AURA NEXUS

BUILT-IN DSP PROCESSING — KEY FEATURE

8-Band PEQ on every input and output • 5 filter types • ±15 dB PEQ gain • Stereo EQ linking • Copy/Import/Export PEQ • Independent output delay up to 50 ms • 5 preset scenes.

NEXUS 16

ACN-1616

16×16 DANTE AUDIO BRIDGE

FRONT / PRODUCT IDENTITY



REAR / LOCAL AND NETWORK CONNECTIONS



16 INPUTS
Balanced XLR / TRS

16 OUTPUTS
Balanced XLR

2 NETWORK PORTS
Dante / redundancy

POWER
PoE / local DC

16×16
ANALOG I/O

Sixteen in. Sixteen out.
Connected to AURA.

TECHNICAL DATASHEET + SOFTWARE CAPABILITIES

Embedded Web GUI / Dante Controller / TCP/IP API

PROMIC product artwork and catalogue template. Hardware review notes remain on page 8.

SOFTWARE / GETTING CONNECTED

From network to browser.

The device-configuration interface is built into the audio bridge. Open it in a PC browser on the local network; Dante Controller is a separate tool used in the access workflow below.

FIRST CONNECTION

01 Connect the device. Connect the PRIMARY (PoE) port to the Ethernet switch and power the unit using a supported power option.

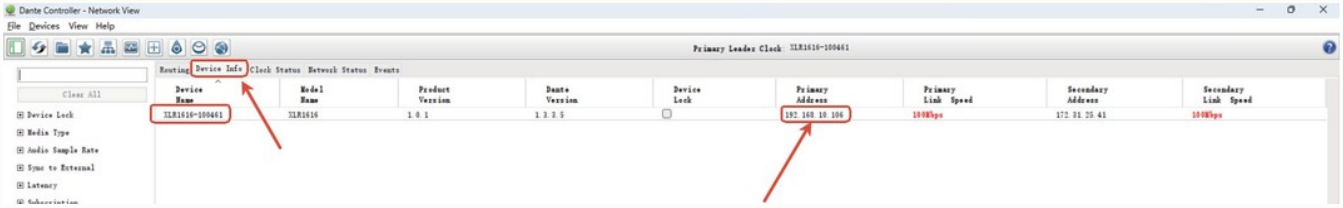
02 Connect the computer. Connect the PC to the same switch. Set the PC network connection to “Obtain an IP address automatically”, as instructed in the manual.

03 Find the audio bridge. Open Dante Controller and locate the device on the Routing page.

04 Read the actual IP address. Open Device Info and read the device IP address. The bridge is in DHCP mode by default; do not assume the example address in a screenshot is your unit’s address.

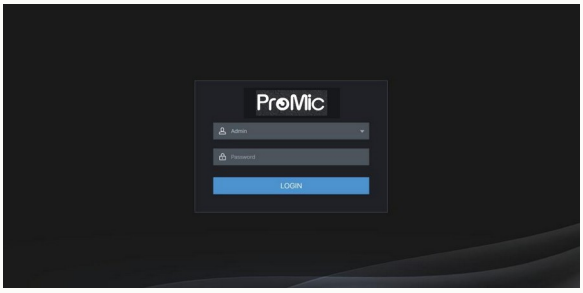
05 Open the Web GUI. Enter that IP address in the PC browser to display the login screen.

06 Sign in and configure. Select Admin and enter the password. The initial page is Information; use the navigation menu to reach Preset, Input, Output, DSP, Network and System.



Dante Controller / Device Info. Original screenshot detail from the supplied manual, printed p. 6; the lower empty area is cropped.

PROMIC Web GUI / Login (manual, p. 6).



FACTORY LOGIN

Admin / 1234
User / 1234

Admin opens the configuration pages. User opens the simplified operator page with scene recall and Master Out controls.

Use System > Account Passwords to change the Admin and User passwords during commissioning.

Three control paths, different jobs

Web GUI: local I/O, DSP and device settings. Dante Controller: discovery, device information and Dante latency. ASCII API: integration with a controller that can send the documented TCP/IP commands. A separate PROMIC desktop or mobile application is not documented in the supplied guide.

Sources: supplied 16×16 User Manual V1.0, Web GUI and API sections; supplied PROMIC interface reference. Firmware page layouts and controls are reproduced from the manual; only the ProMic logo and "Smart Sound Devices Trading Company" header are applied. Dante Controller is unchanged.

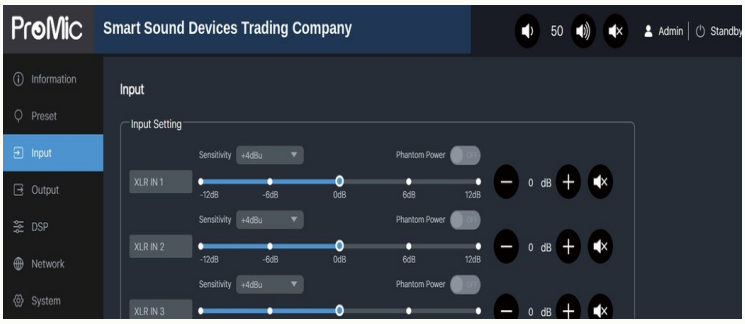
SOFTWARE / INPUT + OUTPUT

Control every local channel.

Set source sensitivity and microphone power at the input, then manage each output level, mute state and delay. Master Out can control a selected group of outputs.

INPUT PAGE / XLR IN 1–16

PROMIC Web GUI / Input (16-channel interface).



Name each input. Rename channels for their connected sources; up to 32 characters.

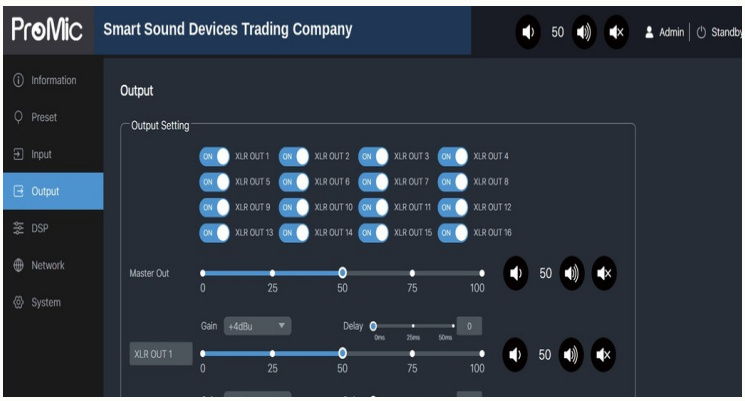
Match the source. Select one of six sensitivity levels for each input.

Set gain and mute. Adjust input audio independently; input gain range is specified in the API table below.

Enable +48 V as needed. Phantom power is independently switchable on each input.

OUTPUT PAGE / XLR OUT 1–16

PROMIC Web GUI / Output (16-channel interface).



Name each output. Rename channels, up to 32 characters.

Choose the output level. Five selectable reference levels; the interface labels this setting “Gain”.

Adjust each destination. Set volume, mute and delay independently.

Build a master group. Select which XLR outputs follow Master Out. The master then adjusts level and mute for the selected members.

DOCUMENTED CONTROL RANGES

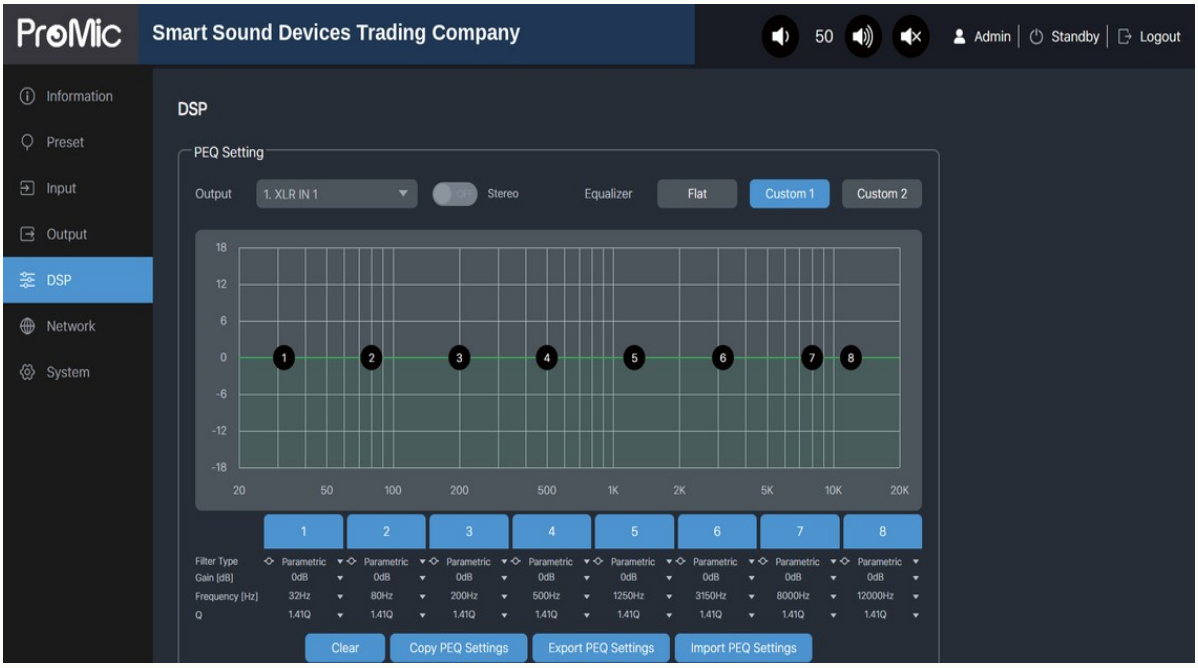
Input sensitivity	+24 dBu / +14 dBu / +4 dBu / 0 dBV / −18 dBV / −35 dBV
Input gain	−12 to +12 dB in 0.1 dB steps, as specified by the API
Output reference level	+20 dBu / +14 dBu / 0 dBV / -18 dBV (Web GUI)
Output and master volume	0–100 control scale in the API; this is not a 0–100 dB specification
Output delay	0–50 ms on each output
Master membership	Include or exclude each of the sixteen outputs

Source: supplied 16×16 User Manual V1.0, Web GUI and API sections. The documented delay control is on outputs and is separate from Dante network latency.

SOFTWARE / DSP

Shape. Match. Align.

Apply eight bands of parametric equalization to each input or output. The DSP page provides channel selection, editable filter parameters, EQ memories and settings transfer.



PROMIC Web GUI / DSP. Original firmware layout and controls from the supplied 16×16 manual; only the ProMic logo and company header are applied.

Channels / bands	XLR IN 1–16 and XLR OUT 1–16; 8 PEQ bands per channel
Filter types	Parametric, Lowpass, Highpass, Low Shelf, High Shelf
Frequency / Q	20–20,000 Hz; Q = 0.02–16
PEQ gain	−15 to +15 dB; API gain step: 0.1 dB
EQ memories	Flat / Custom1 / Custom2; Flat sets all EQ gains to 0 dB
Stereo EQ linking	Same EQ settings for stereo channel pairs (1/2, 3/4, 5/6, 7/8, 9/10, 11/12, 13/14, 15/16), separately for inputs and outputs
Transfer and reset	Clear settings, copy PEQ to another channel, export PEQ and import PEQ

HOW TO ADJUST THE EQ

Select the required XLR input or output, choose a band from 1–8, then set Filter Type, Gain, Frequency and Q. Use Flat, Custom1 or Custom2 as required. Copy PEQ Settings transfers the EQ to another input or output; Export / Import PEQ Settings moves the EQ settings to or from a file.

Output alignment is separate from Dante latency

Set an output delay of 0–50 ms on the Output page. Dante device latency is a different setting: 2 / 3 / 4 / 5 / 10 ms, configured in Dante Controller. Do not combine these into a single delay specification.

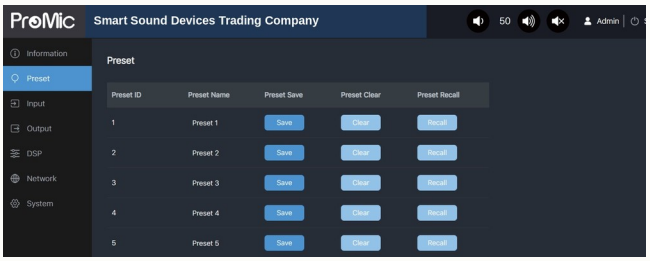
Source: supplied 16×16 User Manual V1.0, Features, Web GUI and API sections. Frequency and Q ranges follow the API parameter definitions. Documented processing scope: gain, PEQ and output delay.

SOFTWARE / SCENES + INTEGRATION

Save the setup. Simplify operation.

Store device scenes for repeat use, provide a simpler operator login and expose documented controls to an external TCP/IP control system.

PROMIC Web GUI / Preset (manual, p. 7).



PROMIC Web GUI / User (manual, p. 11).



PRESETS AND USER ACCESS

Scene storage	5 preset slots; scene names up to 32 characters
Scene actions	Save current settings, recall saved settings or clear a scene
Scene scope	API definition: all settings except network settings
Admin login	Configure inputs, outputs, DSP, presets, network and system settings
User login	Recall scenes and adjust Master Out volume/mute for the selected outputs

Working method: configure the channel and DSP settings, name a Preset slot and click Save. The operator then uses Recall, or the corresponding preset button on the User page. Network settings are not part of scene recall.

ASCII API / TCP/IP CONTROL

Connect the control computer and bridge to the same LAN. The manual documents ASCII commands over TCP/IP, with default port 8000. An external controller must implement these commands; a ready-made driver for any particular control platform is not established by the supplied guide.

COMMAND EXAMPLE	ACTION
`status`	Read the device’s current status
`get ipconfig`	Read network configuration
`set master vol 50`	Set master volume to 50 on the 0–100 scale
`set input 1 mute on`	Mute input 1
`set output 2 delay 20`	Set output 2 delay to 20 ms
`set preset recall 1`	Recall stored scene 1

The API also documents gain, input sensitivity, phantom power, output levels, master membership, EQ, power/standby and network settings. The examples above illustrate the documented command syntax.

Source: supplied 16×16 User Manual V1.0, Web GUI and API sections. Preset recall excludes network settings; command ranges follow the API parameter definitions.

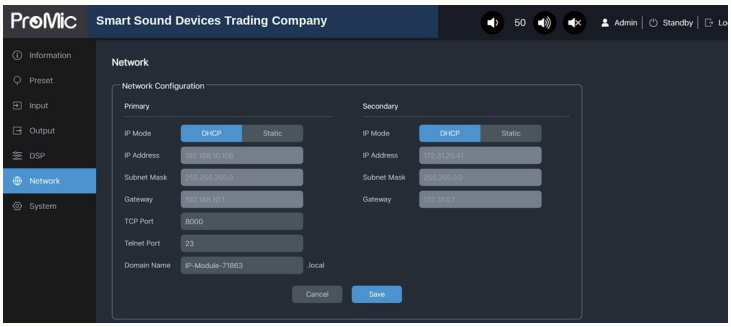
SOFTWARE / NETWORK + SYSTEM

Configure. Back up. Maintain.

Set addressing, manage access, preserve the installation configuration and carry out the maintenance functions exposed by the embedded interface.

NETWORK PAGE

PROMIC Web GUI / Network (manual, p. 10).



Primary + secondary. Choose DHCP or Static for each network.

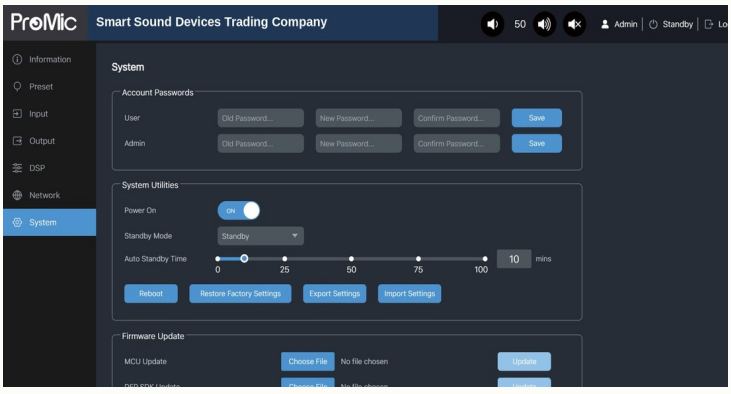
Static addressing. Enter IP address, subnet mask and gateway, then Save.

Control ports. Configure the primary network TCP and Telnet ports. Documented defaults: 8000 and 23.

Hostname access. The device's .local IP Hostname can be used to open the Web GUI; its name can be edited, up to 32 characters.

SYSTEM PAGE

PROMIC Web GUI / System (manual, pp. 10–11).



Accounts. Change the Admin and User login passwords.

Power management. Power control, Standby / Sleep selection and automatic standby timing. API range: 1–100 minutes; 0 disables auto standby.

Configuration backup. Export Settings saves configuration to a file; Import Settings loads a configuration file.

Maintenance. Reboot, Restore Factory Settings and Firmware Update using Choose File, then Update.

INFORMATION AND STATUS

The Information page shows Model Name, MCU Version, Web Version, DEP SDK, IP Hostname and both networks' configuration information. The top bar exposes Master Out volume/mute, the current login, power/standby and logout controls.

DO NOT CONFUSE THESE ACTIONS	PURPOSE
Preset Save / Recall	Stores and recalls scenes, excluding network settings
PEQ Export / Import	Transfers equalizer settings
System Export / Import	Exports or imports device configuration files

Source: supplied 16×16 User Manual V1.0, Web GUI and API sections. This describes the supplied firmware documentation; interface appearance and update files must be checked against the delivered hardware/firmware revision.

TECHNICAL SPECIFICATIONS

Audio, network and processing.

Hardware values below are retained from the supplied 16×16 manual. Software operation and control capabilities are detailed on pages 2–6.

ANALOG AUDIO & PERFORMANCE

Analog inputs	16 × female XLR/TRS combo, mic/line; balanced or unbalanced
Analog outputs	16 × male XLR, line level; balanced or unbalanced
Phantom power	+48 V, independently switchable per input
Input impedance	20 kΩ balanced / 10 kΩ unbalanced
Maximum line input	+24 dBu (12.28 Vrms) balanced; +18 dBu (6.14 Vrms) unbalanced
Minimum mic input	−35 dBV (17.78 mVrms), balanced
Output impedance	600 Ω balanced / 300 Ω unbalanced
Maximum line output	+20 dBu (7.75 Vrms) balanced; +14 dBu (3.875 Vrms) unbalanced
Frequency response	20 Hz–20 kHz, ±0.5 dB
Dynamic range	≥105 dB at +4 dBu, 1 kHz, A-weighted
Signal-to-noise ratio	≥105 dB at +4 dBu, 1 kHz, A-weighted
THD+N	<0.01% at +4 dBu, 1 kHz

DANTE NETWORK AUDIO

Audio protocols / capacity	Dante 16×16 and AES67 support, as stated in Features. See publication note 2 on page 8.
Network connections	2 × locking RJ45; primary and secondary, with redundancy and dual PoE+ per manual
Network bandwidth	1000 Mbps
Sample rates / bit depth	44.1 / 48 / 88.2 / 96 kHz; 16-bit or 24-bit
Dante device latency	2 / 3 / 4 / 5 / 10 ms, configurable in Dante Controller
Transmission distance	Up to 100 m (328 ft) over CAT6 / CAT6A / CAT7

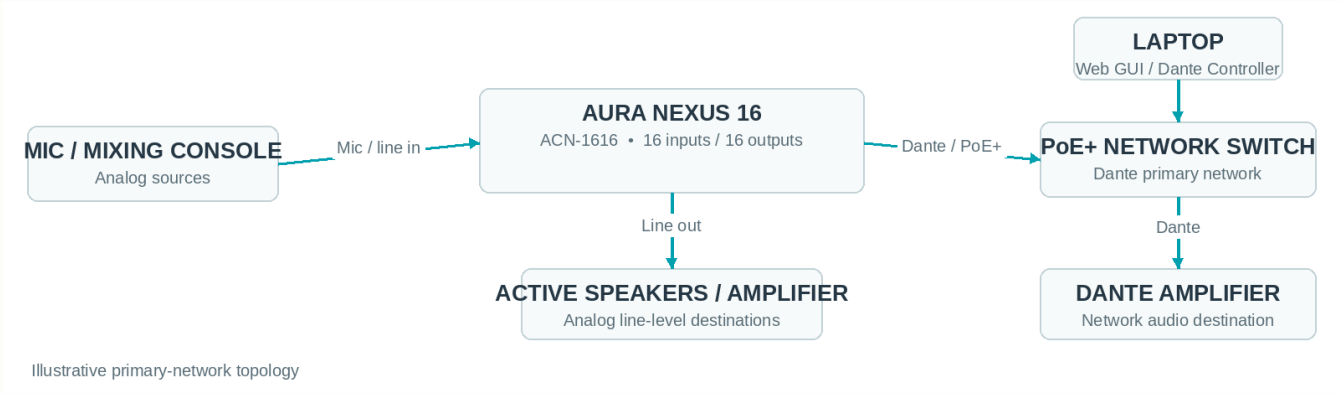
SIGNAL PROCESSING & CONTROL

Input gain / sensitivity	−12 to +12 dB (0.1 dB steps); six sensitivity levels, listed on page 3
Output-level selection	+20 dBu / +14 dBu / +4 dBu / 0 dBV / −18 dBV
Parametric equalization	8 bands on each input and output; gain ±15 dB
PEQ frequency / Q	20–20,000 Hz; Q = 0.02–16
Filter types	Parametric / Lowpass / Highpass / Low Shelf / High Shelf
Output delay	0–50 ms; separate from Dante device latency
Configuration interfaces	Embedded Web GUI / Dante Controller / ASCII API over TCP/IP

Source: supplied 16×16 User Manual V1.0, hardware and API sections. Values are transcribed or condensed from the supplied guide and remain subject to production-hardware verification.

INSTALLATION & INTEGRATION

Connections, power and control.



Illustrative primary-network topology

Connection concept adapted from the supplied manual. Secondary network and local DC power are not shown.

POWER, MECHANICAL & ENVIRONMENTAL

Local DC supply[1]	12 V DC / 2.5 A, 2-pin locking connector, as stated in the manual
Power over Ethernet	Dual PoE+ PD, IEEE 802.3at Class 4; primary and secondary ports, as stated in the manual
Maximum consumption	19.44 W; manual test condition: 1 Hz sine wave
Enclosure / mounting[1]	Metal enclosure; black per manual / 19-inch rack, 2U-height / 88 mm
Dimensions / weight	440 × 200 × 88 mm (W × D × H) / 3.12 kg
Operating conditions	0–40 °C; 20–80% RH, non-condensing
Storage conditions	−20–60 °C; 10–90% RH, non-condensing
ESD protection	IEC 61000-4-2: ±8 kV air / ±4 kV contact discharge
Indicators / reset	Power and status LEDs; reset button; input phantom-power indicators
XLR pinout	Pin 1: ground/shield; pin 2: positive/hot; pin 3: negative/cold

PACKAGE CONTENTS / AS LISTED IN THE MANUAL

1 × audio bridge; 1 × 12 V / 2.5 A locking power supply with optional multinational conversion plug; 2 × mounting ears; 8 × machine screws; 1 × user manual.

PUBLICATION NOTES / TECHNICAL REVIEW REQUIRED

1 Electrical / artwork revision. The manual specifies a black enclosure, while the supplied PROMIC artwork uses the approved grey finish. The 88 mm chassis height is used; the introductory 1U statement requires confirmation. Confirm the production hardware, supply and artwork before publication.

2 Dante channel format. Features specify Dante 16×16, while the digital-format table states “PCM 2CH”. This document retains the declared 16×16 configuration; confirm the available Dante channel count at each sample rate before publication.

3 Software reference. Web GUI screenshots preserve the original firmware layouts, controls, channel counts and parameter positions from the supplied 16×16 manual. Only the ProMic logo and “Smart Sound Devices Trading Company” header are applied. Confirm delivered firmware before publication.

Source record: 16×16 XLR Audio Bridge with Dante® and PoE+, User Manual V1.0: hardware pp. 1–4; Web GUI pp. 5–12; API pp. 13–26; connection diagram p. 27. Product artwork: supplied PROMIC AURA NEXUS 16 / ACN-1616. Dante® is a registered trademark of Audinate Pty Ltd.