



PROVCOM IP SPEAKER

PROV-H-320-P

User's Manual



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IP SPEAKER Requirements

To be able to take advantage of information mentioned in this manual, the following requirements must be done first:

1. PoE switches with 15.5 WATTs per port.
2. Have speaker connected to LAN.
3. Power source (Optional) if PoE Switch is not used.

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1. Getting Started

1.1 About PROVCOM IP Speakers:

PROVCOM IP Speakers are new generation of IP speakers that will make paging process easier than ever, it comes with the set of tools and features that will make paging environment easier to manage, announce, expand, and to be monitored.

The speaker body is well designed, and using the elegant color (white), the speaker looks more beautiful and can be installed in most ceiling without affecting the general look of the ceiling itself.

1.2 Before you start:

Before you start to read and use information mentioned on this manual, you need to make sure that your speaker model is matching on the following models:

PROV-H-320-P, PROV-H-320-W

1.3 Features:

- SIP/Multicast compatible.
- Support up to 3 SIP Accounts.
- can join up to 20 Multicast Group.
- Web-based configuration.
- Power-over-Ethernet (PoE 802.3af) (**PROV-H-320-P model only**).
- Network and manual speaker volume control.

1.4 Technical Information:

Specifications	
Dimensions	Height: 155 mm, Width (front: 215mm) (Back: 160mm)
Speaker Output	Up to 13 Watts
Microphone	Front: built-in high sensitivity microphone Back: 3.5 mm JACK
Working Environment	Temperature: 0 ~ 60 degrees Humidity: 10% ~ 90%
Network Interface	RJ-45 10/100 Mb
Protocol	SIP, Multicast
Power	Input : AC100~ 240V, output:DC12V/1A, POE (IEEE802.af)
Codec	G711, G729, G723
Weight	Net weight: 1.1 kg , gross weight: 2.0 kg
Buttons (Light)	Three Buttons. One: IP broadcast/Reset. Two: Volume UP. Three: Volume Down.
Warranty	2 years hardware
Color	White, Gray, Brown, Black

2. Speaker Installation

PROVCOM IP speakers are easy to install, it can be installed on the ceiling by following these easy steps:

2.1 Creating hole on the Ceiling:

First you will need to create a hole on the ceiling; it should be circle with diameter equal to (180 mm). As shown on figure2-1 below.

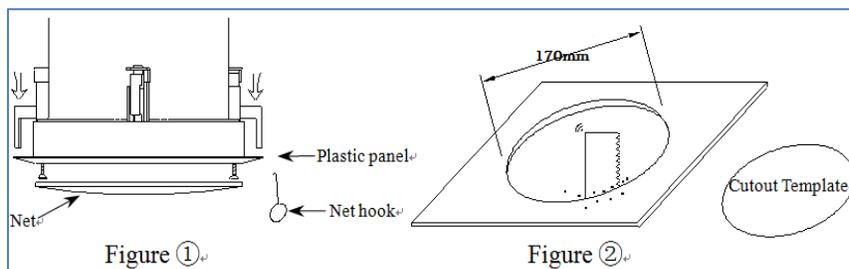


Figure 2-1: Creating Hole on Ceiling

2.2 Install Speaker inside the hole:

Push the speaker inside the installation hole then remove the speaker metal net using the net hook and fix the screws to install the speaker. As shown on figure 2-2 below.

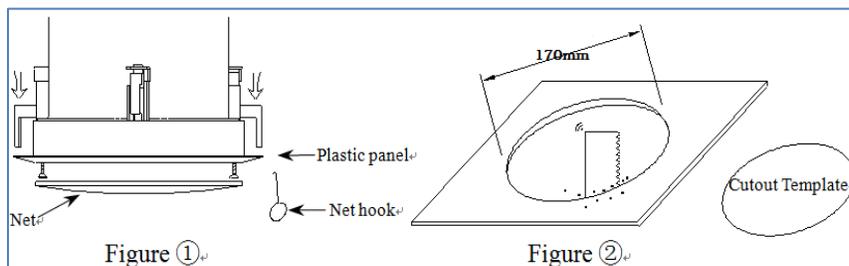
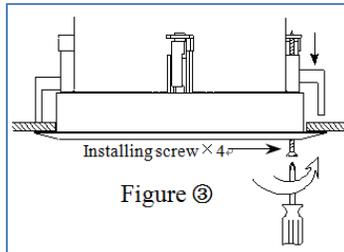


Figure 2-2: installing speaker inside the hole

2.3 Finishing installation (Fixing Screws):

After fixing the screws and installing the speaker, return the net back to the front of the speaker, if the speaker connected to PoE or power adapter, it should boot up and the LEDs should blink.

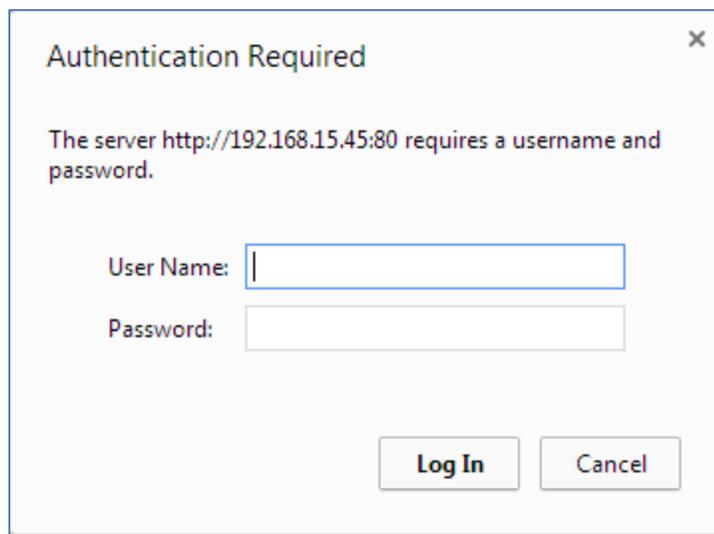


3. Speaker Configuration

Before you start to configure the speaker, you need to know the IP address of the speaker, below are the ways you can learn the speaker IP address. ***IP address will be obtained from DHCP, you can learn the IP address by pressing the first button from the left, it will announce the speaker IP.***

3.1 Login

Once you type the IP address, the speaker will ask you for user name and password to allow you to access the speaker configuration.



Authentication Required

The server http://192.168.15.45:80 requires a username and password.

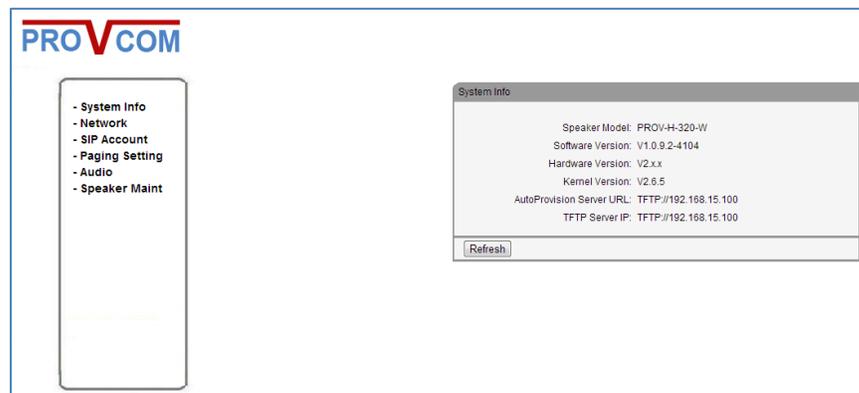
User Name:

Password:

Log In Cancel

Figure 3-1: Speaker Login Page

After you successfully login, the following main menu will appear.



PROVCOM

- System Info
- Network
- SIP Account
- Paging Setting
- Audio
- Speaker Maint

System Info

Speaker Model: PROV-H-320-W
Software Version: V1.0.9.2-4104
Hardware Version: V2.x.x
Kernel Version: V2.6.5
AutoProvision Server URL: TFTP://192.168.15.100
TFTP Server IP: TFTP://192.168.15.100

Refresh

Figure 3-2: Main Page

The sections that follow will describe each option and how to configure its parameters.

3.2 Network

This tab is used to set network settings, please note that, if you have wireless speaker, you can set LAN and VPN Settings.

3.2.1 LAN Settings

This tab is used to configure speaker IP settings, all you need to configure is speaker IP address type (preferred static), and optionally DNS.

The screenshot shows the 'LAN Port' configuration page. It is divided into several sections:

- IP settings:**
 - DHCP: Hostname(Option 12): ; Manufacturer(Option 60):
 - Static IP: IP Address: ; Netmask: ; Gateway:
 - PPPoE: Username: ; Password: ; MTU: Default: 1500
- DNS Settings:**
 - Automatic
 - Manual DNS: Primary DNS: ; Secondary DNS:
- MAC Address:** MAC Address: 00:26:8b:01:7b:3c
- Port Management Settings:** HTTP Port: ; Telnet Port:
- Socket5 Proxy Server:**
 - Socket5 Proxy Server: off on
 - Server IP: *
 - Port: *
 - Anonymous Login:
 - Username:
 - Password:

A red note at the bottom states: "Please Note: Changing the default HTTP Port (80) will require using the new port number to access the IP Speaker web interface. Please note that changes require a reboot. Use the following format when not using the default HTTP (http://ip address:portnumber)."

A 'Submit' button is located at the bottom left of the form.

Figure 3-3: Configure LAN Settings

3.2.2 VPN Settings

If your speaker part of VPN network, you need to configure the VPN settings from this tab.

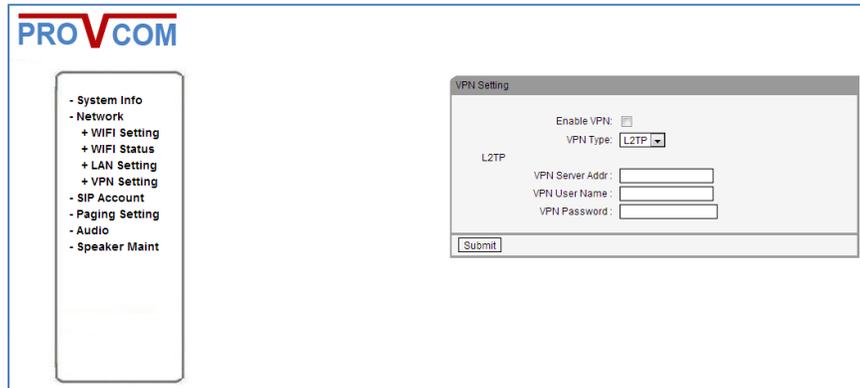


Figure 3-4: Configure VPN Settings

3.3 SIP Accounts

PROVCOM IP speakers can join up to 3 SIP accounts, information needed on this tab is SIP server IP, port number, account code and password, if all information inserted are valid and correct, the speaker will attempt to register with the SIP server.

The screenshot shows a configuration window titled "Account1" with the following sections and fields:

- SIP Settings**
 - Enable:
 - Account Mode: **VOIP** (dropdown)
 - Display Name: **601** (text box)
 - Username: **601** (text box) *
 - Authenticate Name: **601** (text box)
 - Password: ********* (text box) *
 - Label: **601** (text box)
 - SIP Server: **192.168.15.101** (text box)
 - Secondary server: **Account1** (text box)
 - OutboundProxy Server: (text box)
 - Secondary OutboundProxy Server: (text box)
 - Polling Interval Time Of Registration: **32** s Default Value: 32s, Range: 20s~~60s
 - NAT Traversal: **Disable** (dropdown)
 - STUN Server: (text box)
 - BLA: off on
 - BLA Number: (text box)
 - Call Method: SIP TEL
 - Subscribe Period: **1800** Default: 1800s, Min: 120s
 - Register Expire Time: **3600** Default: 3600s, Min: 40s
 - DNS-SRV: off on
 - SIP Transport: UDP TCP TLS
- Call**
 - Amount Of Line Account Used: **2** (Default: 2)
 - Do Not Disturb: off on
 - Anonymous Call: off on
 - Anonymous Call Rejection: off on
 - Use Session Timer: off on
 - Session Timer: **300** (min:150s)
 - Allow-events: off on
 - Registered NAT: off on
 - Ring Type: **None** (dropdown)
 - UDP Keep-alive Message: off on
 - UDP Keep-alive Interval: **30** (15-60s)
- Security**
 - SIP Encryption: off on
 - RTP Encryption: off on
 - Encryption Algorithm: **RC4** (dropdown)
 - Encryption Key: (text box)

A **Submit** button is located at the bottom left of the window.

Figure 3-5: Configure SIP Account

3.4 Paging Settings

PROVCOM IP speakers can join up to 20 multicast zones, you can add them manually from this tab by inserting the multicast IP and port number for each zone.

The screenshot shows a 'Paging Setting' window with 20 rows, each representing a paging zone. Each row contains a label (e.g., 'Paging 1:'), a radio button (with 'off' selected), a 'Group IP' text box, and a 'Port' text box (with '10000' entered). A 'Submit' button is located at the bottom left of the window.

Paging Zone	Radio Button	Group IP	Port
Paging 1:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 2:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 3:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 4:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 5:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 6:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 7:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 8:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 9:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 10:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 11:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 12:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 13:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 14:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 15:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 16:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 17:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 18:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 19:	<input checked="" type="radio"/> off <input type="radio"/> on		10000
Paging 20:	<input checked="" type="radio"/> off <input type="radio"/> on		10000

Figure 3-6: Configure Paging Settings

3.5 Audio

To manage speaker volume level and microphone level, you need to use this tab, please note that for most cases, if you enable microphone, keep it on level 7, for speaker sound, it is recommended not to use more than level 4 unless you are sure your covered area is crowded and noise level is high.

The screenshot shows the 'Audio' configuration window with the following sections and settings:

- Tone:** Select Country: China
- Output Volume (1~9):** SpeakerPhone Volume: 2
- Input Volume (0~7):** SpeakerPhone Mic Volume: 0
- Voice Codec:** Payload Length: 20 ms; High Rate of G723.1:
- Jitter Buffer:** Type: Adaptive Fixed; Min Delay: 60; Normal Delay: 120; Max Delay: 150
- Other:** VAD: ; SideTone: ; Echo Suppression Mode:
- Ring:** Ring Type: Ring1; Delete button
- Uploading Ring Tone:** File input field, Browse... button, Upload button, Cancel button. Note: (Please upload a ring tone with G711A audio coding, Maximum 10 rings and the total sizes must less than 150k.)
- Audio Codecs:** enableCode list: G722, G711A, G711U, G729A, G723. Up/Down buttons, <</>> buttons, and disableCode button.
- Submit** button at the bottom left.

Figure 3-7: Configure Audio Settings

3.6 Speaker Maintenance

From time to time, you need to check the speaker health and usage, and configure some more additional options, we placed these options on one big tab named speaker maintenance, using this tab, and you can reset the speaker or retrieve the speaker log file for more maintenance.

3.6.1 Log

As known for most systems, log file will serve you when the speaker behavior is changed due to some reason, log file contains information you need to investigate the issue, it is recommended to submit log file to PROVCOM support if you need assistance from them.

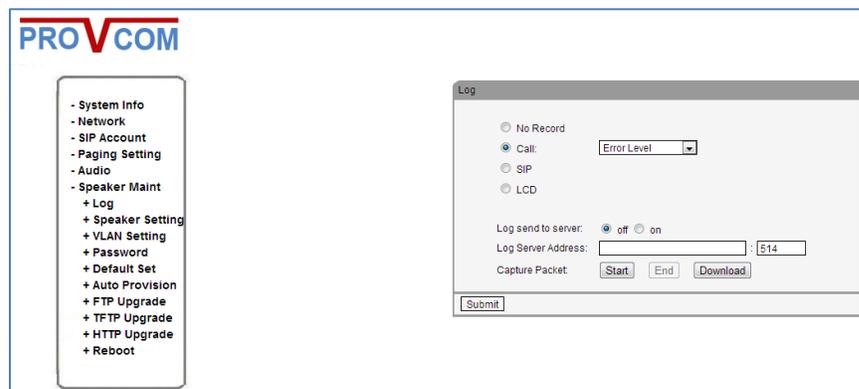


Figure 3-8: Configure Log Settings

3.6.2 Speaker Settings

This tab is reserved for future use, you can just set the date and time from this tab and all other options will be ignored.

Speaker Setting

Basic

Called No AnswerTime: 70 s (Min:20, Max:1800)

Caller No AnswerTime: 180 s (Min:90, Max:1800)

DTMF: RFC 2833 Inband SIP Info Auto

Pound Send Method: # %23

RFC 2833 Payload: 101

BackLight: off Always On timer 60 s (Min:1, Max:255)

Keyboard Lock: Disabled

PSTN Setting

PSTN Ring Type: PSTN Ring VOIP Ring

PSTN Prefix Code:

VOIP Prefix Code:

Hook: off on

Hook Frequency: 500 (Default:500 ms,min:100 ms,max:1600 ms)

Qos

SIP Qos: 26 (0-53)

Voice Qos: 46 (0-53)

Call

BLF Transfer In Taking: off on

BLF Transfer Mode: Blind Transfer Attended Transfer

Hot Line Function: off Immediately Hot Line Delay 5 s (5-30)

Hot Number:

Call Waiting: off on

Call Waiting Tone: off Play on currently active device Frequency: 10 s (5-60)

Auto Answer: off on Turn On But Filter This Group: NONE

Auto Answer Mode: Hands Free Handle Headset

Pickup Function: off on

Pickup Code: 123

Message: *97

Fuzzy Search: off on

Booking Voicemail: No

Play Voicemail Tone: off on

Miss Call Display: off on

Call List Save: off on

DND Softkey: off on

Play Hangup Tone: off on

Transfer Code: off on Number:

Conference Exit Result: Disconnect All Others Remain Connected

Return code when refuse: 603(Decline)

Return code when DND: 603(Decline)

Flash hook time(<800ms): 500

VOIP Call Forward

Always: off on Number:

If Busy: off on Number:

If No Answer: off on Number:

Ring Frequency: 15 (Default: 15s, Max: 15s)

Set Time Mode: SNTP SIP Server PSTN Manual

Sntp Server: sparky.services.adelaide.edu.au

sparky.services.adelaide.edu.au List

sparky.services.adelaide.edu.au Manual

SntpSecondary server: www.time.ac.cn

www.time.ac.cn List

www.time.ac.cn Manual

Update Interval(seconds): 600

Daylight Savings Time Mode: always off always on Auto

Time Format: 24 Hour 12 Hour

Date Format: DD MM WWW

Time Zone-GMT: GMT+08:00 Beijing

Manual Setting

2000 Year 1 Month 1 Day 0 Hour 0 Minute 0

Other

QoS: 40 Diff-Serv or Precedence

Check When Upgrade Software: Check BLF Light: On

Headset Mode: Normal Seat Mode

Ring Type On Seat Mode: Headset Speaker

Network Packet Mirroring: Off

Submit

Figure 3-9: Configure Speaker Settings

3.6.3 VLAN Settings

If your speakers will operate in vlan, you will need to configure vlan options from this tab, otherwise, your speaker may not operate or play any announcement.

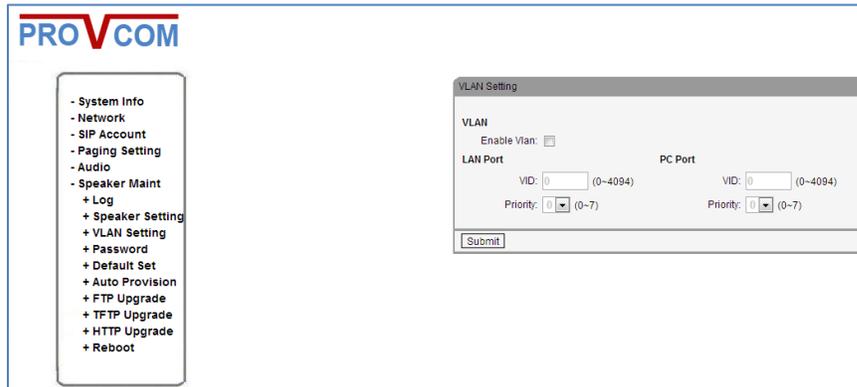


Figure 3-10: Configure VLAN Settings

3.6.4 Password

If you need to change default password to access the speaker, you will need to use this tab, please note that the password need to be kept safe and not distributed to anyone unless they have direct permission to interact with the speaker.

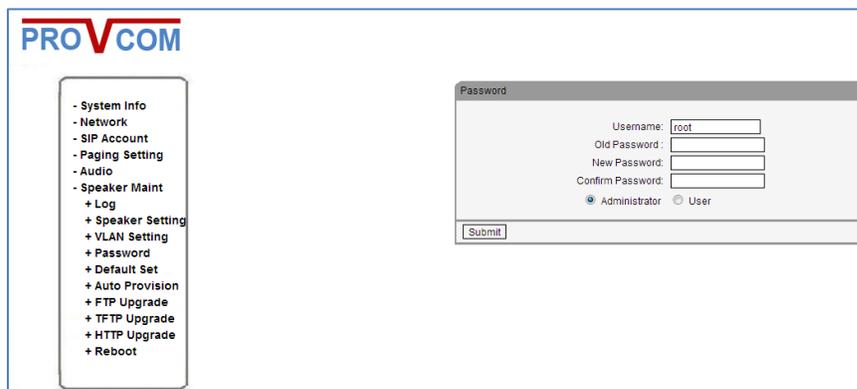


Figure 3-11: Change Password

3.6.5 Default Set (Reset)

If you need to restore the factory settings for the speaker, you will need to use this tab, please note that restoring the factory settings will erase all configuration that been made on the targeted speaker, be careful with it.

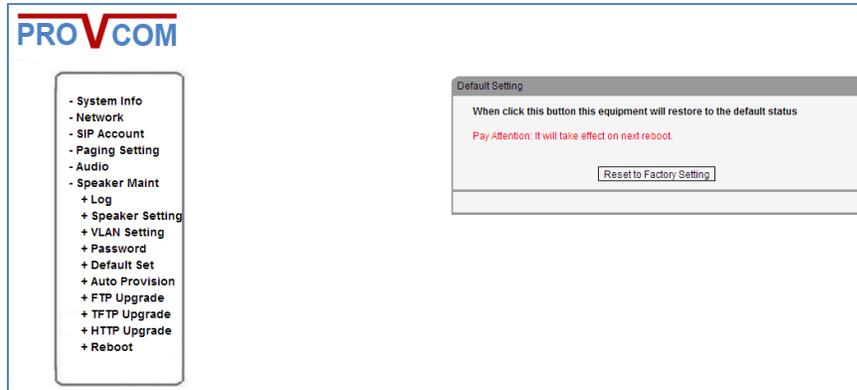


Figure 3-12: Reset Speaker Settings

3.6.6 Auto Provision

Auto provision is used to let the speaker read its configuration from server instead of manually configuring it, this tab will require information such as server name or IP address, username and password (optional), frequency to check, check on reboot. The file name of the speaker has to be named with its MAC address. (ex. 00a0f8d975f5.xml)

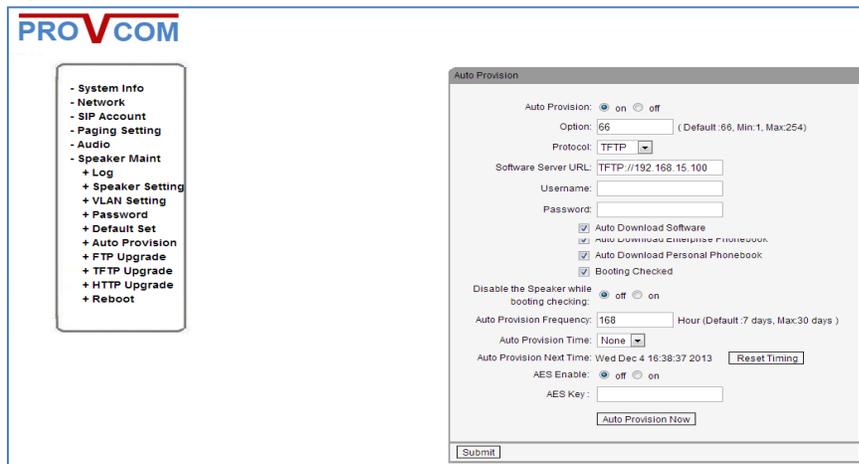


Figure 3-13: Configure Auto Provision Settings

3.6.7 FTP Upgrade

For new firmware and upgrade of speaker software, you can use FTP, TFTP and HTTP, if you decided to use FTP, configure FTP parameters from this tab.

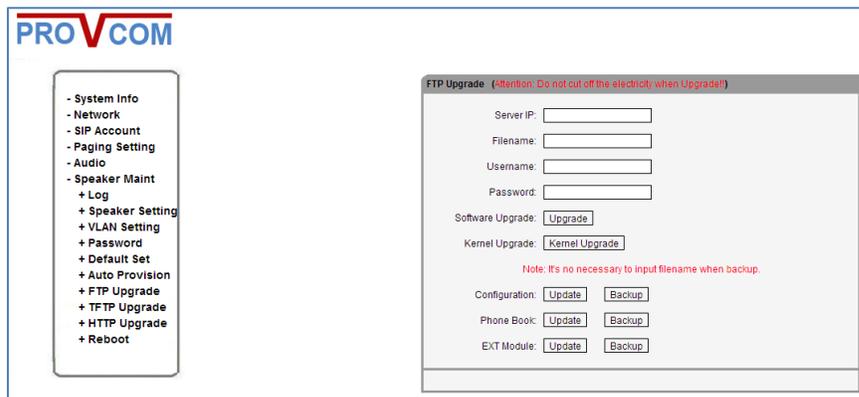


Figure 3-14: Configure FTP Upgrade Settings

3.6.8 TFTP Upgrade

If you choose to upgrade speakers using TFTP, configure its parameters from this tab.

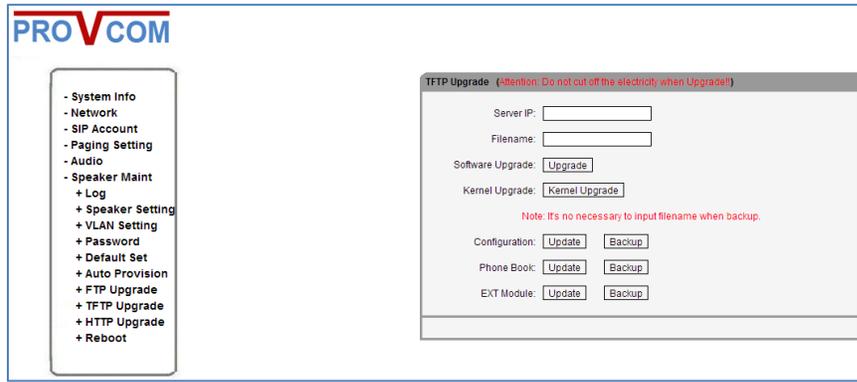


Figure 3-15: Configure TFTP Settings

3.6.9 HTTP Upgrade

If you choose to upgrade speaker's software using HTTP, configure its parameters from this tab.

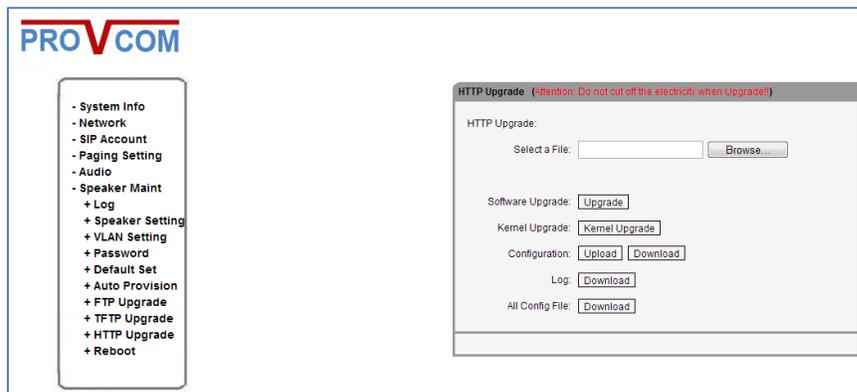


Figure Configure HTTP Upgrade Settings

3.6.10 Reboot

For rebooting the speaker, please use this tab, please note that you don't have to reboot the speaker unless it is necessary, like it is hanging or not responding which is rarely happens.



Figure 3-17: Speaker Reboot

4. Troubleshooting

This section contains questions and answers to the common issues that you may face when dealing with PROVCOM IP speakers.

Q: I have installed the speaker, how do I know the current IP address?

You need to press the first button from the right of the speaker, it will announce the IP address, and then you can type the address in your browser to access the web interface of the speaker.

Q: I configured the speaker, but still cannot reach it, what should I do?

This may be related to gateway, all speakers need gateway to be set, otherwise it may be VLAN issue or the switch is connected to different network than yours, contact your network administrator and ensure that you can ping the speaker, if all failed, you need to reset the speaker and do the configuration again.

Q: I need to reset the speaker to original factory settings, what should I do?

There are two ways to reset the speaker to the factory settings:

Note that this action will erase all configuration previously made on speaker.

From web interface: login to your speaker and navigate to speaker maint>Default Set, then click the button Reset to Factory Setting.

From speaker: press and hold the first button on the right of the speaker for 20 seconds, the speaker will reboot and return to factory settings.

Q: I configured the speaker properly, but when it plays any sound, it automatically reboots what should I do?

To use PROVCOM IP speakers properly, you need to make sure that the switch connecting the speakers is PoE switch and it's producing 15.5 WATTS on each port.

Q: Can I configure the speaker to use VLAN?

YES, just login to your speaker web interface and navigate to Speaker Maint> VLAN Setting.

Q: I configured auto provision properly, but the speaker cannot retrieve the correct file, what should I do?

To use auto provisioning well, you need to set up TFTP server, and configure each speaker to contact the TFTP (AUTO PROVISIONING) server, on the server side, you need to create xml file for each speaker that will connect to the auto provisioning server, and the name of the xml file must be speaker MAC address, for example (00a0f8d975f5.xml) and so on.

If you need further assistance, please contact PROVCOM support at support@provcom.net