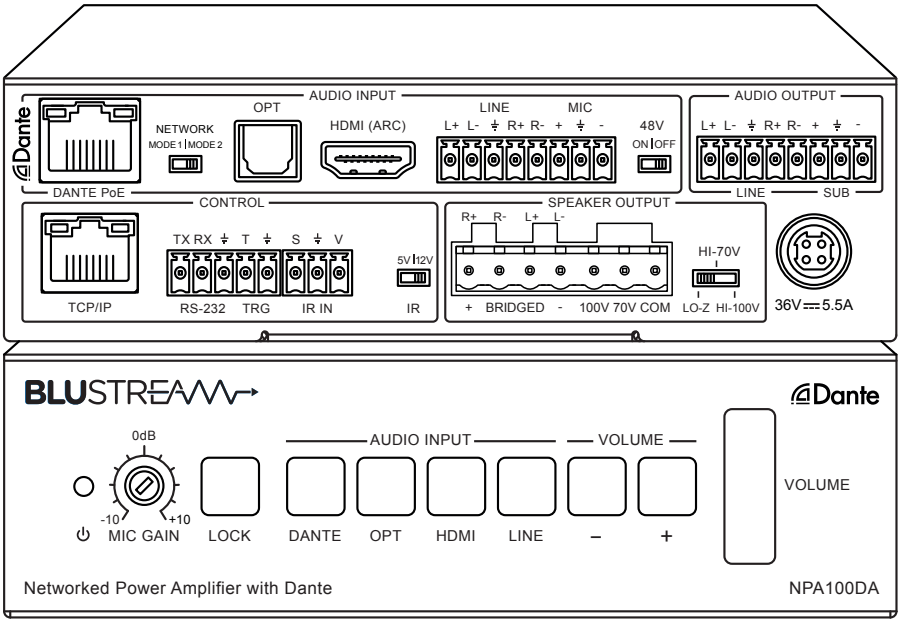
NPA100DA

Quick Reference Guide



Introduction

Our NPA100DA networked audio zone amplifier delivers advanced audio integration within a commercial or residential AV installation.

The NPA100DA features a 2 x 50W digital amplifier (1 x 100W mono) or 70V / 100V hi-level constant voltage output, dedicated LFE subwoofer output, Dante audio integration and 2ch balanced / unbalanced audio outputs.

The NPA100DA supports a variety of inputs including 2ch Dante audio, HDMI ARC, MIC audio with 48V Phantom power support, optical audio and 2ch balanced / unbalanced analogue audio.

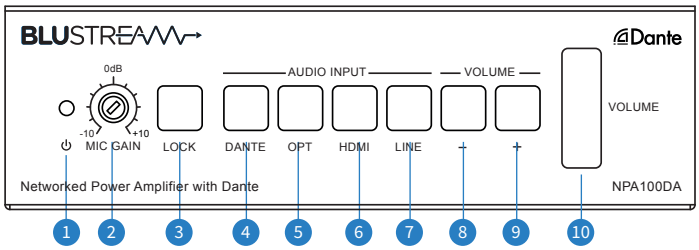
The NPA100DA can be powered via PoE++ from a compatible network switch, or locally should the switch not support PoE++. The unit also includes the ability to lower the amplifier power output subject to PoE capabilities, support for combined or independent LAN and Dante connections, DSP with a 10 band EQ, audio delay for lip sync correction, independent gain control for audio inputs and control via front panel, IR, RS-232, TCP/IP, web-GUI or 12V trigger.

FEATURES:

- Advanced network audio amplifier with Dante Integration
- Supports 2 x 50W @ 4 / 8 ohm, 1 x 100W @ 4 / 8 ohm or 70 / 100V constant output for multiple speakers with longer cable runs
- Supports power via PoE++ on Dante LAN connection or Local power supply*
- Dual network option - independent Dante and LAN control ports, or combined to a single LAN
- Audio inputs include:
  - 2ch Dante / AES67 audio input
  - HDMI ARC, with CEC volume control
  - MIC audio input with phantom power and auto-ducking
  - 2ch analogue audio input – unbalanced & balanced
  - 1 x optical (S/PDIF) audio input
- Audio outputs include:
  - 2ch Dante/AES67 audio output
  - 2ch variable / fixed analogue output, unbalanced & balanced
  - 1 x LFE subwoofer output
- Independent gain control for input channels
- DSP with 31 band EQ with +/-10dB and audio delay
- Local 12V input trigger for automated power control
- Control via front panel, IR, RS-232 and IP
- Auto standby mode with signal sensing
- In-built web-GUI for setup and control

**Amp power limited when using PoE+*

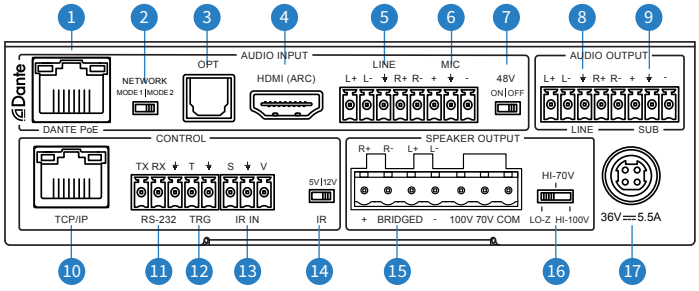
Front Panel Description



1. Power Status LED
2. MIC Gain Rotary Dial - Adjust the microphone gain between -10 to +10dB
3. Lock Button - Press to lock or unlock the front panel buttons
4. Dante Button - Select Dante audio input
5. Opt Button - Select optical audio input
6. HDMI Button - Select HDMI ARC audio input
7. Line Button - Select analogue line audio input
8. Volume - Button - Decrease master output volume
9. Volume + Button - Increase master output volume
10. Volume Level LED's - Illuminates to show current volume level

Note: To factory reset this device, press and hold the Lock button and Volume + button for 10 seconds

Rear Panel Description



1. Dante (PoE) Port - RJ45 connector supporting PoE power to power NPA100DA
2. Network Mode Switch - Mode 1 allows Dante audio and TCP/IP and web-GUI control via the Dante PoE port
   - Mode 2 allows Dante audio via the Dante PoE Port, and TCP/IP and web-GUI control via the TCP/IP port
3. Optical Digital Audio Input - S/PDIF
4. HDMI ARC Audio Input - Supports HDMI ARC audio only, connect to HDMI ARC port on display. Supports 2ch PCM audio only
5. Analogue L/R Audio Input - Phoenix connector supports balanced or unbalanced analogue audio signals
6. MIC Audio Input - Phoenix connector supports balanced or unbalanced microphone audio signals
7. 48V Phantom Power Switch - Enable or disable 48V phantom power for microphone audio input
8. Analogue L/R Audio Output - Phoenix connector supports balanced or unbalanced variable analogue audio signals
9. Sub Audio Output - Phoenix connector supports balanced or unbalanced analogue audio signal with fixed 80Hz Low Pass Filter
10. TCP/IP Port - RJ45 connector for TCP/IP and web-GUI control of the device
11. RS-232 - Phoenix connector for RS-232 control of the device
12. Trigger Input - Phoenix connector triggers device power on/off. Low level (0V) to turn amp on, high level (5-12V) to turn amp off
13. IR Input - 3.5mm stereo connector to connect to Blustream IR receiver for IR control of the device
14. IR Voltage Switch - Select between 5V or 12V IR voltage. Please note: included Blustream IR accessories are 5V
15. Speaker Output - Phoenix connector to connect speaker outputs, see Speaker Connections section for more information
16. Speaker Impedance Switch - Select low impedance (LO-Z, 4-8ohm) speakers, or high impedance (HI-70V or HI-100V) speakers
17. Power Port - Use included 36V/5.5A DC power adaptor if not powered via PoE++ device

RS-232 Configuration

The RS-232 port is used for configuration and control of the device. The default RS-232 communication settings are:

Baud Rate: 57600 **Data Bit:** 8 **Stop Bit:** 1 **Parity Bit:** none

For a complete RS-232 command list please see the NPA100DA User Manual - available to download from the Blustream website.

Web-GUI Control

The NPA100DA features an in-built web-GUI which can be used for control and configuration of the unit. By default the device is set to DHCP, however if a DHCP server (eg: network router) is not installed the device IP address will revert to below details:

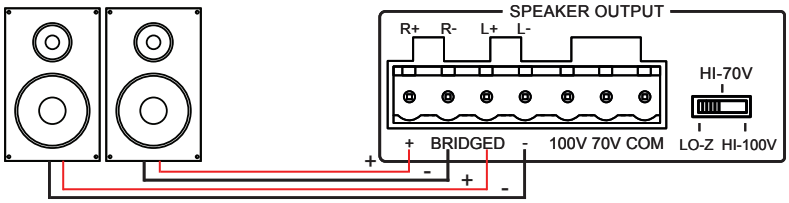
Default **Username**: blustream Default **Password**: 1234 Default **IP Address**: 192.168.0.200

For further information please see the NPA100DA User Manual - available to download from the Blustream website.

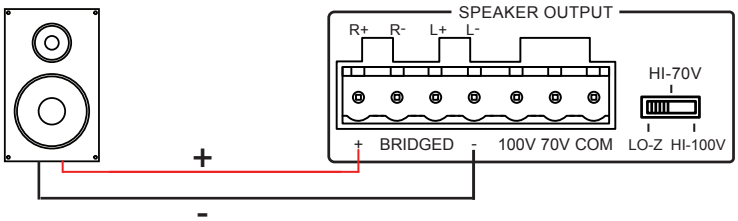
Speaker Connections

The NPA100DA supports both Low Impedance (4-8ohm) speakers as well as High Impedance (70V-100V) speakers. It is necessary to configure the Speaker Impedance Switch as well as wire up speakers according to the specific speakers you are using. Wiring examples can be found as follows:

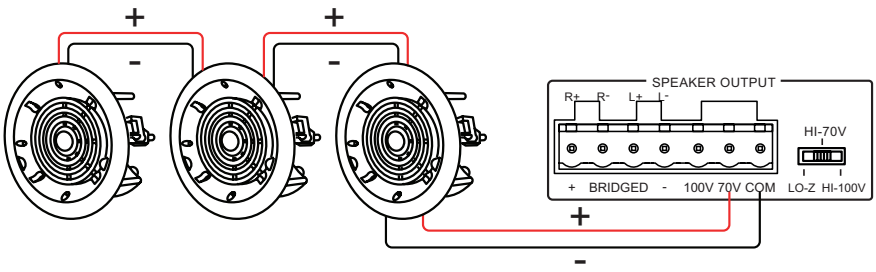
Low Impedance (4-8ohm) Stereo Speakers



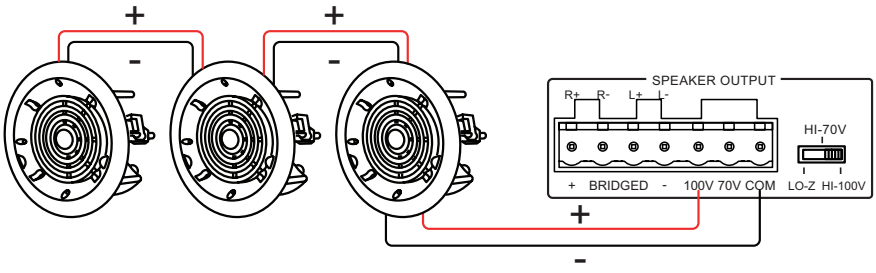
Low Impedance (4-8ohm) Mono Speaker



High Impedance 70V Speakers

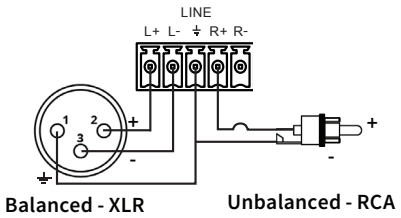


High Impedance 100V Speakers



Speaker Connections

The NPA100DA supports both balanced and unbalanced analogue audio connections. The wiring configuration should be as follows:



Specifications

NPA100DA

- **Audio Inputs:** 1 x 5-Pin Phoenix connector (analogue)
  1 x 3-Pin Phoenix connector (MIC)
  1 x HDMI Type A, 19-pin, female, locking (ARC)
  1 x Optical (S/PDIF)
- **Audio Outputs:** 1 x 4-Pin Phoenix connector (4 / 8 ohm speaker)
  1 x 3-Pin Phoenix connector (70 / 100V speaker)
  1 x 5-Pin Phoenix connector (analogue audio)
  1 x 3-Pin Phoenix connector (LFE subwoofer)
- **Ethernet Port:** 1 x LAN RJ45 connector (Dante)
  1 x LAN RJ45 connector (Network)
- **RS-232 Serial Port:** 1 x 3-Pin Phoenix connector
- **IR Input Ports:** 1 x 3-Pin Phoenix connector
- **Trigger Input:** 1 x 2-Pin Phoenix connector
- **Rack Mountable:** 19" Rack mounting and wall / surface mounting kit included
- **Casing Dimensions (W x H x D):** 250mm x 150mm x 45mm
- **Dimensions Including Connections (W x H x D):** 252mm x 150mm x 45mm
- **Shipping Weight:** 2.8kg
- **Operating Temperature:** 32°F to 104°F (0°C to +40°C)
- **Storage Temperature:** -4°F to 140°F (-20°C to +60°C)
- **Power Supply:** PoE++ Type 4, or 36V/5.5A DC 4-pin DIN

NOTE: *Specifications are subject to change without notice. Weights and dimensions are approximate.*

AMP POWER SPECIFICATION

POWER SOURCE	AMP OUTPUT
36V/5.5A DC	100W
PoE++ Type 4 Class 8	55W
PoE++ Type 4 Class 7	45W
PoE++ Type 3 Class 6	35W
PoE++ Type 3 Class 5	25W
PoE+ Type 2 Class 4	10W

Package Contents

NPA100DA

- 1 x NPA100DA
- 1 x 36V/5.5A power supply
- 1 x Remote control
- 1 x IR Receiver
- 1 x Rack mounting kit
- 1 x Wall / surface mounting Kit
- 4 x Rubber Feet
- 1 x Quick Reference Guide

Acknowledgements

Dante® is a registered trademark of Audinate Pty Ltd.

Certifications

FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION - changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CANADA, INDUSTRY CANADA (IC) NOTICES

This Class B digital apparatus complies with Canadian ICES-003. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

CORRECT DISPOSAL OF THIS PRODUCT

This marking indicates that this product should not be disposed with other household wastes. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.