



plexusAV P-AVN-SPK-6C-WB

PoE/PoE+ Powered IPMX / Dante / AES67 Network Ceiling Speaker

User Manual

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3820 N Potsdam Ave, Sioux Falls, SD 57104 USA

www.plexusav.com

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About PlexusAV

PlexusAV delivers a full-featured, open IPMX-based AV-over-IP platform built for flexibility and scalability — offering transceivers, encoders, decoders, speakers, and software-based products for centralized management and IP stream protocol conversion.

Control options include a local UI and centralized management via plexusAV Visual Array. Additional NMOS and RESTful API support offer third-party control for integration flexibility. For more information, visit www.plexusav.com

Revision History

Date (MM/DD/YYYY)	Version	Description	Author
08/08/2026	1.0	Release Version	JDF

⚠ Safety Instructions

Important: Read and follow these safety precautions before installing or operating this product. Failure to do so may result in electric shock, fire, or injury.

General Use

- Read and retain all instructions.
- Observe all warnings and follow instructions carefully.
- Do not use this product near water.
- Clean only with a dry cloth.

Installation & Environment

- Do not block ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near heat sources such as radiators, heat registers, stoves, or other devices that produce heat.
- Do not expose this product to dripping or splashing liquids.

Power & Cables

- Protect the network cable from being walked on or pinched, especially at plugs and the point of exit from the product.
- Use only attachments and accessories specified by the manufacturer.
- Disconnect network power during lightning storms or when unused for long periods of time.

Servicing

- Refer servicing to qualified personnel only.
- Use only replacement parts specified by PlexusAV or with the same operating characteristics as the original.

Package Contents

The box should contain:

- Ceiling Speaker
- White Magnetic Speaker Grille (installed)
- Black Magnetic Speaker Grille (included)
- Quick Installation Guide
- 3-Pin Phoenix-style Connector
- 4-Pin Phoenix-style Connector
- 1 set of cable clips
- Auxiliary Drilling Plate
- plexusAV Logo Badge with adhesive (included, installation optional)

If any of these items were omitted from the packaging, contact the [Support Ticket System](#) to obtain a replacement.

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1 Overview

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[SPK-6C Product Page](#)

1.1 Product Introduction

The plexusAV P-AVN-SPK-6C-WB is a high-performance, full-range speaker that's easy to install. It's designed with advanced linear sound source technology, making it an ideal choice for delivering background music and vocal performances across a wide variety of applications and installations. Its 6.5" driver and 1" directable tweeter speaker drivers offer excellent dispersion, a wide bandwidth, and a smooth frequency response. It's the top pick for contemporary overhead installations in both commercial and residential settings.

This networked ceiling speaker is highly versatile and energy-efficient. It uses just a single network cable to handle power supply distribution, audio signal transmission, and control functions.

The speaker ships in IPMX mode by default and operates natively in three switchable modes — IPMX, Dante (stereo), and AES-67 — selectable via the local web interface or REST API, without requiring different hardware.

See Web Interface Operation → System Setting → Audio Setting for the mode-switching procedure.

Important: IPMX input streams must use PCM audio payload. The speaker does not support Dolby Digital downmixing. Some source devices (e.g., the plexusAV P-AVN-2E) may default to AAC audio, which is also unsupported — verify the source's audio payload format is set to PCM before commissioning.

1.2 Key Features

- Tri-Mode Operation: ships in IPMX (default) mode, with available Dante (stereo) and AES-67 modes
- Dante Domain Manager and Dante Controller compatible
- Seamless integration with third-party audio systems via REST API
- Built-in amplifier module, digital signal processing with 21-band fully parametric EQ filters
- PoE/PoE+ enabled — power, audio, and control transmitted within one cable (up to 40W)
- Two-way driver system with 6.5" woofer and 1" physically directable tweeter
- Dante/AES67 audio IP input and analog audio input, flexible for remote & local playback
- Contact closure to trigger a stored audio file, useful for audio notifications and alarms
- Removable magnetic grille seamlessly covers the entire loudspeaker
- Visual Array compatible for discovery, routing, and management in plexusAV IPMX systems

1.3 Front Panel Overview



Front panel (grille removed)

Indicator Light: The red and green dual-color light is located inside the grille.

No.	Device Status	Indicator Color
1	Power On Initialization	Green Steady
2	Factory Reset	Green Flashing Quickly
3	Location Indicator	Red Flashing Quickly (~3s) when Unit ID feature is enabled
4	Signal Loss (AES67)	Red Steady
5	Standby / Sleep Mode	Green Slow Flashing
6	Amplifier Short Circuit	Red Flashing Quickly
7	DRC Limiting Triggered	Red Steady
8	Active / Playing	Green Steady
9	Firmware Upgrading	Green Flashing Quickly

Push-Button

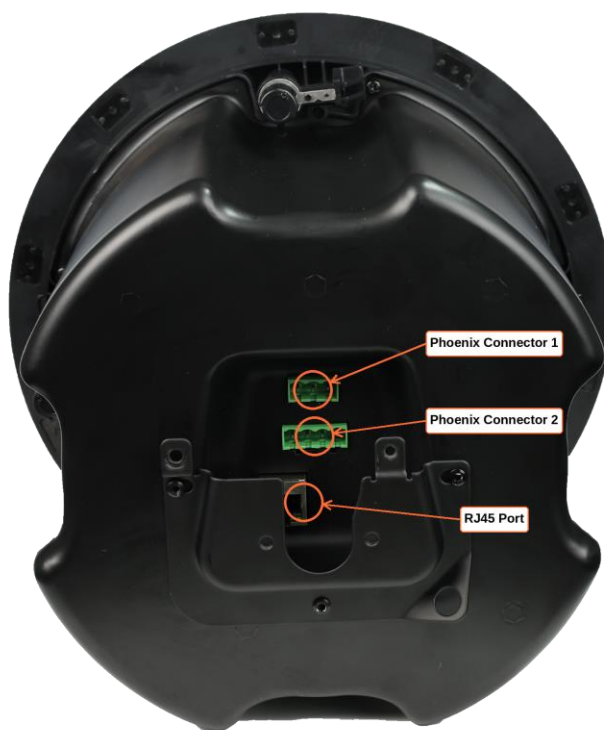
Located next to the indicator LED.

- Click once: Reboot the speaker.
- Click twice quickly: The speaker announces its IPMX (web interface) IP address.
- Click three times quickly: The speaker announces its Dante IP address.
- Hold for 10 seconds: Restore the device to factory settings. After a factory reset, the IP address acquisition method reverts to DHCP.

Grille: attached to the surface of the speaker by magnetic attraction. White and black grilles are both included.

The plexusAV logo badge is included with the backing still on the adhesive. If logo is desired remove plastic backing from adhesive and press firmly to the speaker grille for 10 seconds to install.

1.4 Rear Panel Overview



Rear panel

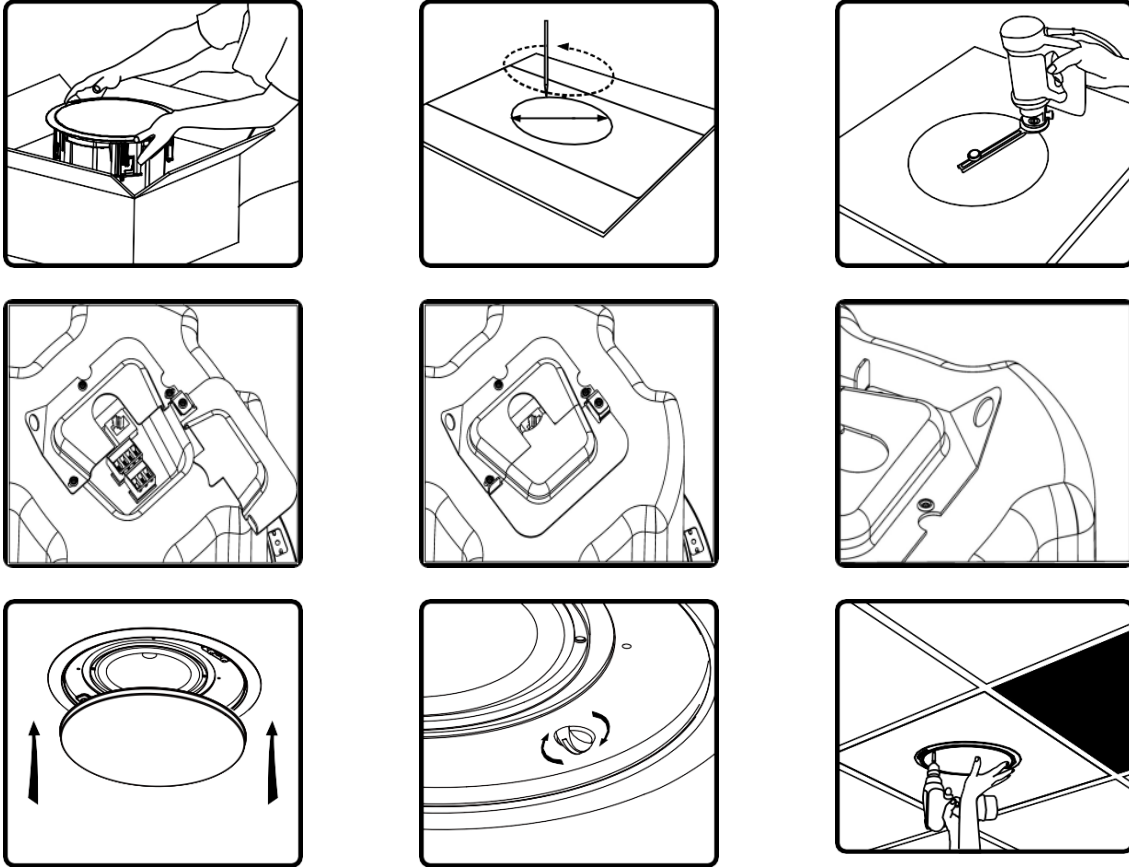
The rear panel consists of the following connection ports:

- RJ45 port: management, power, and IP audio input
- Phoenix Connector 1: analog balanced audio input
- Phoenix Connector 2: contact signal input and 18V output

2 Installation

2.1 Mounting & Power

Designed for in-ceiling installation using the included auxiliary drilling plate and mounting clips. Power, audio, and control all run over the single RJ-45 network connection to PoE or PoE+ switch.



Installation sequence

- Unpack the speaker and set aside the grille assembly.
- Use the auxiliary drilling plate to mark the cutout on the ceiling tile.
- Use a cutting tool to cut the hole in the tile.
- Unscrew the cover plate screws, rotate the cover plate, and connect cables.
- Rotate the cover plate back to its original position, route the wires through the center of the cover plate, and tighten the cover plate screws.
- Pass the safety rope through the safety wire tab and tie the safety rope to a stable point.
- Pull spring loaded clips back, and then rotate so they lock into place flush with the chassis.
- Insert the speaker into the mounting hole.
- Adjust the rotation switch so the installation clips lock against the ceiling install speaker grille.

Connect the speaker's RJ-45 port to a PoE (IEEE 802.3af) or PoE+ (IEEE 802.3at) capable network switch. PoE+ is recommended to ensure full-power operation under all conditions.

2.2 Network Setup

The speaker has two IP addresses on its single network interface — one for IPMX and the local web interface, and a separate one for Dante. Locate the IPMX address by pressing the push-button twice in quick succession (the speaker announces it aloud), or from Visual Array's Device List → Audio Device tab.

Default Settings

Setting	Default Value
IP Assignment	DHCP (falls back to APIPA / link-local if no DHCP server is found)
Username	admin
Password	proav101
Password Requirements	7 to 32 characters when changed
Factory Reset	Hold the push-button for 10 seconds (also restores DHCP addressing)

Note: Change the default password after commissioning. If the password is lost, the only recovery is a factory reset using the speaker's push-button.

3 Web-Interface Operation

Every P-AVN-SPK-6C-WB speaker hosts its own web interface. No software installation is required — the interface is reached from a standard browser. Visual Array is recommended, but optional.

All P-AVN-SPK series speakers share the same speaker hardware, control module, and firmware regardless of chassis. The interface described in this section is therefore identical on the ceiling (6C), pendant (6P), and surface (6S) models; only the product name shown in the interface header differs.

3.1 Accessing the Web Interface

Connecting

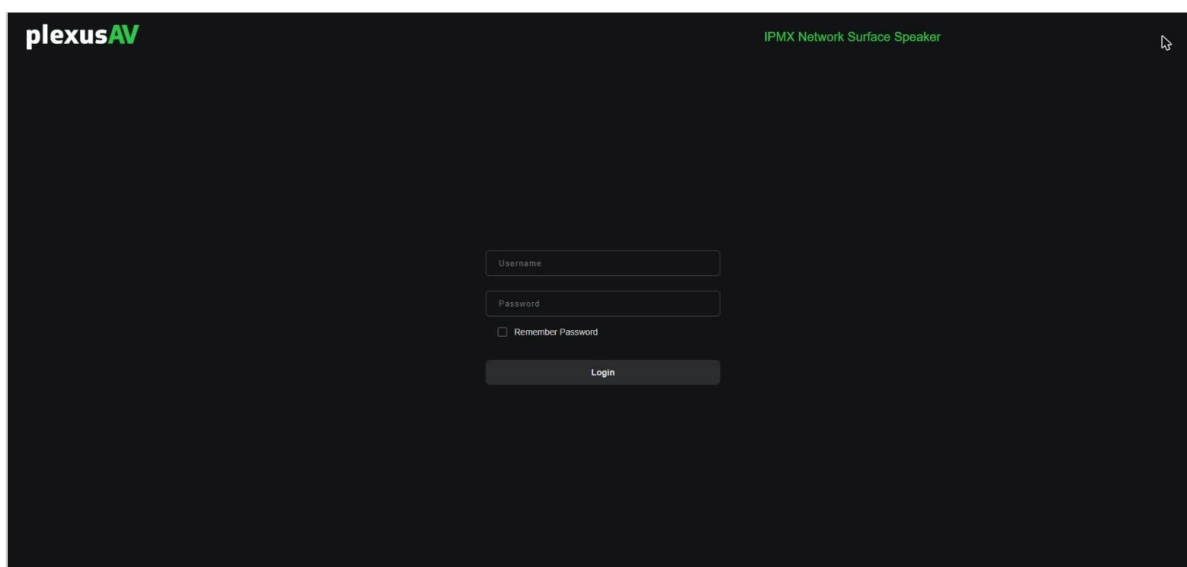
The speaker's RJ-45 port carries power, audio, control, and management on a single cable. Connect the speaker to a PoE or PoE+ capable switch, then connect the configuring computer to the same network. If the network has no router or DHCP server, set the computer's network settings to place it on the same subnet as the speaker.

Finding the Speaker's IP Address

Method	Steps
Push-button	Press the push-button twice in quick succession. The speaker announces its IPMX address aloud. (Three presses announces the Dante address, which is not used for the web interface.)
Visual Array	Open Device List → Audio Device. The IP Address column lists the IPMX address for every discovered speaker.

Logging In

Enter the speaker's IPMX address in a browser and sign in with the default credentials (Username: admin, Password: proav101). Change the default password after commissioning.



Interface Layout

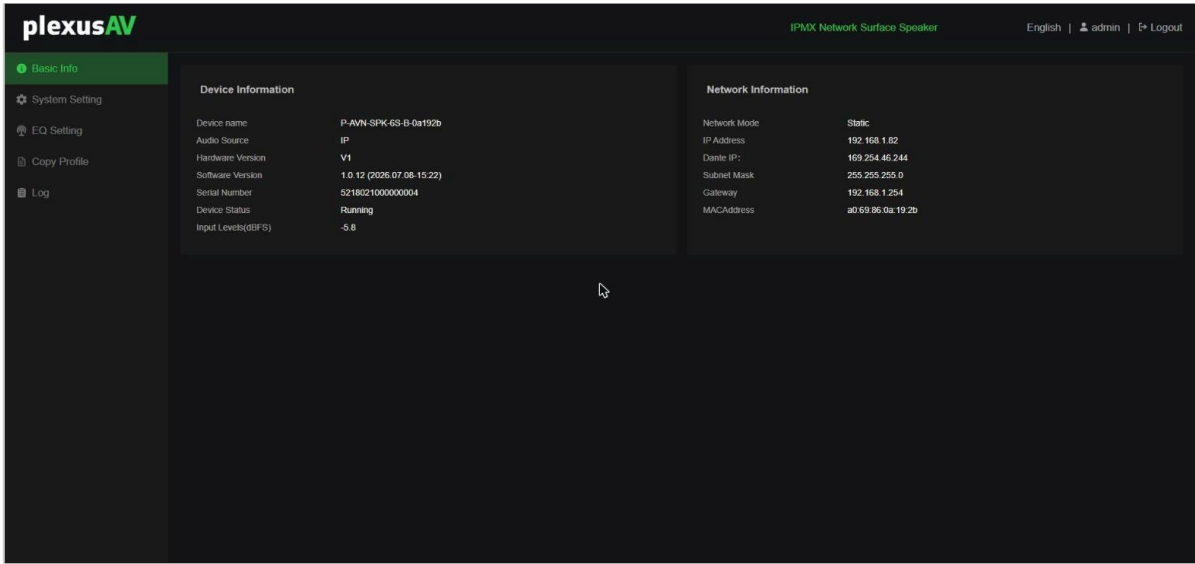
The interface presents a navigation pane down the left side and the selected page in the main area.

Navigation Item	Purpose
Basic Info	Read-only summary of device identity, addressing, and status
System Setting	Network, audio, alarm, IPMX, NMOS, firmware, configuration, sleep, password, and LED
EQ Setting	DSP filters and equalization
Copy Profile	Copies this speaker's configuration to other speakers on the network
Log	System event log

The header shows the product name, a language selector, the signed-in account, and Logout. This manual documents the English interface.

3.2 Basic Info

Basic Info is a read-only summary of the speaker's identity, status, and addressing — the fastest way to confirm what a speaker is, what firmware it is running, and how it is addressed on the network.



Device Information

Field	Description
Device name	The speaker's network name
Audio Source	The currently selected input — for example, IP
HW Version	Hardware revision of the speaker control module
Software Version	Firmware version and build date — for example, 1.5.0 (build date)
Serial Number	The unit's serial number
Device Status	Operating state — for example, Running
Input Levels	Live input level. A reading at or near the floor (for example, -110.0) indicates no audio is present on the selected source.

Network Information

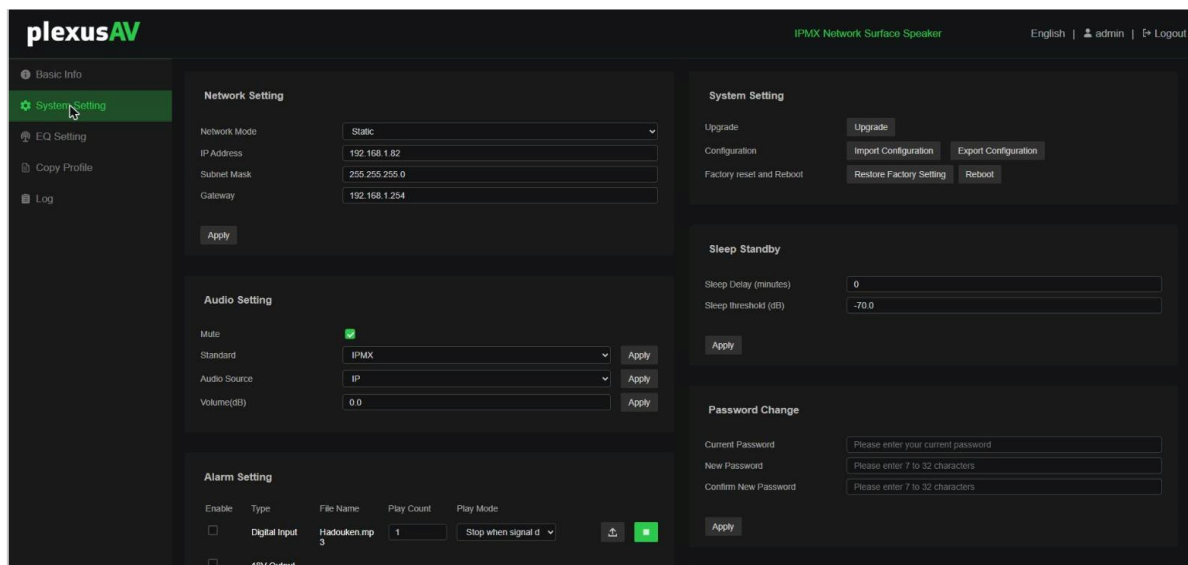
Field	Description
Network Mode	DHCP or Static
IP Address	The speaker's IPMX / web interface address

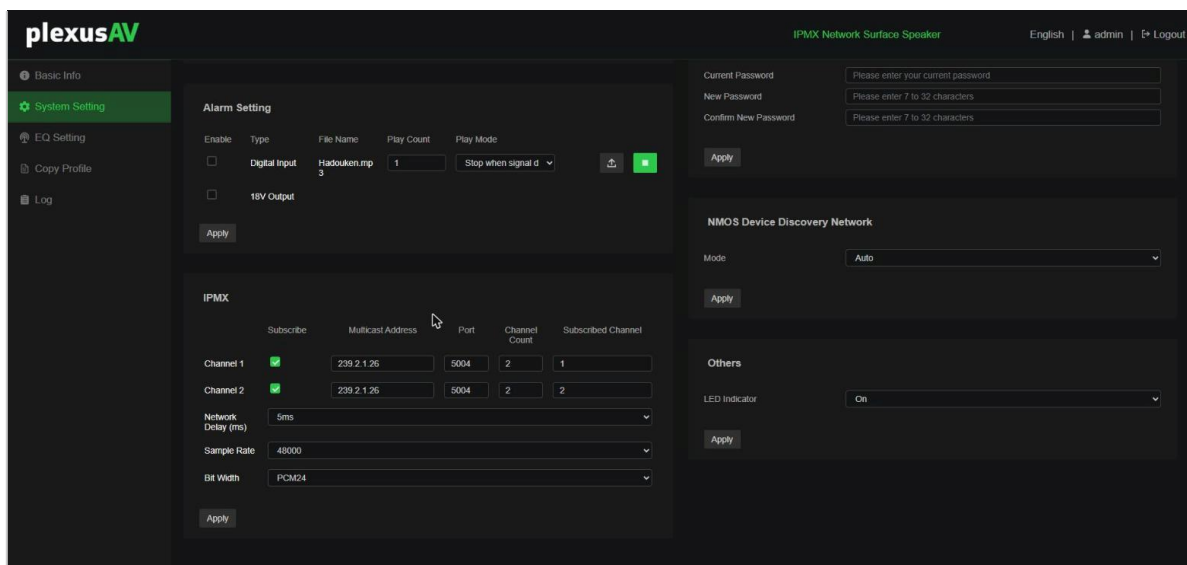
Field	Description
Dante IP	The address of the onboard Dante interface — see the note below
Subnet Mask	Subnet mask
Gateway	Default gateway
MAC Address	The speaker's hardware address

Note: The speaker has one physical network interface but presents two IP addresses over it: the IP Address used for IPMX and the web interface, and the Dante IP used by the onboard Dante chipset and Dante Controller software. The two are issued independently and will not match. A Dante IP in the 169.254.x.x range is a link-local address, indicating the Dante interface did not obtain a DHCP lease.

3.3 System Setting

System Setting groups every configurable parameter onto a single page, arranged in panels. Each panel applies independently, and several fields have their own Apply button — a change is not saved until the relevant Apply is selected; navigating away discards it.





Network Setting

Field	Description
Network Mode	DHCP or Static
IP Address	The speaker's IPMX / web interface address
Subnet Mask	Subnet mask
Gateway	Default gateway

These fields configure the IPMX and web interface address only; the Dante interface holds a separate address configured through Dante Controller.

Caution: Applying an incorrect static address, subnet mask, or gateway will make the speaker unreachable from this interface. Recovery requires a factory reset using the push-button (hold for 10 seconds), which returns the speaker to DHCP.

Audio Setting

Field	Description
Mute	Silences the speaker's audio output
Standard	Mode of operation — IPMX, AES67, or Dante. The speaker ships in IPMX mode.
Audio Source	Selects the input — Analog, IP, Mixing, or No Input
Volume (dB)	Output level

Standard, Audio Source, and Volume each have their own Apply button and commit independently.

Note: Changing Standard switches the speaker between IPMX, AES67, and Dante operation. A speaker moved out of IPMX mode is no longer discovered or routed through NMOS and will disappear from the IPMX views in Visual Array. Firmware and configuration changes are done directly in web-interface when using Dante mode.

Alarm Setting

The Alarm Setting panel configures what the speaker does when its trigger input is activated.

Column	Description
Enable	Enables this alarm entry
Type	The trigger type — Digital Input or 18V Output
File Name	The audio file played when the alarm is triggered
Play Count	Number of repeats when Play Mode is set to loop
Play Mode	For example, stop when signal disappears, or loop by number of times

Digital Input plays the selected audio file when a short-circuit trigger is received on the speaker's 4-pin Phoenix connector. 18V Output drives the connector's 18V line — idle at 0V, switching to 18V during broadcast — to trigger external devices via contact closure.

IPMX Setting

Configures the speaker's audio stream when operating in IPMX mode. Each of the speaker's two channels is configured independently. Meaning a speaker could play just left channel, just right, or mix in both.

Field	Description
Subscribe	Enables the channel's subscription
Multicast Address	The multicast group carrying the source stream
Port	The stream's port — for example, 5004
Channel Count	Number of channels in the source stream
Subscribed Channel	Which channel of that stream this speaker channel plays
Network Delay (ms)	Receive buffer depth. Higher values tolerate more network jitter at the cost of latency.
Sample Rate	For example, 48000
Bit Width	For example, PCM24

The Subscribed Channel fields allow a stereo source to be split across speakers — subscribing Channel 1 to source channel 1 and Channel 2 to source channel 2 reproduces stereo, while pointing both at the same source channel produces mono.

Note: Sample rate and bit width must match the transmitter. A mismatch will prevent audio from playing.

NMOS Device Discovery

Mode selects how the speaker locates the NMOS registry (for example, Auto). In Auto mode the speaker discovers the registry automatically, which is what allows Visual Array to find the speaker with no configuration.

Upgrade, Configuration, and Reset

Control	Description
Upgrade	Installs a firmware file on the speaker
Import Configuration	Applies a saved configuration file to this speaker
Export Configuration	Saves this speaker's configuration to a file
Restore Factory Setting	Returns all parameters to factory defaults
Reboot	Restarts the speaker without changing settings

Caution: Do not remove network power or navigate away while a firmware update is running. The interface displays “Uploading files in progress... Please do not power down!” for the duration of the transfer.

Note: After an upgrade, confirm the new version on the Basic Info page. A failed upgrade may leave the speaker on its previous firmware without an obvious error in the interface — check the Log page if the version does not change.

Caution: A factory reset returns the network mode to DHCP. A speaker previously set to a static address will obtain a new address and must be located again.

Sleep Standby

Field	Description
Sleep Delay (minutes)	How long the input must remain below the threshold before the speaker enters standby. 0 disables sleep standby.
Sleep Threshold (dB)	The level below which the sleep delay timer begins counting — for example, -70.0

Standby power consumption is under 4W.

LED “Unit ID” Indicator

Enables or disables the speaker's status LED. Disable the LED in installations where the indicator must stay dark, such as auditoriums, theaters, and studios — with the LED disabled the speaker gives no local visual status indication. The same control is available from Visual Array.

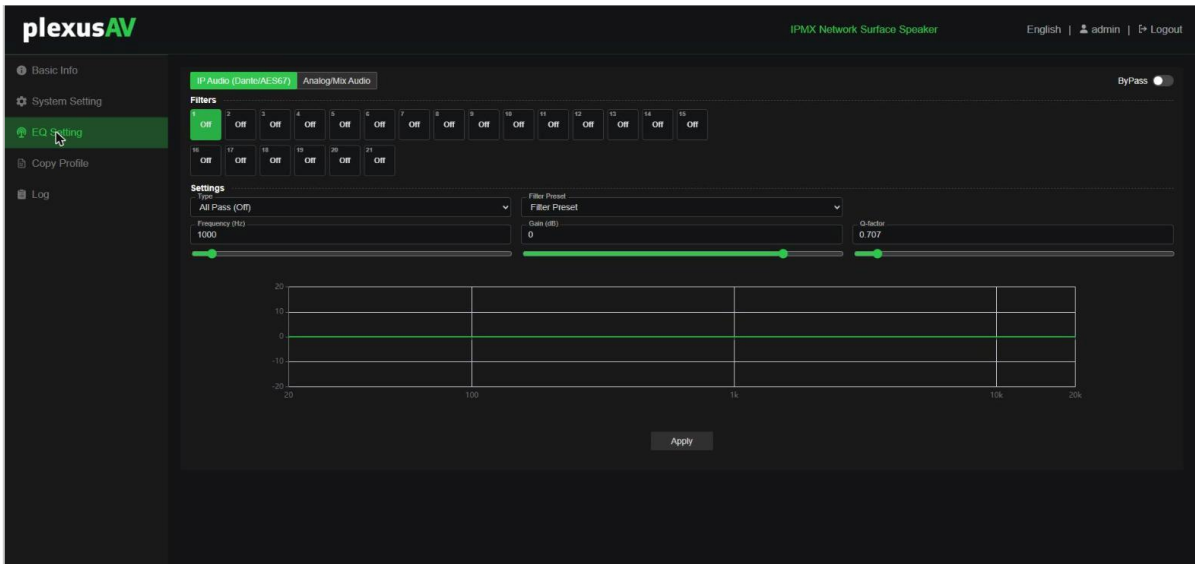
Password Change

Enter the current password, then the new password twice to confirm. Passwords must be 7 to 32 characters.

Note: If the password is lost, the only recovery is a factory reset using the speaker's push-button.

3.4 EQ Setting

The EQ Setting page provides the speaker's parametric equalizer. Filters are configured per input path.



Input Path Tab	Filter Bands
IP Audio (Dante/AES67)	21
Analog/Mix Audio	6

Each path holds its own independent filter set. The ByPass toggle disables all DSP processing for the selected path, passing audio through unprocessed — useful for comparing processed against unprocessed output, or ruling out EQ when troubleshooting.

The Filters row shows every available band as a numbered button; a band displaying Off has no filter applied. Selecting a band loads it into the Settings area:

Field	Description
Type	The filter type applied to the selected band (see below)
Filter Preset	Recalls a stored filter preset
Frequency (Hz)	Center or corner frequency — adjustable by field entry or slider
Gain (dB)	Filter gain — adjustable by field entry or slider
Q-factor	Filter Q, controlling bandwidth — for example, 0.707
Filter Type	Abbreviation
All Pass (default — band off)	—

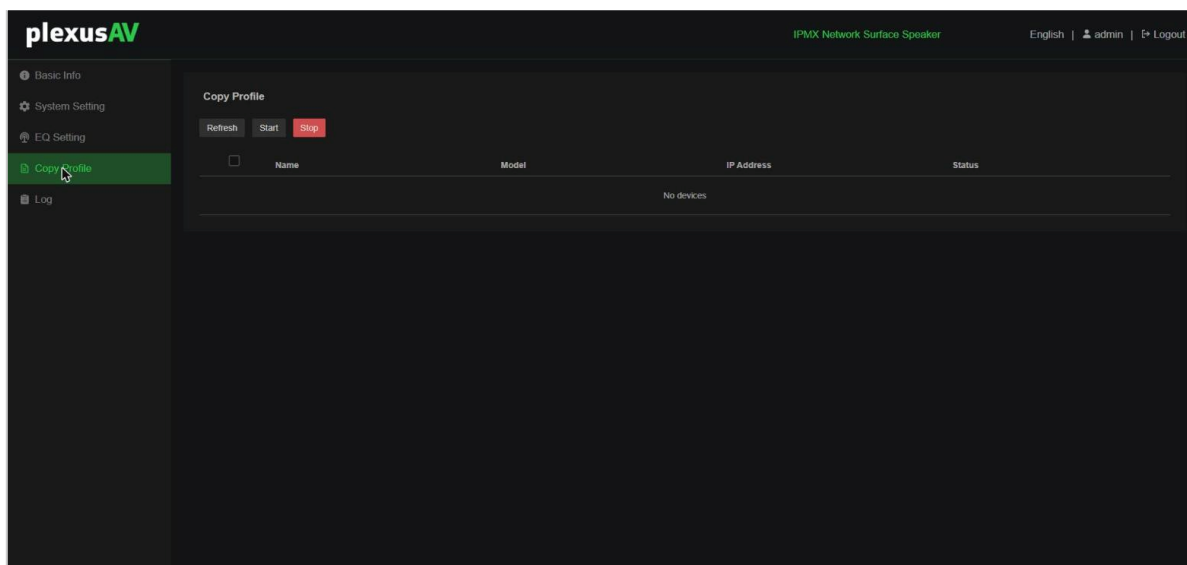
Field	Description
Peaking	P
High Pass	HP
Low Pass	LP
High Shelf	HS
Low Shelf	LS
Notch	N

The response graph below the settings plots the summed effect of all active filters from 20Hz to 20kHz on a ± 20 dB scale. A flat trace at 0dB indicates no EQ is applied. Select Apply to commit the filter set to the speaker.

Note: Gain has no effect on High Pass, Low Pass, and Notch filters, which attenuate by shape rather than by gain.

3.5 Copy Profile

Copy Profile replicates this speaker's configuration directly onto other speakers on the network, without exporting and importing a file. The page lists other P-AVN-SPK series speakers discovered on the network.



Column	Description
Name	The target speaker's device name
Model	The target speaker's model

Column	Description
IP Address	The target speaker's IPMX address
Status	Progress and result of the copy operation
Control	Action
Refresh	Rescans the network for available target speakers
Start	Copies this speaker's configuration to the selected targets
Stop	Halts a copy in progress

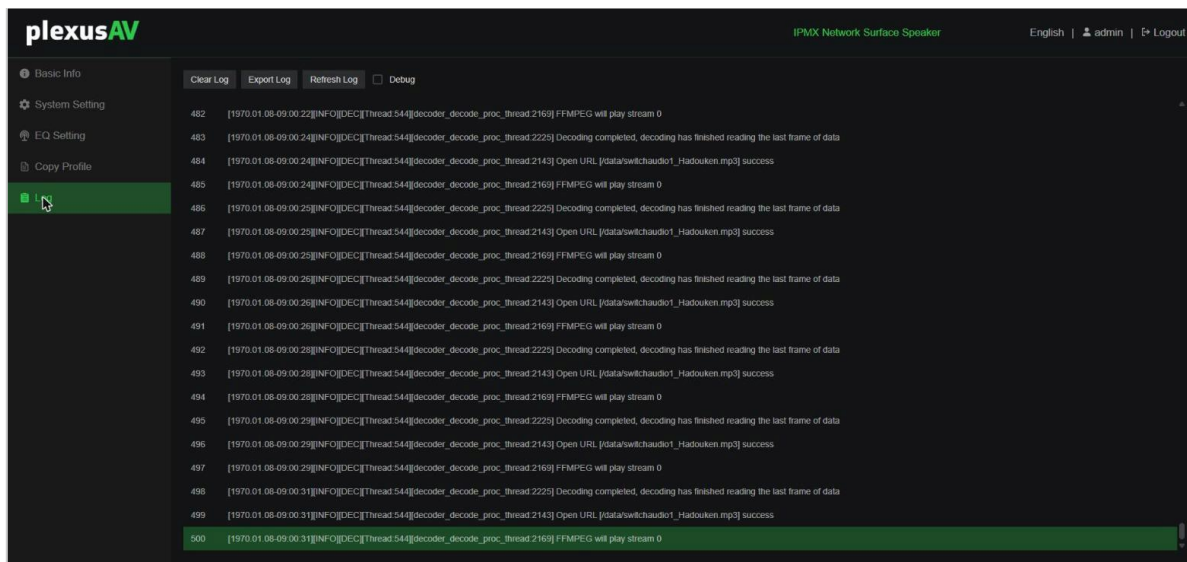
To replicate a configuration: configure one speaker fully, open Copy Profile on that speaker, select the checkbox beside each target, and select Start.

Caution: Copy Profile overwrites configuration on the selected target speakers. Confirm which devices are selected before selecting Start.

This differs from Import/Export Configuration under System Setting, which moves a configuration through a file rather than device to device.

3.6 Log

The Log page records system events and is the first place to look when a speaker is not behaving as expected.



Control	Description
Clear Log	Clears all logs on the speaker

Control	Description
Export Log	Exports the log to a single file
Refresh Log	Refreshes the display
Debug	When enabled, records additional detailed information

Each entry carries a line number, timestamp, severity (INFO or ERR), subsystem, thread, source location, and message. Entries are useful for confirming operations that fail silently elsewhere in the interface, such as a firmware upgrade that does not change the version shown on Basic Info.

Multicast subscription activity is also logged, which is useful when verifying IPMX routing; entries record joining and leaving multicast groups and the sockets bound to each stream. Service discovery is logged as well — the speaker advertises itself over mDNS as `_smartaudio._udp.local`, using its device name as the hostname.

Note: Log timestamps on a speaker that has not synchronized its system clock begin from an epoch date rather than the current date. Use the relative order of entries rather than absolute times.

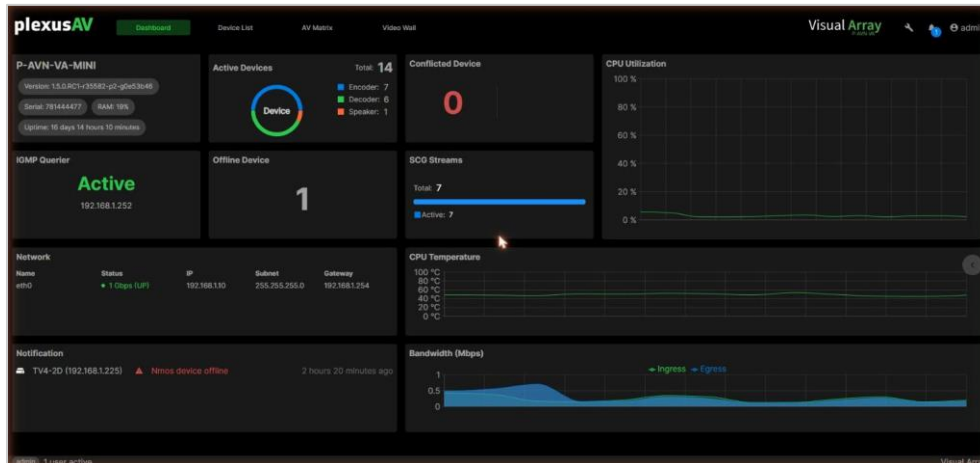
Note: The log is cleared by a firmware upgrade. Export any entries needed for troubleshooting before upgrading.

4 Managing via plexusAV Visual Array

The P-AVN-SPK-6C-WB ships in IPMX mode by default. IPMX uses NMOS (IS-04/IS-05) for discovery and connection management, so Visual Array automatically detects the speaker as soon as it is powered on and connected to the same network. No manual device entry, address assignment, or driver installation is required.

4.1 Discovering the Speaker in Visual Array

After logging in to Visual Array, the Dashboard is displayed, giving an at-a-glance summary of every device Visual Array has discovered along with system and network health.



Active Devices

The Active Devices panel reports the total number of devices currently online, broken out by device type and color-coded to match the ring chart: Blue = Encoder, Green = Decoder, Orange = Speaker. Every speaker operating in IPMX mode is counted in the Speaker total.

If a speaker has been powered and connected but does not appear in this count, verify that it is on the same subnet as Visual Array and that it has not been switched out of IPMX mode via its local web interface.

Related Dashboard Panels

The Offline Device panel counts devices Visual Array has previously discovered that are no longer responding. The Notification panel lists recent system events — NMOS speaker events appear here, for example an “Nmos device offline” warning naming the affected speaker. The Network panel confirms the Visual Array host's own addressing, and IGMP Querier shows the querier status and address for the multicast network carrying audio.

4.2 Device List

Select Device List from the top navigation bar to see every device Visual Array manages — a single combined inventory of the entire plexusAV system. AVoIP encoders, decoders, and transceivers are listed together with any discovered speakers, rather than in separate views per device type.

Status	Name	Mode	Tag	Link Utilization	ETH1 IP	Network ETH2 IP	SFP IP	IGMP Version	Video Address	Audio Address	Anc Data Address
Online/Live	4RU-CH1	Encoder	Sealink Mini-P...		192.168.1.25	0.0.0.0	0.0.0.0		239.1.1.25	239.2.1.25	239.3.1.25
Online/Live	4RU-CH2	Encoder			192.168.1.26	0.0.0.0	0.0.0.0		239.1.1.26	239.2.1.26	239.3.1.26
Online/Live	4RU-CH3	Encoder			192.168.1.27	0.0.0.0	0.0.0.0		239.1.1.27	239.2.1.27	239.3.1.27
Online/Live	4RU-CH4	Encoder	Sealink Mini-P...		192.168.1.28	0.0.0.0	0.0.0.0		239.1.1.28	239.2.1.28	239.3.1.28
Online/Live	4RU-CH1	Encoder	Sealink Mini-P...		192.168.1.25	0.0.0.0	0.0.0.0		239.1.1.25	239.2.1.25	239.3.1.25
Online/Live	TV1-4	Decoder	Bench 1		192.168.1.150	0.0.0.0	0.0.0.0	V2			
Online/Live	TV2-4	Decoder	Bench 1		192.168.1.209	0.0.0.0	0.0.0.0	V2			
Online/Live	CL-100-2E	Encoder			192.168.1.3	0.0.0.0					
Online/Live	CL-100-4E	Encoder			192.168.1.202	0.0.0.0			239.1.1.202	239.2.1.202	239.3.1.202
Online/Live	TV1-4	Decoder	Bench 1		192.168.1.150	0.0.0.0	0.0.0.0	V2			
Online/Live	TV2-4	Decoder	Bench 1		192.168.1.209	0.0.0.0	0.0.0.0	V2			

The Device List is split into two tabs: IPMX AV Device (the full IPMX inventory, including IPMX-mode speakers) and Audio Device (speakers only, with audio-specific columns). Speakers appear by device name using the P-AVN-SPK- prefix followed by the chassis/color designator and a unique identifier.

Locating a Speaker

- Search by Device Name — entering "SPK" filters the list to speakers only
- All Groups — filter by device group (devices are placed in the Default group unless assigned otherwise)
- All Devices — filter by device type
- Tag — filter by user-assigned tags

Status Values

Status	Meaning
Online/Live	Device is reachable and actively passing media
Online/Stopped	Device is reachable but not currently streaming
Offline	Device was previously discovered but is not responding

An offline speaker also raises an “Nmos device offline” entry in the Dashboard Notification panel.

Selecting Speakers and Speaker Actions

Select the checkbox at the left of any device row to select it; select multiple rows to act on several speakers at once. With one or more speakers selected, the following actions are available from the action bar:

The screenshot shows the plexusAV Visual Array interface. The 'Device List' tab is active. A red box highlights the action bar for the selected device, which includes buttons for Basic Setting, Advanced Setting, Mute, Unmute, Clear Selection, and Delete. The table below shows a list of devices with checkboxes for selection.

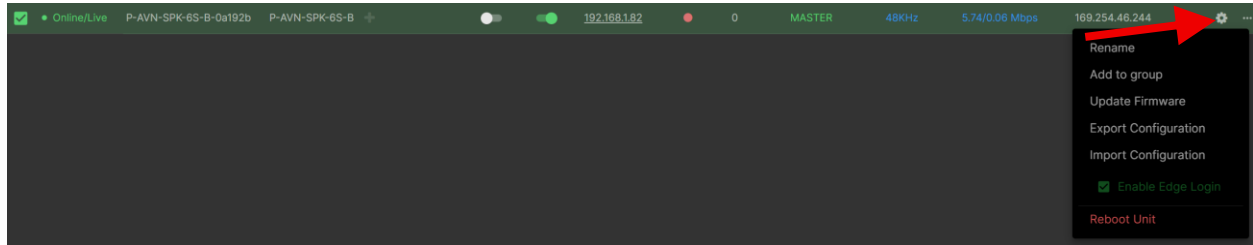
Status	Name	Device Type	Tag	UID	LED	IP Address	Sync	PPM (ms)	PPM Clock Mode	Sample Rate	Rx/Tx Bandwidth	Dante Address
☐	4RU - Rack Accessory											
☐	Bench Decoders											
☐	CL-100 Demo											
☐	Wall Plate Demo											
☒	Default	1										
☒	Online/Live	P-AVN-SPK-6S-B-0a192b	P-AVN-SPK-6S-B			192.168.1.82	0	MASTER	48KHz	5.74/0.07 Mbps	169.254.46.244	

Action	Description
Basic Setting / Advanced Setting	Opens the Remote Settings page for the selection — see Remote Settings below
Mute / Unmute	Mutes or restores audio output on the selected speaker(s)
Clear Selection	Deselects all currently selected devices
Delete	Removes the selected device(s) from Visual Array

Caution: Confirm the selection before choosing Delete.

Per-Device Controls

Two controls are available at the right of each device row. The gear icon opens that speaker's Remote Settings configuration page, where its parameters can be viewed and changed from Visual Array without logging in to the speaker's own web interface. The ellipsis (...) menu opens a per-device menu:

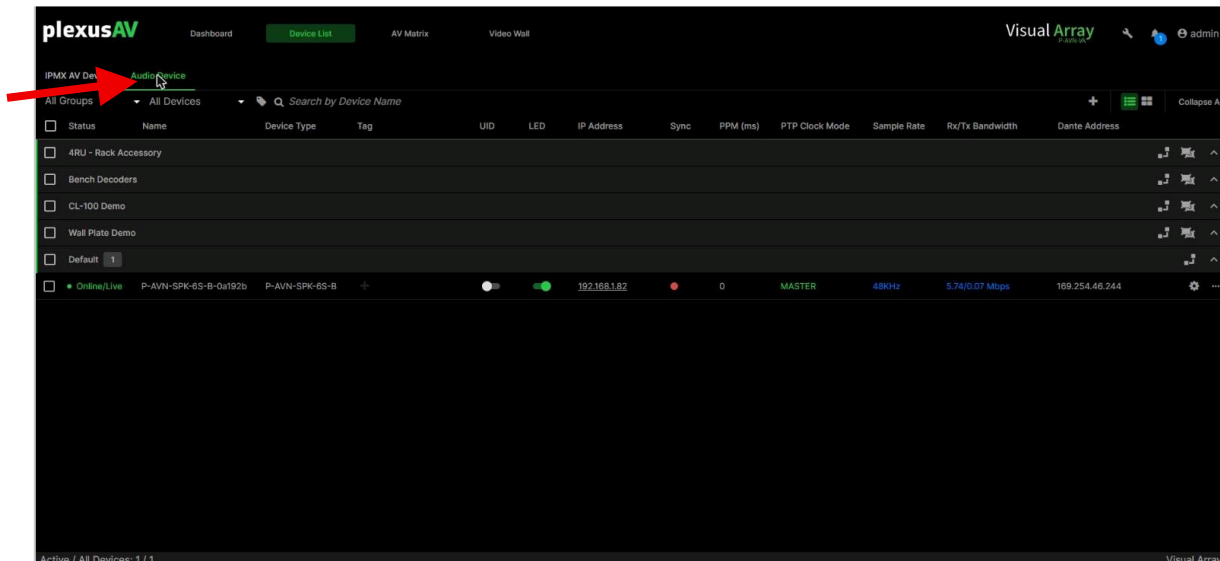


Menu Item	Description
Rename	Changes the device's display name in Visual Array
Add to group	Assigns the device to a group for filtering and bulk operations
Update Firmware	Pushes a firmware update to the selected device
Export Configuration	Saves the device's current configuration to a file
Import Configuration	Applies a previously saved configuration file to the device
Reboot Unit	Restarts the device

Note: Firmware updates, configuration import, and reboot interrupt audio playback on the affected speaker. Perform these operations during a maintenance window.

Audio Device Tab

Select the Audio Device tab to filter the Device List down to speakers only — the most efficient view for commissioning and monitoring a speaker system.



Column	Description
Status	Online/Live or Offline
Name	The speaker's device name (editable via Rename)
Device Type	The speaker model — for example P-AVN-SPK-6C-WB
Tag	User-assigned tags
UID	Identify toggle — flashes the LED on the physical speaker so it can be located in a ceiling or rack of otherwise identical units
LED	Enables or disables the speaker's status LED completely
IP Address	The speaker's IPMX / web interface address
Sync	PTP synchronization indicator — green when locked to the network clock, red when not
PPM (ms)	Clock offset from the PTP master
PTP Clock Mode	MASTER or SLAVE, indicating the speaker's role in the PTP clock hierarchy
Sample Rate	The speaker's operating sample rate (for example, 48 kHz)
Rx/Tx Bandwidth	Current receive and transmit bandwidth in Mbps
Dante Address	The speaker's Dante IP address (see below)

Dante Address

The speaker has only one physical network interface — a single RJ-45 port carrying power, audio, and control — but presents two separate IP addresses over that one connection: the IPMX address (used for NMOS discovery, IPMX audio, and the local web interface) and the Dante address (used by the onboard Dante Ultimo chipset). The two are independent and will not match IP's, and only one cable and one switch port are required. This is expected behavior, not a fault.

Note: A Dante address in the 169.254.x.x range is a link-local (APIPA) address, indicating the Dante interface did not obtain a DHCP lease. The speaker may still appear in Visual Array over its IPMX address while being unreachable from Dante Controller.

Bulk Configuration of Multiple Speakers

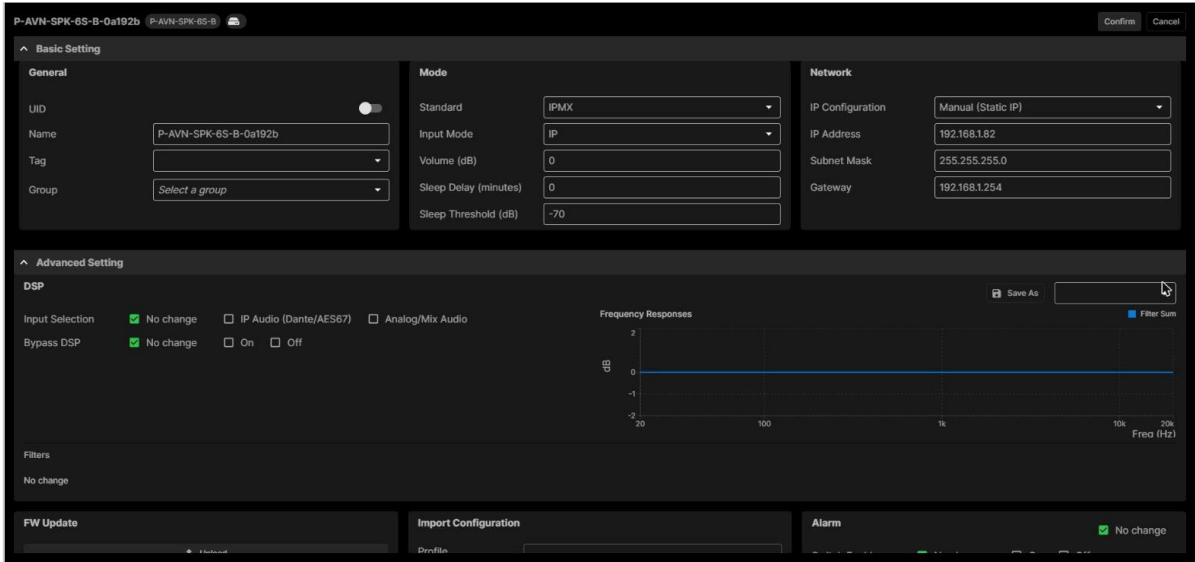
Settings can be applied to several speakers at once — useful when commissioning a zone of identical speakers. Select the checkbox beside each speaker (or the group header row to select an entire group), confirm the selection count shown on the action bar, then choose Basic Setting or Advanced Setting to open the same panels described below, applied to the whole selection.

Bulk configuration relies on the “No change” convention described under Advanced Settings: every parameter left on No change is skipped, and each speaker keeps its existing value. Only the parameters you explicitly set are written to the selected speakers.

Caution: Bulk operations apply to every selected device. Confirm the selection count and verify which speakers are highlighted before selecting Confirm. Take particular care with Network fields — pushing a single static IP address to multiple speakers will create an address conflict.

4.3 Remote Settings

Selecting the gear icon on a speaker row opens that speaker's Remote Settings page. Everything on this page is configured from Visual Array and pushed to the speaker, so a speaker mounted in a ceiling can be fully configured without logging in to its own web interface.



The speaker's name and model appear at the top left. Confirm applies every pending change to the speaker; Cancel discards all pending changes. The page is divided into two collapsible areas, Basic Setting and Advanced Setting.

Basic Setting — General

Field	Description
UID	Identify toggle — flashes the LED on the physical speaker so it can be located
Name	The speaker's display name in Visual Array
Tag	Assigns one or more tags for filtering
Group	Assigns the speaker to a group

Basic Setting — Mode

Field	Description
Standard	The speaker's mode of operation: IPMX, AES67, or Dante. The speaker ships in IPMX mode.
Input Mode	Selects the audio source — IP (network audio), analog, or a mix of both
Volume (dB)	Output level for the speaker
Sleep Delay (minutes)	How long the input must remain below the sleep threshold before the speaker enters standby. 0 disables sleep standby.
Sleep Threshold (dB)	The input level below which the sleep delay timer begins counting (for example, -70)

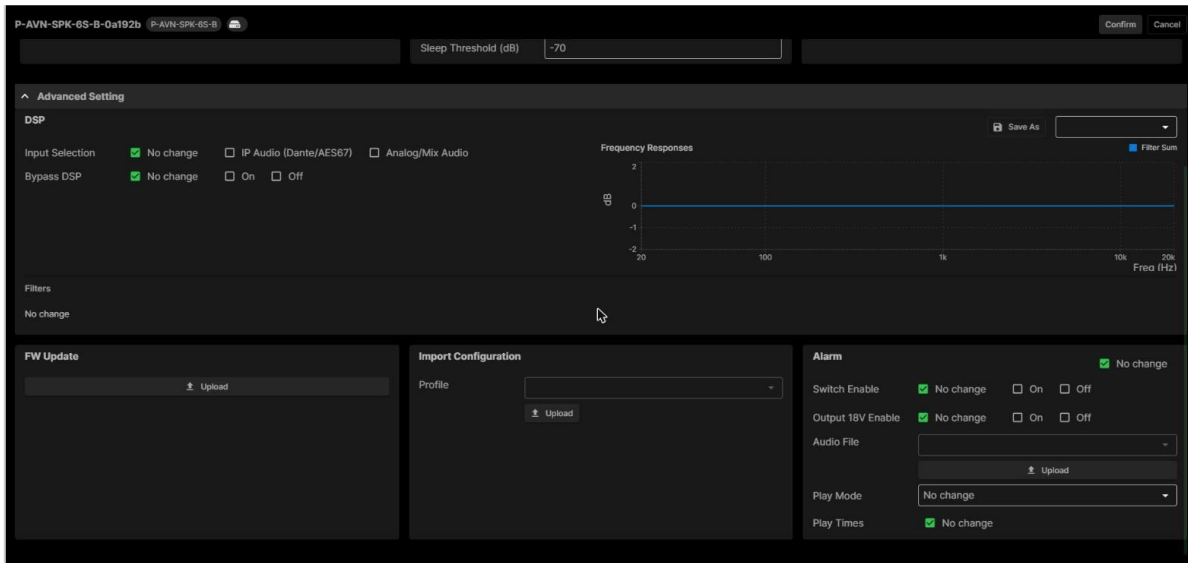
Note: Changing Standard switches the speaker between IPMX, AES67, and Dante operation. A speaker moved out of IPMX mode will no longer be discovered or routed through NMOS, and will disappear from the IPMX views in Visual Array. Confirm the intended mode before applying.

Basic Setting — Network

Field	Description
IP Configuration	DHCP or Manual (Static IP)
IP Address	The speaker's IPMX / web interface address
Subnet Mask	Subnet mask for the above
Gateway	Default gateway for the above

Caution: Applying an incorrect static IP address, subnet mask, or gateway can make the speaker unreachable from Visual Array. Recovery requires a factory reset from the speaker's push-button (hold for 10 seconds), which returns the speaker to DHCP.

4.4 Advanced Settings



The “No change” Convention

Most controls in Advanced Setting offer a No change option alongside their real values, and No change is selected by default. Any parameter left on No change is not written to the speaker when Confirm is selected — the speaker keeps whatever it already had. This makes it safe to open Remote Settings, change one value, and apply, without disturbing settings you did not touch, and is what makes bulk configuration practical.

DSP

Control	Description
Input Selection	No change, IP Audio (Dante/AES67), or Analog/Mix Audio
Bypass DSP	No change, On, or Off
Frequency Responses	A live plot of the speaker's EQ curve across 20Hz–20kHz. The Filter Sum trace shows the combined effect of all active filters.
Filters	The individual EQ filter definitions applied to the speaker
Save As / preset selector	Saves the current DSP configuration as a named preset, or recalls a saved preset

FW Update, Import Configuration, and Alarm

Select Upload under FW Update to push a firmware file to the speaker. A firmware update interrupts audio playback and restarts the speaker — perform updates during a maintenance window and do not remove network power during an update. Firmware can also be pushed from the Device List using Update Firmware on the per-device ellipsis menu.

Import Configuration selects a saved Profile from the dropdown, or uploads a configuration file, to apply a stored configuration to the speaker — pairing with Export Configuration on the ellipsis menu.

Alarm Control	Description
Switch Enable	No change, On, or Off — enables the short-circuit trigger input
Output 18V Enable	No change, On, or Off — enables the 18V output used to trigger external devices such as an alarm beacon
Audio File	Selects a previously uploaded alarm audio file, or Upload a new one to speaker memory
Play Mode	How the alarm audio plays when triggered
Play Times	The number of repeats when Play Mode is set to loop

4.5 Routing Audio to a Speaker (AV Matrix)

Select AV Matrix from the top navigation bar to route sources to destinations. The AV Matrix is a crosspoint grid: Encoders / TX Devices are arranged as columns across the top, and Decoders / RX Devices — including speakers — are listed as rows down the left side.

Tab	Shows
All Routing	Every device and every stream type in one grid
AV Routing	Video and audio routing
Data Routing	Serial and data routing
KVM Routing	Keyboard, video, and mouse routing
H.26x Routing	H.264/HEVC streams only
JXS Routing	JPEG-XS streams only
Audio Routing	Audio only — speakers as destinations

In the All Routing view, a speaker row carries no video crosspoints. Expand a speaker row using the chevron at the left of its name to reveal its audio detail: the stream format the speaker is receiving (for example, 48kHz 24bit) and a separate row for each audio channel, CH 1 and CH 2 — so the left and right legs of a stereo source can be assigned independently. A green border marks an online speaker available for routing; a red border marks an offline speaker.

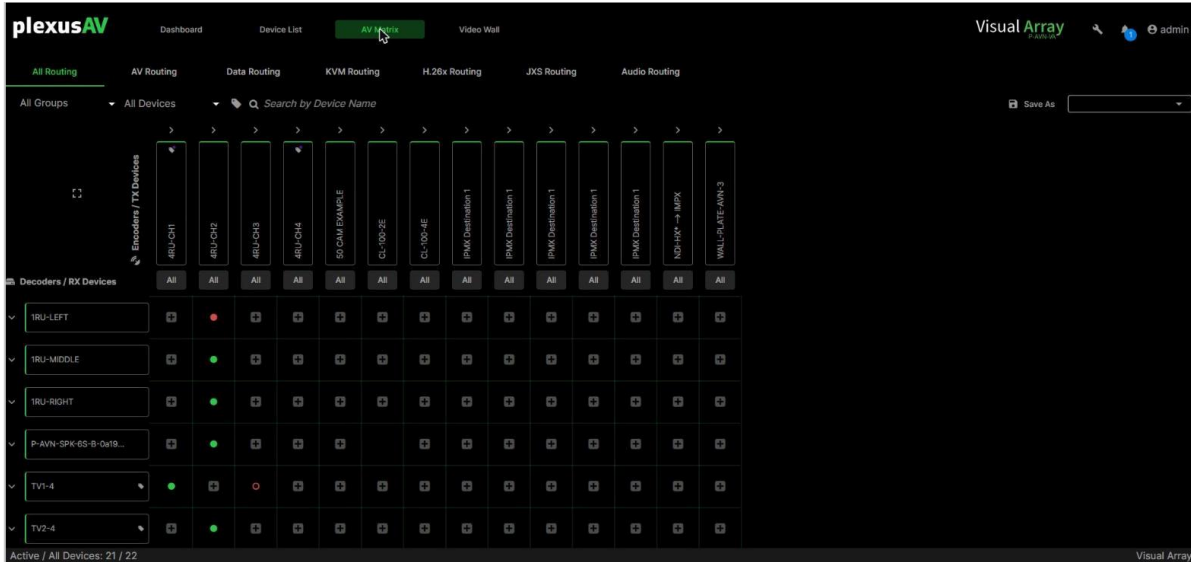
On each encoder card, the SPK stream-type selector exposes that source's speaker-routable audio, which is what a P-AVN-SPK series speaker subscribes to. Sources that do not present an SPK stream cannot be routed to a speaker.

The Audio Routing tab filters the matrix down to the speaker system alone: rows are grouped under a single Speaker heading listing only P-AVN-SPK series speakers, and columns list only encoders presenting a compatible audio stream. Use All Routing instead when a route needs to be made alongside video.

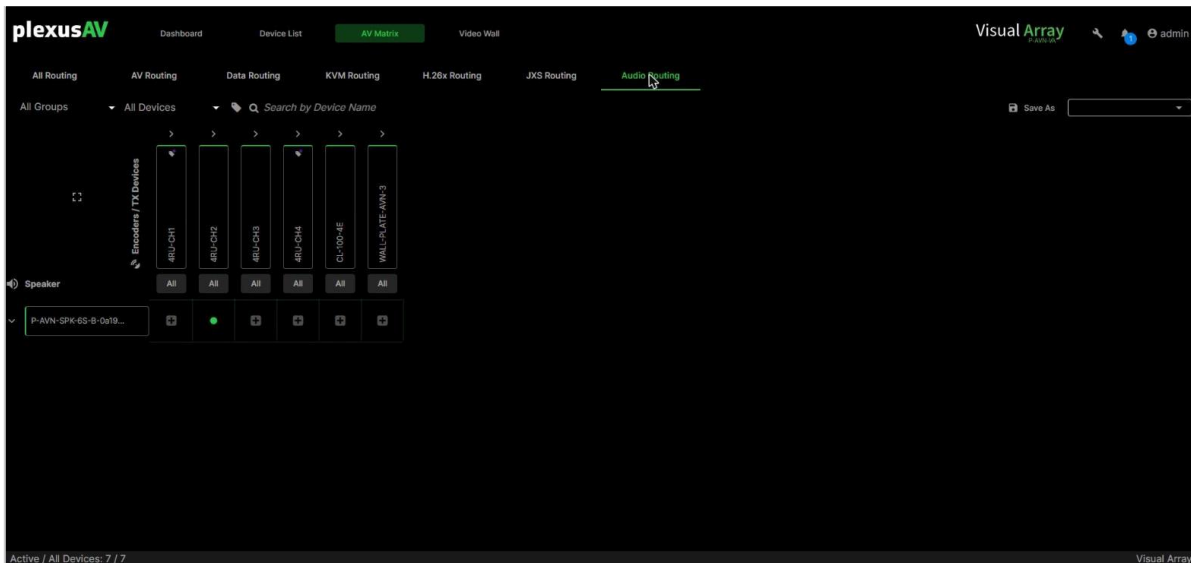
Creating a Route

- Select AV Matrix, then the Audio Routing tab.
- Locate the source in the column headers and the target speaker in the rows.
- To route the full stream, select the + at the intersection of the source column and the speaker row.
- To route individual channels, expand the speaker row with the chevron and select the crosspoint on the CH 1 or CH 2 row.

Routing presets can be stored and recalled using Save As and the preset selector at the upper right of the matrix.



AV Matrix — All Routing view, with a speaker row expanded



AV Matrix — Audio Routing tab, filtered to the speaker system

For complete Visual Array platform documentation beyond speaker-specific control, see the plexusAV Visual Array Manual.

5 API Control

The P-AVN-SPK series speakers use REST API for external control and integration. All REST API commands, syntax, and explanations of the commands are hosted on the API Developer site:

[plexusAV API Developer Hub](#)

Appendices

Appendix A — Ordering Information

Model	Description
P-AVN-SPK-6C-WB	6.5" PoE Network Ceiling Speaker w/ DSP, IPMX/NMOS/Dante/AES67, white and black grille included

Appendix B — Specifications

Core Audio

Specification	Value
Audio Standard	IPMX, Dante, AES67
Frequency Response (-2.5 dB)	70 Hz – 20 kHz
Speaker Driver	Low Frequency: 165 mm (6.5"), cone; High Frequency: 25 mm (1"), silk dome
Crossover Frequency	2.9 kHz (bass/treble)
Amplifier Max Output Power	40 W
Max. Output Level	104 dB SPL
Harmonic Distortion	< 0.5% (@85 dB SPL at 1 m on axis)
Dispersion Angle	Horizontal 120°, Vertical 100°

DSP and EQ

Specification	Value
EQ Filters	Dante/AES67: 21-band; Analog/Mixed: 6-band

Specification	Value
Digital Signal Processing	Parametric notch; high frequency shelf; low frequency shelf; bass roll-off; bass tilt; treble tilt

Inputs and Connectivity

Specification	Value
Audio Input	1× RJ45 (100 Mbps) for IPMX/Dante/AES67
Analog Audio Input	1× 3-pin Phoenix connector, balanced
Analog Input Impedance	10 kΩ, balanced
Analog Input Max. Level	18 dBu
Trigger Signal In	1× 4-pin Phoenix connector (short-circuit input)

Power

Specification	Value
Power Supply	PoE, IEEE 802.3af, 13 W; PoE+, IEEE 802.3at, 26 W
Standby Power Consumption	< 4 W

Physical and Environmental

Specification	Value
Operating Temperature	-6.7 – 40 °C (20 – 104 °F)
Storage Temperature	-29 – 75 °C (-20 – 167 °F)
Dimensions	Φ258 × 222 mm (Φ10.16 × 8.74 in)
Mounting Hole Dimension	Φ227 mm (8.94 in)
Weight	3.4 kg (7.5 lbs)
Grille Options	White and black, both included

Appendix C — Certifications

The P-AVN-SPK-6C-WB has the following certifications

- ✓ CE
- ✓ FCC
- ✓ WEEE

Pending: C-ETL-US

Appendix D — Warranty

PlexusAV Hardware Three-Year Warranty

PlexusAV warrants this instrument against defects from any cause, except acts of God and abusive use, for a period of three years from date of purchase. During this warranty period, PlexusAV will correct any covered defects without charge for parts, labor, or recalibration.

Appendix E — Support and Contact Information

Returning Products for Service or Calibration

The P-AVN-SPK-6C-WB is a delicate piece of equipment and needs to be serviced and repaired by PlexusAV. Periodically it is necessary to return a product for repair or calibration. To expedite this process, please carefully read the instructions below.

RMA Number

Before any product can be returned for service or calibration, an RMA number must be obtained. To obtain an RMA number, open a service ticket through the [Support Ticket System](#) with the Application Engineering team.

Shipping the Product

Once an RMA number has been issued, the unit needs to be packaged and shipped back to PlexusAV. It's best to use the original box and packaging for the product, but if this is not available, check with the customer service representative for the proper packaging instructions.

Note: Do not return any cables or accessories unless instructed to do so by the customer service representative.

[PlexusAV Knowledge Base](#)

Support Requests: <https://plexusav.com/support-request/>



www.plexusav.com

3820 N Potsdam Ave, Sioux Falls, SD 57104 USA



Scan or visit plexusav.com/products/p-avn-spk-6c-wb