

Australian Monitor ISP Amplifier Series Introduction



ISP Series – Range Overview



IS2120P – 2 x 120W



IS2250P – 2 x 250W



IS4120P – 4 x 120W



IS4250P – 4 x 250W



DM4x4 – Dante module



ANALOGUE4 – 4 Analogue input module

High Impedance Range Overview

ES Series

Cost Effective - Basic Features

ES120P – 1 x 120W
ES250P – 1 x 250W
ES500P – 1 x 500W
ES2120P – 2 x 120W
ES480P – 4 x 80W



HS Series

Mid Range with miniDSP
PC Control Application

HS120P – 1 x 120W
HS250P – 1 x 250W
HS2120P – 2 x 120W
HS2250P – 2 x 250W
HS4120P – 4 x 120W
HS4250P – 4 x 250W



IS Series

Premium Range with Full DSP
ALMA Web Application

IS2120P – 2 x 120W
IS2250P – 2 x 250W
IS4120P – 4 x 120W
IS4250P – 4 x 250W

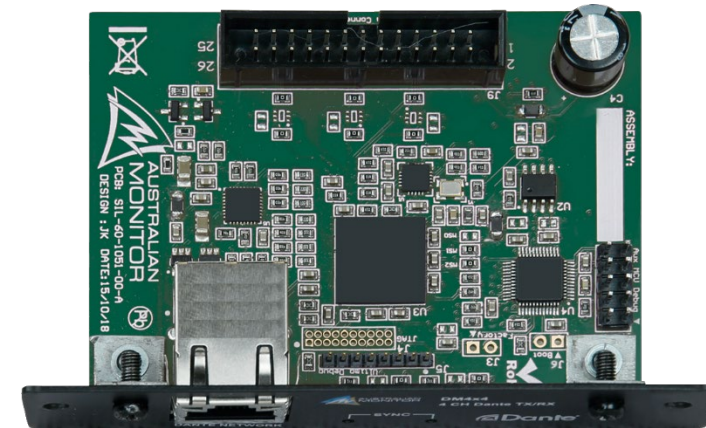


ISP Series – Range Overview

- New range for Australian monitor
 - IS2120P 2 x 120W, IS2250P 2 x 250W
 - IS4120P 4 x 120W, IS4250P 4 x 250W
- Includes full DSP
 - Volume control
 - Matrix Mixer, High/Low/All pass filters
 - 12 band parametric equaliser per channel including graphical editing
 - Compressor/Limiter
 - Delay up to 75m(220ms) per amplifier output
- Ethernet control
- 4 General Purpose Control Inputs/Outputs
- Automatic audio failover
- TCP/UDP 3rd party control
- ErP Low Power Standby <2W
- DM4x4 Expansion Module. Dante® Module with 4 inputs, 4 outputs
- Analogue4 Expansion Module. 4 analogue inputs

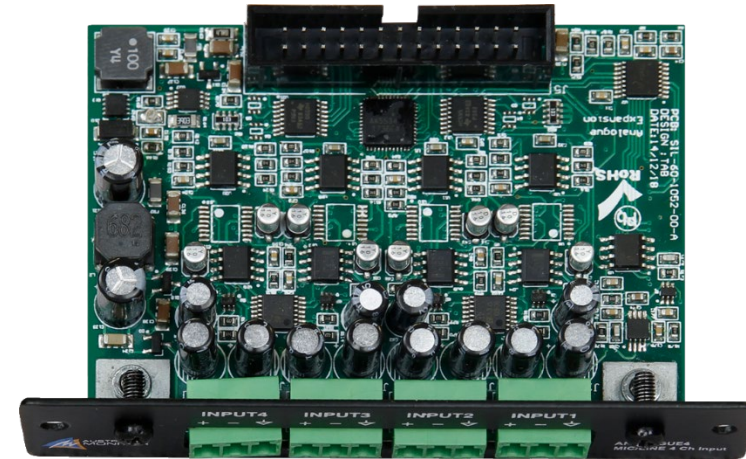
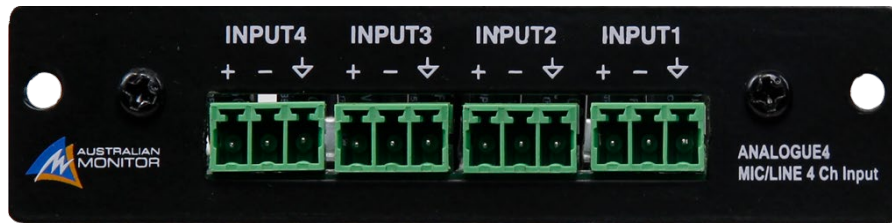


DM4x4 Dante Expansion Module



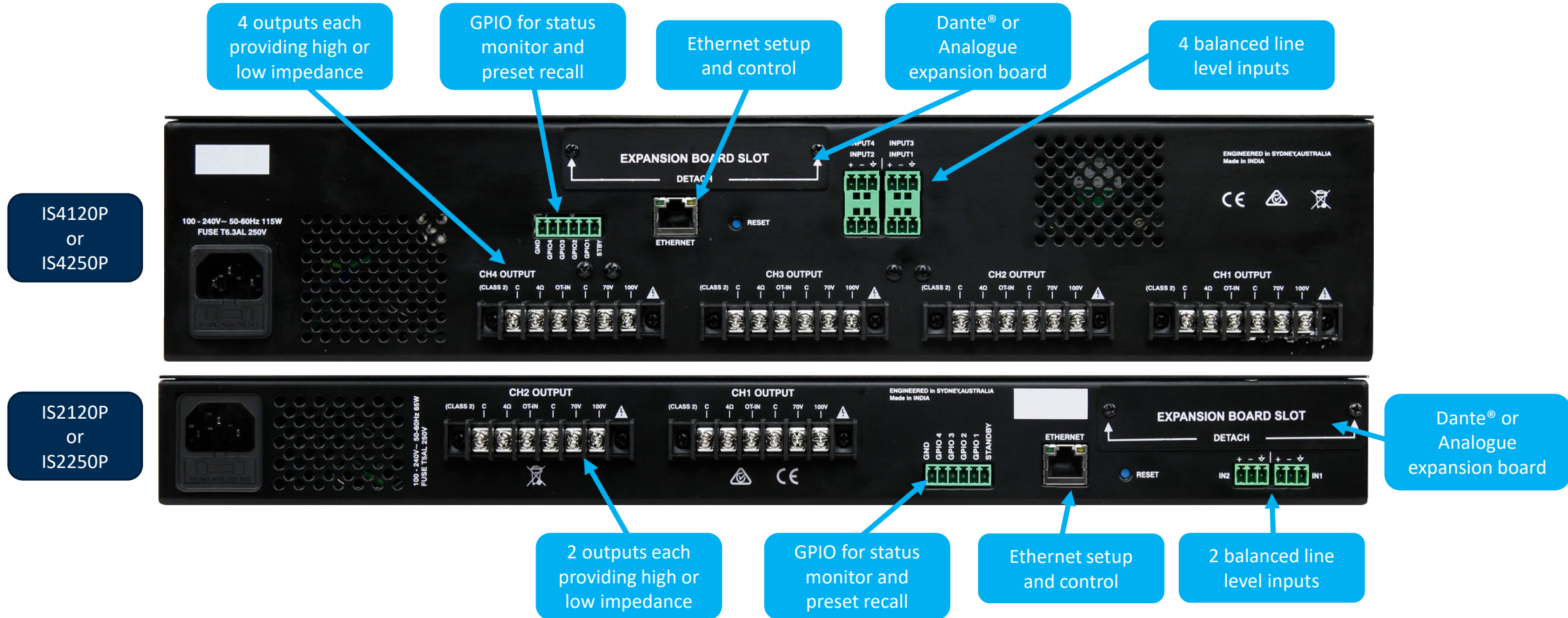
- Optional expansion module. Keeps the ISP cost as low as possible when not required
- Installed by removing the rear blanking plate and inserting a ribbon cable
- 4 Receive Channels
- 4 Transmit Channels
 - Loopback audio mixer outputs back on to the Dante network

ANALOGUE4 Optional Expansion Module



- Optional expansion module
- Installed by removing the rear blanking plate and inserting a ribbon cable
- 4 Line Level Inputs
- -15dB attenuation pad. Settable via ALMA software

ISP Range of Power Amplifiers



IS4250P + DM4x4



CONNECT CONFIGURE CONTROL

Win: <http://ausmonXXXXXX/>

OS X: <http://ausmonXXXXXX.local/>

ISP Series – Dante Setup

IS4250P



IS2250P



DM4x4 Module



DM4x4 Module



ISP Series – Dante Setup

IS2250P



IS4250P



DM4x4 Module



Audio

ROUTER



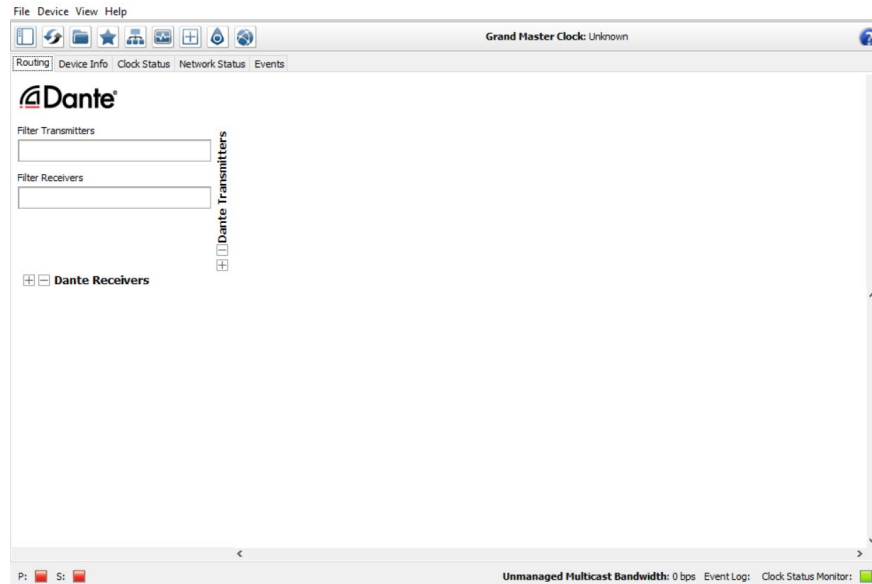
DM4x4 Module



Audio

Dante Controller

<https://www.audinate.com/products/software/dante-controller>



- Device discovery
- Configure the audio routing. Inputs to Outputs
- IP Assignment
- Dante Firmware Updates
- Dante status

PDF File **ALMA Interface Protocol Usage and Examples**

Excel File **ALMA-Interface-Protocol-Specification.xlsx**

	operation	section	group	param	sub	ssub	value	Carriage Return
Set input 1 volume of preset 1 to -20dB	set	preset1	in1	vol			-20.0	CR
	reply	preset1	in1	vol			-20.0	CR
Set output 1 volume to -40dB	set	active	out1	vol			-40	CR
	reply	active	out1	vol			-40	CR
Mute output 4	set	active	out4	mute			true	CR
	reply	active	out4	mute			true	CR



CONNECT CONFIGURE CONTROL



- The heart of the ISP range of power amplifiers
- ALMA allows you to;
 - **CONNECT** to the amplifier from any device or operating system
 - **CONFIGURE** your system using full DSP and matrixing
 - **CONTROL** the system using third party control and/or contact closure via the GPIO
- ALMA is embedded into the product requiring no software installation.
- Simply connect using any web browser application.

Access the demonstration software at www.ausmonitor.com/is4250p-demo



Username
Password

Sign in

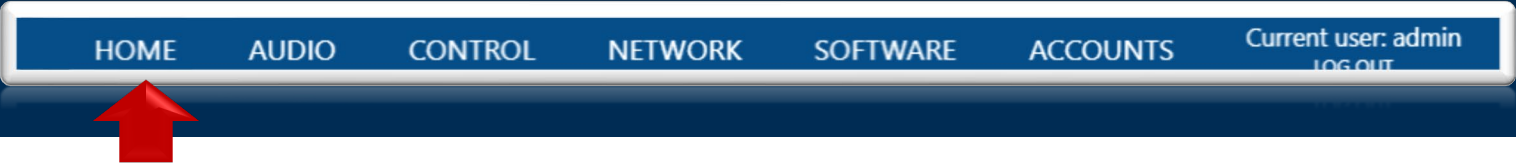


- The heart of the ISP range of power amplifiers
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Product Name : IS4250P
Serial Number : NSNU0000DPA00099

ALMA is embedded into the product requiring no software installation.
Simply connect using any web browser application.

Home Screen

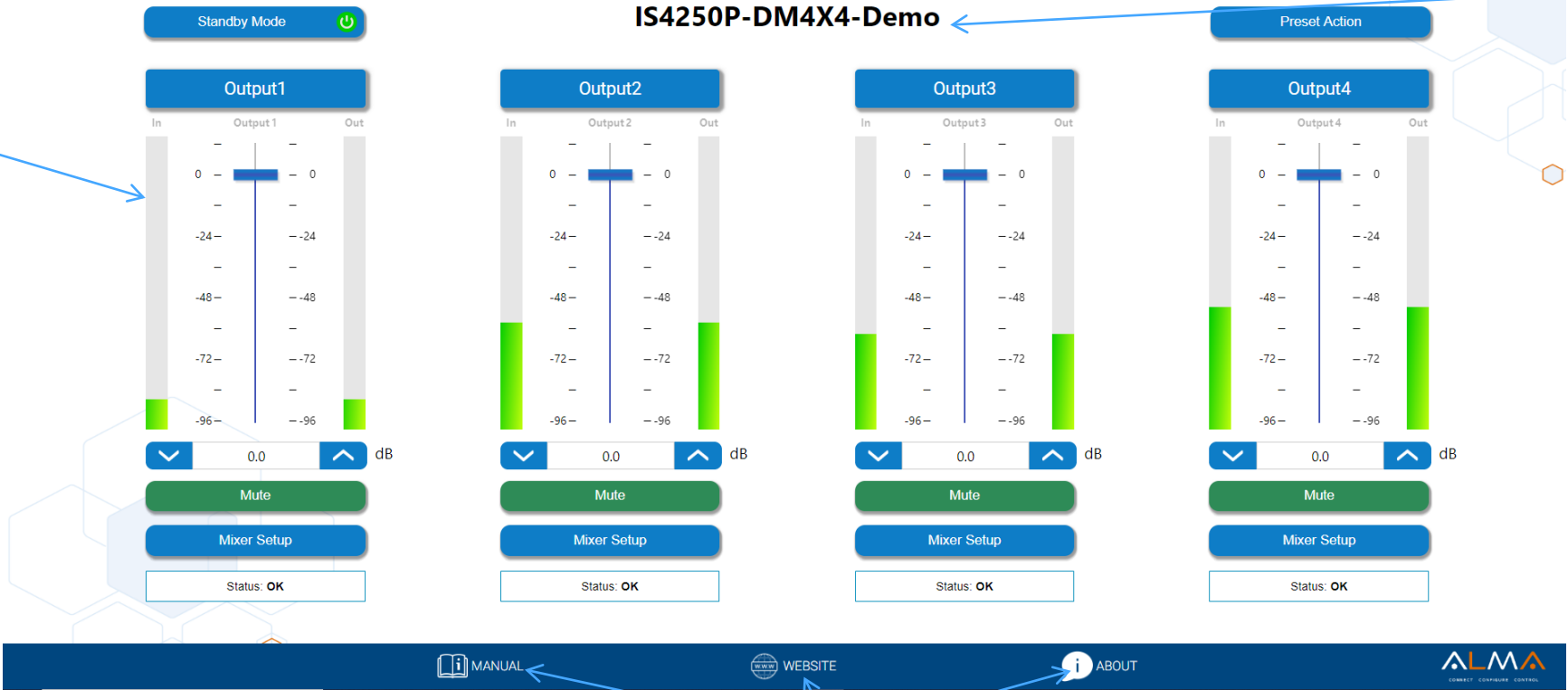


Navigation bar



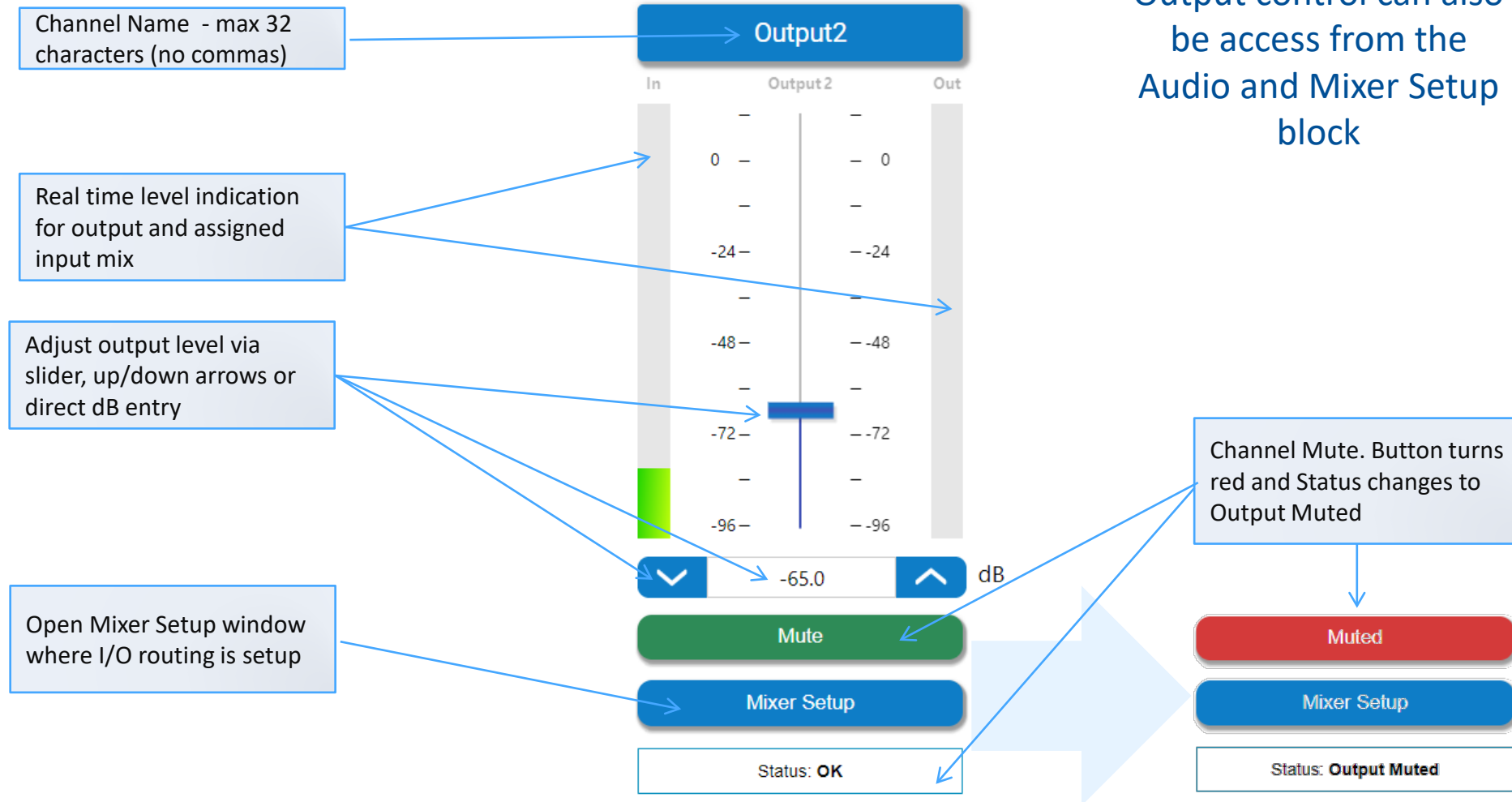
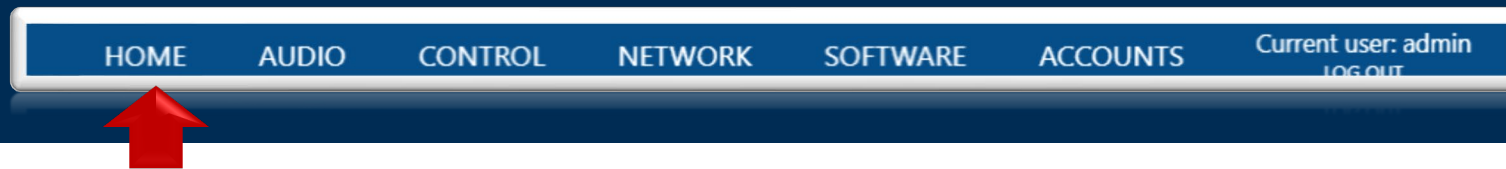
Current connected amplifier and expansion card (if present)

Realtime status for each channel



User manual, link to website and information on connected amplifier

Home Screen



Home Screen



- Audio Screen** with access to
- Input and Output naming
 - DSP setup including
 - Matrix setup
 - Crossover and EQ
 - Compressor limiter
 - Delay
 - High or low impedance mode per channel

- Device Control Screen**
- Configuration and preset reset
 - Auto standby
 - Channel failover configuration
 - GPIO setup

Home Screen and system status overview



- Network Settings**
- Setup
 - Host name
 - 3rd Party Control (TCP, UDP)
 - Set IPv4 (DHCP or fixed IP address)

- Software**
- Import and export configuration files
 - Factory reset
 - Update system file, firmware update

- Accounts**
- Manage up to 10 user accounts
 - Assign system access levels

Audio Setup Screen



Copy Setup



Audio Setup

Preset Action

Main Inputs

Input1	-15dB	Mixer Setup	Crossover & EQ	Compressor / Limiter	Delay	70/100V mode	Output1
Input2	-15dB	Mixer Setup	Crossover & EQ	Compressor / Limiter	Delay	70/100V mode	Output2
Input3	-15dB	Mixer Setup	Crossover & EQ	Compressor / Limiter	Delay	70/100V mode	Output3
Input4	-15dB	Mixer Setup	Crossover & EQ	Compressor / Limiter	Delay	70/100V mode	Output4
Pink Noise		Mixer Setup	Crossover & EQ	Compressor / Limiter	Delay	70/100V mode	Output5

Expansion Inputs

ExInput1	Mixer Setup	Crossover & EQ	Compressor / Limiter	Output6
ExInput2	Mixer Setup	Crossover & EQ	Compressor / Limiter	Output7
ExInput3	Mixer Setup	Crossover & EQ	Compressor / Limiter	Output8
ExInput4	Mixer Setup	Crossover & EQ	Compressor / Limiter	

Audio Setup Screen

[HOME](#)[AUDIO](#)[CONTROL](#)[NETWORK](#)[SOFTWARE](#)[ACCOUNTS](#)Current user: admin
[LOG OUT](#)

Copies setup block from individual or all outputs to one or all outputs

Add 15dB padding to each input

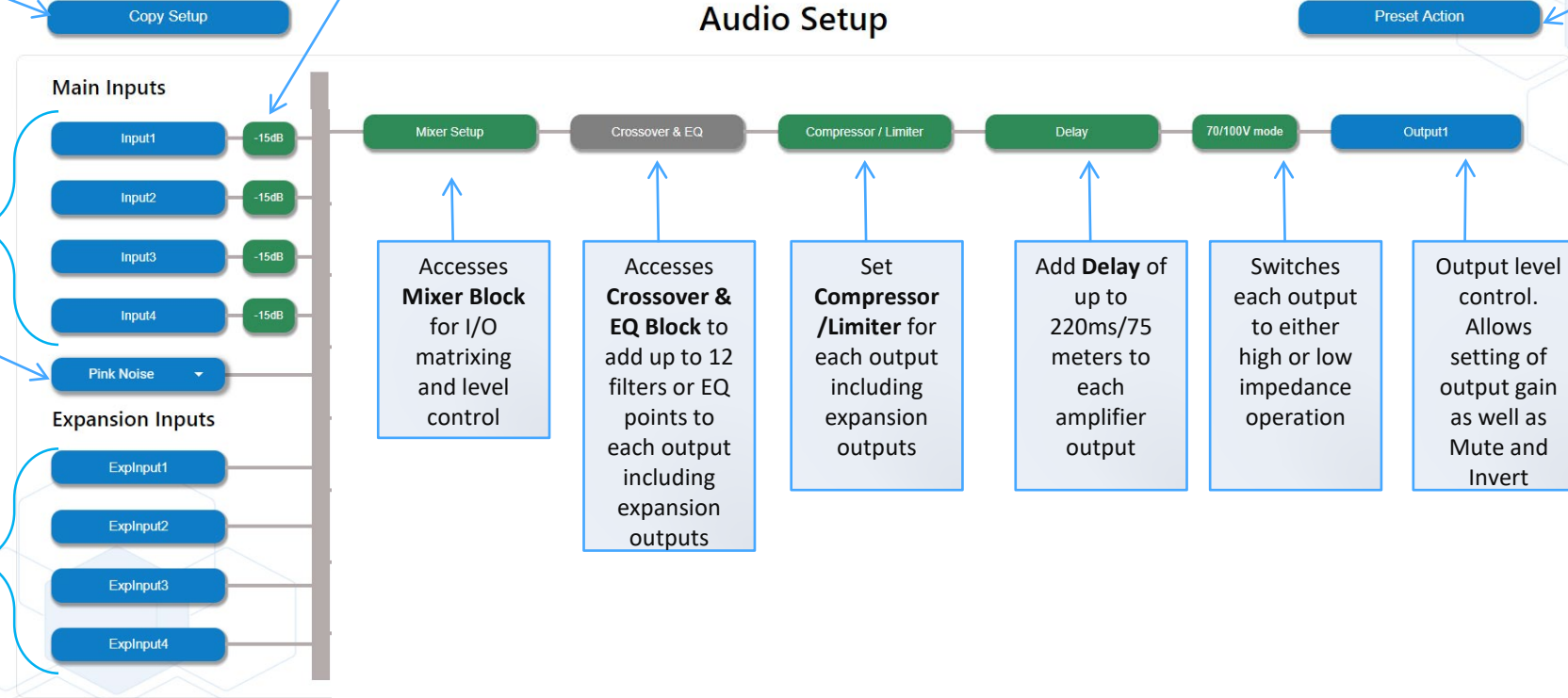
Recall and save up to 10 presets

Re-name Inputs

Tone Generator

- Pink noise
- 500Hz Sine
- 1kHz Sine
- 5kHz Sine
- 10kHz Sine

Optional inputs from DM4X4 or ANALOGUE4 card appear here. They can also be renamed as needed



☒ Output1

☐ Output2

☐ Output3

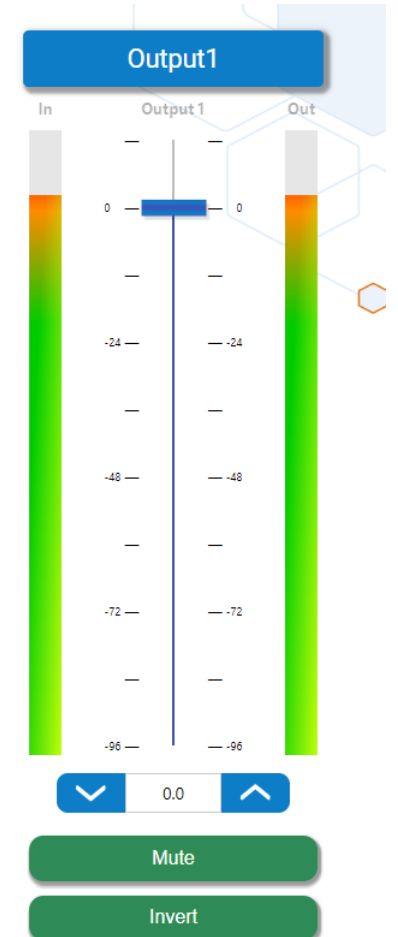
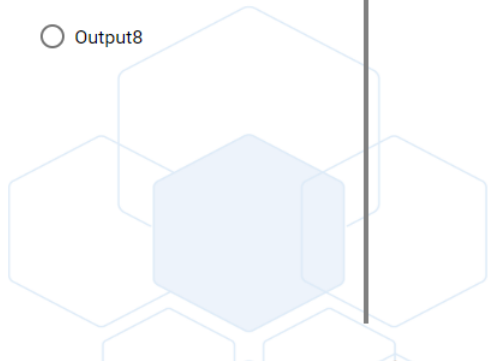
☐ Output4

☐ Output5

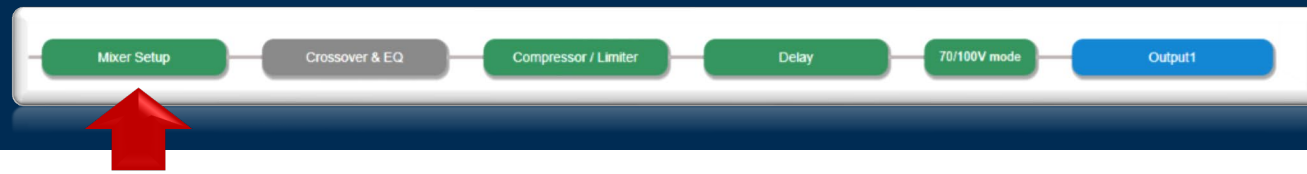
☐ Output6

☐ Output7

☐ Output8



Mixer Setup



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Output

- ☒ Output1
- ☐ Output2
- ☐ Output3
- ☐ Output4
- ☐ Output5
- ☐ Output6
- ☐ Output7
- ☐ Output8

Input1, Input2, Input3, Input4, Pink Noise, ExInput1, ExInput2, ExInput3, ExInput4

Output1

- I/O Matrixing is setup here along with input renaming
- Select which output **1** you wish to send input/s to. Note; expansion outs also shown
- Adjust input levels **2** for each input
 - This only affects the output selected so if no signal is to go to that output then simply mute the input
- Adjust output level as needed **3**
- Note that the expansion inputs and tone generator are also accessed here. **4**

Crossover and EQ



1. Select the output to apply filters to. Each Output can have a different configuration
2. Select filter type
3. Enable or disable filters
4. Set EQ filter type
5. Adjust parameters for each filter.
6. Use adjustment points or direct number entry

Crossover and EQ



- Select the output to apply filters 1
- 15 individual filters can be set
- The top line 2 are three fixed filters
- Underneath there are 12 filters that can be set to different types 4
 - i. EQ
 - ii. High Pass
 - iii. Low Pass
 - iv. Notch
 - v. High Shelf
 - vi. Low Shelf
 - vii. All Pass
- Any of these filters can be individually enabled or disabled 3
- For each filter enter the value for Frequency, Q and Gain here 5
- Adjustment points on graph can also be used to change these parameters 6
- When High or Low Pass filters are selected the filter type can also be set 7

Compressor/Limiter



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Output ¹

- ☒ Output1
- ☐ Output2
- ☐ Output3
- ☐ Output4
- ☐ Output5
- ☐ Output6
- ☐ Output7
- ☐ Output8

Enabled

Mode

Compressor ²

Threshold

-18.7 dB

Compression ratio

20.0 : 1

Knee width

42 dB

Makeup gain

15.2 dB

Attack time

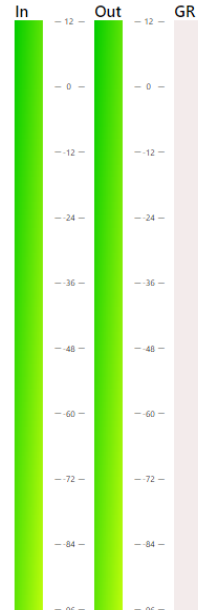
112 ms

Hold time

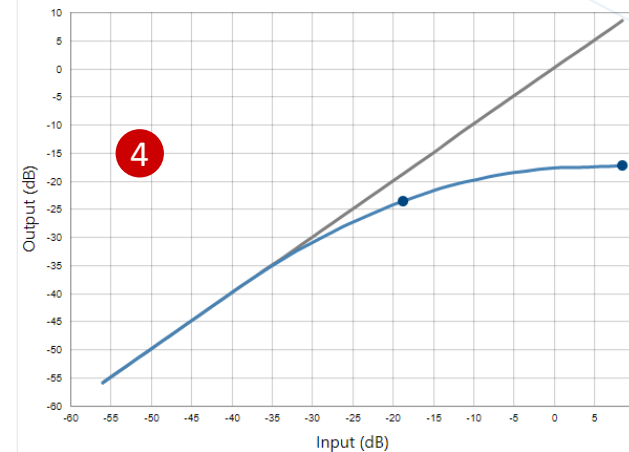
1889 ms

Release time

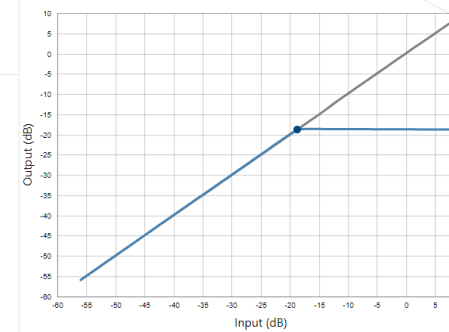
1913 ms



Compressor



Limiter



- Select the output ¹ to apply either the Compressor or a Limiter
- Choose either a Compressor or Limiter filter ²
 - I. Set desired parameters
 - II. Filter will not be active until status is changed to Enabled
- Check Input and Output levels and Gain Reduction (GR) ³
- Graph shows current filter setting and allows Input and Output levels to be changed by dragging control points ⁴



Output Delay

Output

- ☒ Output1
- ☐ Output2
- ☐ Output3
- ☐ Output4

Enabled

Feet	118.5
Meters	36.1

1

▼

2 106

▲

(millisecond(s))

- Delay only affects amplified outputs.
- Either 2 or 4 channels depending on model of ISP amplifier
- Up to 220 milliseconds (ms) can be applied to each amplified output.
 - Maximum delay
 - 220 ms
 - 246 feet
 - 75 meters
- Either use the up and down arrows to change the delay in milliseconds, **1** or directly enter a value between 0 and 220 **2**
- Change status to Enabled to apply delay to selected Output channel

Preset Action



Audio Setup



- Select Preset Action from Audio Setup screen ①
- On the Preset Action pop-up window ②
 - Up to ten presets can be configured
 - Rename any preset ②
 - Recall a previously saved preset ③
 - Save current setup to a preset ④

Preset Action

Save or recall the current configuration into any preset.

②

Preset 1	③ Recall	④ Save
Preset 2	Recall	Save
Preset 3	Recall	Save
Preset 4	Recall	Save
Preset 5	Recall	Save
Preset 6	Recall	Save
Preset 7	Recall	Save
Preset 8	Recall	Save
Preset 9	Recall	Save
Preset 10	Recall	Save

Device Control

Default Audio Settings

Reset active configuration

Active

Reset all presets

Presets

Auto Standby

Autostandby

Enabled

Minutes

30

Wake-up Sensitivity (dB)

-50 -40 -30 -20

Expansion Wake up Sensitivity (dB)

-50 -40 -30 -20

Wake-up Inputs

Audio Channel Failovers

Configure

Control Feature

	Feature	Mode	Selection
GPIO 1	None	N/A	N/A
GPIO 2	None	N/A	N/A
GPIO 3	None	N/A	N/A
GPIO 4	None	N/A	N/A

None
VCA
Mute Output
Recall Preset
Amp Fault Status
Amp Temperature Warm

All Outputs

Output1
Output2
Output3
Output4
Output5

Default Audio Settings

Reset active configuration

Reset all presets

1

Active

Presets

Auto Standby

Autostandby

Minutes

Wake-up Sensitivity (dB)

Expansion Wake up Sensitivity (dB)

2

Enabled

3

-50 -40 -30 -20

-50 -40 -30 -20

4

Wake-up Inputs

1. Reset all Configurations and Presets to their default status. 1 This can't be rolled back so saving Config files is recommended.
2. Enables or disables Autostandby. 2 When Enabled the amplifier will go into standby mode after the set number of minutes. Note that either disabling this feature or setting a time greater than 30 minutes makes the unit non ErP compliant.
3. Set the sensitivity of the signal that can wake the amplifier from standby. 3 Set sensitivity separately for included and expansion inputs
 - I. The lower the setting the stronger the signal needs to be to wake the amplifier from standby
4. Select which inputs are allowed to wake the amplifier from standby. 4
5. The amplifier ships with energy saving mode enabled and will enter auto standby if it detects a period of inactivity less than (-40dBV) for 30 minutes.

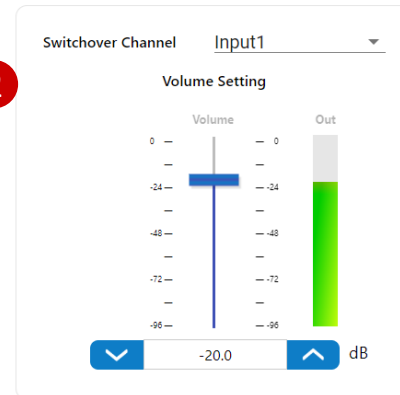
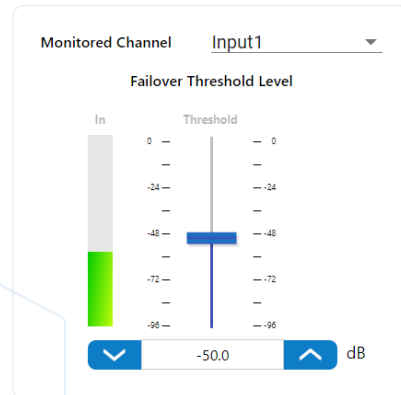
Audio Channel Failovers

[Configure](#)[< Back](#)

Output

- ☒ Output1
☐ Output2
☐ Output3
☐ Output4

Audio Failover Configuration



Failover Delay **3**

Enable Failover ☐

Failover Status **4** Deactivated

1. Select which Output the Failover signal applies to. **1** Failover can be set separately for each amplified output
2. Set the Failover Threshold of the first monitored channel and which channel the amplifier switches to on a failure of the monitored channel. **2** The Failover Threshold sets how low the signal must drop to be considered a failure
3. Failover Delay determines how long the signal must be at the threshold set above to be considered a failure **3**
4. Select Enable Failover and the Failover Status will change to Activated. **4**

Control Feature

	Feature	Mode	Selection
GPIO 1	None	▼ N/A	▼ N/A
GPIO 2	None	▼ N/A	▼ N/A
GPIO 3	None	▼ N/A	▼ N/A
GPIO 4	None	▼ N/A	▼ N/A

Feature Options

- None
- VCA
- Mute Output
- Recall Preset
- Amp Fault Status
- Amp Temperature Warm
- Amp Temperature Hot
- Heartbeat

Mode Options

- Determined by Feature
- Active Low (pull-up enabled)
- Active High (pull-up enabled)
- Active Low (pull-up disabled)
- Active High (pull-up disabled)
- Pull-up enabled
- Pull-up disabled

Selection Options

- Select output GPIO applies to
- Both amplified and extension outputs can be monitored

- GPIO can be configured as
 - Output with open collector
 - Output with open collector 100k internal pullup
 - Input with 100k internal pullup
 - VCA input supporting 500k linear potentiometer

Network Settings

[HOME](#)[AUDIO](#)[CONTROL](#)[NETWORK](#)[SOFTWARE](#)[ACCOUNTS](#)Current user: admin
[LOG OUT](#)

Host Name

The network host name is a user-friendly name to access the product instead of using an IP address. Simply enter the host name shown below into your web browser.

Format:

http://ausmonitor/ (Windows)

http://ausmonitor.local/ (MacOS X)

Note: Host name only supports up to 15 characters, not case-sensitive.

Update

3rd Party Control

Enabled



3

TCP

UDP

Port Number*



2626



2626

Save Configuration**

*Supported Port Numbers are from 1000 to 65534.

Note that changing these settings forces **system reboot.

IPv4 Properties

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☐ Obtain an IP Address automatically (DHCP Mode)

4

☒ Use the following IP address:

IP Address

192

168

1

10

Subnet Mask

255

255

255

255

Default Gateway

192

168

10

1

5

Update

1. Enter the host name to be used for network access. **1** Press Update.
2. The name entered is automatically to the correct format for either a Windows or MacOS system. **2**
3. If 3rd party control is being used specify the control protocol. **3**
4. Set the required port number and Save Configuration. **4** Note that this will force a system reboot to apply the port settings

Configuration

Export Amplifier Configurations

1

Save Config

Import Amplifier Configurations

2

Load Config

Factory Default

5

Reset

Software Update

1. Download System File

3

Download the latest Internet Series Amplifier System File from the Australian Monitor website or click on the button below.

Download

2. Load System File

4

Your browser and amplifier will automatically reset.

Drop file here or click to upload. (.bin)

1. Exports current Amplifier Configuration file. 1 For security reasons this does not including account details.
2. Import an Amplifier Configuration file to the connected ISP amplifier. 2 This is an easy way to load identical setups into multiple amplifiers
3. Links to the Software Download page of australianmonitor.com.au where the latest Firmware can be downloaded to a PC. 3
4. Up load a previously downloaded Firmware Update to the connected ISP amplifier 4
5. Resets the connected ISP amplifier to the Factory Default status. 5 When this is done all loaded configurations are removed and accounts are set to the default Admin login.

Manage Accounts

[Add a New Account](#)
[Delete Selected Account\(s\)](#)

<input type="checkbox"/>	No.	Username	Active	Admin	
<input type="checkbox"/>	1	admin	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit
<input type="checkbox"/>	2	user10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit
<input type="checkbox"/>	3	user2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit
<input type="checkbox"/>	4	user3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit
<input type="checkbox"/>	5	user4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit
<input type="checkbox"/>	6	user5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Edit
<input type="checkbox"/>	7	user6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Edit
<input type="checkbox"/>	8	user7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit
<input type="checkbox"/>	9	user8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Edit
<input type="checkbox"/>	10	user9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit

- Up to 10 User accounts can be setup for each ISP amplifier
- Add a new account or edit an existing account
- An account can be set to either Active or Admin privileges
 - Active allows access to the Home screen only permitting the user to adjust output volume only
 - Admin allows a user full access to all system features
- The edit button allows the name and password of each user account to be set or maintained as well as assigning privileges.

www.australianmonitor.com.au

- Ceiling speaker spacing calculator
- SPL calculator
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- Application notes now online
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- Simplified searching within product groups
- Discontinued products

