



## IP Audio | User Manual

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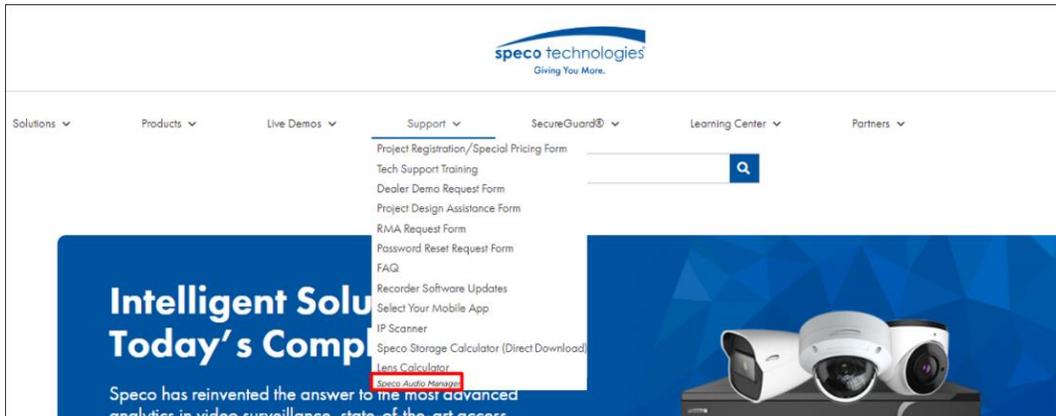
## Overview

The Speco SPIP series are IP based paging speakers designed for indoor and outdoor applications. Our Speco IP speakers are compatible with both the SIP & the ONVIF protocol. This will allow for the use of VoIP in applications. Each IP speaker has up to 10 RTP multicast addresses. Alarm in and HTTP URL can combine with our alarm systems. Pre-recorded messages and scheduled broadcasting are also another way that the Speco IP speakers meet the paging demands.

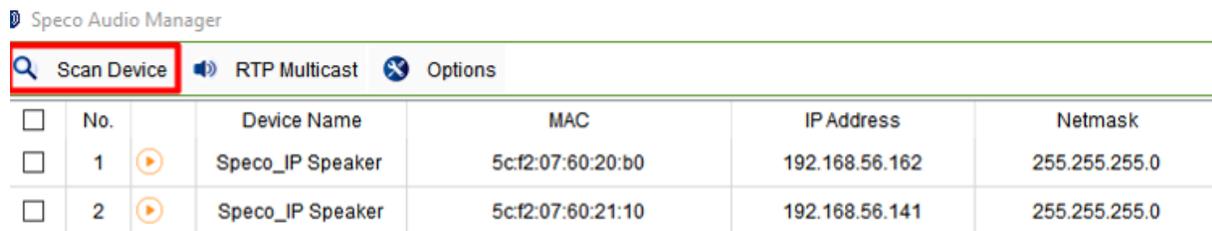


## Web Configuration

- 1) Download Speco Audio Manager from Specotech.com.
- 2) This can be found under the support tab at Specotech.com.



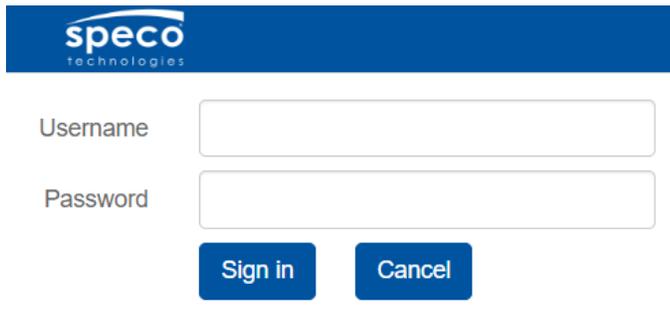
- 3) Extract the zip-file and run the exe for Speco Audio Manager on your computer.
- 4) Put the Speco Audio Manager shortcut on to your desktop/laptop.
- 5) Lastly run Speco Audio Manager and click on scan device. This will find every Speco IP speaker on the network.



## Logging into the IP Speaker

- 1) Through the Speco Audio Manager if you double click on one of the speakers IP addresses it will direct you to the web interface of that IP speaker.
- 2) Every Speco IP speaker will have the same default username & password.
- 3) Click on “Sign in” to log into the IP speaker.

**Username: admin | Password: 1234**



The screenshot shows the login page for the Speco IP Speaker. At the top, there is a blue header with the 'speco technologies' logo. Below the header, there are two text input fields: 'Username' and 'Password'. Underneath the 'Password' field, there are two blue buttons: 'Sign in' and 'Cancel'.

## Navigating the Web Interface

Once logged into the IP speaker there will be eleven menus to choose from. The following menus are:

- 1) **Status**
- 2) **Basic**
- 3) **ONVIF**
- 4) **SIP Account**
- 5) **Audio**
- 6) **Media File**
- 7) **Alarm**
- 8) **Schedule**
- 9) **RTP Multicast**
- 10) **Firewall**
- 11) **System**

## Status Menu

On this menu the information consists of the date/time, the devices ID, the firmware version, how much space is free on the device, the SIP account status, and the network information will also be listed at the bottom of the page. It's important to know that you can only view the information here.

## Basic Menu

The Basic Menu will list the date/time, and the network settings. On this menu you will be able to make any necessary changes to the settings. Every IP speaker will be set to DHCP by default. If you wanted to change the IP speaker to static, you can do this by clicking on the static IP address button and clicking save at the bottom.

**\*If the IP speaker doesn't have a way to receive DHCP, the default IP address will be 192.168.5.200**

## ONVIF Menu

The ONVIF menu consists of an enable/disable option for ONVIF. You can also set the ONVIF username and password.

**\*ONVIF will be enabled by default.**

The screenshot shows the ONVIF configuration page. On the left is a navigation menu with options: Status, Basic, ONVIF (selected), SIP Account, Audio, Media File, Alarm, Schedule, RTP Multicast, Firewall, and System. The main content area is titled 'ONVIF' and contains the following fields: 'ONVIF Enable' (checked), 'User Name' (admin), and 'Password' (1234). A 'Save' button is located at the bottom right of the configuration area.

## SIP Account Menu

The SIP account menu allows you to create up to two separate SIP accounts. SIP is a protocol that initiates a direct call to that specific VoIP device, and this will include IP speakers. This will give you the option to have two-way audio with IP speakers that have a built-in microphone.

The screenshot shows the SIP Account configuration page. On the left is a navigation menu with options: Status, Basic, ONVIF, SIP Account (selected), Audio, Media File, Alarm, Schedule, RTP Multicast, Firewall, and System. The main content area is titled 'SIP Set' and contains the following fields: Account (Account 1), User Name (Admin), Auth ID (Admin), Password (\*\*\*\*), Display Name (Account 1), Server Host (192.168.56.151), Server Port (1500), Outbound Proxy (Disable), Expire Time (180 Seconds), Ringing Tone (bell1), Auto Answer (Answer Immediately), Incoming Notify, and Answer Notify. A 'Save' button is located at the bottom right of the 'SIP Set' section. Below this is the 'SIP Advanced' section with a 'SIP Protocol' dropdown set to 'UDP' and another 'Save' button.

Expire Time	Set the expire time of registered account information
Ringing Tone	5 system ringtones and 10 users upload media files
Auto Answer	answer immediately and answer delay when a calling incomes
Incoming Notify	Put an input URL, when a incoming call ringing, URL take effect
Answer Notify	Put an input URL, when a incoming call answered, URL take effect

## Audio Menu

The Audio menu will have the option to select between four different audio codecs: **OPUS, G.722, G.711U, and G.711**. In this menu you can also set the volume control of the IP speaker. If the IP speaker has a microphone, you will see the option to enable the microphone and set the volume of the IP speaker.

The screenshot shows the Speco IP Audio configuration interface. On the left is a navigation menu with options: Status, Basic, ONVIF, SIP Account, **Audio**, Media File, Alarm, Schedule, RTP Multicast, Firewall, and System. The main content area is divided into three sections:

- Codec:** A table for Codec Setting with four rows: OPUS (checked), G.722 (checked), G.711U (checked), and G.711A (checked).
- Speaker:** Settings for Volume (0-100) set to 37, Amp Auto OFF set to YES, Jitter Buffer (60 - 2000) set to 360 ms, HPF (unchecked), and NR (unchecked).
- MIC:** Settings for MIC Enable (checked), Gain set to None, Volume (0-100) set to 44, AEC (checked), AEC Time (1-200) set to 20 ms, AGC (checked), AGC Mode set to Auto, AGC Target (0-31) set to 3, AGC Gain (0-90) set to 30, HPF (unchecked), NR (checked), and NR Level set to 3.

A **Save** button is located at the bottom right of the configuration area.

**Jitter buffer:** Helps make the audio more stable.

**Amp Auto OFF:** Will be set to “Yes” by default. This will eliminate any noise when not broadcasting.

## Media File Menu

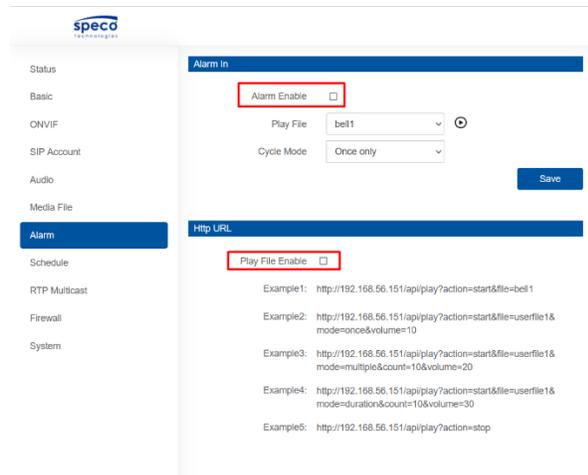
The Media File menu consists of 5 preset bell options to choose from. You can also set up to 10 of your own audio files and play the files directly through the IP speaker. The Maximum media file size is listed as a total of 3836 kilobytes. **\*Through Speco Audio Manager there is no file size limit**

The screenshot shows the Media File configuration interface. On the left is a navigation menu with options: Status, Basic, ONVIF, SIP Account, Audio, **Media File**, Alarm, Schedule, RTP Multicast, Firewall, and System. The main content area is divided into two sections:

- System File:** A table with 5 rows, each representing a preset bell file (bell1 to bell5). Each row has a # column, a Name column, and a play button icon.
- User File (3836KB free):** A table with 10 rows, each representing a user-defined audio file (userfile1 to userfile10). Each row has a # column, a Name column, a File column with a 'Browse...' button, and a play button icon.

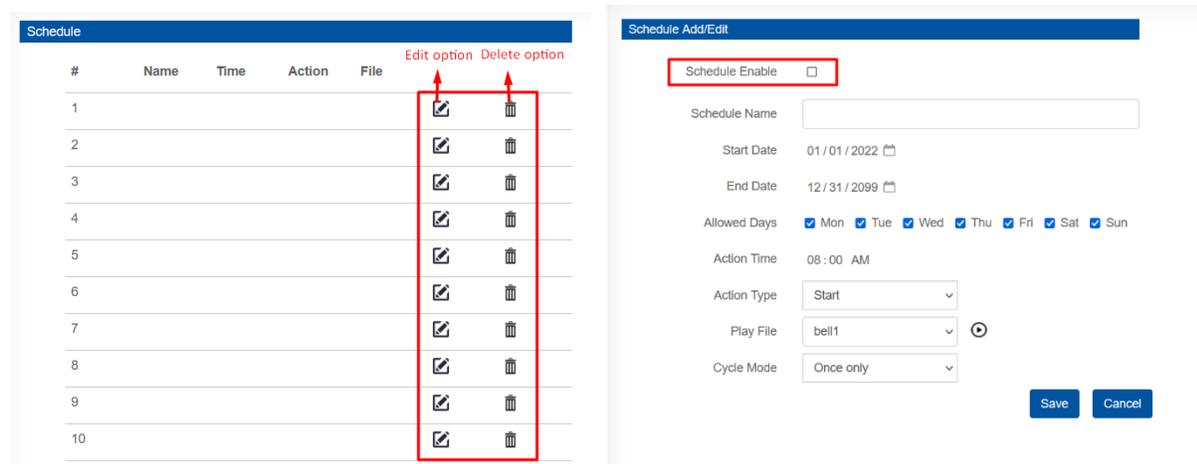
## Alarm Menu

The Alarm menu allows for the user to set up one alarm input/output to the IP speaker. By default, you will have to enable the alarm input. The alarm output will have to be selected through this menu first, then it will play either one of the preexisting media files or it will play a custom audio clip. Once the alarm is enabled, you will also have the option to enable “Play File Enable”, which means you can take the example URL commands, and they will play the audio clip by just sending it through a web address.



## Schedule Menu

This menu will allow the user to create a custom schedule. The schedule menu is designed to be used for schools, factories, and office projects. The schedule allows for the user to make a regular bell, announcement or alarm happen at a specific time/date. In each IP speaker there are 10 different schedules that can be created. To create a schedule, click on the edit option, and then a new schedule window will come up. Enable the schedule and customize the schedule you wish to create by: giving it a name, start time/end time, allowed days in the schedule, action time, action type, the file it will be playing, and lastly the cycle mode. After creating the schedule click save at the bottom.



## RTP Multicast Menu

The RTP multicast menu will be used to set up RTP addresses to zone out the IP speakers. RTP stands for **Real-Time Transport Protocol**. This allows the user to stream audio over the internet, thereby enabling VoIP (Voice over Internet Protocol). On this menu you will see a list from 1 through 10. This means you can create up to 10 RTP addresses, and depending on what slot you put the RTP address in will determine what priority it is set too. Number 1 being the highest priority on the list & number 10 being the lowest priority on the list. This will allow you to do priority paging. After creating an RTP list, click save at the bottom.

**\*RTP address Range: 224.0.0.0-239.255.255.0**

**\*Port Range: 1500-6300**

RTP Multicast

Priority	IP Address (e.g. 239.255.0.1:5004) → Example listed
1	<input type="text"/>
2	<input type="text"/>
3	<input type="text"/>
4	<input type="text"/>
5	<input type="text"/>
6	<input type="text"/>
7	<input type="text"/>
8	<input type="text"/>
9	<input type="text"/>
10	<input type="text"/>

Save

## Firewall Menu

This menu is used primarily to keep your network safe. You can edit the firewall settings by clicking on the edit option. From the edit option, you can add any specific rules that you wish to add to your IP speaker's firewall. To do this you have to first enable the firewall rules to do this. You can also add firewall defensive rules to the IP speaker. Again, this will have to be enabled first to use this feature. You can create up to 5 rules for both categories in your firewall settings.

Firewall Rules				
#	Name	Type	IP/MAC	Action
1				
2				
3				
4				
5				

Automatic Defense Rules				
#	Name	Protocol	Port Range	Rate
1		-		
2		-		
3		-		
4		-		
5		-		

### Firewall Rules

### Firewall Defensive Rules

Firewall Add/Edit

Enable

Name

Rule Type

Protocol

IP Address

Net Mask

Action

Automatic Defense Add/Edit

Enable

Name

Protocol

Port Range  -

Rate (1-10000)  /s

## System Menu

The System menu will allow you to Reboot, Reset, and upgrade the firmware of the IP speaker. On this page you will also be able to change the IP speaker's username and password from the default to a more unique username and password if needed.

The screenshot displays the System Menu interface. It is divided into two main sections: Upgrade and Security. The Upgrade section contains three buttons: Reboot, Reset, and Upgrade. The Reboot button is labeled 'Reboot Device Now', the Reset button is labeled 'Reset to Factory Setting', and the Upgrade button is labeled 'Browse...' with the text 'No file selected.' below it. The Security section contains five input fields: User Name, Password, New User Name, New Password, and Confirm Password. A Save button is located at the bottom right of the Security section. Red boxes highlight the Reboot, Reset, and Upgrade buttons in the Upgrade section, and the User Name, Password, New User Name, New Password, and Confirm Password input fields in the Security section.

Upgrade	
Reboot	Reboot Device Now
Reset	Reset to Factory Setting
Upgrade	Browse... No file selected.

Security	
User Name	<input type="text"/>
Password	<input type="password"/>
New User Name	<input type="text"/>
New Password	<input type="password"/>
Confirm Password	<input type="password"/>

Save



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