

IP Speaker User Manual



GANZ CBC Co., Ltd.

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1. Overview

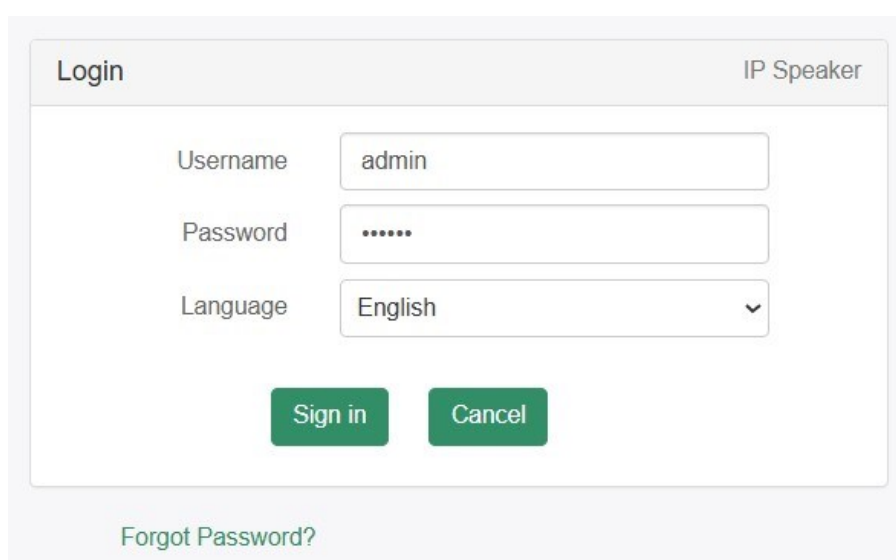
GANZ IP speaker have different shape and design to fulfill the installation in indoor and outdoor environment, they are well compatible with SIP & ONVIF protocol that are able to be used in VoIP and security field. Up to 10 RTP multicast address enable to arrange different paging solutions, alarm in 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, after the device and PC are connected to a same network, type the device's IP address in a web browser, the default IP address is 192.168.5.200, then log in with defaulted username and password as below, and there are different language options.

Username: admin

Password: tm1234



The screenshot shows a web browser interface for the IP Speaker. At the top, there is a header bar with 'Login' on the left and 'IP Speaker' on the right. Below the header is a login form with three input fields: 'Username' with the value 'admin', 'Password' with masked characters '.....', and 'Language' with a dropdown menu showing 'English'. Below these fields are two green buttons: 'Sign in' and 'Cancel'. At the bottom of the form, there is a link that says 'Forgot Password?'.

2.1 Status

Show out device time, firmware version, free space and SIP accounts status, and also MAC, IP address and gateway etc.

Status	
Device Time	2024-10-17 02:38:35
Device ID	50359289708D641C
Firmware Ver	CS20-V3.3.36
Free Space	3576KB
SIP1 Status	NONE
SIP2 Status	NONE

Network	
MAC Address	A2:C0:A4:20:29:4C
IP Address	192.168.2.101
Subnet Mask	255.255.255.0
Gateway	192.168.2.1
Primary DNS	192.168.5.1
Secondary DNS	192.168.2.1

Refresh

2.2 Basic

2.2.1 Date/ Time

Two update modes for time: NTP and local time.

- NTP: set time zone, NTP sever and interval, then save the configuration.

Date/Time	
Device Time	2024-10-17 02:42:47
Update Mode	NTP
TimeZone	GMT+08:00
NTP Server	pool.ntp.org
NTP Interval	10 Minutes

Save

- Local time, follow the PC time.

Date/Time

Device Time	2024-10-17 02:42:47
Update Mode	LocalTime ▼
LocalTime	2024-10-17 11:31:07

Save

2.2.2 Network

- DHCP, IP address will be created automatically by DHCP server
- Static IP Address, it could set up as required of IP Address, Subnet Mask, Gateway, Primary DNS, and Secondary DNS.

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

Save

2.2.3 Network Advanced

Set Http or Https or both, and the ports of Http, Https and RTSP. And Vlan configure, able for VLAN ID, VLAN IP, VLAN Netmask, and VLAN Gateway setting.

Network Advanced (*Take effect after device is restarted!)

Http/Https	Http&Https	
Http Port	80	(80, 1025~65534)
Https Port	443	(443, 1025~65534)
RTSP Port	554	(554, 1025~65534)
VLAN Enable	☒	
VLAN ID (1~4094)	1	
VLAN IP	10.10.10.10	
VLAN Netmask	255.255.255.0	
VLAN Gateway	10.10.10.1	

Save

2.3 ONVIF

- Select Enable ONVIF, then the device is able to be searched by ONVIF VMS, the password and user name is same like IP speaker log in user name and password.
- WAN NAT, do ports forward on router to ensure that data can be transmitted correctly between the server and the public Internet, then come to speaker web and turn on the option **WAN NAT**, insert the IP address, HTTP Port and RTSP Port.

ONVIF

ONVIF Enable	☒
WAN NAT	☒
WAN IP Address	
WAN HTTP Port	
WAN RTSP Port	

Save

2.4 SIP Account

2.4.1 SIP Set

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

User Name	User account, provided by SIP server
Auth ID	SIP service subscriber's ID used for authentication.
Password	Account password provided by SIP server
Display Name	SIP service subscriber's name
Server Host	SIP server address
Server Port	SIP port, default to be 5060
Outbound Proxy	It is used to process signals and help data streams to go through firewall or NAT if there have.
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 income
Incoming Notify	Put an input URL, when a incoming call ringing, URL take effect, include to play HTTP audio stream
Answer Notify	Put an input URL, when a incoming call answered, URL take effect, include to play HTTP audio stream

SIP Set

Account	Account 1	NONE
User Name		
Auth ID		
Password		
Display Name		
Server Host		
Server Port		
Outbound Proxy	Disable	
Expire Time	180	Seconds
Ringing Tone	bell1	▶
Auto Answer	Answer Immediately	
Incoming Notify	☒	
Http URL		
Answer Notify	☒	
Http URL		
Save		

2.4.2 SIP Advanced

Now IP speakers support to work under transport protocols of UDP, TCP and TLS, with the encryption of SRTP option.

Then if want to support SIP P2P (Peer-to-peer SIP), then click to make it work. If it takes place on a local network, all that's needed are the SIP addresses of the user agents. A typical SIP address in this case would be SIP:<local IP>, like sip:192.168.5.200.

SIP Advanced

SIP Protocol UDP

Encryption SRTP

SIP P2P Enable ☒

Save

2.5 Audio

2.5.1 Codec

Under Audio, select at least one audio codec with the desired audio quality, there are four options.

Codec

Codec Setting

☒ OPUS☒ G.722☒ G.711U☒ G.711A

2.5.2 Speaker

- ☐ Volume: Speaker out volume
- ☐ Amp Auto OFF: It's set defaulted YES, to turn of the build in amplifier if do not play audio.
- ☐ Jitter buffer: Make the audio playing more stable.
- ☐ HPF: high pass filter, it is to filter the frequency under 150HZ.
- ☐ NR: noise reduction, it is able to reduce the noise from audio input to improve sound quality when enable, it is calculated and simulated from the Chip.

Speaker

Volume (0-100)	60	
Amp Auto OFF	YES	▼
Jitter Buffer (60 - 2000)	360	ms
HPF	☐	
NR	☐	

2.5.3 MIC

- Gain: There are four different gain level from none to high.
- Volume: Build in MIC out volume
- AEC: Acoustic Echo Cancellation
- AGC: Automatic Gain Control
- HPF: high pass filter, it is to filter the frequency under 150HZ.
- NR: noise reduction, there are 3 level to reduce Premeter noise from speaker Mic side for listen. It is calculated and simulated from the Chip.

MIC

Gain	None	▼
Volume (0-100)	100	
AEC	☒	
AGC	☒	
AGC Gain Level	High	▼
HPF	☐	
NR	☒	
NR Level	1	▼

Save

2.6 Media File

Click  to listen in PC, and click  to listen in speaker side.

□ System File

Five system audio clips

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

□ User file

10 audio clips upload bases on customers' demands, the free space is about 3800kb.

User File (3796KB free)			
#	Name	File	
1	userfile1	选择文件 未送	
2	userfile2	选择文件 未送	
3	userfile3	选择文件 未送	
4	userfile4	选择文件 未送	
5	userfile5	选择文件 未送	
6	userfile6	选择文件 未送	
7	userfile7	选择文件 未送	
8	userfile8	选择文件 未送	
9	userfile9	选择文件 未送	
10	userfile10	选择文件 未送	

2.7 Alarm

Two kind of alarm trigger, one is connected to speaker alarm in IO connector and the other one is HTTP API.

2.7.1 Alarm In (IO connection)

- File Enable: play pre recorded audio
- Sip Enable: enable SIP extension and SIP P2P call
- Http Stream Enable: play HTTP audio stream, like http://listen.livestreamingservice.com/181-greatoldies_128k.mp3

Alarm In

File Enable

☒

Play File

bell1

▼

▶

Cycle Mode

Once only

▼

Sip Enable

☒

Sip Account

Account 1

▼

Sip Number

6688

Http Stream Enable

☒

Http Stream URL

http://listen.livestreamingservice.com/181-greatoldies_128k

Save

2.7.2 HTTP URL

- (1) Enable Play URL Enable
- (2) Speaker will be able to receive supported HTTP URL

Http URL

Play File Enable ☒Example1: `http://192.168.2.100/api/play?action=start&file=bell1`Example2: `http://192.168.2.100/api/play?
action=start&file=userfile1&mode=once&volume=10`Example3: `http://192.168.2.100/api/play?
action=start&file=userfile1&mode=multiple&count=10&volume=20`Example4: `http://192.168.2.100/api/play?
action=start&file=userfile1&mode=duration&count=10&volume=30`Example5: `http://192.168.2.100/api/play?action=stop`Example6: `http://192.168.2.100/api/play?
action=startstream&stream=http://xxxxxx`Example7: `http://192.168.2.100/api/play?action=stopstream`

2.8 Schedule

It is widely use in school, factory and office, make a regular bell, announcement and alarm, support 10 schedule set up.

- ☐ Enable the Schedule Enable
- ☐ Schedule Name
- ☐ Loop Type: Once, Daily and weekly
- ☐ Action Time
- ☐ Action Type: Start or Stop
- ☐ Play File: Pre recorded audio clips
- ☐ Cycle Mode
- ☐ Http Stream URL: play HTTP audio stream, like
http://listen.livestreamingservice.com/181-greatoldies_128k.mp3

Schedule Add/Edit

Schedule Enable

☒

Schedule Name

User

Loop Type

Daily

▼

Action Time

08 : 00 AM

Action Type

Start

▼

Play File

bell1

▼

▶

Cycle Mode

Once only

▼

Http Stream URL

http://listen.livestreamingservice.com/181-greatoldies_128k

Save

Cancel

2.9 RTP Multicast

Support 10 RTP addresses, 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, PA Lite and PA Pro to do RTP multicast.

RTP Multicast	
Priority	IP Address (e.g. 239.255.0.1:5004)
1	239.255.0.0:8000
2	
3	
4	
5	
6	
7	
8	
9	
10	

Save

2.10 Firewall

2.10.1 Firewall Rules

- ☐ Name
- ☐ Rule Type: IP address or MAC
- ☐ Protocol: ALL or TCP, UDP ☐ IP Address or Mac: like 192.168.5.200 ☐ Net Mask:
- ☐ Action: Accept or not.

Firewall Add/Edit

Enable

☒

Name

Rule Type

IP

▼

Protocol

ALL

▼

IP Address

Net Mask

Action

ACCEPT

▼

Save

Cancel

2.10.2 Automatic Defense

Set to protect from the TCP and UDP port or ICMP.

Automatic Defense Add/Edit

Enable

☒

Name

Protocol

TCP

▼

Port Range

-

Rate (1-10000)

/s

Save

Cancel

2.11 Auto Provision

Three ways to set up IP speaker auto provision, it is MAC-based configuration provisioning, support third-party server storing configuration files of DHCP, PnP, TFTP, FTP and HTTP.

2.11.1 DHCP option

set up a DHCP server first and then choose the option code, there three choices: option66, option43, Custom option, then follow the way to set the routine of configure file and run DHCP server.

DHCP Option

DHCP Option Setting

Option 66

2.11.2 PnP

Set up a PNP server, then follow the way to set the routine of configure file and run PNP server.

PnP

Enable PnP



PnP Server

224.0.1.75

PnP Port

5060

PnP Transport

UDP

PnP Interval

1

(1~99)Hour

2.11.3 Static Provisioning Server

Supports three kinds of protocol: TFTP, FTP and HTTP. Prepare a TFTP, FTP and HTTP server, and set up server address and the saving path of auto provision file, if the server needs authentication information, set up and remember the username and password.

Static Provisioning Server

Update Mode

Update After Reboot

Update Interval

1

(1~99)Hour

Server Address

Protocol Type

TFTP

Username

Password

Save

2.12 System

2.12.1 Maintain

- Log: speaker running situation record
- Reboot
- Reset
- Upgrade

How to upgrade IP Speaker firmware version in web interface?

- (1) Select the latest version firmware: xxx-bin.
- (2) Click upgrade, it would require about 20s to finish process.
- (3) Back to speaker login web interface.

Maintain

Log	Download log file
Reboot	Reboot Device Now
Reset	Reset to Factory Setting
Upgrade	选择文件 未选择文件

2.12.2 Auto Reboot

Set to reboot as desired time.

Auto Reboot

Reboot Enable	☒
Reboot Date	Every Day ▼
Reboot Time	08:30 ⌚

Save

2.12.3 Security

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

Security

User Name	ADMIN
Password	•••••
New User Name	User
New Password	•••••
Confirm Password	•••••

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 in <https://cbcpoland.pl/pobierz-plik/1747232680/zs8-pas30h-m/IPToolCS20.zip>
- (2) Run IPTool, select correct networking from “Network”, and then “Search” the devices and do setting.

IPToolCS20
— □ ×

Network
Search
RTP Multicast
Settings

☐	No.	UID	Name	MAC	IP address	SIP Settings	RTP Settings	Version	Volume	System
☐	1	50359289708D641C	CS20	a2:c0:a4:20:29:4c	192.168.5.100	6000@192.168.2.106	239.255.0.0:8000	CS20-V3.3.36	80,60	admin

Current Device CS20-50359289708D641C

SIP Account 1

User Name

Password

Display Name

Server Host

Server Port

SIP Account 2

User Name

Password

Display Name

Server Host

Server Port