

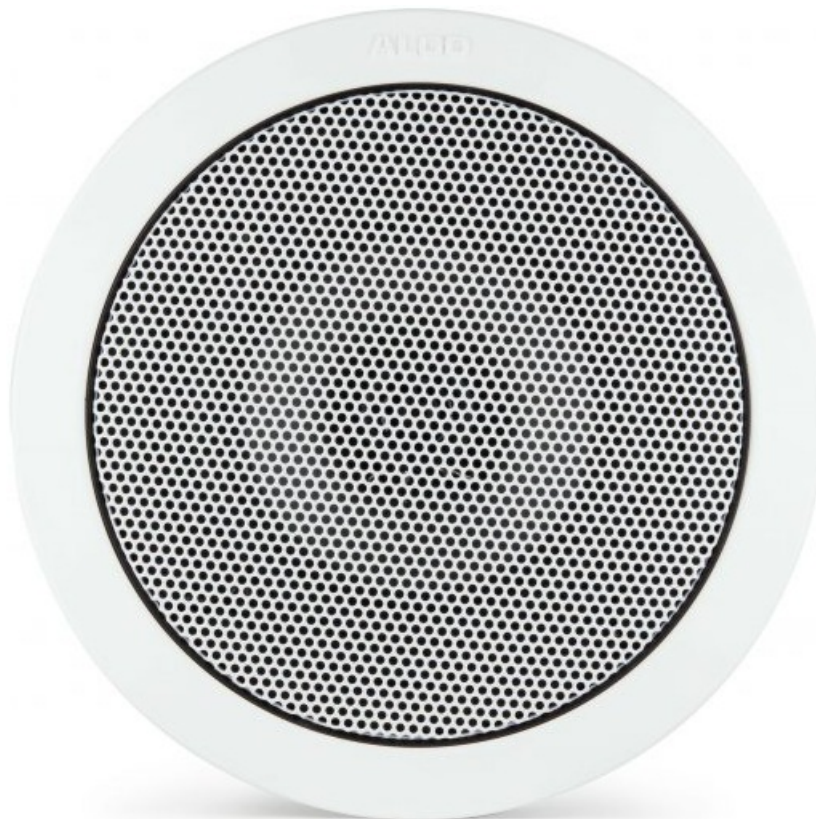
ALGO Fuze Recommends Instructions

[Home](#) » [ALGO](#) » ALGO Fuze Recommends Instructions 

Contents

- 1 [ALGO Fuze Recommends](#)
- 2 [Logging into the Algo](#)
- 3 [Algo Configuration Guidelines for Fuze](#)
 - 3.1 [Advanced Settings – Admin](#)
 - 3.2 [Basic Settings – SIP](#)
 - 3.3 [Additional Features – More Ring Extensions \(When using Multicast\)](#)
 - 3.4 [Advanced Settings – Advanced SIP](#)
 - 3.5 [Basic Settings – Features](#)
 - 3.6 [Advanced Settings – Network](#)
 - 3.7 [Advanced settings – Provisioning](#)
 - 3.8 [Status](#)
 - 3.9 [System – Maintenance](#)
- 4 [Additional Information and Troubleshooting Steps](#)
 - 4.1 [Advanced Settings – Advanced Audio](#)
- 5 [Documents / Resources](#)
- 6 [Related Posts](#)

ALGO



Fuze Recommends, is a beta technical partner project from Fuze where recommendations for hardware and or software can be made and published by the vendor of equipment that has been found to operate within Fuze's recommended configuration guidelines.

The following configuration guidelines for these third-party services have been recommended as being compatible with Fuze existing SIP requirements.

Note: Fuze does not support Third Party Services so any subsequent configuration questions or issues must be directed to the third-Party vendor's Support Services.

Note: Fuze is subject to change connectivity requirements without notice and without further validation.

Note: The customer is responsible for maintaining the security of the device and supplied credentials. Fuze is not liable for any subsequent costs resulting from misconfiguration.

Algo Contact Information

info@algosolutions.com – Sales and product questions

support@algosolutions.com – Tech Support on Products

Document Control	
Fuze Recommends – Algo Configuration Guidelines for Fuze	
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Logging into the Algo

1. Log into the web interface by typing the device's IP address in the web browser. For device-specific instructions to discover the IP address, check its User Guide, typically supplied with the unit or use the Algo Network Device Locator.
2. Enter the default password (algo)

ALGO 8301 Paging Adapter & Scheduler Firmware: 3.4.4

Welcome to the Algo 8301 Paging Adapter & Scheduler

Setting up your Paging Adapter & Scheduler:

Step 1: Configure your Paging Adapter & Scheduler
Log in with the default password and use the Basic Settings pages to set up the basic information.

Step 2: Check network settings (Optional)
Use the Network page under the Advanced Settings tab to change network settings. The default setting for the device is to obtain its IP address from a DHCP server. Contact your Network System administrator if you plan to assign a static IP address, Host, and Gateway to the device.

Step 3: Secure your Paging Adapter & Scheduler (Optional)
Use the Admin page under the Advanced Settings tab to change the administrator password.
⚠ Changing the password is extremely important if the device is directly connected to a public network.

Step 4: Register your Paging Adapter & Scheduler (Optional)
Please register your product using the link below:
<http://www.algosolutions.com/register>
Registration ensures your access to the latest upgrades to this product and important service notices.

Login

Password (default: algo)

Status

Device Name	algo-8301		
SIP Registration	Page Ring #2	Successful	(Extension DSHHTHPBh~9270) (Extension DSHHTHPBh~9261)
Call Status	Idle		
Proxy Status	Single proxy mode		
Provisioning Status	Disabled		
MAC	00:22:ee:09:63:20		
IPv4	192.168.1.242/24, Gateway: 192.168.1.1		
Switch Port ID	mac 3c:5e:c3:37:b9:19		
Date / Time	Mon Sep 13 14:58:47 EDT 2021		
Next Scheduled Event	No Events Scheduled		
Multicast Mode	Master Mode, Idle		
Volume	Page Volume: 10 (0dB) Ring Volume: 10 (0dB)		
Relay Input Status	Disabled		

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Algo Configuration Guidelines for Fuze

****UPGRADE THE FIRMWARE to 3.4.4****

www.algosolutions.com/firmware-downloads

Pick your IP endpoint and follow the instructions for the firmware currently installed.

Note: This process can take up to 45 minutes.

Note: You may be asked to reboot the unit during this process, but you don't need to until the end, However you will need to do it at least once.

Advanced Settings – Admin

Here you will:

1. Set 'Force Strong Password' to Enabled (Optional, If you choose not to do this make sure you are still setting a strong password) Algo suggests 10 characters. 1 lower case, 1 upper case, 1 number, 1 special character
2. Set 'Allow Secure SIP Passwords' to Enabled.
3. Set a strong password to protect the device. This is mandatory to save the page

These are required for a secure unit. Once complete you can verify by downloading the configuration and noting

the passwords are encrypted. See System – Maintenance section below.

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The screenshot shows the 'Advanced Settings' page for the ALGO 8301 Paging Adapter & Scheduler. The page is organized into several sections, each with a title and a list of settings. Two purple arrows are overlaid on the image, pointing to specific sections:

- The first arrow, labeled 'Set Unit Password', points to the 'Admin Settings' section, which includes fields for 'Old Password', 'Password', and 'Confirmation'.
- The second arrow, labeled 'Set Security', points to the 'Management' section, which includes settings for 'Web Interface Protocol', 'Force Strong Password', and 'Allow Secure SIP Passwords'.

Other sections visible include 'General' (Device Name, Introduction Section, Show Status Section, Display Switch Port ID, Web Interface Session Timeout, Play Tone at Startup), 'Log Settings' (Log Level, Log Method), 'Simple Network Management Protocol' (SNMP Support), 'API Support' (RESTful API), 'System Integrity' (System Integrity Checking), and 'Syn-Appls' (SIP Announce Support, InformaCast Support).

MAKE SURE TO CLICK SAVE – Failure to do so will result in you losing what you just set.

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Basic Settings – SIP

Note: This is for using the Algo endpoint as a paging extension. Here you will:

- Enter the Fuze supplied URL in the SIP Domain (Proxy Server) field
- Enter the SIP peer name in the page Extension and Authentication ID.
- Enter the password in the Authentication Password field. These credentials come from Fuze.
- Enter the Realm which is asterisk

SIP Settings

SIP
 ⓘ This section allows the SIP server information & account credentials to be entered. This information should be obtained from your telephone system administrator or hosted account provider. After saving these settings, see the [Status](#) tab to confirm successful registration.

SIP Domain (Proxy Server)
 ⓘ Default port is 5060. To specify a different port, enter PROXY:PORT, e.g. my_proxy.com:5070, or 192.168.1.10:5080.

Ring/Alert Mode ☐ Monitor "Ring" event on registered SIP extension
☒ None

Page Extension
 Authentication ID
 Authentication Password
 Display Name (Optional)
 Realm
 ⓘ If the realm is changed, then the password needs to be re-entered.

ⓘ The device will auto-answer any inbound call received on this extension and provide a voice paging path (and multicast if configured).

☒ Save

MAKE SURE TO CLICK SAVE – Failure to do so will result in you losing what you just set.

Note: To use the Algo IP endpoint as a night bell make sure Monitor "Ring" event... is selected. If no Multicast is being used, you can enter the Ringer credentials here, otherwise move to the next step.

SIP Settings

SIP
 ⓘ This section allows the SIP server information & account credentials to be entered. This information should be obtained from your telephone system administrator or hosted account provider. After saving these settings, see the [Status](#) tab to confirm successful registration.

SIP Domain (Proxy Server)
 ⓘ Default port is 5060. To specify a different port, enter PROXY:PORT, e.g. my_proxy.com:5070, or 192.168.1.10:5080.

Ring/Alert Mode ☒ Monitor "Ring" event on registered SIP extension
☐ None

Ring Extension
 Authentication ID
 Authentication Password
 Display Name (Optional)
 Realm
 ⓘ If the realm is changed, then the password needs to be re-entered.

ⓘ The device will detect inbound ring events on this extension and play the alerting tone (and multicast if configured) until the inbound call stops ringing. It will not answer the call on this extension.

Page Extension
 Authentication ID
 Authentication Password
 Display Name (Optional)
 Realm
 ⓘ If the realm is changed, then the password needs to be re-entered.

ⓘ The device will auto-answer any inbound call received on this extension and provide a voice paging path (and multicast if configured).

☒ Save

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Additional Features – More Ring Extensions (When using Multicast)

Next step is to add the Night bell/Ringer SIP credentials as the Ring Extension and set the appropriate Multicast Group if it is a Master unit.

Status | Basic Settings | **Additional Features** | Scheduler | Advanced Settings | System | Logout

Input/Output | Emergency Alerts | More Page Extensions | **More Ring Extensions**

More Ring Extensions

① This section allows additional extensions to be registered for the purpose of providing loud ringing alerts for more than one line. Unique ring tones can be selected for each line to allow them to be easily distinguished - for example a 'Sales' line could have a different ring tone from a personal line. Appropriate call routing must be configured on your SIP phone system of course in order to trigger it to send calls to these different numbers.

② The 8301 will detect inbound ring events on these numbers and play the alerting tone until the inbound call stops ringing. It will not answer the calls in this mode.

③ Note: Some SIP phone systems may not support this feature if they limit the number of extensions that can be registered on a single device.

Ring Extension 2	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
Extension	DSMITHPBX-x9261
Authentication ID	DSMITHPBX-x9261
Authentication Password	*****
Display Name (Optional)	
Realm	asterisk
Ring Tone	<Use Default Ring Tone>
Multicast Zone	Zone 3
Ring Extension 3	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
Ring Extension 4	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
Ring Extension 5	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
Ring Extension 6	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
Ring Extension 7	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
Ring Extension 8	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
Ring Extension 9	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
Ring Extension 10	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled

MAKE SURE TO CLICK SAVE – Failure to do so will result in you losing what you just set.

Advanced Settings – Advanced SIP

You will need to

- Set Register Period (Seconds) to 360
- Set 'Standard' on SDP SRTP Offer
- Select Keep-Alive Method to Double CRLF
- Set the Keep-Alive Interval (seconds) to 30 – This prevents premature NAT session timeout.

Status | Basic Settings | Additional Features | Scheduler | **Advanced Settings** | System | Logout

Network | Admin | Users | Time | Processing | Advanced Audio | **Advanced SIP** | Advanced Multicast

Advanced SIP Settings

General

SIP Transportation: ☒ Auto ☐ Disabled

① Select Auto to check DNS NAPTR records, then try UDP/TCP.

② In TLS mode, if the SIP Server requires endpoints to be authenticated, a PEM file containing both a device certificate and a private key needs to be installed on the Algo device. Use the "System" > "File Manager" tab to upload a certificate file named to "apicert.pem" in the "certs" folder.

SIPS Scheme: ☐ Enabled ☒ Disabled

Validate Server Certificate: ☒ Enabled ☐ Disabled

① Enable this option to validate the SIP server against common certificate authorities. To validate against additional certificates, use the "System" > "File Manager" tab to upload a Base64 encoded X.509 certificate file in .pem, .cer, or .crt format to the "certs/trusted" folder.

Force Secure TLS Version: ☒ Enabled ☐ Disabled

① Enable this option to require TLS connections to use TLSv1.2.

SIP Outbound Support (RFC 5626): ☐ Enabled ☒ Disabled

① Enable this option to support best networking practices according to RFC 5626. This option should generally be enabled if the Algo device is being registered with a hosted server or if TLS is being used for SIP Transportation.

Outbound Proxy:

Register Period (seconds): 360

SRTP

SDP SRTP Offer: Standard

SDP SRTP Offer Crypto Suite: AES_CM_128_HMAC_SHA1_32

NAT

Media NAT: ☒ None ☐ ICE ☐ STUN

Server Redundancy

Server Redundancy Feature (Multiple SIP Server Support): ☐ Enabled ☒ Disabled

Interoperability

Keep-Alive Method: ☐ None ☒ Double CRLF

① This setting will enable sending periodic CRLF messages for both UDP and TCP connections.

Keep-Alive Interval (seconds): 30

Use Outgoing TLS port in SIP headers: ☒ Enabled ☐ Disabled

① When optional port number from outgoing SIP TLS connection instead of listening port number in SIP Contact and Via headers. This is useful to connect the device to some local SIP servers, like Asterisk or FreeSWITCH.

Do Not Reuse Authorization Headers: ☒ Enabled ☐ Disabled

① When enabled, all SIP authentication information from the last successful request will not be reused in the next request.

Allow Missing Subscription-State Headers: ☒ Enabled ☐ Disabled

① When enabled, allow SIP NOTIFY messages that do not contain a "Subscription-State" header.

Save

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Basic Settings – Features

Here you will:

- Set the paging to delayed, avoiding feedback in case the person paging is directly below a speaker. This is optional, but highly recommended.
- Set the output to match the impedance of the paging system. You will find settings for some common paging systems in the Paging adapter amplifier integration guide on the Algo website. Link provided below.
- Set the volume for Ring/Alert Volume and Page Volume as required
- Turn off the Page tone if you don't want to hear a tone before the page plays
- Set the Page timeout to 30 seconds or so to avoid long pages. If someone puts paging on hold or park this prevents an extraordinarily long page.

NOTE: The Output setting is different on all models that have an output (i.e. 8180 has a direct 600 Ohm Unbalanced output only).

ALGO

The screenshot shows the ALGO 8301 Paging Adapter & Scheduler web interface. The top navigation bar includes tabs for Basic Settings, Additional Features, Scheduler, Advanced Settings, System, and Logout. The main content area is titled 'Features' and contains several sections:

- Inbound Ring Settings:** Includes Ring/Alert Tone (set to 'usabc2-mod.wav'), Ring/Alert Volume (set to '10'), and Ring Limit (set to 'no limit').
- Inbound Page Settings:** Includes Page Volume (set to '10'), Page Mode (set to 'Delayed'), Page Timeout (set to '30 seconds'), Page Tone (set to 'Off'), G.722 Support (set to 'Enabled'), and Password Protected Page Extensions (set to 'Enabled').
- Audio:** Includes Ambient Noise Compensation (set to 'Enabled'), Automatic Gain Control (AGC) (set to 'Enabled'), and Line Out Analog Output Level (set to '600 Ohm (also 125 Ohm)').

Arrows point to the following settings:

- Page Mode: Delayed
- Page Timeout: 30 seconds
- Page Tone: Off
- Line Out Analog Output Level: 600 Ohm (also 125 Ohm)

A large arrow points to the 'Save' button at the bottom right of the interface.

MAKE SURE TO CLICK SAVE – Failure to do so will result in you losing what you just set.

Advanced Settings – Network

Enter QOS values to ensure voice priority. Once you click save you will be prompted to reboot. QOS Values are in the image below and are consistent across all Algo devices.

The screenshot shows the '8301 Paging Adapter & Scheduler' web interface. The 'Advanced Settings' tab is selected, and the 'Network' sub-tab is active. The 'Network Settings' section is expanded, showing various configuration options. A purple arrow points to the 'SIP' settings, specifically the 'SIP Method' dropdown which is set to 'Static'. Other visible settings include 'Internet Protocol' (IPv4 only), 'Supersede DNS provided by DHCP' (Enabled), '802.1Q Virtual LAN' (VLAN Mode: Auto), '802.1X Port-Based Network Access Control' (802.1X Authentication: Disabled), 'Differentiated Services' (DSCP, RTP, RTCP values), and 'DNS' (DNS Caching Mode: Disabled).

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Advanced settings – Provisioning

This should be disabled unless you intend to maintain a provisioning server for these devices. Note: Fuze does not offer this service

The screenshot shows the '8301 Paging Adapter & Scheduler' web interface. The 'Advanced Settings' tab is selected, and the 'Provisioning' sub-tab is active. The 'Provisioning Settings' section is expanded, showing the 'Mode' dropdown set to 'Provisioning Mode'. The 'Enabled' radio button is selected, and the 'Disabled' radio button is unselected. A 'Save' button is visible at the bottom right.

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Status

Verify your settings. You should see Successful for Page and if applicable Ringer
Here you can see the call status (Recording, paging, ringing)
You can also see the Multicast Mode in real time.

Status Basic Settings Additional Features Scheduler Advanced Settings System Logout

Device Status

Welcome to the Algo 8301 Paging Adapter & Scheduler

Setting up your Paging Adapter & Scheduler:

Step 1: Configure your Paging Adapter & Scheduler
Log in with the default password and use the Basic Settings pages to set up the basic information.

Step 2: Check network settings (Optional)
Use the Network page under the Advanced Settings tab to change network settings. The default setting for the device is to obtain its IP address from a DHCP server. Contact your Network System administrator if you plan to assign a static IP address, Host, and Gateway to the device.

Step 3: Secure your Paging Adapter & Scheduler (Optional)
Use the Admin page under the Advanced Settings tab to change the administrator password.
⚠ Changing the password is extremely important if the device is directly connected to a public network.

Step 4: Register your Paging Adapter & Scheduler (Optional)
Please register your product using the link below:
<http://www.algosolutions.com/register>

Registration ensures your access to the latest upgrades to this product and important service notices.

Status			
Device Name	algo-8301		
SIP Registration	Page Ring #2	Successful	(Extension DSMTHTPBR-v8270) (Extension DSMTHTPBR-v8263)
Call Status	Idle		
Proxy Status	Single proxy mode		
Provisioning Status	Disabled		
NTP	00:22:ee:09:63:20		
IPv4	192.168.1.242/24, Gateway: 192.168.1.1		
Switch Port ID	mac 3c:5e:c3:37:b9:19		
Date / Time	Mon Sep 13 14:08:57 EDT 2021		
Next Scheduled Event	No Events Scheduled		
Multicast Mode	Master Mode: Idle		
Volume	Page Volume: 10 (0dB) Ring Volume: 10 (0dB)		
Relay Input Status	Disabled		

System – Maintenance

Here is where you can download the configuration to verify the passwords are encrypted. You can also upload a previously saved config.

Status Basic Settings Additional Features Scheduler Advanced Settings System Logout

Maintenance Firmware File Manager Tones System Log Credits About

System Maintenance

Backup / Restore Configuration

Download Configuration File

Restore Configuration File No file chosen

Restore Configuration to Defaults

Backup / Restore All User Files

Backup in zip format includes configuration file and all uploaded files.

Download Backup Zip File

Restore from Backup Zip File No file chosen

Restore All Settings and Files to Defaults

⚠ All preloaded and uploaded files, including tone files, will be deleted.

Reboot

Reboot the device

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Additional Information and Troubleshooting Steps

Advanced Settings – Advanced Audio

In some cases, you may want to increase the Jitter buffer to correct network latency. You can also enable DTMF passthrough here to Play DTMF tones during a SIP Call to allow interoperability with DTMF-controlled multi-zone amplifiers

The screenshot shows the 'Advanced Audio Functions' configuration page. It includes sections for 'Functions' and 'Audio Filters'. In the 'Functions' section, 'Dynamic Range Compression (DRC)' is set to 'Enabled' and 'Generate In-Band DTMF Tones' is also set to 'Enabled'. The 'Audio Filters' section shows 'Speaker Filter' set to 'None' and 'Microphone Filter' set to 'None'. Two blue arrows point to the 'DRC' and 'Generate In-Band DTMF Tones' settings.

MAKE SURE TO CLICK SAVE – Failure to do so will result in you losing what you just set.

For connections to specific common paging systems

<https://www.algosolutions.com/wp-content/uploads/2019/11/Paging-Adapter-Amplifier-Integration-Guide.pdf>

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ALGO

Documents / Resources

	<p>ALGO Fuze Recommendations [pdf] Instructions ALGO, Fuze, Recommendations, Algo Configuration, Guidelines, for, Fuze</p>
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