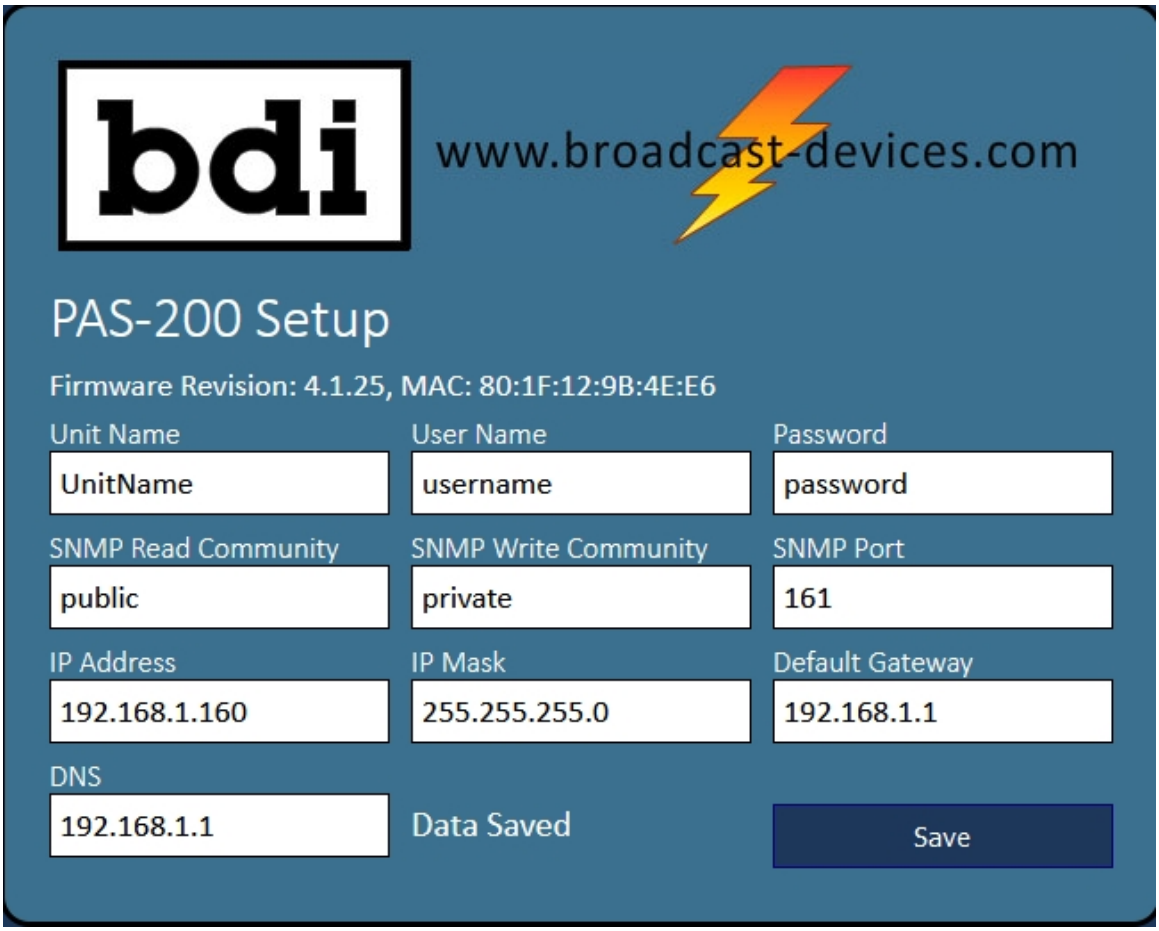
Network Mask: 255.255.255.0

Once you log in to the unit enter the default password and username:

Default USR: username – lower case

Default PSW: password – lower case

Entries are case sensitive.
Once you enter the default parameters you should see a screen that looks like this:



Setup your network parameters, username, password and unit name if desired. **WHEN YOU MAKE THESE CHANGES MAKE A RECORD OF THEM!** We recommend taking a screen shot of the page once the changes have been made. Or you can write the changes in the spaces provided below:

IP ADDRESS: _____

IP MASK: _____

PRIMARY DNS: _____

GATEWAY: _____

UNIT NAME: _____

USR: _____

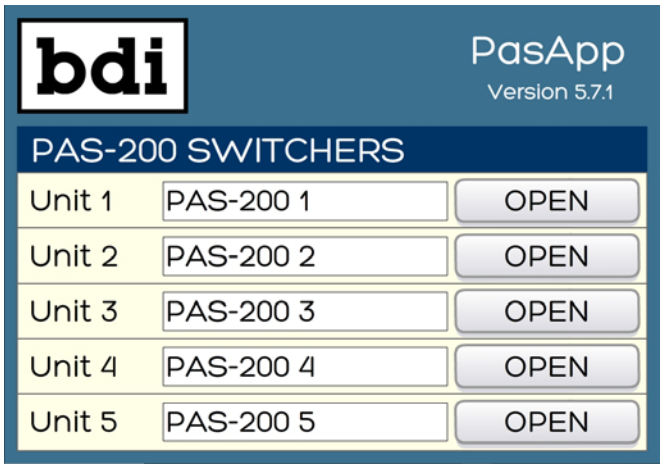
PSW: _____

2. Once all of the desired changes have been made and recorded. You did record the information right? If not go back and do that right now. **OK, now you need to power cycle the unit allowing at least 5 seconds for the changes to take.**
3. In order to see the unit beyond the router it is connected to you must make sure that port 161 is open on your network. If port 161 is being used internal to the network for other devices you can forward the local IP address you have chosen to the unit to an external port that is available. Make certain that the inside port remains the same as that on the setup page.

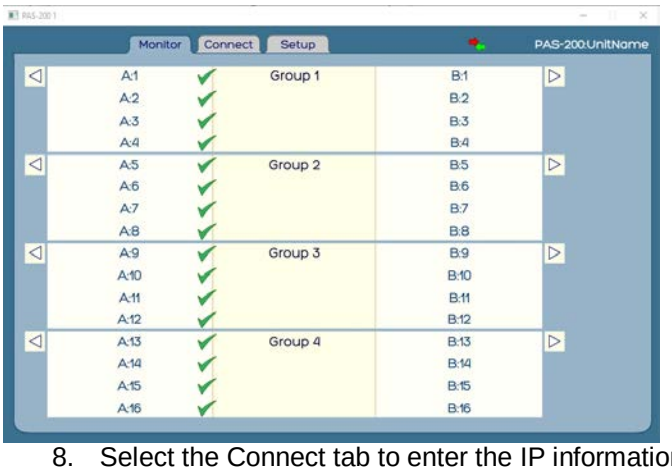
4. Check that your setting took by logging in with a browser to the new IP address and use the username and password you have chosen. If you cannot connect common reasons for changes not to take effect are not hitting the save ICON on the setup page and not allowing enough time for the power recycle. In any of those cases the unit will still be on the default settings.

5. Once you have confirmed proper IP operation it is time to load the BDI PAS-200 application software found on the CD ROM supplied with the unit. Simply copy the entire APP folder onto the computer chosen to use the APP and click on the EXE file to start the APP. The APP does not perform an install on the computer but runs self-contained.

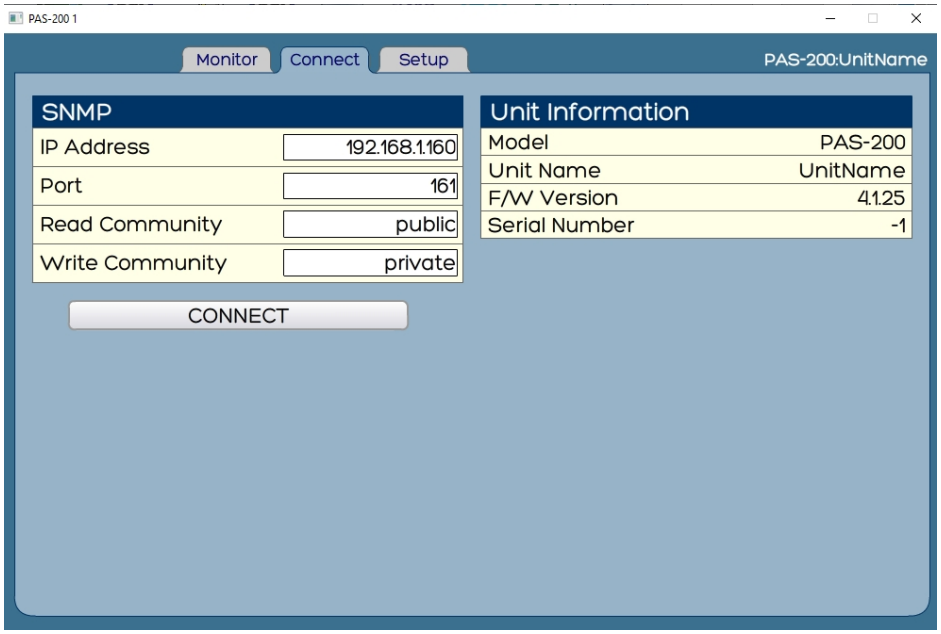
6. Once the APP opens you will see the screen below:



7. Click on the Unit 1 open button to connect to the unit. The APP will open to the screen below:



8. Select the Connect tab to enter the IP information and connect to the unit.



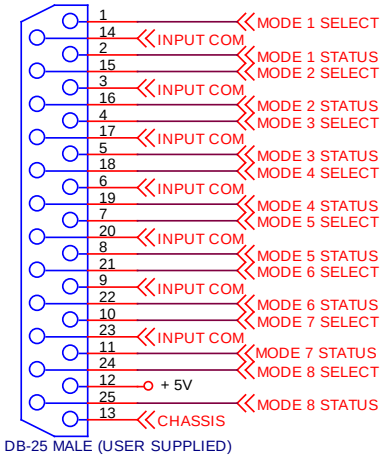
Once you enter the IP information that you saved on the web page press the connect button and if you are successful in connecting to the unit the Unit Information will be displayed on the right hand half of the screen.

9. Next select the Setup tab whereby the instructions for setup will guide you through use of groups and how to configure them. You can also name all 16 A and B inputs which are stored in the unit.

D. General Purpose I/O Connection

The PAS-200 once configured with the APP can be controlled completely by the APP or the stored groups can be assigned to the 8 GPIO available on the 25 pin DUB connector marked “Remote Control” Refer to the figure below for pin assignments for group control and status. The GPIO inputs are open collector pulled up to 5 VDC. The status outputs are active low for the given group selected.

J2 REMOTE CTL./STATUS



1. PULL TO GROUND SELECT PINS

2. STATUS OUTPUTS ARE OPEN COLLECTOR
Use Pin 12 - +5 VDC for pullup if no pullup is available.

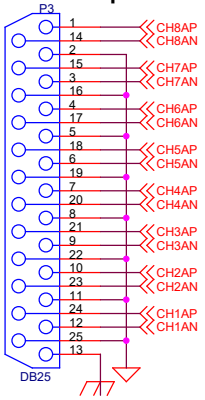
E. Audio I/O Connections

All PAS-200 audio connections are made through the labeled DSUB 25 connectors on the rear panel. There is provision for up to 2 sets of 16 balanced audio inputs for A and B input connectors and a set of 16 outputs. All audio connections follow the Tascam™ standard for DSUB-25 connectors. The pin connections for each connector are shown on the next page.

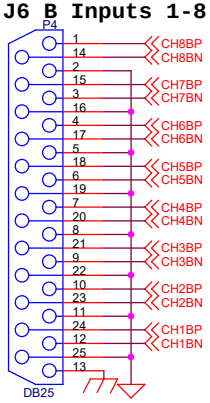
Optional XLR to DSUB interface panels are available from BDI for this product. BDI model number AIP-100 interface panel is available from BDI’s authorized distributor network. The AIP-100 panel consists of 16 XLR connectors and a DSUB cable for direct plug in to the PAS-200 switcher or any Tascam™ standard DSUB audio connector. Three AIP-100 panels are required for the PAS-200 for complete XLR to DSUB conversion.

IV. Schematic Diagram – Audio I/O

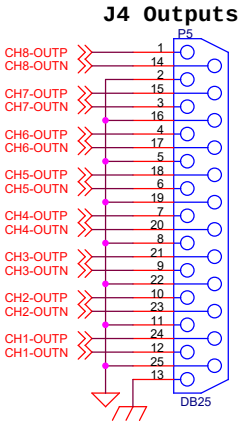
J8 A Inputs 1-8



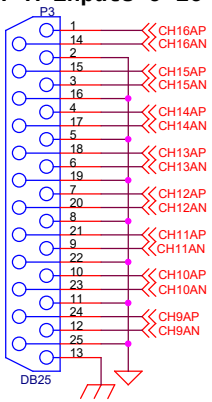
J6 B Inputs 1-8



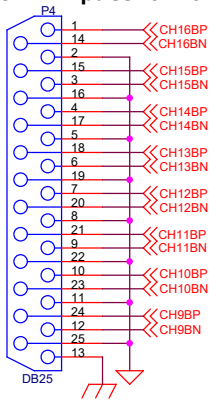
J4 Outputs 1-8



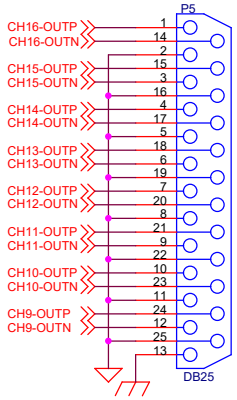
J7 A inputs 9-16



J5 B inputs 9-16



J3 Outputs 9-16



Rear Panel DSUB-25 Connections

Broadcast Devices. Inc.		
Title: PAS-200 Rear Panel Audio I/O		
Size: B	Document Number: {Doc}	Rev: A
Date: Tuesday, June 11, 2019	Sheet 1 of 1	

V. Warranty

Broadcast Devices, Inc. products are warranted against failure due to faulty materials or workmanship for a period of one year from the date of shipment to the ultimate user. The warranty covers repair or replacement of defective parts at the factory, provided the unit has been returned prepaid by the user. All shipments to the factory shall have affixed to the outside of the container an R. A. number obtained from the factory. The above warranty is void if the unit has been modified by the user outside of any recommendations from the factory or if the unit has been abused or operated outside of its electrical or environmental specifications. If customer conducted field tests suggest that the unit may be faulty, whether or not the unit is in warranty, a full report of the difficulty should be sent to Broadcast Devices, Inc. factory. The office may suggest further tests or authorize return for factory evaluation. Units sent to the factory should be well packed and shipped to Broadcast Devices, Inc. – Check our web site for shipping address at www.broadcast-devices.com Remember to affix the R.A. number to the outside of the carton. Any packages received without such R.A. number will be refused. Note: freight collect shipments will also be refused. When the unit has been received, inspected and tested, the customer will receive a report of the findings along with a quotation for recommended repairs, which are found falling outside of the standard warranty. Units returned for in-warranty repairs which are found not to be defective will be subject to an evaluation and handling charge. In warranty units will be repaired at no charge and returned via prepaid freight.
Out-of-warranty units needing repair require a purchase order and will be invoiced for parts, labor, and shipping charges. When ordering replacement part, always specify A) Part number or Description, and Quantity; B) Date of Purchase, Where Purchased; C) Any Special Shipping Instructions. Always specify a street address, as shipping companies cannot deliver to a postal box.

Broadcast Devices, Inc. is not responsible for any other manufacturer's warranty on original equipment. Nor are we responsible for any failure, damage, or loss of property that may occur due to the installation or operation of our equipment outside of recommended specifications.

Broadcast Devices, Inc. reserves the right to make changes to specifications and materials without prior notice.