

PAS-200 Passive Audio Switchers

Programmable A/B Switcher for Sixteen (16) Input Pairs



PAS-200 Programmable Passive Audio Switcher Front Panel



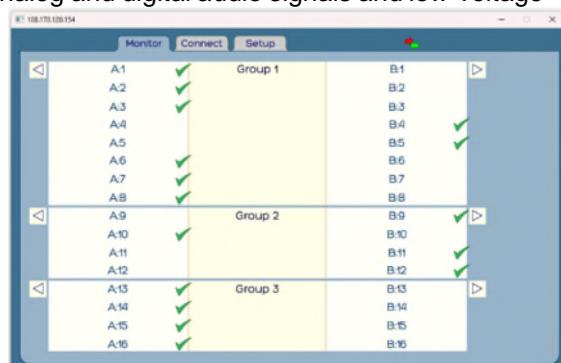
PAS-200 Programmable Passive Audio Switcher Rear Panel

Features

- Sixteen (16) individual A/B inputs switchable as user programmable configurations from two to sixteen (16) pair groups.
- Passive audio switcher employs relay switch sets to pass analog and AES3 digital audio signals or control signals without modification.
- Customizable channel naming and setup configuration done with the free downloaded companion PAS-200 Series Windows application software.
- Steel chassis construction for superior hum rejection.
- Remote control interfaces for GPIO, RS485, and LAN SNMP v2.
- Audio inputs and outputs via TASCAM DSUB25F connectors. Breakout interface panels to XLR and BNC connections are optionally available from BDI.
- Dual power supplies with separate power cords for exceptional reliability.
- Most popular applications include:
 - Transmitter Site Emergency and Standby Program Source Switching
 - Dynamic Source Switching for Public Safety Communications and PA Systems
 - Theater Sound System Input Switching
 - Switching to backup consoles or amplifiers for Live Event Sound Systems
 - Satellite and Automation Switching
 - Emergency Alert System Switching
 - Pre-configurations of inputs for recording, live sound, and remote truck use

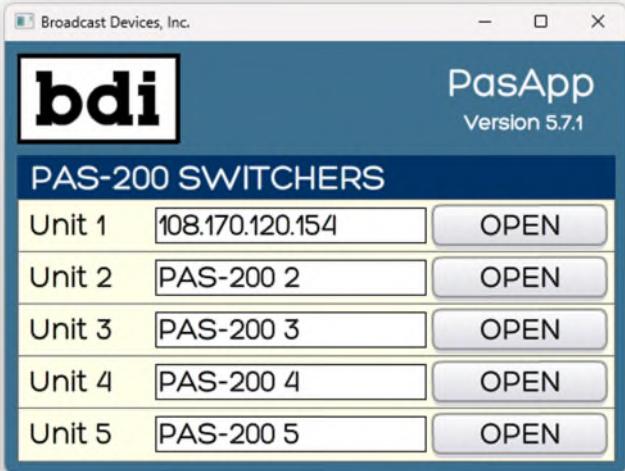
The PAS-200 Passive Multi-Pair Audio Switcher from BDI is designed to accept up to two sets of 16 balanced pairs of A/B inputs, switch between them, and provide sixteen (16) outputs. The unit can be configured to switch each channel individually or in any grouping of two or more channel groups as desired. The PAS-200 can be configured for individual pair switching to up to sixteen (16) preset groups. Standard groupings are provided, and the user can perform custom group programming. In its basic form, the user can control any one of the sixteen (16) channels individually, stereo pairs, or multiple pairs of greater than two. The signal path is passive via relay sets, allowing analog and digital audio signals and low-voltage DC control signals to pass through the switcher. The signal path is passive, with no active circuitry, using sets of relays that allow analog and digital audio signals, as well as control signals, to pass through the switcher.

Control and monitoring can be accomplished in various ways to accommodate nearly every interface situation. RS485 serial and standard GPIO control and status indications are available, along with an SNMP v2-capable LAN interface, and an optional remote-control panel is available from BDI. The remote-control panel is a serial interface connected with a single CAT5 shielded cable and can accommodate cable runs of up to 1000 feet (305 meters). BDI also provides free Windows Graphical User Interface software for configuration, direct control, and status of the PAS-200. Regardless of the application — switching sources, network feeds, or switching satellite receivers — the PAS-200 provides an easy-to-use interface. Browse the following pages to view standard configurations and examples of custom configurations you can create, as the PAS-200 is web-enabled and SNMP-compatible.

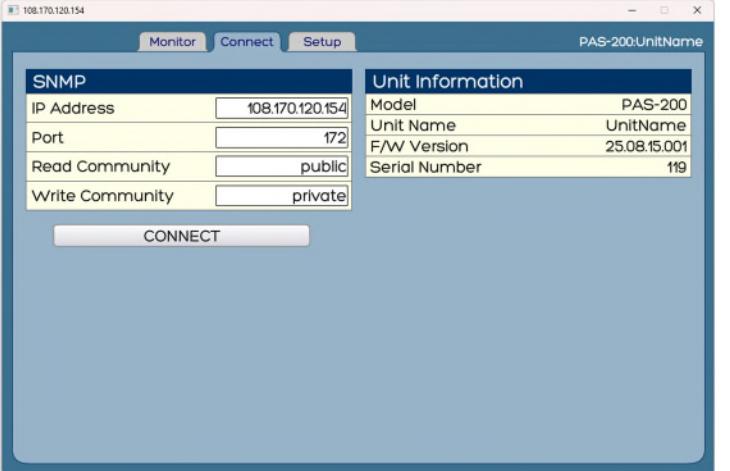


The Windows-based PAS-200 App is included free of charge allows for easy setup and configuration, as well as for direct selection of defined groups or individual channels.

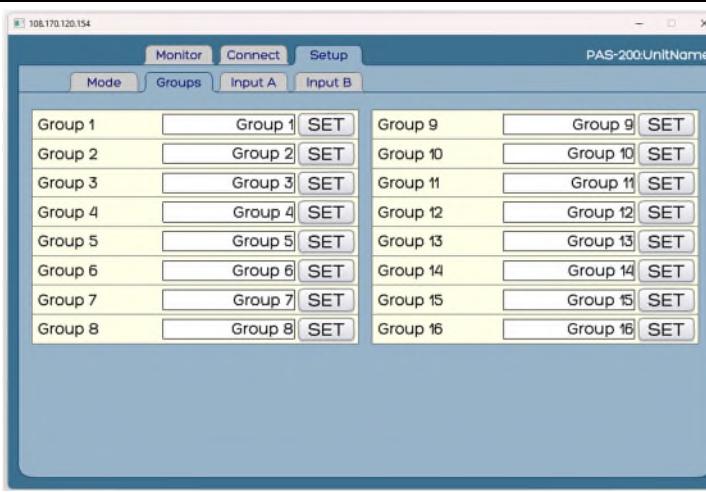
PAS-200 Passive Audio Switchers



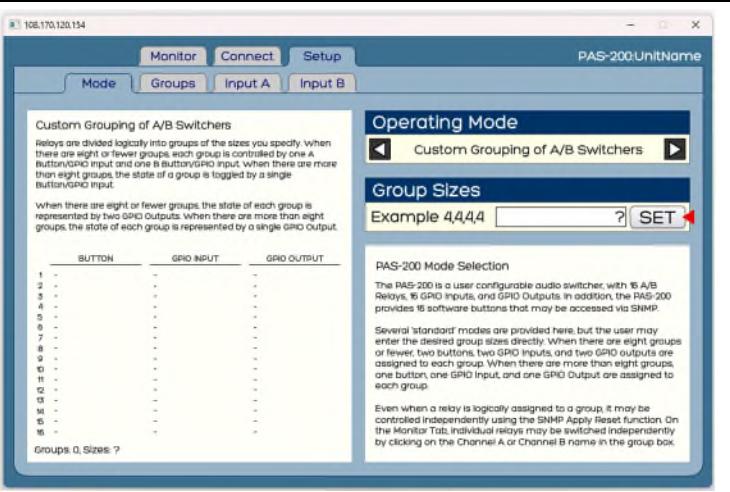
PAS-200 Software Opening Screen provides direct access and selection for up to five (5) individual PAS-200 Audio Switchers.



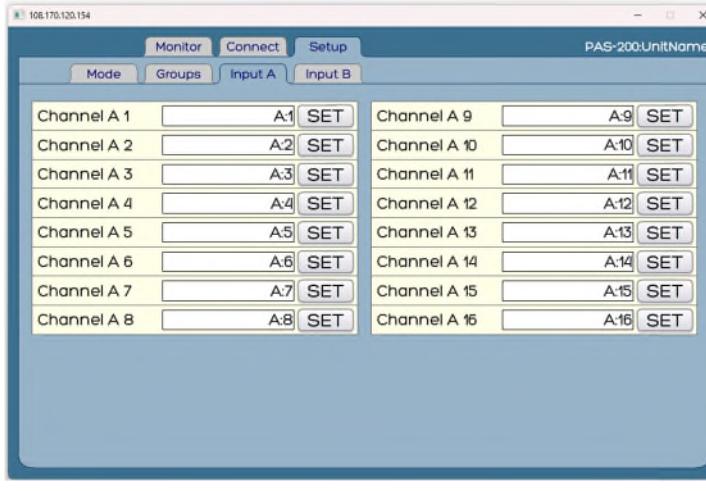
PAS-200 Connect Screen provides network configuration and switcher model and firmware information.



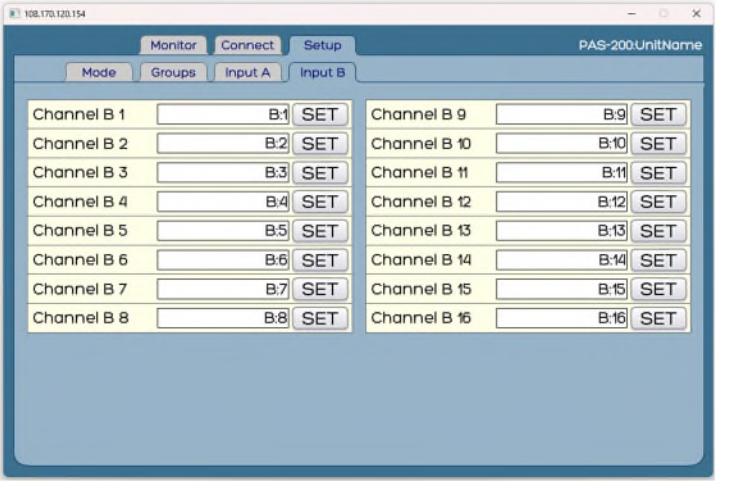
PAS-200 Software Group Setup Screen. From this screen, the user can create custom name labels for each Channel Group configured for their PAS-200 switcher installation.



PAS-200 Software Operating Mode Selection Screen. From this screen, the user can select either a standard channel grouping or create a group configuration tailored to unique requirements.



PAS-200 Software Input "A" Setup Screen. From this screen, the user can create custom name labels for each "A" input



PAS-200 Software Input "B" Setup Screen. From this screen, the user can create custom name labels for each "B" input

PAS-200 Passive Audio Switchers

Operating Mode Configuration Page

PAS-200 Standard Group Configuration of 16 Individual A/B Channels.

Monitor and Control Page

Operating Mode Configuration Page

PAS-200 Standard Group Configuration of One Group of all 16 A/B Channels to allow switching of all inputs simultaneously.

Monitor and Control Page

Operating Mode Configuration Page

PAS-200 Standard Group Configuration of Two Groups of 8 Channels.

Monitor and Control Page

PAS-200 Passive Audio Switchers

Operating Mode Configuration Page

Monitor and Control Page

PAS-200 Standard Group Configuration of Eight Groups of 2 Channels.

Operating Mode Configuration Page

Monitor and Control Page

PAS-200 Standard Group Configuration of Four Groups of 4 Channels.

Operating Mode Configuration Page

Monitor and Control Page

PAS-200 Standard Group Configuration of One Group of 8 Channels and Two Groups of 4 Channels.

PAS-200 Passive Audio Switchers

Operating Mode
Six 2 and Four 1 Channel A/B Switchers

Relays are grouped logically while four are independently controlled. The state of the group, or any of the four independent relays, may be toggled by a single button press or by the leading edge of the active state of a single GPIO input.

The state of the group and the state of each independent relay is represented by a single GPIO output.

Note that relays may still be switched individually via the SNMP Apply Reset command.

BUTTON	GPIO INPUT	GPIO OUTPUT
1	Toggle Relays 1 - 2	Toggle Relays 1 - 2
2	Toggle Relays 3 - 4	Toggle Relays 3 - 4
3	Toggle Relays 5 - 6	Toggle Relays 5 - 6
4	Toggle Relays 7 - 8	Toggle Relays 7 - 8
5	Toggle Relays 9 - 10	Toggle Relays 9 - 10
6	Toggle Relays 11 - 12	Toggle Relays 11 - 12
7	Toggle Relay 13	Toggle Relay 13
8	Toggle Relay 14	Toggle Relay 14
9	Toggle Relay 15	Toggle Relay 15
10	Toggle Relay 16	Toggle Relay 16
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-

Groups: 10, Sizes: 2,2,2,2,2,1,1,1

Operating Mode Configuration Page

Relay	Group	Relay	Group
A:1	Group 1	B:1	
A:2		B:2	
A:3	Group 2	B:3	
A:4		B:4	
A:5	Group 3	B:5	
A:6		B:6	
A:7	Group 4	B:7	
A:8		B:8	
A:9	Group 5	B:9	
A:10		B:10	
A:11	Group 6	B:11	
A:12		B:12	
A:13	Group 7	B:13	
A:14	Group 8	B:14	
A:15	Group 9	B:15	
A:16	Group 10	B:16	

Monitor and Control Page

PAS-200 Standard Group Configuration of Six Groups of 2 Channels and Four Groups of 1 Channel.

Operating Mode
Custom Grouping of A/B Switchers

Relays are divided logically into groups of the sizes you specify. When there are eight or fewer groups, each group is controlled by one A/Button/GPIO input and one B/Button/GPIO input. When there are more than eight groups, the state of a group is toggled by a single Button/GPIO input.

When there are eight or fewer groups, the state of each group is represented by two GPIO outputs. When there are more than eight groups, the state of each group is represented by a single GPIO output.

BUTTON	GPIO INPUT	GPIO OUTPUT
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-

Groups: 0, Sizes: ?

Operating Mode Configuration Page

Relay	Group	Relay	Group
A:1	Group 1	B:1	
A:2		B:2	
A:3		B:3	
A:4	Group 2	B:4	
A:5		B:5	
A:6		B:6	
A:7	Group 3	B:7	
A:8		B:8	
A:9	Group 4	B:9	
A:10		B:10	
A:11		B:11	
A:12		B:12	
A:13	Group 5	B:13	
A:14		B:14	
A:15		B:15	
A:16		B:16	

Monitor and Control Page

PAS-200 Custom Group Configuration of Two Groups of 3 Channels, Two Groups of 1 Channel, and Two Groups of 4 Channels.

Operating Mode
Custom Grouping of A/B Switchers

Relays are divided logically into groups of the sizes you specify. When there are eight or fewer groups, each group is controlled by one A/Button/GPIO input and one B/Button/GPIO input. When there are more than eight groups, the state of a group is toggled by a single Button/GPIO input.

When there are eight or fewer groups, the state of each group is represented by two GPIO outputs. When there are more than eight groups, the state of each group is represented by a single GPIO output.

BUTTON	GPIO INPUT	GPIO OUTPUT
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-

Groups: 0, Sizes: ?

Operating Mode Configuration Page

Relay	Group	Relay	Group
A:1	Group 1	B:1	
A:2		B:2	
A:3		B:3	
A:4	Group 2	B:4	
A:5		B:5	
A:6		B:6	
A:7		B:7	
A:8		B:8	
A:9	Group 3	B:9	
A:10		B:10	
A:11		B:11	
A:12		B:12	
A:13	Group 4	B:13	
A:14		B:14	
A:15		B:15	
A:16		B:16	

Monitor and Control Page

PAS-200 Custom Group Configuration of Four Groups of 2 Channels and Two Groups of 4 Channels.

PAS-200 Passive Audio Switchers

Technical Specifications		PAS-200
Inputs:	Sixteen (16) A/B Balanced Audio Pairs	
Outputs:	Sixteen (16) A/B Balanced Audio Pairs. User Programmable Switching of A/B Inputs in Groups from One (1) to Sixteen (16)	
Input Connector:	DSUB25F – TASCAM Standard	
Output Connector:	DSUB25F – TASCAM Standard	
Switching Type:	Relays—Passive signal path	
Signal Types Supported:	Analog T/R/S, AES3 (non-synchronous), low-voltage DC control signals	
Remote Control:	Up to eight (8) Parallel GPIO, RS485 Serial, Ethernet, SNMP v2, and a free Windows-based BDI Graphical User Interface supplied	
GPIO Remote Connector:	DSUB25F	
Remote Control Local Command:	Momentary to Common	
Status Local:	Open Collector +5 VDC pull-up available on the connector	
Serial LAN Connector:	RJ45	
Power Requirements:	100 to 240 VAC, 50/60 Hz, 0.5 amps	
Operating Ambient Temperature:	32 to 122 degrees, F (0 to 50 degrees, C)	
Humidity:	95%, Non-condensing	
Mechanical Dimensions:	19 in W x 10 in D x 1.75 in H (483 mm W x 254 mm D x 44 mm H) Standard One EIA Rack Unit Enclosure	
Shipping Dimensions:	22 in W x 14 in D x 7 in H (559 mm W x 356 mm D x 178 mm H)	
Shipping Weight:	15 lbs (7 kg)	

Ordering Information

Part Number	Description
PAS-200	SNMP Controlled Passive Relay Switcher is designed to accept up to sixteen (16) A and B balanced pairs and select between them in user-defined groups from one (1) to 16 outputs. Dual power supplies with separate power cords.

Accessories



Optional Audio Interface Panels are available for the PAS-200 Series Audio switchers. The AIP (AIP-100 pictured), ADP, and DAP Series interface panels include gold XLR and DB25 connectors and individually shielded cables mounted to rugged one-rack-unit steel mounting panels. The panels are supplied with a 3-foot (1-meter) standard TASCAM DSUB25F connection cable. For more information, refer to the Audio Interface Panels product brochure, available on the BDI website.

Part Number	Description
PAS-REM	Sixteen (16) Button Remote Control Panel. Provides 16 dedicated individual pushbuttons for input and group selection. Connection is via a single CAT5 shielded cable, up to 1000 feet (305 meters) in length (one (1) 25 foot (8 meter) cable supplied). The remote control panel is an EIA rack-mounted one-rack-unit steel chassis. For more information, see the PAS-REM product brochure, available on the BDI website.