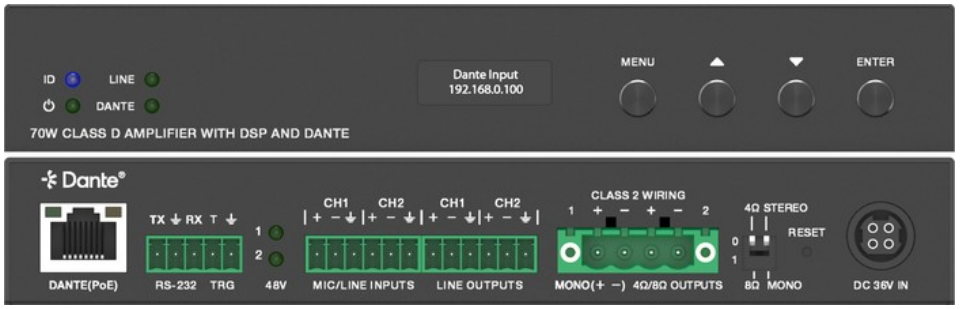
70W 2-Channel Class D Amplifier with Dante

2x35W Stereo or 70W Mono into 4/8 ohm, Dante 2x2, Mic/Line Input with 48V Phantom, PoE++ or 36V Power



Puts a powered Dante speaker zone in the room on one network cable, with no rack amplifier and no separate Dante interface. The AUD-DTE-70AMP is a two-channel Class D amplifier for low-impedance speakers. It delivers 2 × 35W at 4/8 ohm in stereo or 1 × 70W in bridged mono from its 36V supply, and 2 × 25W on IEEE 802.3bt Class 8 PoE++ alone. It comes in a compact black metal enclosure measuring 7.09 × 4.65 × 1.10 in, with mounting ears. It is the right choice for meeting rooms, classrooms, hospitality and worship spaces where one-cable installation, a local mic input and in-room DSP matter more than 70V/100V distributed-line reach.

A single RJ45 port carries Dante 2×2 and AES67 audio at 44.1kHz to 96kHz, 16- or 24-bit, along with PoE, TCP/IP control and RelayAV control. The two-channel MIC/LINE input accepts balanced or unbalanced sources and supplies 48V phantom power for condenser microphones. The amplifier sends a presenter mic back onto the Dante network and ducks program audio under the voice. The DSP routes four inputs and two mixers to six outputs (Dante, line and speaker), with an 8-band parametric EQ, up to 50ms of output delay, five presets, auto standby with signal sensing and a 5–12V trigger input that disables the amplifier output. The unit is controlled over RS-232, TCP/IP, RelayAV (routing, volume, mute and delay for each output, the mixers, EQ, presets and standby) or the front-panel LCD and buttons, and a balanced or unbalanced line output cascades to a second amplifier for larger rooms.

Surge Protection Recommended — This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, or lightning strikes. Use of surge protection systems is highly recommended.

TABLE OF CONTENTS

1. Features 2
2. Package Contents 2
3. Specifications 2
4. Introduction 4
5. Panel Descriptions 5
Front Panel 5
Rear Panel 6
6. Audio Amplifier Output 6
7. Speaker Connections 7
8. Dante Web GUI User Guide 7
Logging in 7
Information Page 7
Preset Page 7
Input Page 7
Output Page 7
DSP Page 8
Network Page 8
System Page 8
User Page 8
9. RS-232 Control Commands 9
Connecting 9
System Setting 9
Input Setting 11

continued

Output Setting 11
DSP Setting 13
Preset Setting 14
Network Setting 14
Status Report 15
10. Connection Diagram 16
11. Connection Diagram 17
12. Troubleshooting 17

1. Features

- ✓ 70W Class D audio amplifier with Dante integration
- ✓ 2 × 35W @ 4/8 ohm stereo, or 1 × 70W @ 4/8 ohm bridged mono
- ✓ Dante 2×2 and AES67 audio input and output
- ✓ Balanced or unbalanced analog input, plus analog output for cascading
- ✓ Simultaneous outputs: 2-channel Dante digital audio, balanced or unbalanced line-level analog, and amplified speaker output
- ✓ Microphone input with 48V phantom power
- ✓ Audio DSP with gain, ducking, mixing, matrixing, equalizer, volume and delay control
- ✓ 8-band parametric EQ on the audio outputs (±15dB gain), and up to 50ms of output delay
- ✓ Auto standby with signal sensing, adjustable from 0 to 100 minutes
- ✓ Local 5–12V trigger input that disables the amplifier output
- ✓ RelayAV control: route a source to each output, set each output's volume, mute and delay, adjust the two mixers and the output EQ, save and recall presets, and put the unit in standby
- ✓ Network control: a host unit can control other units on the same network segment
- ✓ Dante audio at 44.1kHz, 48kHz, 88.2kHz and 96kHz sampling rates, 16- or 24-bit
- ✓ Dante latency selectable at 2, 3, 4, 5 or 10ms
- ✓ Control from the front-panel buttons, RS-232, TCP/IP or RelayAV
- ✓ Powered by PoE or the local 36V DC power supply (amplifier power is limited on PoE)

2. Package Contents

- ✓ 1x 2 × 35W Class D Audio Amplifier (AUD-DTE-70AMP)
- ✓ 2x 6-pin 3.5mm Phoenix connector (male)
- ✓ 1x 5-pin 3.5mm Phoenix connector (male)
- ✓ 1x 4-pin 5.08mm Phoenix connector (male)
- ✓ 2x Mounting ears
- ✓ 4x Machine screws
- ✓ 1x 36V/2.5A multinational power supply, 4.9ft (1.5m)

3. Specifications

TECHNICAL	
Amplifier Type	Class D
Output Power	2 × 35W @ 4/8 ohm stereo; 1 × 70W @ 4/8 ohm mono
Network Bandwidth	100Mbps
Audio Latency	Dante device latency selectable at 2, 3, 4, 5 or 10ms in Dante Controller; amplifier and analog output delay adjustable from 0 to 50ms

continued

Audio Format: Dante	Dante/AES67 digital audio in/out, 2-channel PCM, 44.1kHz–96kHz, 16/24-bit
Audio Format: Line In	Analog audio, balanced/unbalanced, max input level 24dBu
Audio Format: Mic In	Analog audio, balanced/unbalanced, min input level -35dBV
Audio Format: Line Out	Analog audio, balanced/unbalanced, max output level 2V RMS
Audio Format: Amp Out	Balanced 2-channel; max 2 × 35W @ 4/8 ohm stereo, 1 × 70W @ 4/8 ohm mono
Transmission Distance	328ft (100m) over CAT6/6A/7
ESD Protection	IEC 61000-4-2: ±8kV air-gap discharge, ±4kV contact discharge
LINE/MIC INPUT AUDIO	
Input Impedance	20kohm balanced; 10kohm unbalanced
Input Level	Max 24dBu (12.28Vrms) balanced line; max 18dBu (6.14Vrms) unbalanced line; min -35dBV (17.78mVrms) balanced mic
Phantom Power	48V, switchable per input
LINE OUTPUT AUDIO	
Output Impedance	600 ohm balanced; 300 ohm unbalanced
Output Level	Max 2V RMS balanced; max 2V RMS unbalanced
Frequency Response	20Hz to 20kHz (±0.5dB)
Dynamic Range	>100dB @ 0dBu, 1kHz, A-weighted
S/N Ratio	>100dB @ 0dBu, 1kHz, A-weighted
THD+N	<0.01% @ +4dBu, 1kHz
Audio Output Delay	<1ms
AMPLIFIER OUTPUT BY POWER SOURCE	
36V/2.5A DC	2 × 35W stereo; 70W mono (4/8 ohm)
PoE++ Type 4 Class 8	2 × 25W stereo; 50W mono (4/8 ohm)
PoE++ Type 4 Class 7	2 × 20W stereo; 40W mono (4/8 ohm)
PoE++ Type 3 Class 6	2 × 15W stereo; 30W mono (4/8 ohm)
PoE++ Type 3 Class 5	2 × 10W stereo; 20W mono (4/8 ohm)
PoE+ Type 2 Class 4	2 × 5W stereo; 10W mono (4/8 ohm)
DSP	
Audio Matrix	4 inputs + 2 mixers routed to 6 outputs (Dante Out CH1/CH2, Line Out CH1/CH2, Speaker Out CH1/CH2)
Parametric EQ	8-band per output; Parametric, Lowpass, Highpass, Low Shelf, High Shelf; 20Hz–20kHz; ±15dB; Q 0.02–16
Ducking	Mic/Line trigger; duck level and threshold -60 to 0dB; attack 3–1000ms; hold 3–2000ms; release 3–10000ms
Output Delay	0–50ms per output
Presets	5 scenes
Auto Standby	Signal sensing, 0 (off) to 100 minutes
CONNECTIONS	

continued

Input	1 × MIC/LINE IN, 2-channel (6-pin 3.5mm Phoenix connector)
Output	1 × LINE OUT, 2-channel (6-pin 3.5mm Phoenix connector); 1 × 4/8 ohm AMP OUT (4-pin 5.08mm locking Phoenix connector)
Network	1 × DANTE/IP (RJ45, PoE++ PD, IEEE 802.3bt Class 8): Dante/AES67, TCP/IP and RelayAV control
Control	1 × RS-232 (3-pin 3.5mm Phoenix connector, API command control); 1 × TRIGGER (2-pin 3.5mm Phoenix connector, high/low level configurable to disable the amplifier output)
Power Input	1 × DC 36V IN (4-pin locking connector)
CONTROL	
Methods	Front-panel LCD and buttons, RS-232, TCP/IP, RelayAV
RS-232 Settings	115200 baud (default; 4800–115200 selectable), 8 data bits, 1 stop bit, no parity
TCP/IP Port	8000 (default)
Front-Panel Indicators	Power LED, ID LED, LINE/DANTE signal LEDs, LCD screen
Rear-Panel Indicators	48V phantom power LEDs (×2)
Rear-Panel Controls	AMP output mode DIP switch (4 ohm/8 ohm, stereo/mono); RESET button
POWER	
Power Supply	36V/2.5A DC power supply with 4-pin locking connector, or PoE++ Type 4 Class 8 (IEEE 802.3bt)
Power Consumption (Max)	94.6W (1kHz sine wave, amplifier output into a 4 ohm load)
PHYSICAL	
Housing	Metal enclosure
Color	Black
Dimensions (W × D × H)	7.09 × 4.65 × 1.10 in (180 × 118 × 28 mm)
Weight	1.48 lbs (0.67 kg)
ENVIRONMENTAL	
Operating Temperature	32°F to 104°F (0°C to 40°C)
Storage Temperature	-4°F to 140°F (-20°C to 60°C)
Operating Humidity	20% to 80% RH, non-condensing
Storage Humidity	10% to 90% RH, non-condensing

4. Introduction

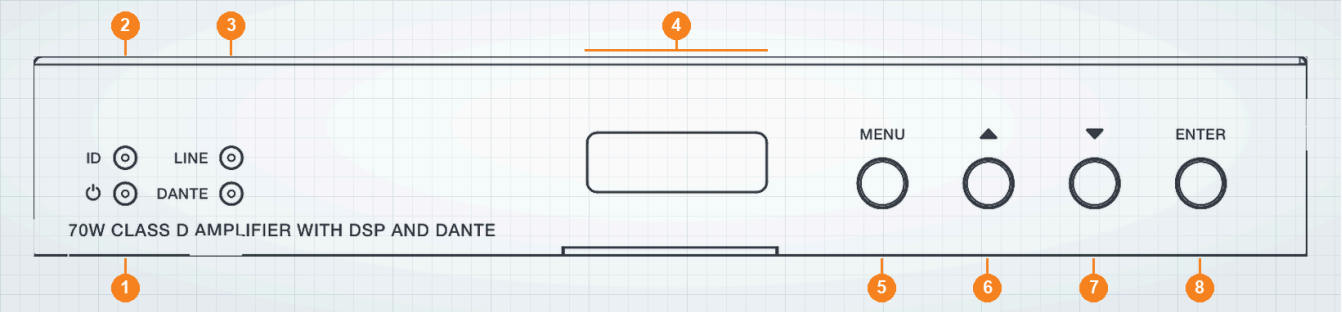
This amplifier is a two-channel Class D design for low-impedance (4Ω or 8Ω) speakers. It delivers up to 2 x 35W in stereo or 1 x 70W in bridged mono. It has two channels of Dante digital audio input and output, plus two channels of balanced or unbalanced analog audio input and output.

The analog inputs accept line-level sources or microphones. They can supply 48V phantom power to condenser microphones. A built-in DSP handles gain, mixing, matrix routing, equalization, volume and delay. You can control the amplifier from its front panel, over RS-232, over TCP/IP, or through its built-in Web GUI.

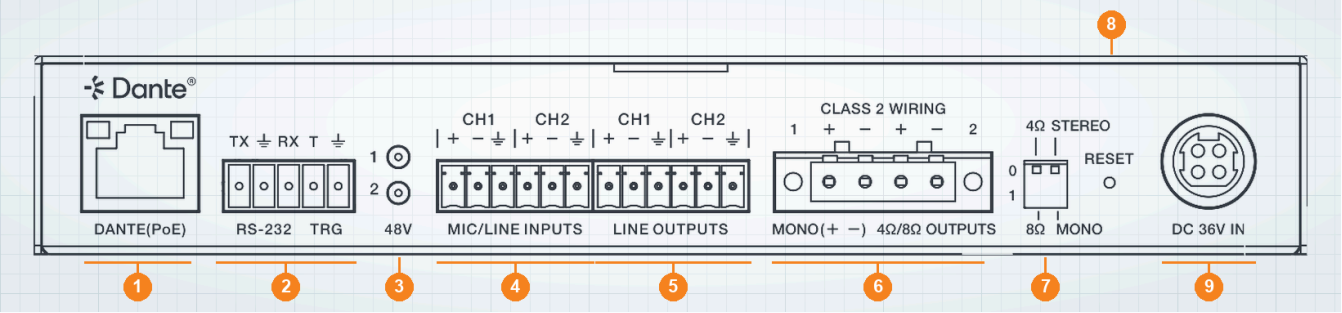
Surge protection: The amplifier contains sensitive electronics that electrical spikes, surges, electric shock and lightning strikes can damage. Use a surge protection device to protect the unit and extend its life.

Network cable: Use a straight-through cable (direct connection). Do not use a crossover cable. Wire both ends in the same order: white/orange, orange, white/green, blue, white/blue, green, white/brown, brown.

5. Panel Descriptions



Front Panel



Rear Panel

FRONT PANEL

No.	Name	Description
1	**Power LED**	Green means the unit is powered on, by PoE or DC. Red means it is in standby. Off means it is powered off.
2	**ID (show me) LED**	Flashes so you can find this unit in a rack. Turn it on from the Web GUI or by command. For example, setting Dante Identification to On on the System page makes this LED flash. When identification is off, the LED is off.
3	**LINE/DANTE LED**	Signal indicators. The green DANTE or LINE LED lights when a signal is detected on that input.
4	**LCD screen**	Shows the unit's status. With the menu buttons you can check the software version, set input gain, turn DHCP on or off, and set the output volume.
5	**MENU button**	Opens the menu for input gain, network settings, output volume and the software version.
6	**UP button**	Selects the previous item.
7	**DOWN button**	Selects the next item.
8	**ENTER button**	Confirms and runs the selected item.

REAR PANEL

No.	Name	Description
1	**DANTE port**	Dante network port with PoE. It carries Dante audio in and out, and it is also the port for the Web GUI and TCP/IP control.
2	**RS-232/TRG port**	**RS-232:** serial control port, used for RS-232 pass-through or for controlling the amplifier with API commands. **TRG:** trigger input that responds to a rising or falling voltage edge. When it detects a trigger, the amplifier mutes its audio (protected mode). Set the trigger behavior under Input Trigger on the Web GUI System page.
3	**48V Phantom power LEDs**	Two indicators. Green means phantom power is on for that input. Off means it is off.
4	**MIC/LINE INPUTS port**	Two-channel analog input, balanced or unbalanced. Line sources can go up to 24dBu. Microphones can go down to −35dBV.
5	**LINE OUTPUTS port**	Two-channel analog line output, balanced or unbalanced, up to 2V RMS.
6	**AMP OUT port**	Two-channel balanced speaker output: 2 x 35W @ 4/8Ω stereo or 1 x 70W @ 4/8Ω mono. Use 1+/1− and 2+/2− for a pair of stereo speakers. Use 1+/1− alone for a single bridged mono speaker.
7	**AMP output mode DIP switch**	**Left switch (impedance):** up for 4Ω speakers, down for 8Ω speakers. **Right switch (connection):** up for stereo two-channel output, down for bridged mono output.
8	**RESET button**	Press briefly to restart the unit. Hold for 3 seconds to restore factory defaults while keeping network settings. Hold for 10 seconds to restore factory defaults including network settings.
9	**DC 36V IN**	36V/2.5A DC power input.

6. Audio Amplifier Output

The amplifier delivers the same power into 4Ω and 8Ω speakers. How much power it delivers depends on what powers it. With the 36V DC supply it gives full power. On PoE it adjusts its internal gain to make the most of the power available. Before you connect speakers, set the impedance switch on the rear panel to match them.

POWER SOURCE	4/8Ω STEREO	4/8Ω MONO
36V/2.5A DC	2 x 35W	70W
PoE++ Type 4 Class 8	2 x 25W	50W
PoE++ Type 4 Class 7	2 x 20W	40W
PoE++ Type 3 Class 6	2 x 15W	30W
PoE++ Type 3 Class 5	2 x 10W	20W
PoE+ Type 2 Class 4	2 x 5W	10W

7. Speaker Connections

The amplifier supports low-impedance speakers only (4Ω to 8Ω). Set both DIP switches and wire the speakers to suit your speakers.

Stereo pair (4Ω or 8Ω): Set the impedance switch to 0 for 4Ω or 1 for 8Ω. Set the connection switch to 0 (STEREO). Wire the left speaker to 1+/1− and the right speaker to 2+/2−.

Single mono speaker (4Ω or 8Ω): Set the impedance switch to 0 for 4Ω or 1 for 8Ω. Set the connection switch to 1 (MONO). Wire the speaker to 1+/1−.

8. Dante Web GUI User Guide

LOGGING IN

1. Connect the amplifier's DANTE port to your Ethernet switch. 2. Connect your PC to the same switch, and set its network adapter to obtain an IP address automatically. 3. Open Dante Controller on the PC and find the amplifier on the Routing page. 4. Open the Device Info tab to see the amplifier's IP address. 5. Type that IP address into a browser on the PC to open the login page. 6. Sign in with the **Admin** account and its password, then click **LOGIN**. The Information page opens.

The Web GUI has two accounts. **Admin** reaches every page. **User** reaches only the User page, described below.

INFORMATION PAGE

This page shows basic product information: model name, MCU version, web version, DEP SDK, IP hostname and network configuration.

PRESET PAGE

You can store up to five scenes.

- **Preset Name:** name the scene.
- **Save:** store the current settings in that preset.
- **Clear:** erase the preset.
- **Recall:** load the preset.

INPUT PAGE

Dante In CH1 / CH2: set the volume of each Dante input, or mute it. The CH1/CH2 Stereo switch links the two channels as a stereo pair.

Mic/Line In CH1 / CH2: set the volume of each analog input, or mute it, and link them as a stereo pair with the Stereo switch. Choose a sensitivity from the drop-down (+24dBu, +14dBu, 0dBu, −18dBu or −35dBu) to suit the source. Turn on the Phantom Power switch to send 48V phantom power to a condenser microphone on that input.

OUTPUT PAGE

Master Out: set the volume of each output, or mute it. The outputs are Dante Out CH1/CH2, Line Out CH1/CH2 and Speaker Out CH1/CH2. If you turn on several outputs together, you can adjust them as a group.

Per-output settings: for each pair of outputs, the CH1/CH2 Stereo switch links the two channels. You can also set each output's delay, raise or lower its level, and mute it.

DSP PAGE

Ducking: ducking lowers an output automatically when someone speaks into a microphone.

- **Ducking:** pick the input that triggers ducking, and turn ducking on or off with the switch.
- **Output:** pick the output to duck.
- **Duck Level:** how far the output is lowered.
- **Threshold:** the input level that starts ducking.
- **Attack Time (3–1000):** how quickly ducking starts, in ms.
- **Hold Time (3–2000):** how long ducking holds, in ms.
- **Release Time (3–10000):** how quickly the level recovers, in ms.
  Audio Matrix: the amplifier has four inputs (Dante In CH1/CH2 and Mic/Line In CH1/CH2) and two mixers (Mixer 1 and Mixer 2). That gives six sources to route to six outputs (Dante Out CH1/CH2, Line Out CH1/CH2 and Speaker Out CH1/CH2).

- One source can feed one or many outputs.
- Each output takes only one source.
- Click a grid square to route a source to an output.
- The **All Outputs** row sends one source to every output at once.
- **Mixer 1/2:** set the level of each of the four inputs in a mixer, then click the grid to send the mix to one or more outputs.
- A blue square is selected. A grey square is not.
  PEQ Setting: select an output from the drop-down. The Stereo switch applies the same EQ to both channels of the pair.

- **Flat** sets every band to 0dB. **Custom1** and **Custom2** are two EQ curves you define yourself.
- Click a band button (1–8) to select it. A blue button is selected. Then set that band's filter type, gain, frequency and Q.
- **Clear** resets the EQ.
- **Copy PEQ Settings** copies the EQ settings.
- **Export PEQ Settings** and **Import PEQ Settings** save the EQ to a file and load it back.

NETWORK PAGE

Choose an IP mode of DHCP or Static.

- **Static:** enter the IP address, subnet mask and gateway, then click **Save**.
- **DHCP:** the amplifier takes the address your router assigns.
  You can also set the TCP port, the Telnet port and the domain name. You can open the Web GUI by its `.local` domain name, which is shown on this page and can be changed here. Click **Save** to apply your changes, or **Cancel** to discard them.

SYSTEM PAGE

System Utilities:

1. **Power On:** turns the amplifier on or off. 2. **Key Lock:** locks or unlocks the front-panel buttons. 3. **Standby Mode:** chooses the standby or sleep mode. 4. **Device Identification:** sets how the front-panel ID LED behaves. 5. **Input Trigger:** Off, High Level or Low Level. With High Level selected, a high voltage on the TRG input mutes the amplifier (protected mode). 6. **Power Mode:** on DC power this is fixed at "DC Power Supply." On PoE you can choose a PoE mode. The default is PoE Class 0. 7. **Front Panel LCD:** sets how long the LCD stays on: Always on, Off, 15s, 30s or 60s. With a timed setting, the LCD turns off after that long without use. 8. **RS-232 Baud Rate:** sets the serial baud rate. 9. **Auto Standby Time:** drag the slider to set the auto standby time.

Other System page controls:

- **Reboot:** restarts the amplifier.
- **Restore Factory Settings:** returns the amplifier to factory settings.
- **Export Settings** and **Import Settings:** save the configuration to a file and load it back.
- **Account Passwords:** change the password for the User and Admin accounts, then click **Save**.
- **Firmware Update:** click **Choose File**, select the update file, then click **Update**. The update is complete when the progress bar reaches 100%.

USER PAGE

Sign in with the **User** account to open the User page. From here you can:

1. **Preset:** recall a saved scene. 2. **Matrix:** route audio, the same way as on the Admin DSP page. 3. **Master Out:** set the master volume or mute. Turn each output on or off to set its volume or mute it individually.

Controls in the top-right corner of every page:

4. **Master volume:** click the volume icons to raise or lower the master volume. Click the mute icon to mute; it turns red while muted. 5. **Account:** shows the account you are signed in with (User or Admin). 6. **Power:** turns the amplifier on or puts it in standby. 7. **Logout:** signs you out and returns to the login page.

9. RS-232 Control Commands

CONNECTING

Connect the amplifier's RS-232 port to your PC through the 3-pin Phoenix connector and a USB-to-RS-232 cable. Wire TX, RX and Ground between the Phoenix connector and the DB9 connector. Then open a serial terminal on the PC and send the ASCII commands below. The same commands work over TCP/IP on port 8000.

SETTING	VALUE
Baud rate	115200 (default)
Data bits	8
Stop bits	1
Parity	None
TCP/IP port	8000

In the tables, **x** is the first parameter and **y** is the second.

Input numbers (x): 0 = all inputs, 1 = Dante In CH1, 2 = Dante In CH2, 3 = Mic/Line In CH1, 4 = Mic/Line In CH2. For stereo commands: 0 = all, 1 = Dante In CH1/2, 2 = Mic/Line In CH1/2.

Output numbers (x): 0 = all outputs, 1 = Dante Out CH1, 2 = Dante Out CH2, 3 = Line Out CH1, 4 = Line Out CH2, 5 = Speaker Out CH1, 6 = Speaker Out CH2. For stereo commands: 0 = all, 1 = Dante Out CH1/2, 2 = Line Out CH1/2, 3 = Speaker Out CH1/2.

SYSTEM SETTING

COMMAND	FUNCTION	EXAMPLE	FEEDBACK	DEFAULT
`?`	List all commands	`?`	List of all API commands	
`help`	List all commands	`help`	List of all API commands	
`get type`	Get device model	`get type`	`AUD-DTE-70AMP`	
`get status`	Get device status	`get status`	Full status report (see Status Report below)	
`get fw version`	Get firmware version	`get fw version`	`GUI: V… MCU: V… DEP: V…`	
`set power on`	Power on	`set power on`	`Power on` / `System Initializing...` / `Initialization Finished!` followed by firmware versions	
`set power off`	Power off	`set power off`	`Power off`	
`get power`	Get power state	`get power`	`power on` / `power off`	
`set reboot`	Reboot	`set reboot`	`Reboot…` / `System Initializing...` / `Initialization Finished!` followed by firmware versions	
`set reset`	Reset system settings to default. Type "Yes" to confirm, "No" to cancel	`set reset`	`Sure to Reset System Settings To Default? Type "Yes" after next prompt to confirm…`	

continued

COMMAND	FUNCTION	EXAMPLE	FEEDBACK	DEFAULT
set reset all	Reset system and network settings to default. Type "Yes" to confirm, "No" to cancel	`set reset all`	`Sure to Reset System and Network Settings To Default? Type "Yes" after next prompt to confirm…`	
set auto stb x	Set auto standby time. x = 0 is off; x = 1–100 is minutes	`set auto stb 10`	`Auto standby time: 10mins`	10
get auto stb	Get auto standby time	`get auto stb`	`Auto standby time: 10mins`	
set lcd on/off/15/30/60	LCD always on, off, or on for 15/30/60s	`set lcd on`, `set lcd off`, `set lcd 15`, `set lcd 30`	`LCD: on`, `LCD: off`, `LCD: 15s`	60s
get lcd	Get LCD setting	`get lcd`	`LCD:60s`	
set idled on/off/15/30/60	ID LED on, off, or on for 15/30/60s	`set idled on`, `set idled 15`, `set idled 30`	`ID LED: on`, `ID LED:15s`	off
set trigger on/off x	Trigger on/off. x = 0 mutes the output on a low level (0V); x = 1 mutes it on a high level (5–12V)	`set trigger on 1`, `set trigger off`	`Trigger on with high level`, `Trigger off`	off
get trigger	Get trigger setting	`get trigger`	`Trigger on with high level`	
set rsb x	Set serial baud rate: 115200, 57600, 38400, 19200, 9600 or 4800	`set rsb 115200`	`Baud rate: 115200`	115200
get rsb	Get serial baud rate	`get rsb`	`Baud rate: 115200`	
set key lock on/off	Lock or unlock the front-panel buttons	`set key lock off`	`Key lock: off`	on
get key lock	Get key lock state	`get key lock`	`Key: lock on`	
set amp mode x	Set amplifier PoE power mode. x = 1 PoE++ Type 4 Class 8, 2 Type 4 Class 7, 3 Type 3 Class 6, 4 Type 3 Class 5, 5 PoE+ Type 2 Class 4	`set amp mode 1`, `set amp mode 2`	`AMP power mode: PoE Class 0`. On DC power: `Error: AMP is DC power supply, adjusting the AMP power is invalid.`	0
get amp mode	Get amplifier power mode	`get amp mode`	`AMP power mode: PoE Class 0`	

INPUT SETTING

COMMAND	FUNCTION	EXAMPLE	FEEDBACK	DEFAULT
set input x stereo on/off	Input stereo link on/off (x = 0–2)	set input 1 stereo on	Dante In CH1/2 stereo mode: on	Off
get input x stereo	Get input stereo link	get input 1 stereo	Dante In CH1/2 stereo mode: on	
set input x gain y	Set input gain. x = 0–4; y = −12 to 12dB in 0.1dB steps	set input 1 gain 10	Dante In CH1 gain: 10dB	0
get input x gain	Get input gain	get input 1 gain	Dante In CH1 gain: 10dB	
set input x gain+ / set input x gain+y	Raise input gain by y. y = 0.1–24; leave y out for 1dB	set input 1 gain+, set input 1 gain+5	Dante In CH1 gain: 1dB, Dante In CH1 gain: 5dB	
set input x gain- / set input x gain-y	Lower input gain by y. y = 0.1–24; leave y out for 1dB	set input 1 gain-, set input 1 gain-5	Dante In CH1 gain: -1dB, Dante In CH1 gain: -5dB	
set input x sensitivity y	Mic/Line input sensitivity. x = 3–4; y = 1 +24dBu, 2 +14dBu, 3 +4dBu, 4 0dBV, 5 −18dBV, 6 −35dBV	set input 3 sensitivity 1	Mic/Line In CH1 sensitivity: +24dBu	0dBV
get input x sensitivity	Get sensitivity (x = 3–4)	get input 3 sensitivity	Mic/Line In CH1 sensitivity: +24dBu	
set input x phantom power on/off	48V phantom power on/off (x = 3–4)	set input 3 phantom power on	Mic/Line In CH1 phantom power: on	Off
get input x phantom power	Get phantom power state	get input 3 phantom power	Mic/Line In CH1 phantom power: on	
set input x mute on/off	Input mute on/off (x = 0–4)	set input 1 mute on	Dante In CH1 mute: on	Off
get input x mute	Get input mute	get input 1 mute	Dante In CH1 mute: on	

OUTPUT SETTING

COMMAND	FUNCTION	EXAMPLE	FEEDBACK	DEFAULT
set master member <abcdef>	Choose which outputs the master volume controls. 1 includes an output, 0 excludes it. a Dante Out CH1, b Dante Out CH2, c Line Out CH1, d Line Out CH2, e Speaker Out CH1, f Speaker Out CH2	set master member <111111>	Master member: 111111	111111
get master member	Get master members	get master member	Master member: 111111	

continued

COMMAND	FUNCTION	EXAMPLE	FEEDBACK	DEFAULT
set master vol x / set vol x	Set master volume, x = 0–100	set master vol 50, set vol 50	Master volume: 50	50
get master vol / get vol	Get master volume	get master vol, get vol	Master volume: 50	
set master vol+ / set vol+ / set master vol+y / set vol+y	Raise master volume by y. y = 1–100; leave y out for one step	set master vol+, set vol+5	Master volume: 51, Master volume: 55	
set master vol- / set vol- / set master vol-y / set vol-y	Lower master volume by y. y = 1–100; leave y out for one step	set master vol-, set vol-5	Master volume: 49, Master volume: 45	
set master mute on/off / set mute on/off	Master mute on/off	set master mute on, set mute on	Master mute: on	Off
get master mute / get mute	Get master mute	get master mute, get mute	Master mute: on	
set output x stereo on/off	Output stereo link on/off (x = 0–3)	set output 1 stereo on	Dante Out 1/2 stereo mode: on	Off
get output x stereo	Get output stereo link	get output 1 stereo	Dante Out 1/2 stereo mode: on	
set output x vol y	Set output volume. x = 0–6; y = 0–100	set output 5 vol 50	Speaker Out CH1 volume: 50	50
get output x vol	Get output volume	get output 5 vol	Speaker Out CH1 volume: 50	
set output x vol+ / set output x vol+y	Raise output volume by y. y = 1–100; leave y out for 1	set output 5 vol+, set output 5 vol+5	Speaker Out CH1 volume: 51, … 55	
set output x vol- / set output x vol-y	Lower output volume by y. y = 1–100; leave y out for 1	set output 5 vol-, set output 5 vol-5	Speaker Out CH1 volume: 49, … 45	
set output x mute on/off	Output mute on/off (x = 0–6)	set output 5 mute on	Speaker Out CH1 mute: on	Off
get output x mute	Get output mute	get output 5 mute	Speaker Out CH1 mute: on	
set output x delay y	Set output delay. x = 0–6; y = 0–50ms	set output 5 delay 50	Speaker Out CH1 delay: 50ms	0
get output x delay	Get output delay	get output 5 delay	Speaker Out CH1 delay: 50ms	

continued

COMMAND	FUNCTION	EXAMPLE	FEEDBACK	DEFAULT
set output x duck on/off y lv a1 th a2 at t1 ht t2 rt t3	Output ducking. y = trigger source (1 Mic/Line In CH1, 2 Mic/Line In CH2); a1 = duck level −60 to 0dB; a2 = threshold −60 to 0dB; t1 = attack 3–1000ms; t2 = hold 3–2000ms; t3 = release 3–10000ms	set output 1 duck off, set output 2 duck on 1 lv -9 th -12 at 100 ht 1000 rt 100	Dante Out CH1 ducking: off, Dante Out CH2 ducking: Mic/Line In CH1, duck level: -9dB, threshold: -12dB, attack time: 100ms, hold time: 1000ms, release time: 100ms	Off
get output x duck	Get output ducking	get output 1 duck, get output 2 duck	As above	

DSP SETTING

COMMAND	FUNCTION	EXAMPLE	FEEDBACK	DEFAULT
set output x from y / set output x1 x2... from y	Route source y to one or more outputs. y = 1 Dante In CH1, 2 Dante In CH2, 3 Mic/Line In CH1, 4 Mic/Line In CH2, 5 Mixer 1, 6 Mixer 2	set output 5 from 1, set output 5 6 from 1	Speaker Out CH1 from: Dante In CH1, Speaker Out CH1, Speaker Out CH2 from: Dante In CH1	
set output x remove from y / set output x1 x2... remove from y	Remove source y from one or more outputs	set output 5 remove from 1, set output 5 6 remove from 1	The current source of each output, for example Speaker Out CH1 from: Mixer 1 or Dante Out CH1 from: none	
get output x from	Get an output's source	get output 5 from	Speaker Out CH1 from: Dante In CH1	
set mixer x from <y1 y2 y3 y4>	Set mixer levels. x = 0 all, 1 Mixer 1, 2 Mixer 2. y1–y4 are the levels of Dante In CH1, Dante In CH2, Mic/Line In CH1 and Mic/Line In CH2, from −48 to 0dB in 1dB steps, or off	set mixer 1 from <-14 -14 -14 -14>, set mixer 2 from <-14 off -14 off>	Mixer 1: <-14 -14 -14 -14>, Mixer 2: <-14 off -14 off>	−∞dB
get mixer x from	Get mixer levels	get mixer 0 from	Mixer 1: <-14 -14 -14 -14> / Mixer 2: <-14 off -14 off>	
set output x eq preset y	Select EQ preset. y = 1 Flat, 2 Custom1, 3 Custom2	set output 1 eq preset 2	Dante Out CH1 PEQ: Custom1	
get output x eq preset	Get EQ preset	get output 1 eq preset	Dante Out CH1 PEQ: Custom1	
set output x eq y on/off	EQ band on/off. y = 1–8, or 0 for all bands	set output 1 eq 0 on	Dante Out CH1 EQ all: on	Off
get output x eq	Get EQ on/off state	get output 1 eq	Dante Out CH1 EQ all: on	

continued

COMMAND	FUNCTION	EXAMPLE	FEEDBACK	DEFAULT
`set output x eq stereo on/off`	Use the same EQ on both channels of a pair (x = 0–3)	`set output 1 eq stereo on`	`Dante Out CH1/2 EQ stereo mode: on`	Off
`get output x eq stereo`	Get EQ stereo state	`get output 1 eq stereo`	`Dante Out CH1/2 EQ stereo mode: on`	
`set output x eq y typ t frq z val aa q bb`	Set EQ band y (1–8, or 0 for all). t = 1 Parametric, 2 Lowpass, 3 Highpass, 4 Low Shelf, 5 High Shelf; z = 20–20000Hz; aa = gain −15 to 15dB in 0.1dB steps; bb = Q 0.02–16 in 0.01 steps	`set output 1 eq 1 typ 1 frq 200 val -18 q 0.02`	`Dante Out CH1 EQ 1: Type: 3, Frequency: 200Hz, Value: -18dB, Q: 0.02`	
`get output x eq setting`	Get every EQ band of an output	`get output 1 eq`	One line per band, for example `1: Type: 3, Frequency: 200Hz, Value: -18dB, Q: 0.02`	
`set output x eq clear`	Clear an output's EQ	`set output 1 eq clear`	`Clear Dante Out CH1 EQ`	
`set output x eq copy to y`	Copy EQ from output x (1–6) to output y (0–6)	`set output 1 eq copy to 2`	`Set Dante Out CH1 EQ copy to Dante Out CH2`	

PRESET SETTING

Presets store every setting except the network settings. x = 1–5.

COMMAND	FUNCTION	EXAMPLE	FEEDBACK
`set preset save x`	Save current settings to preset x	`set preset save 1`	`Save to preset 1`
`set preset recall x`	Recall preset x	`set preset recall 1`	`Recall preset 1`
`set preset clear x`	Clear preset x	`set preset clear 1`	`Clear preset 1`

NETWORK SETTING

Changes to the IP mode, address, subnet mask or gateway take effect after you send `set net reboot` or power-cycle the unit. While DHCP is on, the unit refuses a static address, subnet mask or gateway. Turn DHCP off first with `set ip mode 0`.

COMMAND	FUNCTION	EXAMPLE	FEEDBACK	DEFAULT
`get ipconfig`	Get the current IP configuration	`get ipconfig`	IP mode, IP address, subnet mask, gateway, TCP/IP port, Telnet port, MAC address and the stored static settings	
`get mac addr`	Get the MAC address	`get mac addr`	`MAC: xx:xx:xx:xx:xx:xx`	
`set ip mode x`	Set IP mode: 0 Static, 1 DHCP	`set ip mode 0`	`IP mode: Static` (with a prompt to reboot the network to apply)	1 (DHCP)

continued

COMMAND	FUNCTION	EXAMPLE	FEEDBACK	DEFAULT
get ip mode	Get IP mode	`get ip mode`	`IP mode: DHCP`	
set ip addr xxx.xxx.xxx.xxx	Set static IP address	`set ip addr 192.168.1.100`	`IP address: 192.168.1.100` (with a prompt to reboot the network to apply)	
get ip addr	Get IP address	`get ip addr`	`IP: 192.168.1.100`	
set subnet xxx.xxx.xxx.xxx	Set subnet mask	`set subnet 255.255.255.0`	`Subnet Mask: 255.255.255.0` (with a prompt to reboot the network to apply)	
get subnet	Get subnet mask	`get subnet`	`Subnet Mask: 255.255.255.0`	
set gateway xxx.xxx.xxx.xxx	Set gateway	`set gateway 192.168.1.1`	`Gateway: 192.168.1.1` (with a prompt to reboot the network to apply)	
get gateway	Get gateway	`get gateway`	`Gateway: 192.168.1.1`	
set tcp/ip port x	Set TCP/IP port (1–65535)	`set tcp/ip port 8000`	`TCP/IP port: 8000`	8000
get tcp/ip port	Get TCP/IP port	`get tcp/ip port`	`TCP/IP port: 8000`	
set telnet port x	Set Telnet port (1–65535)	`set telnet port 23`	`Telnet port: 23`	23
get telnet port	Get Telnet port	`get telnet port`	`Telnet port: 23`	
set net reboot	Restart the network module	`set net reboot`	`Network reboot… Search for IP, Please wait ...!` followed by the new IP configuration	
set net hostname xxxx	Set hostname (up to 32 characters)	`set net hostname 1234`	`Hostname: 1234`	
get net hostname	Get hostname	`get net hostname`	`Hostname: 1234`	

STATUS REPORT

`get status` returns a full status report.

First line: power state, LCD timeout, ID LED, key lock, trigger, amplifier power mode, speaker setting, auto standby time and baud rate. In the manual's example these read: On, 60s, Off, On, Low, DC, 4ohm/STEREO, 10min, 115200.

Remaining sections: the network block (TCP/IP and Telnet ports, MAC address, DHCP state and addresses), plus the input, output and ducking tables. The manual's example of each table follows.

INPUT	NAME	STEREO	PHANTOM POWER	SENSITIVITY	GAIN (DB)	MUTE	MIXER 1 (DB)	MIXER 2 (DB)
01	Dante_In_CH1	Off	–	–	0	Off	−14	Off
02	Dante_In_CH2	Off	–	–	0	Off	−14	Off

continued

INPUT	NAME	STEREO	PHANTOM POWER	SENSITIVITY	GAIN (DB)	MUTE	MIXER 1 (DB)	MIXER 2 (DB)
03	Mic/Line_In_CH1	Off	On	−18dBV	0	Off	Off	−14
04	Mic/Line_In_CH2	Off	On	−35dBV	0	Off	Off	−14

OUTPUT	NAME	FROM INPUT	STEREO	VOLUME	MUTE	DELAY (MS)
01	Dante_Out_CH1	03	Off	50	Off	0
02	Dante_Out_CH2	04	Off	50	Off	0
03	Line_Out_CH1	01	Off	50	Off	0
04	Line_Out_CH2	02	Off	50	Off	0
05	Speaker_Out_CH1	01	Off	50	Off	0
06	Speaker_Out_CH2	02	Off	50	Off	0

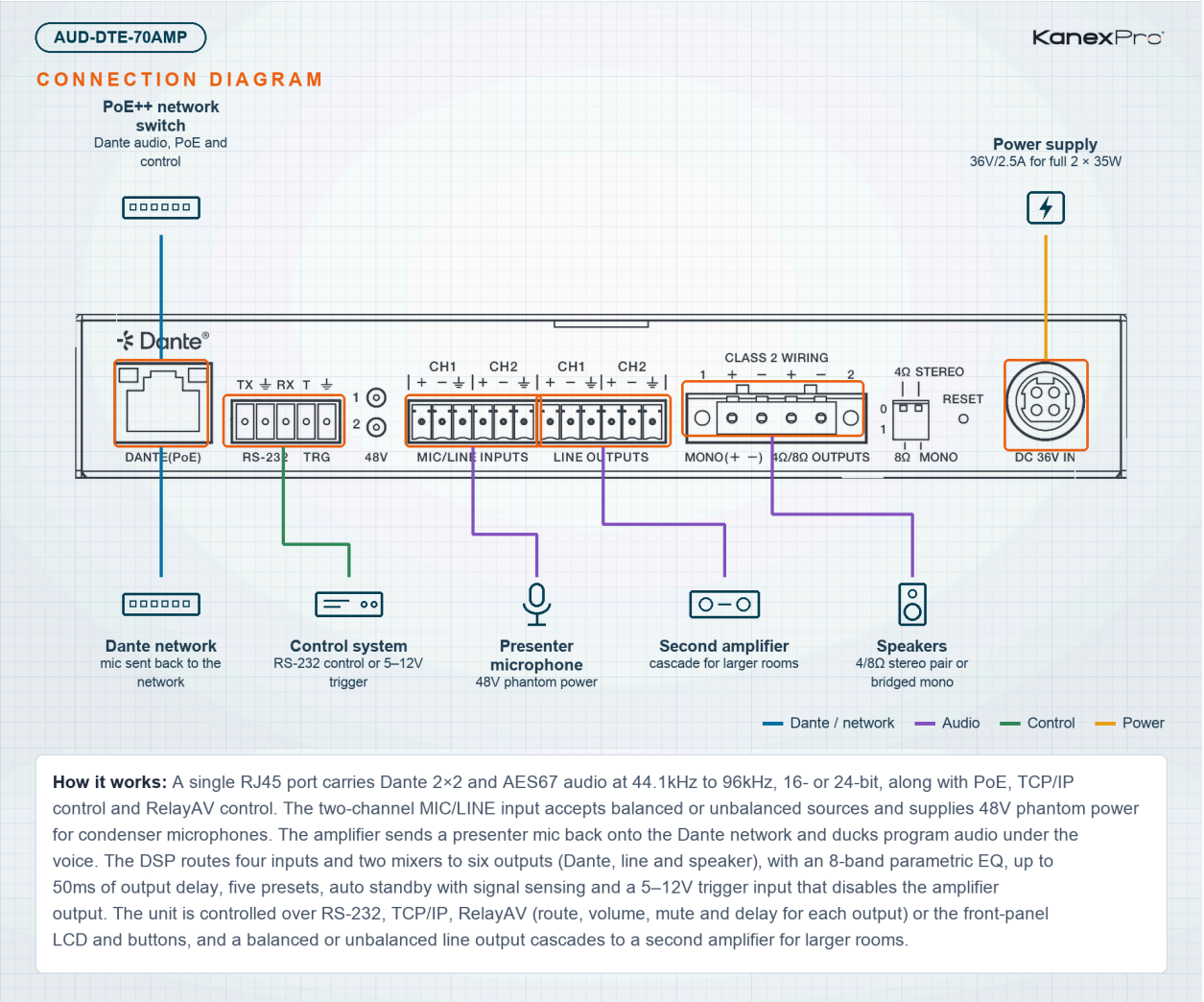
DUCK	NAME	ON/OFF	DUCKING SOURCE	LEVEL (DB)	THRESHOLD (DB)	ATTACK (MS)	HOLD (MS)	RELEASE (MS)
01	Dante_Out_CH1	On	Mic_In_CH1	−6	−12	100	1000	100
02	Dante_Out_CH2	On	Mic_In_CH1	−6	−12	100	1000	100
03	Line_Out_CH1	On	Mic_In_CH1	−6	−12	100	1000	100
04	Line_Out_CH2	On	Mic_In_CH1	−6	−12	100	1000	100
05	Speaker_Out_CH1	On	Mic_In_CH1	−6	−12	100	1000	100
06	Speaker_Out_CH2	On	Mic_In_CH1	−6	−12	100	1000	100

10. Connection Diagram

In the typical system shown, the amplifier's DANTE port connects by network cable to an Ethernet switch. An audio processor also sits on that switch. A microphone connects to MIC/LINE INPUTS by audio cable. A control panel connects to the RS-232 port. A pair of 4/8Ω speakers connects to AMP OUT. A second amplifier is cascaded from LINE OUTPUTS by audio cable.

Dante® is a registered trademark of Audinate Pty Ltd. All other trademarks are the property of their respective owners.

11. Connection Diagram



How it works: A single RJ45 port carries Dante 2×2 and AES67 audio at 44.1kHz to 96kHz, 16- or 24-bit, along with PoE, TCP/IP control and RelayAV control. The two-channel MIC/LINE input accepts balanced or unbalanced sources and supplies 48V phantom power for condenser microphones. The amplifier sends a presenter mic back onto the Dante network and ducks program audio under the voice. The DSP routes four inputs and two mixers to six outputs (Dante, line and speaker), with an 8-band parametric EQ, up to 50ms of output delay, five presets, auto standby with signal sensing and a 5–12V trigger input that disables the amplifier output. The unit is controlled over RS-232, TCP/IP, RelayAV (route, volume, mute and delay for each output) or the front-panel LCD and buttons, and a balanced or unbalanced line output cascades to a second amplifier for larger rooms.

12. Troubleshooting

Q: There is no sound from the speakers. What should I check?
A: First check the front Power LED: green is on, red is standby. A red LED means the unit is in standby or auto standby, so wake it with the power-on command over RS-232 or TCP/IP. Next, check that the LINE or DANTE signal LED lights for your source, then check that Input Trigger is not muting the output and that the source is routed to Speaker Out in the matrix with no output or master mute on.

Q: The amplifier is quieter than expected when running on PoE. Why?
A: On PoE, output power depends on what the switch supplies, from 2 x 25W at PoE++ Type 4 Class 8 down to 2 x 5W at PoE+ Class 4. Check that the switch port provides Type 4 Class 8, and set the PoE power mode to match with the set amp mode command, for example set amp mode 1. For full 2 x 35W, use the 36V DC supply.

Q: I set a static IP address but the amplifier did not change. What is wrong?
A: The unit refuses a static address while DHCP is on, so first turn DHCP off with set ip mode 0. Then set the address, subnet mask and gateway. The changes take effect after you send set net reboot or power-cycle the unit.

Q: The front-panel buttons do nothing. How do I fix it?
A: The front-panel buttons may be locked. Unlock them by sending set key lock off over RS-232 or TCP/IP.

Need help? — For additional support, visit kanexpro.com/support, or scan the QR code below for the product page.