



# Milesight IP Speaker User Manual

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# 1. Overview

IP Speaker series is IP based paging speaker. They have different shape, materials and design which can be easy installed in indoor and outdoor environment. The IP speakers are well compatible with SIP & ONVIF protocol that can be used in VoIP and security field. Up to 10 RTP multicast address enable to arrange different paging solutions. Alarm in and HTTP URL are able to combine with alarm system. Pre-recorded message and schedule broadcasting to meet various paging demands. The 48K OPUS Audio Codec enables excellent sound quality to make announcement, play background music, security alarm in school, factory and hospital, etc.

## 2. Web Configuration

Web configuration includes complete function setting. When the device and your computer are connected to a same network, please open a browser and type in <http://192.168.5.200>, then log in with defaulted username and password as below.

Username: admin

Password: tm1234

The screenshot shows a web browser window displaying a login page for an IP Speaker. The page has a light gray background. At the top left, the word 'Login' is displayed, and at the top right, 'IP Speaker' is shown. The main content area contains two input fields with a light yellow background. The first field is labeled 'Username' and contains the text 'admin'. The second field is labeled 'Password' and contains seven dots. Below these fields are two green buttons: 'Sign in' and 'Cancel'. At the bottom left of the form area, there is a link that says 'Forgot Password?'.

## 2.1 Status

We can check out firmware version, free space and two SIP accounts status of IP speaker, also can locate the current network information here, like MAC, IP address and gateway etc.

### IP SPEAKER

- Status
- Basic
- ONVIF
- SIP Account
- Audio
- Media File
- Alarm
- Schedule
- RTP Multicast
- Firewall
- System

Status	
Device Time	2024-04-30 09:06:13
Device ID	50359289908F781C
Firmware Ver	CS20-V3.3.19N
Free Space	3836KB
SIP1 Status	NONE
SIP2 Status	NONE

  

Network	
MAC Address	A2:C0:A4:20:29:53
IP Address	192.168.5.200
Subnet Mask	255.255.255.0
Gateway	192.168.5.1
Primary DNS	192.168.5.1
Secondary DNS	218.85.152.99

Refresh

## 2.2 Basic

### 2.2.1 Date/ Time

There are two update modes for time: NTP/ local time, choose one and set the time zones, NTP sever and interval can choose default setting, then save the configuration.

### Date/Time

Device Time 2024-01-04 14:07:20

Update Mode

TimeZone

NTP Server

NTP Interval  Minutes

### Date/Time

Device Time 2024-01-04 14:07:20

Update Mode

LocalTime 2024-01-04 14:11:24

## 2.2.2 Network

When choose DHCP and save it, IP address will be created automatically by a DHCP server, then you need to login again with the new IP address on browser: 192.168.5.XXX.

Status IP address: it is a default IP and will not be changed as follows.

### Network

DHCP

Static IP Address

IP Address	192.168.5.200
Subnet Mask	255.255.255.0
Gateway	192.168.5.1
Primary DNS	192.168.5.1
Secondary DNS	218.85.152.99

## 2.2.3 Network advanced

Pick one of network as your requested.

### Network Advanced

Http/Https  \*Take effect after restart!

## 2.3 ONVIF

Select Enable ONVIF, then the device is searched by ONVIF VMS.

Default user name: admin, password:tm1234.

Then open the VMS/NVR to search and connect with IP speaker.

## 2.4 SIP Account

Each speaker has two SIP accounts, put SIP extension and SIP sever information into the blanks and save the configuration, then you can check if it registers successfully or not on status.

Parameter	Description
Outbound Proxy	Choose disable or enable the proxy as needed.
Expire Time	Set the expire time of registered account information.
Ringtone	5 system ringtones and 10 users upload media files.
Auto Answer	Answer immediately and answer delay when a calling income.
Incoming Notify	Put an URL from the third party, when a incoming call ringing, URL take effect.
Answer Notify	Put an URL the third party, when a incoming call answered, URL takes effect.
SIP Advanced	UDP/TCP/TLS, three SIP protocol optional.

### SIP Set

Account	Account 1	REG SUCCESS
User Name	6001	
Auth ID	6001	
Password	****	
Display Name	6001	
Server Host	192.168.5.201	
Server Port	5060	
Outbound Proxy	Disable	
Expire Time	180	Seconds
Ringing Tone	bell1	🔊
Auto Answer	Answer Immediatly	
Incoming Notify	<input checked="" type="checkbox"/>	
Http URL	http://192.168.5.201:9391/action?zone=3000&operation=st	
Answer Notify	<input checked="" type="checkbox"/>	
Http URL	http://192.168.5.201:9391/action?zone=3000&operation=st	

### SIP Advanced

SIP Protocol	UDP	<input type="button" value="Save"/>
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- UDP
- TCP
- TLS

## 2.5 Audio

On the audio part, we can choose four audio codecs to be compatible with major audio sources. and adjust the volume and sound quality of speaker and MIC.

Jitter buffer: to make the audio more stable.

Amp auto off: It's set defaulted as ON, then there will be less noise when the speaker under broadcasting.

HPF: High Pass Filter

NR: Noise reduction.

AEC: Automatic echo cancellation.

AGC: Automatic Gain Control.

### Codec

Codec Setting	<input checked="" type="checkbox"/>	OPUS
	<input checked="" type="checkbox"/>	G.722
	<input checked="" type="checkbox"/>	G.711U
	<input checked="" type="checkbox"/>	G.711A

### Speaker

Volume (0-100)	<input type="text" value="26"/>
Amp Auto OFF	<input type="text" value="YES"/>
Jitter Buffer (60 - 2000)	<input type="text" value="360"/> ms
HPF	<input type="checkbox"/>
NR	<input type="checkbox"/>

### MIC

Gain	<input type="text" value="None"/>
Volume (0-100)	<input type="text" value="80"/>
AEC	<input checked="" type="checkbox"/>
AGC	<input checked="" type="checkbox"/>
AGC Gain Level	<input type="text" value="High"/>
HPF	<input type="checkbox"/>
NR	<input checked="" type="checkbox"/>
NR Level	<input type="text" value="1"/>

## 2.6 Media File

There are five system ringtones, and you can upload 10 user files as customers' demands: music, announcement, bells, etc. Support MP3 and WAV, the limitation of user files is 3732KB.

 this button is for uploading files for PC.

 this button is to preview the files you upload.

 click this button, the speaker will play the files.

 it's a delete button.

System File

#	Name	
1	bell1	 
2	bell2	 
3	bell3	 
4	bell4	 
5	bell5	 

User File (3732KB free)

#	Name	File	
1	userfile1	userfile0.mp3	<input type="button" value="选择文件"/> 未选    
2	userfile2	userfile1.wav	<input type="button" value="选择文件"/> 未选    
3	userfile3		<input type="button" value="选择文件"/> 未选 
4	userfile4		<input type="button" value="选择文件"/> 未选 
5	userfile5		<input type="button" value="选择文件"/> 未选 
6	userfile6		<input type="button" value="选择文件"/> 未选 
7	userfile7		<input type="button" value="选择文件"/> 未选 
8	userfile8		<input type="button" value="选择文件"/> 未选 
9	userfile9		<input type="button" value="选择文件"/> 未选 
10	userfile10		<input type="button" value="选择文件"/> 未选 

## 2.7 Alarm

### 2.7.1 Alarm In

File Enable: choose one play file and the cycle mode, save configuration. Trigger the alarm which connect to the alarm in port on the IP speaker, then the speaker will play the file.

SIP Enable: choose one of the sip accounts, and put the SIP extension you want to call, e.g. 6006. Trigger the alarm which connect to the alarm in port on the IP speaker, then 6006 will received the alarm call.

Alarm In

File Enable

Play File

Cycle Mode

Sip Enable

Sip Account

Sip Number

## 2.7.2 Http URL

User can control the alarm by HTTP URL. (we can also rewrite a new URL as the examples)

- (1) Enable the selection;
- (2) Open any browser you have in computer;
- (3) Put the URL as the following examples, enter, then this URL takes effort.

Http URL

Play File Enable

Example1: `http://192.168.5.199/api/play?action=start&file=bell1`

Example2: `http://192.168.5.199/api/play?action=start&file=userfile1&mode=once&volume=10`

Example3: `http://192.168.5.199/api/play?action=start&file=userfile1&mode=multiple&count=10&volume=20`

Example4: `http://192.168.5.199/api/play?action=start&file=userfile1&mode=duration&count=10&volume=30`

Example5: `http://192.168.5.199/api/play?action=stop`

## 2.8 Schedule

This function is widely use in school, factory and office projects. Making a regular bell, announcement and alarm.

Enable the schedule, you can name the schedule, choose start and end time, cycle days, etc. Don't forget to save the configuration finally to make it work.

Schedule Add/Edit

Schedule Enable

Schedule Name

Start Date

End Date

Allowed Days  Mon  Tue  Wed  Thu  Fri  Sat  Sun

Action Time

Action Type

Play File

Cycle Mode

Times (1-1000)

Save Cancel

## 2.9 RTP Multicast

There are 10 RTP addresses can be received for each device, please note that: port numbers do not use continuous numbers when setting the same RTP addresses.

Use discontinuous numbers. eg:

239.255.1.2:8000, 239.255.0.1:8001, 239.255.0.1:8002 (×)

239.255.0.1:8000, 239.255.0.1:8002, 239.255.0.1:8004 (√)

- Multicast address range: 224.0.0.0-239.255.255.
- Ports range: 1024-65536
- Use IP Tool, Audio manager and PA System software to play RTP multicast.

Status

Basic

ONVIF

SIP Account

Audio

Media File

Alarm

Schedule

**RTP Multicast**

Firewall

System

RTP Multicast	
Priority	IP Address (e.g. 239.255.0.1:5004)
1	<input type="text" value="e.g. 239.255.0.1:8000"/>
2	<input type="text" value="e.g. 239.255.0.1:8002"/>
3	<input type="text" value="e.g. 239.255.0.1:8004"/>
4	<input type="text" value="e.g. 239.255.0.1:8006"/>
5	<input type="text" value="e.g. 239.255.0.1:8008"/>
6	<input type="text" value="e.g. 239.255.0.1:8010"/>
7	<input type="text" value="e.g. 239.255.0.1:8012"/>
8	<input type="text" value="e.g. 239.255.0.1:8014"/>
9	<input type="text" value="e.g. 239.255.0.1:8016"/>
10	<input type="text" value="e.g. 239.255.0.1:8018"/>

## 2.10 Firewall

### 2.10.1 Firewalls Rules

Firewall Add/Edit

Enable

Name

Rule Type

Protocol

Port Range  -

IP Address

Net Mask

Action

Firewall Add/Edit

Enable

Name

Rule Type

MAC Address

Action

Parameter	Description
Name	A name for this rule E.g. rule1
Rule Type	IP/MAC optional.
MAC Address	The format of MAC Address is XX: XX: XX: XX: XX: XX, X means 0~9 or A~F in hex, the A~F are not case sensitive.
Protocol	All/TCP/UDP three options.
Port Range	Initial port should be on the left and end port should be on the

	right. The port must be equal to or greater than start port. E.g. 2000 - 3000
IP Address Net Mask	The IP address and netmask are used in combination E.g. 192.168.5.20 & 255.255.255.255 for IP 192.168.5.20 E.g. 192.168.5.0 & 255.255.255.0 for IP from 192.168.5.0 to 192.168.5.255
Action	Accept: Accept the access from remote hosts Drop: Drop the access from remote hosts

## 2.10.2 Automatic Defense Rules

Automatic Defense Add/Edit

Enable

Name

Protocol

Port Range  -

Rate (1-10000)  /s

Parameter	Description
Rule Type	IP/MAC optional.
Protocol	TCP/UDP two options.
Port Range	Initial port should be on the left and end port should be on the right. The port must be equal to or greater than start port.
Rate (1-10000)	The maximum packets can be handled per unit time. E.g. (IP:192.168.6.88/32 Protocol: UDP Rate:10/sec) means maximum 10 UDP packets from 192.168.6.88 can be handled per minute, and drop the redundant packets.

## 2.11 System

### 2.11.1 Upgrade

When reboot and reset the system, system will turn to original setting, and you need to re-login the web page.

How to upgrade IP Speaker firmware version in web interface?

Select the latest version firmware CS20-xxx-bin.

(2) Click upgrade to refresh, it would require about 10-20s.

(3) Re-login the web interface, latest version has upgraded.

### 2.11.2 Security

Set a new user name and password as you need, save the configuration and restart login.

The screenshot displays the web interface for the IP Speaker. On the left is a navigation menu with the following items: Status, Basic, ONVIF, SIP Account, Audio, Media File, Alarm, Schedule, RTP Multicast, Firewall, and System (highlighted in green). The main content area is divided into two sections:

- Upgrade:** Contains three buttons: 'Reboot' (with the text 'Reboot Device Now'), 'Reset' (with the text 'Reset to Factory Setting'), and 'Upgrade' (with a file selection button labeled '选择文件' and the text '未选择任何文件').
- Security:** Contains five input fields: 'User Name' (pre-filled with 'admin'), 'Password' (masked with '\*\*\*\*\*'), 'New User Name', 'New Password', and 'Confirm Password'. A green 'Save' button is located at the bottom right of this section.

### 3. IPTool Configuration

Apart from Web configuration, IPTool is the other option that configure quickly basic information such as SIP account setting, volume setting, RTP Multicast setting, upgrade. Please follow below steps.

- (1) Download IPTool (contact sales or support to get one).
- (2) Enter IPTool, scan local network, the device will appear and then start setting.

The screenshot shows the IPToolCS20 web interface. At the top, there are tabs for Network, Search, RTP Multicast, and Settings. Below the tabs is a table with the following columns: No., UID, Name, MAC, IP address, Netmask, Gateway, SIP Settings, RTP Settings, Version, Audio, and System. The table contains one row with the following data:

No.	UID	Name	MAC	IP address	Netmask	Gateway	SIP Settings	RTP Settings	Version	Audio	System
1	5023428330897A1C	CS20	a2:c0:a4:26:a0:ce	192.168.5.192	255.255.255.0	192.168.5.1		239.255.0.0:5008	CS20-V2.8.1N	12,7	admin

Below the table, there is a section for configuration. It shows the current device as CS20-5023428330897A1C. There are two SIP account configuration sections, SIP Account 1 and SIP Account 2. Each section has input fields for User Name, Password, Display Name, Server Host, and Server Port. There are 'Set' and 'Set All' buttons at the bottom of the configuration section.