

## Algo 8180G2

# ALGO 8180G2 PoE IP Paging and SIP Loud Ringer Indoor Audio Alerter User Manual

## 1. INTRODUCTION

This manual provides comprehensive instructions for the installation, configuration, and operation of the ALGO 8180G2 PoE IP Paging and SIP Loud Ringer Indoor Audio Alerter. The 8180G2 is a second-generation, SIP-compliant, Power over Ethernet (PoE) wall-mounted loud speaker designed for Voice over IP (VoIP) paging, IP loud ringing, and emergency notification applications. It integrates seamlessly into various environments such as schools, warehouses, and offices.



Figure 1: Front view of the ALGO 8180G2 device, highlighting its 'G2' generation designation.

## 2. PRODUCT OVERVIEW

### 2.1 Key Features

- Multifunctional speaker for voice paging, loud ringing, emergency notification, and bell scheduling.
- New G2 Hardware with enhanced features, including outputs for external speaker, slave amplifier, or strobe/visual alerter.
- Integrated MWI LED (Red / Blue) and I/O Relay.
- Network managed and supervised SIP and multicast endpoint with TLS/SRTP support and 802.1x Security,

SIP TCP/UDP.

- SIP compatibility with leading UC vendors such as Avaya, Broadsoft, Cisco, Digium/Asterisk, Metaswitch, NEC, Polycom, and most other SIP IP-PBX and ITSPs.
- PoE (802.3af) for plug-and-play network connectivity, eliminating the need for an additional amplifier.

## 2.2 Components and Connections



Figure 2: Diagram illustrating the ALGO 8180G2's internal and external components, including the built-in speaker, microphone, LED indicator, RJ45 network port, speaker output, audio output, relay I/O, and manual programming buttons. The surface mount wiring channel is also shown.

The ALGO 8180G2 features:

- **Built-in Loud Speaker with Amplifier:** Provides clear audio output.
- **Microphone:** Enables two-way audio for duplex paging.
- **Red / Blue LED Indicator:** Displays Message Waiting Indicator (MWI), status, and heartbeat (8180G2 only).

- **RJ45 Network Port:** For Power over Ethernet (PoE) and network connectivity.
- **Speaker Output:** Allows connection to an external speaker. Note: Connecting an external speaker disables the internal loudspeaker.
- **Audio Output:** Line-level audio output.
- **Relay Input / Output:** For integration with external devices (8180G2 only).
- **Manual Programming Buttons:** For basic configuration or programming via the built-in web interface.

## 3. SETUP

### 3.1 Physical Installation

The ALGO 8180G2 is designed for wall mounting. Consider the desired coverage area and proximity to network infrastructure when selecting a mounting location.

**ALGO** 8180G2 SIP Audio Alerter Control Panel

Status Basic Settings Additional Features Advanced Settings System Logout

SIP Features Multicast

#### Features

**Inbound Ring Settings**  
 ⓘ These settings apply to events triggered by the Ring Extension(s) & Emergency Alerts sections. The Play/Loop/Stop buttons can also be used to test the device and set the appropriate volume level.

Ring/Alert Tone: warble2-med.wav [Play] [Loop] [Stop]

Ring/Alert Volume: 4 [Apply]

Ring Limit: No limit  
 ⓘ 1 ring = 6 seconds.

**Inbound Page Settings**

Page Speaker Volume: 4 [Apply]  
 ⓘ When in Slave mode, note that this is the default volume control for all audio received via multicast.

Page Mode: ☒ One-way ☐ Two-way ☐ Delayed  
 ⓘ "Delayed" mode stores the page audio temporarily, and then broadcasts it after the call is hung-up. This can help avoid feedback.

Page Timeout: 5 minutes  
 ⓘ Maximum page timeout in Delayed mode is 5 minutes.

Page Tone: <Default>  
 ⓘ Use only Default, or custom uploaded file. The other pre-installed tone files all contain silence at the end in order to generate ring "cadence" of 6 seconds. This silence will block the voice path for several seconds at the start of a page.

G.722 Support: ☒ Enabled ☐ Disabled  
 ⓘ Applies to codec used during SIP negotiation only. Multicast codec is configured separately.

**Audio Processing**

Ambient Noise Compensation: ☒ Enabled ☐ Disabled  
 ⓘ Automatically adjust speaker level in response to ambient noise level detected at the device prior to start of each call.

Automatic Gain Control (AGC): ☒ Enabled ☐ Disabled  
 ⓘ Automatically maximize level of voice received from calling phone in order to make page volume more consistent.

[Save]

Figure 3: Front and side dimensions of the ALGO 8180G2, showing a width of 4 inches (10.2 cm), height of 6.3 inches (16 cm), and depth of 2.2 inches (5.5 cm) without the wall bracket.

ALGO

8180G2 SIP Audio Alerter Control Panel

Status

Basic Settings

Additional Features

Advanced Settings

System

Logout

SIPFeaturesMulticast

Multicast Settings

Multicast Mode

Multicast Mode

☐ None
☒ Master/Sender
☐ Slave/Receiver

*†* Multicast Zone Definitions can be found in "Advanced Settings > [Advanced Multicast](#)".

Multicast Type

☒ Regular (RTP)
☐ Polycom Group Page
☐ Polycom Push-to-Talk
☐ Regular RTP + Polycom Group Page
☐ Regular RTP + Polycom Push-to-Talk

*†* Regular mode uses RTP audio packets compatible with all Algo SIP endpoints, and most multicast-enabled phones.
  
*†* Both "RTP + Polycom" multicast types will enable local speaker playback for all groups and zones.

Number of Zones

☒ Basic Zones Only
☐ Basic and Expanded Zones

Master/Sender Zone Settings

Zone Selection Mode

☐ DTMF Selectable Zone
☒ Single Zone

*†* For additional capabilities allowing unique SIP extensions per zone, see "Additional Features > [More Page Extensions](#)".

Master Single Zone

Zone 1

*†* If "DTMF Selectable Zone" is selected above, then this single zone setting will not apply to Paging (since the zone can now be dynamically selected per call using DTMF), but it will still apply to the Ring Extension and Relay triggered events.

Speaker Playback Zones

☒ Priority Call
☒ All Call
☒ Music
  
☒ Zone 1
☒ Zone 2
☒ Zone 3
  
☒ Zone 4
☒ Zone 5
☒ Zone 6

*†* Allows master device to play audio for selected zones only. This is useful if using DTMF Selectable Zone mode (or [More Page Extensions](#) per zone) and wishing to make the Master unit a member of only certain zones.

Save

Figure 4: Back view dimensions of the ALGO 8180G2, illustrating the detachable wall mount bracket with a height of 7 inches (17.8 cm) and width of 3.5 inches (8.8 cm).

## 3.2 Power and Network Connection

The 8180G2 requires Power over Ethernet (PoE) for operation. Connect a standard Ethernet cable from a PoE-enabled switch or a PoE injector to the RJ45 network port on the device. The device does not support direct power connection; PoE is the sole power source. Ensure your network infrastructure supports 802.3af PoE.

## 3.3 Initial Configuration

Initial configuration and advanced settings are managed through the device's built-in web interface. A basic understanding of computer networking and Voice over IP (VoIP) concepts is recommended for optimal setup. The device can also support provisioning for larger deployments.

# 4. OPERATING INSTRUCTIONS

## 4.1 Web Interface Access

To access the web interface, connect the 8180G2 to your network. Obtain the device's IP address (this can often be found via network scanning tools or by checking your DHCP server logs). Enter the IP address into a web browser to access the control panel.

## 4.2 SIP Configuration

The 8180G2 registers as a third-party SIP endpoint with most leading premise or hosted UC providers. Configure the necessary SIP account details (extension, password, server address) within the web interface's SIP settings.

## 4.3 Paging and Loud Ringing Settings

The web interface allows for independent volume adjustment for paging, loud ringer, and alerts. Paging can be configured for one-way or duplex (two-way) audio via the built-in microphone.

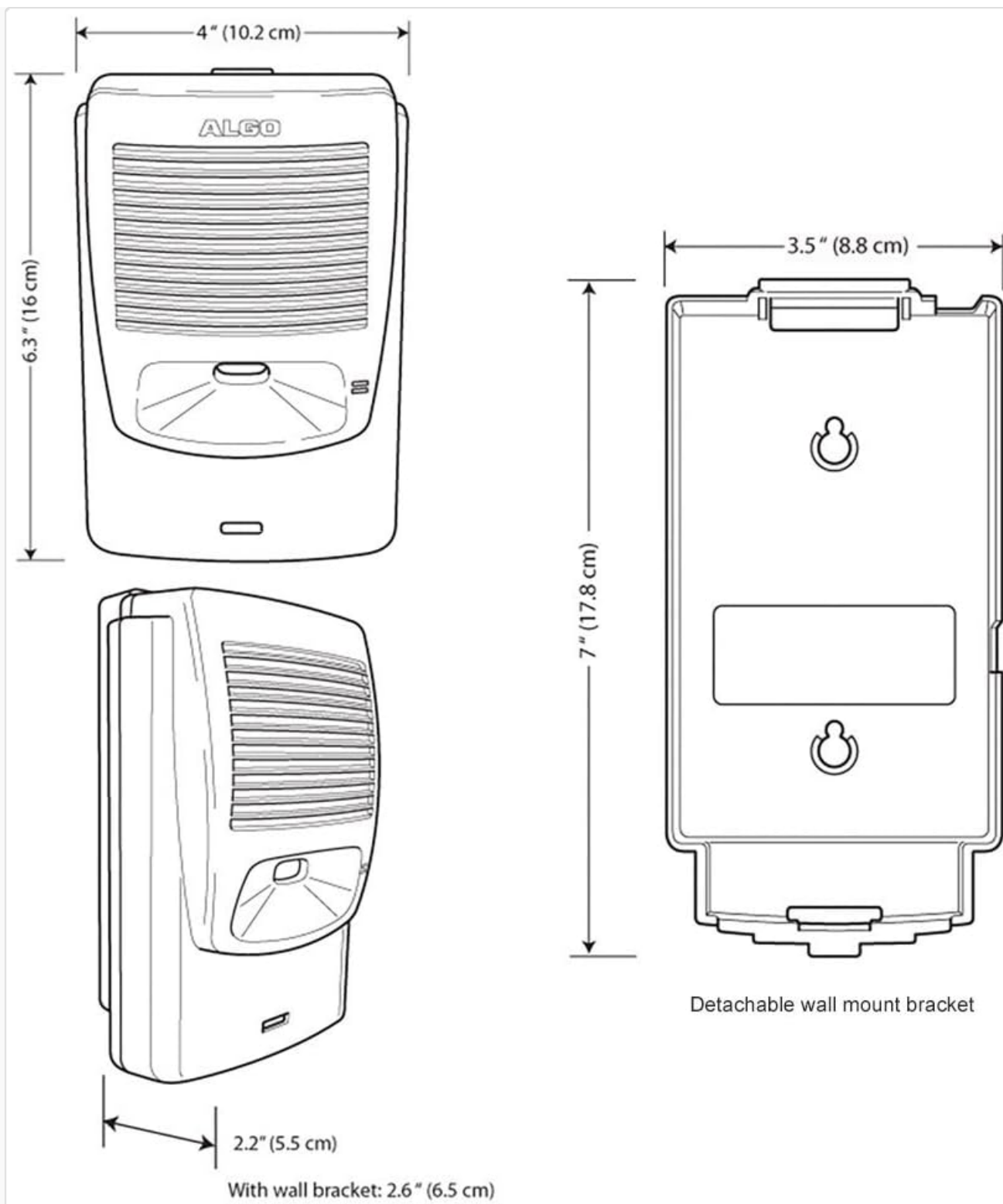


Figure 5: Screenshot of the ALGO 8180G2 web interface 'Basic Settings' page, showing options for Inbound Ring Settings, Inbound Page Settings, and Audio Processing, including volume controls and page modes.

## 4.4 Multicast Settings

The 8180G2 supports various multicast options, including RTP multicast, Polycom Group Page, and Syn-Apps SA Announce. Any number and combination of Algo SIP speakers, paging adapters, and strobes can be used via built-in multicast for comprehensive large-scale deployments. Zoned multicast paging is available via remote DTMF keypress selection.



ALGO

8180G2 SIP Audio Alerter Control Panel

StatusBasic SettingsAdditional FeaturesAdvanced SettingsSystemLogout

Input/OutputEmergency AlertsMore Page ExtensionsMore Ring Extensions

Input/Output

Terminal Block Functions

Speaker Mode

☒ Auto
☐ Internal
☐ External
☐ Disabled

Note that Auto mode is not available when the Relay Terminal Function is set to Input.

Relay Terminal Function

☒ Output
☐ Input

Audio Streaming

Microphone Always On

☐ Enabled
☒ Disabled

This feature will stream the microphone audio via multicast for monitoring applications. When microphone streaming is active, the device will act as multicast Master regardless of the setting in Basic Settings > Multicast. Note that streaming is only available while the device is idle (it will be interrupted if a Page call is active).

Output

Output Light

☒ Enabled
☐ Disabled

Disable the light on the speaker entirely (keep the light off even when the speaker is active).

Output Light Colour

☒ Blue
☐ Red

Heartbeat Light

☐ Enabled
☒ Disabled

Flash the light every 30 seconds to indicate that the device is powered and running.

Output Relay

☒ Enabled
☐ Disabled

Disable the relay output on the speaker.

Save

Figure 6: Screenshot of the ALGO 8180G2 web interface 'Multicast Settings' page, detailing options for Multicast Mode, Multicast Type, Number of Zones, and Master/Sender Zone Settings.

## 4.5 Input/Output Functions

The device offers configurable input/output functions for enhanced integration.

ALGO

8180G2 SIP Audio Alerter Control Panel

StatusBasic SettingsAdditional FeaturesAdvanced SettingsSystemLogout

NetworkAdminTimeProvisioningTonesFile ManagerAdvanced AudioAdvanced SIPAdvanced Multicast

Admin Settings

Admin Password

Password

Confirmation

General

Device Name (Hostname)

sipalerter

Introduction Section on Status Page

☒ On
☐ Off

Show Status Section on Status Page when Logged Out

☒ On
☐ Off

Web Interface Session Timeout

1 hour

Automatically log out web interface after period of inactivity.

Play Tone at Startup

☒ Enabled
☐ Disabled

A tone can be played at startup to confirm that the device has booted.

Log Settings

Log Level

☐ Error (Lowest)
☐ Notice ("Event")
☒ Info ("SIP")
☐ Debug (Highest)

Log Method

☒ Local
☐ Network
☐ Both

Management

Web Interface Protocol

☒ Both HTTP and HTTPS
☐ HTTPS Only

Force Strong Password

☐ Enabled
☒ Disabled

Allow Secure SIP Passwords

☒ Enabled
☐ Disabled

After enabling this option, it is recommended to re-enter SIP passwords and their corresponding realm to store the passwords securely.

SNMP Support

☐ Enabled
☒ Disabled

Download MIB file [here](#).

System Integrity

System Integrity Checking

☐ Enabled
☒ Disabled

This feature verifies installed system packages to ensure they have not been tampered with. Enabling this feature may cause reboots and upgrades to take 30 seconds longer. Verification results can be found on the Status page.

Syn-Apps

SA-Announce Support

The SA-Announce feature cannot be used when Multicast Master mode or Polycom mode is enabled. To enable SA-Announce mode, set Multicast Mode to None in "Basic Settings > Multicast"

InformaCast

InformaCast Support

☐ Enabled
☒ Disabled

This feature requires a valid license to be activated. Please contact [sales@algorithmsolutions.com](mailto:sales@algorithmsolutions.com) for assistance.

Save

Figure 7: Screenshot of the ALGO 8180G2 web interface 'Input/Output' page, showing settings for Terminal Block Functions (Speaker Mode, Relay Terminal Function), Audio Streaming (Microphone Always On), and Output controls (Output Light, Output Light Colour, Heartbeat Light, Output Relay).

- **Speaker Mode:** Configure internal, external, or disable the speaker.
- **Relay Terminal Function:** Set as input or output.
- **Microphone Always On:** Stream microphone audio via multicast for monitoring.
- **Output Light:** Enable or disable the device's indicator light.
- **Heartbeat Light:** Flash the LED every 30 seconds to indicate device operation.
- **Output Relay:** Enable or disable the relay output.

## 5. MAINTENANCE

To ensure optimal performance and longevity of your ALGO 8180G2, regular maintenance is recommended:

- **Cleaning:** Gently wipe the exterior with a soft, dry cloth. Avoid using harsh chemicals or abrasive cleaners.
- **Firmware Updates:** Periodically check the manufacturer's website for new features and required firmware updates. Keeping the firmware current ensures access to the latest functionalities and security enhancements.
- **Network Integrity:** Ensure stable network connectivity and proper PoE supply.

## 6. TROUBLESHOOTING

If you encounter issues with your ALGO 8180G2, consider the following:

- **No Power/No LED:** Verify the PoE connection. Ensure the Ethernet cable is securely connected to a PoE-enabled port or a functional PoE injector.
- **No Audio Output:** Check volume settings in the web interface. If an external speaker is connected, ensure it is properly wired and functional. Remember that connecting an external speaker disables the internal one.
- **SIP Registration Failure:** Confirm SIP account details (extension, password, server address) are correctly entered in the web interface. Verify network connectivity to the SIP server.
- **Paging/Ringing Issues:** Check multicast settings if using multicast. Ensure the correct zones are configured and active. Verify that the paging source is correctly configured to send audio to the device.
- **Web Interface Inaccessible:** Confirm the device's IP address and ensure your computer is on the same network segment. Check network cables and switch status.

For advanced technical support, it is recommended to contact your dealer or refer to the manufacturer's official website for detailed documentation and support resources.

## 7. SPECIFICATIONS

Feature	Specification
Product Dimensions (L x W x H)	7 x 5 x 3 inches (17.8 x 12.7 x 7.6 cm)
Item Weight	1.52 pounds (0.69 Kilograms)
Power Source	PoE (Power over Ethernet) - 802.3af
Material	Metal
Color	Gray
Telephone Type	Corded (VoIP)



Feature	Specification
Compatible Devices	VoIP systems, SIP compatible devices
Multiline Operation	Multi-Line Operation
Manufacturer	Algo
First Available	October 21, 2023


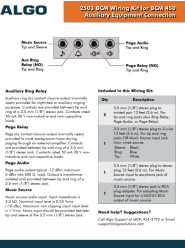

## 8. WARRANTY AND SUPPORT


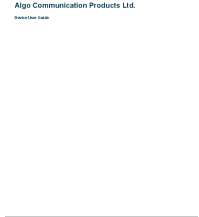

For information regarding product warranty, please refer to the documentation provided with your purchase or visit the official Algo website. For technical assistance, troubleshooting, or inquiries about specific features, please contact your authorized Algo dealer or the Algo customer support team through their official channels.



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### Related Documents - 8180G2

	<p><a href="#">Algo 8190 IP Speaker-Clock User Guide</a></p> <p>Comprehensive user guide for the Algo 8190 IP Speaker-Clock, detailing its features, setup, installation, configuration, and advanced settings for voice paging, alerting, and communication systems.</p>
	<p><a href="#">Algo 2503 BCM Wiring Kit for BCM 450: Auxiliary Equipment Connection Guide</a></p> <p>Connect auxiliary equipment such as loud ringers, paging amplifiers, and visual alerts to your BCM 450 system using the Algo 2503 wiring kit. This guide details the kit's components, their functions, and provides connection diagrams for seamless integration.</p>
	<p><a href="#">Algo 8190S IP Speaker Clock &amp; Visual Alerter User Guide</a></p> <p>Comprehensive user guide for the Algo 8190S IP Speaker, Clock, and Visual Alerter. Details setup, installation, web interface access, and configuration for SIP paging, multicast, emergency alerts, and system management.</p>

	<p><a href="#">Algo 8305 Multi-Interface IP Paging Adapter Quick Start Guide</a></p> <p>This Quick Start Guide provides essential information for setting up and configuring the Algo 8305 Multi-Interface IP Paging Adapter. Learn how to connect legacy analog systems to VoIP networks using this SIP-compliant, PoE-powered device.</p>
	<p><a href="#">Algo 8190S IP Speaker: User Guide for Paging, Alerts, and Visual Notifications</a></p> <p>Explore the Algo 8190S IP Speaker, Clock &amp; Visual Alerter. This user guide covers setup, SIP paging, multicast, emergency alerts, and advanced features for clear audio and visual communication in commercial environments.</p>
	<p><a href="#">Singlewire InformaCast Guide: Testing and Configuration for Algo IP Endpoints</a></p> <p>This guide provides comprehensive instructions for testing and configuring Algo IP Speakers, Paging Adapters, and Visual Alerters with Singlewire InformaCast. Learn about device registration, notification profile creation, and troubleshooting.</p>