

MOCET

IG7600 Smart Telephone System

Administration Manual



Environment

The equipment you have purchased must not be disposed of with household waste. You should return these to your distributor if they are to replace or dispose of them in an approved recycling centre.

FCC Statement

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions in this manual, may cause interference to radio communications. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against radio interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures are necessary to correct the interference.

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WARNING!



1. Read these installation instructions carefully before connecting the equipment to its power adapter.
2. To reduce the risk of electric shock, do not remove the cover from the equipment or attempt to dismantle it. Opening or removing covers may expose you to dangerous voltage levels. Equally, incorrect reassembly could cause electric shock on re-use of the appliance.
3. Do not expose the equipment to fire, direct sunlight or excessive heat.
4. Do not expose the equipment to rain or moisture and do not allow it to come into contact with water.
5. Do not install the equipment in an environment likely to present a Threat of Impact.
6. You may clean the equipment using a fine damp cloth. Never use solvents (such as trichloroethylene or acetone), which may damage the equipment's plastic surface. Never spray the equipment with any cleaning product whatsoever.
7. The equipment is designed to work in temperatures from 0°C to 45°C (32°F to 104°F).
8. The equipment must be installed at least 1 meter from radio frequency equipment, such as TVs, radios, hi-fi or video equipment (which radiate electromagnetic fields).
9. Do not connect the LAN/WAN port to any network other than an Ethernet network.
10. Do not attempt to upgrade your equipment in an unstable power environment. This could cause unexpected damages.
11. Do not work on the system during lightning storms. Please disconnect all cables.
12. Children don't recognize the risks of electrical appliances. Therefore use or keep the equipment only under supervision of adults or out of the reach from children.
13. No repair can be performed by the end user, if you experience trouble with this equipment, for repair or warranty information, please contact your supplier.

Electrical Powering:

The IG7600 can be powered with correct power adaptor; the power adaptor must be 12V/1.5A. Any damage caused to the IG7600 as a result of using unsupported power adaptors will not be covered by the manufacturer's warranty.

Product Disposal Warning:

Ultimate disposal of this product, accessories, packing, especially the batteries should be handled carefully for recycle and nature protection in accordance with national laws and regulations.

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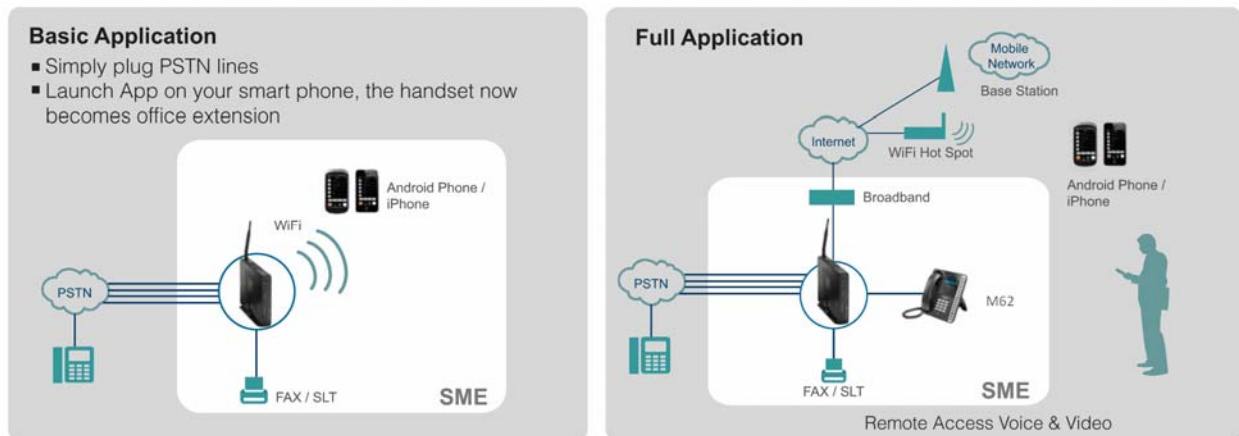
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1. Introduction

MOCET IG7600 Smart Telephone System is the ultimate SME solution which has rich feature set of IP PBX telephone systems and IP networking systems. It has business essential PBX features such as an auto-attendant, voice mail, multi-line appearances, three way call conferencing, intercom, music on hold, call-forwarding and much more. The IG7600 system opens up access to the benefits of VoIP, including low cost long distance service, and one network for both voice and data.

The IG7600 is so easy to configure that a fully working system can be set up in minutes. Plug and Play feature allows IP phone, iPhone or Android phone with IP3054 App to be automatically detected and registered when they are connected. The IG7600 is easy to be managed and configured by integrated web server.

The IG7600 system should work with MOCET IP Phones IP3000 and IP2000 series and take advantages of powerful business features such as plug & play, all paging/group paging, multi-line appearances, etc....The IG7600 has one FXS port to support traditional analog devices such as telephone, answering machine, FAX machine.



1.1 Interfaces

- ◆ WAN Interface: one 10/100/1000 Base-T Ethernet port
- ◆ LAN Interface: one 10/100 Base-T Ethernet port
- ◆ CO Interface: 4 FXO (Loop Start, for PSTN)
- ◆ Analog Device Interface: 1 FXS (for analog Telephone or FAX)
- ◆ Built-in 802.11b/g/n WiFi access point
- ◆ Auto-Pairing button

1.2 Terminals

- ◆ 1 Analog Terminal (Analog Telephone or FAX)
- ◆ 49 IP Stations (IP-Phone; Max. 16 IP3054 App for iPhone / Android Phone)

1.3 Accessory

◆ Wi-Fi IP CAM

Basically, the Administration is required to do the following things:

- (1) To understand the architecture, resources, and devices of whole environment which will be involved with the VoIP communications.
- (2) To build a common setting file for most users.
- (3) To configure each phone and install them into the network.
- (4) To configure each interfaces and install them into IG7600.
- (5) And to solve the problems that users encounter during operation.

2. Getting to Know the IG7600

2.1 Front Panel

The front panel contains several LEDs that indicate the status of the IG7600.

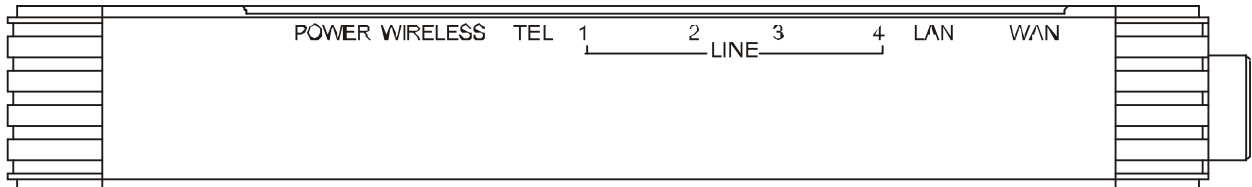


Figure 2-1. Front Panel of IG7600

LED Name	Color	Status	Description
POWER	Red/Blue	Red Flashing	Application Restarting
		Red On	Firmware updating
		Blue Flashing	System booting up
		Blue On	System initialized and running
		Off	Power off
WIRELESS	Blue	On	Wireless LAN is active
		Off	Wireless LAN is idle
LINE (1-4)	Blue	Off	PSTN Line is idle
		On	PSTN Line is active
TEL	Blue	Off	Phone is idle
		On	Phone is active
LAN	Blue	On	LAN is connected
		Off	LAN is not connected
		Flashing	LAN activity present (traffic in either direction)
WAN	Red/Blue	Blue On	WAN is connected and IP is obtained
		Red On	WAN is not connected or no IP assigned
		Flashing	WAN activity present (traffic in either direction)

2.2 Rear Panel

The rear panel contains the ports for the IG7600's data and power connections.

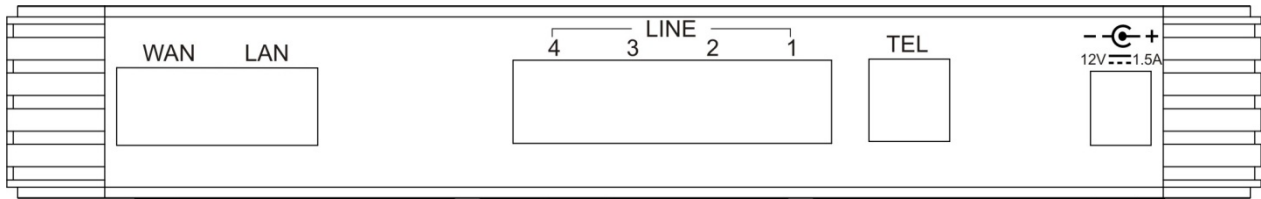


Figure 2-2. Rear Panel of IG7600

Label	Function
WAN	RJ-45 connector: Connects the device to your cable modem, or to your ADSL Modem. It's to connect to the remote network.
LAN	RJ-45 connector: Connects the device to your PC's Ethernet port, or to the uplink port on your LAN's hub.
Line (1-4)	RJ-11 connector: Connects the device to your PSTN lines.
TEL	RJ-11 connector: Connects the device to your analog phone.
Power	Connects to the supplied power converter cable.

3. IG7600 Voice General Features

3.1 3-Way Conference

IG7600 supports 3-way conference. Conference allows multiple speakers to participate in a joint telephone conversation. Each participant in a conference can speak and hear the other participants. IG7600 supports one conference room with at most 3 participants. The voice is mixed on IG7600.

PS: IG7600 supports this function only when it is a new hardware version IG.

3.2 Access Control for Web Page

The Access Control settings allow the System Administrator to configure the Web Port, Service Control List, IP Address Access Control mode and password for Administrator, Supporter and User.

IG7600 also provide an external user access to the internal IP phone's Web page. The Registered Phone page will list all registered phones with their IP links for IP phone. Clicking a specific link will open that specific IP phone's Web page.

IG7600 provides three Access modes for Web Page

- Administrator mode: unrestricted access and configuration
(Default: admin1234/adminxxxxxx xxxxxx are the last 6 characters of IG's MAC Address with lower case.)
- Support Mode: allow an ISP technician to maintain and run diagnostics
(Default: support/supportxxxxxx, xxxxxx are the last 6 characters of IG's MAC Address with lower case.)
- User Mode: view some configuration settings and statistics.
(Default: user/userxxxxxx, xxxxxx are the last 6 characters of IG's MAC Address with lower case.)

3.3 Answering Position

For incoming calls from the Public Switched Telephone Network (PSTN) (via analog CO or FXO ports), the IG7600 provides the flexibility to ring specific destinations. The IG7600 provides the ability to ring Auto Attendant. The IG7600 also provides the ability to simultaneously ring up to 50 extensions when programmed in a UCD Hunt Group, or the Operator in accordance with the system service mode (day or night). The user can also assign a line to ring directly to an extension. Incoming VoIP calls from a registered ITSP can be programmed and routed in the same manner as the analog CO (FXO) ports.

3.4 Auto Attendant & Voice Mail

The IG7600 Auto Attendant can greatly enhance business productivity by providing either a full-time automated attendant to handle all incoming system calls or part-time automated attendant to handle overflow traffic. The Voice Mail Module provides up to 16 hours recording time that are shared by all extensions. The system can handle four simultaneous calls with following functions.

- **Auto Attendant Functions**

The Auto Attendant provides an incoming caller with a customized welcome greeting and specific prompts that will describe the options available to the caller.

- Play the welcome greeting messages depending on the system service mode: Working, Holiday, and Temporary.
- In Working Service mode, play the welcome greeting messages depending on the system service time: Day, Night, Noon, and Holiday.
- Route the call to the appropriate destination (phone/virtual extension, UCD group, operator, single digit) with the dialing digit(s).
- Leave a message to a particular mailbox.
- Make an outside call via another trunk line (PSTN or SIP-Trunk).
- Enter Voicemail box.

- **AA Menu**

- Supports ten different Auto Attendants. Each AA's access number is "Start AA & VM Service Number" plus 0, 1, 2, and 3. For example, if "Start AA & VM Service Number" is 500, then 1st AA is 500, 2nd AA is 501, 3rd AA is 502 and so and so on.
- Only the first AA has default voice prompts (10001~10005.vox), Other Auto Attendants' voice prompts (10006~10050.vox) need to be recorded manually.
- AA Menu has a speed dial menu which is configured in Voice -> Voice Mail -> General -> Single Digit Table. This Table can quickly get your call to the destination that you wanted.
- If an AA is set as Destination of a DID entry or Answering Position of a trunk, the outside caller will hear Dial Tone when it's answered, then it can call extensions by dialing extension numbers. It's used to allow outside devices to be able to dial extension numbers, UCD Group entry ID, AA entry, any appropriate destination.

- **Voice Mail Functions**

- Delete, save, or skip messages.
- Forward messages to other mailboxes.
 - Specified mailbox
 - All mailboxes.
- Envelop information indicating the time and date of the message received; sender information will also be included in the email notification.
- Leave a new message to other extension(s).
- Change personal greeting and password.
- Expert mode support (playback controls when reviewing messages).
- Send a notification via email when a new message is left.
- Send voice message as the attachment of the email in WAV format.
- The maximum recording length for each call is 1800 seconds.
- When 90% of the VM size is used, it shows "Message Full" on the all IP2061/M62's LCD.
- For each extension, the maximum number of Voice Mail is 200.
- Each message can be saved for 1 - 30 days or permanently.

- Support 50 Virtual Mailboxes
- Enter voicemail through another phone extension
- **Management Menu**
 - ◆ Change the Greeting Mode: Working, Holiday, and Temporary.
 - ◆ Record the Greeting Messages
 - ◆ Record other voice prompts.
- **Voice Messages**
 - Provide two languages service for the all voice files.
 - Support G711-ulaw, G711-alaw, G729 three voice files.
 - Administrators can record the all voice messages by themselves.
 - Administrators can update, backup or delete the all voice messages from/to the PC.

For the detail, please refer Appendix 3.

NOTE: When an extension's voicemail is filled up to more than 100 mails, VM system will just read "You have 99 mails."

3.5 Auto Provisioning

WAN Management Protocol (TR-069) allows an Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device. Firmware upgrade or vendor configuration file backup can be done remotely on ACS server. Select the desired values and click "Save Settings" to configure the TR-069 client options.

An Auto Provision Server (APS) is also provided to update IG7600 FW, Update / Retrieve IG7600 Configuration and the registered IP2061/M62 firmware, Management->PTC page is used to configure IG7600 to communicate with APS Server.

3.6 Basic Call

To make an intercom call, dial a Station number (IP Terminal, POTS) or a Voice Mail number.

To make an outside call, dial a phone number. IG7600 chooses a line (PSTN line, IP trunk, another IG7600) via Call Routing Table to dial out.

To make an outside call, dial a PSTN, an IP Trunk or a Trunk Group number first. After hearing dial tone, dial the phone number.

3.7 Call By Name

IG supports Call by Name now, but it is not enabled as default. We should activate it manually before we use it.

Get ready:

1st find the web page Voice-> Voice Mail->General->Auto Attendant->Dial by Name Code and We input a number (for example "9") here to use it as a dial by name code.

2nd we should configure EXT user's name in Voice->Voice Mail->Phone Extension page, So that IG can recognize an extension by its name.

3rd EXT user should record his or her name in IG's Voice System; it will be used as a prompt when the EXT is being called by name.

How to record your name:

1st Regular Phone Extension: Dial 500(as the default Voice mail service number)
->input your password-> press 5->Record your name after the beep tone.

2nd Virtual Extension: Dial 500(as the default Voice mail service number)->Press "*" -> input the Virtual Extension number-> input the Virtual Extension password-> press 5 -> Record the Virtual Extension's name after the beep tone.

Now IG is ready to make a call to EXT by name.

Call By Name Process:

In Dial by Name process, a voice prompt (10230.vox) will be played to ask the caller to input the name. The dialed name will be finished when the caller presses "#" or stops the digit dialing in 5 seconds, after the caller inputs the name; AA compares the dialed name with these activated First Name and Last Name. Then AA starts to play the matched extension's name file. If it matches two or more extensions' names, these extensions' name files will be played one by one following by the extension number. The interval between two name files is 5 seconds.

When hearing the matched name, the caller dials "1". AA will transfer the call to the extension of the matched name (if it's a Virtual Extension, the call will be answered by the mailbox of the Virtual Extension directly). If the caller dials a non-"1" digit, the digit will be ignored.

If it has no matched name or the caller doesn't dial "1" after playing the all matched name, AA will play a warning message (10232.vox), then play a voice prompt (10234.vox) to ask the caller to select the next operation. Press "1", it will ask the caller to input a name again. Press 2, back to AA greeting.

3.8 Call Abandon

For every PSTN call, IG7600 provides the facility to monitor the call status. If the remote party hangs up, the ongoing call will be terminated.

The PSTN line monitor is accomplished through monitoring the loop-break signal, polarity reversal or busy tone. The value range of loop-break signal is: "Disable"/100/200/.../1000 ms.

3.9 Call Operator (Call Attendant)

IG7600 supports one Primary operator and one Secondary operator. Any extension can be designated as the operator through system configuration.

One primary operator may be assigned in the system. When assigned as operator, this extension supports general system functions.

While the internal extension dials Operator Directory Number ("0" at default), or the outside party dials the Operator Directory Number when Auto Attendant plays the welcome message, these calls will be stored into Operator Queue. The Operator is First-In-First-Out to service these calls. For the incoming trunk calls at the waiting time, the calling party will be on Music-On-Hold state.

A secondary (alternate) operator position may be designated for common sharing of incoming operator calls during peak traffic period. If operator doesn't answer the operator

call in Operator Reroute Time, the call is forwarded to Secondary Operator. If Secondary Operator doesn't answer the call in Operator Reroute Time also, the call will be forwarded to Operator's mailbox.

3.10 Call Pickup – Group

Each extension belongs to a Pickup Group. Direct Call Pickup allows extension users to answer a trunk call that is ringing at other extensions. If dialing “*”, allow you to easily access trunk calls ringing in your group. If dialing All Pickup Group Directory number, allow you to access any trunk calls ringing in the system. Calls ringing at extensions in other pickup groups may also be answered using the Directory number assigned to that Pickup Group.

3.11 Call Restriction

IG7600 provides sophisticated monitoring of digits dialed on PSTN/IP Trunks. If a digit or range of digits dialed on a Trunk line is inconsistent with the dialing extension's COS, the call is denied. This calling COS criteria can be applied to local calls, long distance calls, and specific numbers that are considered allowed in areas where other numbers may be restricted.

IG7600 allows configuring the Call Restriction Allowed Table and Denied Table. It provides the following programming items:

- **From/To**

The intervals are made up of a From and To entry which establish a numeric range. For example, an entry of “From 1700”, “To 1800” would include the following range of numbers as the leading: 1700, 1701, 1702 ...1799, 1800. Each From/To entry can be from 1 to 13 digits long and may contain any digit 0-9. The “From” entry must be less than or equal to the “To” entry. Each From/To entry can be from 1 to 13 digits long and may contain any digit 0-9, *, # or X (X representing any digit). The “From” entry must be less than or equal to the “To” entry.

- **Trunk Access**

IG7600 checks the field only when a call matches the associated interval. If the field is set to “Y”, the entry is valid when the trunk is accessed previously. If the field is set to “N”, the trunk isn't accessed previously. The trunk will be accessed through Call Routing Table. If the option is set to “YN”, the entry is valid no matter the trunk is accessed or not previously.

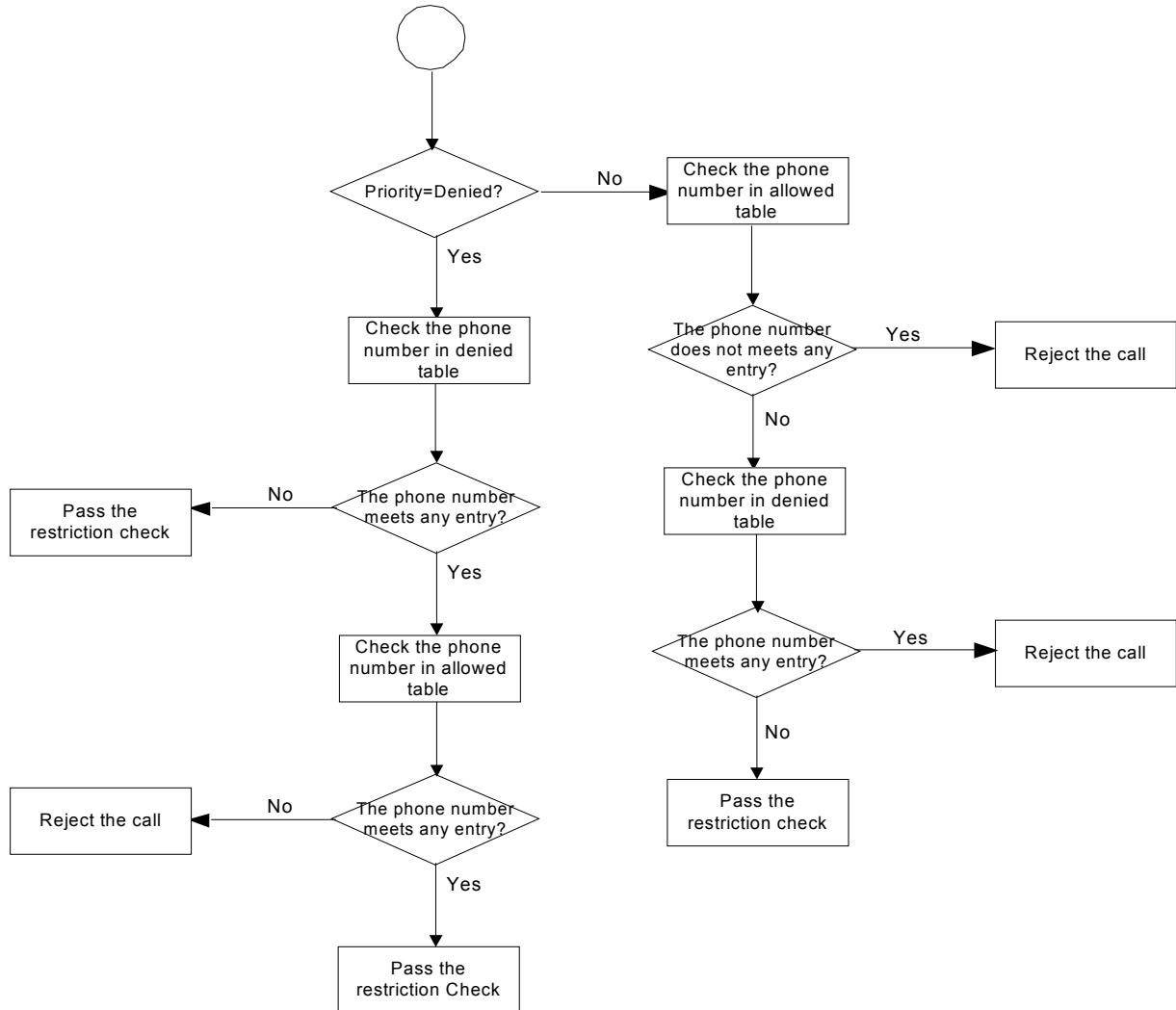
- **COS**

The COS setting is defined by the intervals. Allow an extension with the COS or higher priority to dial the number(s) specified in that range.

- **Table Type**

It configures the type of the entry in Call Restriction Table. It's either “Allowed” or “Denied”.

A maximum 40 entries can be configured in the table. They are divided into Allowed Table or Denied Table based on “Table Type” setting of the entries. It follows “Priority” (“Allowed” / “Denied”) setting for the target phone number in the check. If it checks Denied Table first, the phone number will be rejected if it passes the Denied Table and it doesn’t pass the Allowed Table. If it checks Allowed Table first, the phone number will be passed when it passes the Allowed Table and it doesn’t pass the Denied Table. The flow is as below:



3.12 Call Routing

The Call Routing feature automatically routes outgoing calls using the most appropriate route. The appropriate route is determined based on the number dialed. If necessary, IG7600 can automatically modify the dialed number by deleting and inserting digits.

The call routing destination is a PSTN line, an IP line or a line group. It allows you to configure each entry in the Call Routing Table which contains a routing rule for outgoing calls:

- From/To setting defines the number range
- Min/Max defines the match length
- Del can delete some leading digits in the dialed number.

- Insert can add some digits as the leading for the target number. It will be added after doing "Del".
- Destination defines the outbound call interface trunk

3.13 Caller ID Detection/Generation

IG7600 provides the ability to detect the calling party identification provided by CO via PSTN lines or by Uplink Server via IP trunks. This data when received by the telephone carrier will be displayed on all ringing IP phones.

IG7600 also provide Caller ID Generation to the Caller ID equipped Single Line Telephone.

3.14 Class Of Service (COS)

IG7600 provides 8 Classes of Service (COS) for assignment of outside line dialing-privileges. Each extension may be assigned one Day-COS and one Night-COS. The Extension COS is primarily used for restriction and control of long distance dialing. COS 0 is the highest priority. COS 7 is the lowest one.

3.15 Daylight Saving Time

Daylight Saving Time (DST) feature supports auto adjustment for daylight saving time. It allows you to configure the Daylight Saving Time (DST) which includes support for auto adjustment of daylight saving time.

- Internet Time: it obeys the international standard rule.
- Manual DST Rule: it allows you to define your own Daylight Savings Time Rule.

3.16 Default Set

Clear all settings and return the IG7600 set to the factory condition.

When rebooting the IG7600 to the default, some settings for the registered IP Phones (IP2061 and M62) and Smart Phones are reset to the default also.

- Line Keys
- Call Forward (Direct, Busy, No Answer, DND, Call Fork)
- Phone Lock
- Call Waiting
- Call Waiting Tone

3.17 Direct In Dialing (DID)

IG7600 provides a Direct In Dialing Table for IP Trunks. It will be able to offer its individual phone number for each extension.

IG7600 provides 50 entries in the Direct In Dialing Table. Each entry includes

- DID Number: used to check the caller ID of the incoming call.
- Destination: the ringing destination of the incoming call. It can be a Phone Extension, Virtual Extension, Auto Attendant, UCD Group, Speed Dial, or Paging number. It also can be an outside phone number.
- Outgoing Call ID: used as the private Caller ID when the "Destination" user makes the outgoing call. When the setting is null, it assumes to be the same as "DID"

Number”.

- Display Name: used as the Caller Name when the “Destination” user makes the outgoing call.
- Trunk: the applied trunk(s) of this DID entry. If it’s “All”, this entry will be applied for the all IP Trunks.

3.18 Direct Inward System Access (DISA)

The feature allows you to remotely access IG7600 lines to make the outside calls. The current PSTN/IP lines are all DISA lines. While ringing to Auto Attendant, the outside callers have direct access to extensions, or make an outside call,

The out-calling is to dial a pound (“#”) key at the beginning when Auto Attendant plays the greeting message. The call is secured by means of verified passwords against the assigned extension number. The use is accomplished only when a valid extension number has been entered and when the password entered matches that stored for the extension number entered.

The DISA function is disabled by default.

3.19 Emergency Call

IG7600 allows you configure five Emergency Call numbers and lines with which Emergency Calls are sent out. Any user can make an Emergency Call regardless of its Call Routing table, Call Restriction, and Phone Lock, when they dial a pre-configured Emergency Call number. The numbers of Emergency Call must not collide with the numbers in Numbering Plan.

It allows programming 5 emergency numbers. “911” is in it by default.

3.20 Extension Password

All extensions of the IG7600 system have an associated User Password. The Password is applied to Voice Mail service, and some system feature settings (Phone Lock, COS Following, DISA, Forward, Restore to Default, Feature Button Reset).

The Extension Password is 4-digit length. The default is “0000”.

3.21 Fax/Modem

IG7600 supports FAX/modem tone detection and auto-fallback to G.711. IG7600 also support to use T.38.

3.22 Flash – Analog Port (SLT) Flash Recognition

Flash is the momentary operation of the hook-switch at the analog device, which can be deciphered by the IG7600 system in such a way that the previous call in progress is held, or placed in a status of transfer awaiting further instructions from the user.

3.23 IP Trunk

IG7600 can register up to 12 SIP Uplink Servers. The extensions may make a call to the users of the Uplink Servers, or any user in the world through the Uplink Servers.

- SIP messages, including INVITE, re-INVITE, ACK, CANCEL, BYE, REGISTER,

INFO, REFER and NOTIFY messages

- SIP Proxy, SIP Outbound Proxy, Registrar, and Outbound Registrar
- Auto Registration when Power-on or period
- Session Timer support
- Support IP address, domain name, user name, display name for SIP URL.

3.24 Message Waiting Indication (MWI)

It's a Voice Mail feature. When somebody leaves messages, the router will inform the phones, and phones' LCD will display new voice mails information, and its lamp will flash accordingly.

3.25 Music on Hold

Any PSTN/IP line calls placed on hold will give music to the other external party.

3.26 Numbering Plan

The Numbering Plan refers to the structure of dialed access to the various resources that are part of the system. IG7600 also allows for a very flexible configuration numbering for the various system resources.

IG7600 provides the following resources to be programmed in Numbering Plan.

- Extension Number
- Operator Code
- AA & VM Service Number
- Virtual Extension Number
- PSTN Line Number
- IP Trunk Number
- Trunk Group Number
- All Paging Number
- Paging Group Number
- UCD Group Number
- Pickup Group Number
- System Speed Dial Number
- Call Park Number
- Conference Room Number

3.27 PSTN Backup

In case of power failure, IG7600 automatically switches the first PSTN line to the Single-line analog phone. The other PSTN lines are not supported

3.28 Registration Server

The IG7600 combines Proxy and Registrar servers in its application. For a Registrar server, it acts as the front end to the location service for a domain, reading and writing

mappings based on the contents of REGISTER requests. The location service is then typically consulted by a Proxy server.

3.29 Service Mode

IG7600 provide Day and Night settings for each weekday in service mode page. It will be applied in the following function:

- Answering Position: Trunk incoming call may be forwarded to different extensions according to the settings.
- Class of Service (COS): Phone extension may be assigned to have the different COS in the different time.
- AA Greeting message in Working mode.

3.30 Station Message Detailed Recording (SMDR)

The feature allows the administration to track all incoming and outgoing outside call traffic, chronologically by extension number. SMDR is output from the standard Syslog (None/LAN/WAN/Both)

SMDR information includes Trunk Line used, extension number, time and date the call was placed, number dialed, duration of the call.

IG7600 also provides Outgoing Call Duration Start Time to the PSTN call. It's used to start the record for the PSTN outgoing call.

3.31 System Speed Dial

IG7600 stores frequently dialed numbers. These Speed Dial Numbers are accessed for dialing by the associated Speed Dial Directory Numbers. The Speed Dial Directory Numbers are assigned in Numbering Table. The Speed Dial is only for outgoing calls.

IG7600 stores up to 100 Speed Dial Numbers. In the Speed Dial Number, it's allowed to store Phone number up to 20 digits in length. Call Restriction and Call Routing are applied and extensions may utilize only those numbers allowed based on their extension COS.

3.32 System Time & Date

The IG7600 system provides a built-in time clock to track System Time for reference in certain features such as day/night service mode. This clock has the ability to automatically adjust with network NTP server through internet.

The IG7600 also supports to use manual time setting. Because IG7600 doesn't support battery backup, the time setting may need to be reset when rebooting the IG7600.

System Time & Date can be applied to Smart Phone and IP Phone.

3.33 Trunk Group

The Trunk Group feature is used to assign each PSTN Trunk and IP Trunk to a specific Trunk Group. Each Trunk can be assigned to only one Trunk Group. The Trunk group assignment is used for Trunk pool access. If setting some PSTN trunks and some IP trunks into the same Trunk Group, the trunk access sequence will depend on the access priority and the search order. The IG7600 provides up to 4 selectable Trunk Groups. All PSTN Trunks and IP Trunks are assigned to Trunk Group 1 by default. For the four

groups you can choose IP first or PSTN first if programming PSTN and IP Trunk in the same group. This will take effect if call routing entry's destination has been set as Group choice

Group All is a special group that all trunks are included in.

3.34 UCD (Uniform Call Distribution) Group (or Hunt Group)

IG7600 supports 4 UCD Groups. Each UCD Group can have up to 50 members. There are three kinds of UCD Group mode – All Ring, Linear, and Distributed. For All Ring mode, incoming Trunk calls ring all member extensions simultaneously. For Linear mode, incoming call is put into a queue and then distributed from the first extension. For Distributed mode, it is the same as Linear but selection of an extension is uniformed.

If more than one call rings at the same time, the first agent to go off hook will be connected to the call that has been ringing the longest.

For unanswered Trunk call, it will be forwarded to a Reroute destination. The Reroute destination can be AA Menu, Voice Mail, Phone Extension or Virtual Extension.

The missed UCD Group calls are recorded in UCD Call Log. It records the last 100 missed UCD Group calls.

3.35 Wizard Setup

The IG7600 has a setup Wizard that provides the system administrator with a series of step-by-step operations. You can get in the wizard process from the entry shown on the main page.

When you start setup wizard you can configure the corresponding settings step by step. The following four items are supported.

- WAN Setting
- LAN Setting
- Wireless Basic
- Internet Time (include Manual Time Setting)

4. IG7600 Voice Extension Features

IG7600 follows SIP standard to serve SIP phones. Basically, telephone features that meets SIP standard can be applied in IG7600.

Smart Phone IP3054(-i), M62 and IP2061 phone support many phone features. But for adding some traditional KTS features that are not defined definitely in SIP protocol, some specified information are transmitted between IG7600 and IP2061/M62/IP3054(-i) Phones. This section introduces these special phone features. Some features are only for IP2061/ M62/IP3054(-i) phones and/or FXS phone.

The following features depend on whether the phone provides.

Feature	IP2061	M62	FXS	IP3054(-i)	Other SIP Phone
Agent Log On/Off – UCD Group	Yes	Yes	Yes	No	No
3-Way Conference	Yes	Yes	No	Yes	No
Alphanumeric Display	Yes	Yes	Depends	Yes	Depends
Automatic Callback Busy	Yes	Yes	No	No	No
Auto Hold	Yes	Yes	No	Yes	Depends
Call Fork	Yes	Yes	Yes	No	No
Call Forward – Direct	Yes	Yes	Yes	Yes	Depends
Call Forward – Busy	Yes	Yes	Yes	Yes	Depends
Call Forward – No Answer	Yes	Yes	Yes	Yes	Depends
Call Forward – DND	Yes	Yes	Yes	Yes	Depends
Call Forward – Follow Me	Yes	Yes	Yes	No	No
Call Hold	Yes	Yes	Yes	Yes	Depends
Call Log	Yes	Yes	No	Yes	Depends
Call Park	Yes	Yes	No	No	No
Call Park Answer	Yes	Yes	Yes	No	Yes
Call Pickup - Individual	Yes	Yes	Yes	No	Depends
Call Waiting	Yes	Yes	Yes	Yes	Depends
Caller Blocking	Yes	Yes	No	No	Depends
CO Flash	Yes	Yes	Yes	No	No
Conference (3-way)	Yes	Yes	Yes	Yes	Depends
COS Following	Yes	Yes	Yes	No	No
Default Setting	Yes	Yes	Yes	Yes	Depends
Distinctive Ringing	Yes	Yes	Partial	Yes	Depends
Do Not Disturb	Yes	Yes	Yes	Yes	Depends
DSS/EDM	IP2061 Only	Yes	No	No	No
Feature Key Programming	Yes	Yes	No	No	No
Hold Reminder	Yes	Yes	Yes	No	Depends
Hotline	Yes	Yes	Yes	No	Depends
LCD & Interactive Buttons	Yes	Yes	No	Yes	Depends
Live Recording	Yes	Yes	No	No	Depends
Multi-Line Appearance	Yes	Yes	No	Yes	Depends
Mute	Yes	Yes	No	Yes	Depends
On Hook Dialing	Yes	Yes	Depends	Yes	Depends
Page (All/Group) - Paging	Yes	Yes	Yes	Yes	Yes
Page (All/Group) - Paged	Yes	Yes	No	No	No

Feature	IP2061	M62	FXS	IP3054(-i)	Other SIP Phone
Page Answer	Yes	Yes	No	No	No
Page Allow / Deny	Yes	Yes	No	No	No
Phone Book	Yes	Yes	No	Yes	Depends
Phone Lock/Unlock	Yes	Yes	Yes	Yes	No
Plug and Play	Yes	Yes	Yes	Yes	No
Reminder Tone	Yes	Yes	Yes	No	Depends
Service Mode Switching	Yes	Yes	Yes	No	No
Transfer	Yes	Yes	Yes	Yes	Depends
Web Management	Yes	Yes	No	No	Depends
Volume Control	Yes	Yes	Depends	Yes	Depends

NOTE: the word “Depends” means that the features depend on whether the phone provides.

4.1 3-Way Conference

The Conference feature allows the user to connect two calls into a single conversation. IP2061/M62 can establish a 3-way conference on the phone. IP3054(-i) needs to use IG7600's resource to establish the 3-way conference call. IG7600 supports 1 set of 3-way conference for IP3054(-i).

4.2 Agent Log On/Off – UCD Group

Extensions can log on or log off from UCD group.

Enable Agent Log On feature, dial *91.

Disable Agent Log On feature, dial **91.

If an extension disables the Agent Log On feature, the extension should log off from all UCD groups it belongs to.

4.3 Alphanumeric Display

The IP Phone extension provides a graphic LCD that supports 64 alphanumeric characters. The LCD enhances many system features.

4.4 Automatic Callback Busy

IP2061/M62 supports Automatic Callback Busy. When the callee has no session resource, the caller will hear busy tone.

The caller can dial “6” to get the Automatic Callback Busy feature.

The confirmation tone will be heard and come back to idle status. When the callee is no longer in busy status, the caller will hear call back ring.

Remove the Callback Busy calls, dial *66.

4.5 Auto Hold

You may enable the feature to simplify call handling and avoid accidental “lost” calls. Hold will automatically place any call that is currently connected at your phone on hold whenever a Trunk line button is pressed.

4.6 Call Fork

IG7600 supports to ring another extension or an outside destination via IP Trunk simultaneously when the extension gets an incoming call. When the call is answered by one of the both parties, the call at the other party will stop ringing automatically.

For the Call Fork destination, IG7600 supports to have the second Fork destination. If the first destination is non-existed or busy, make the forking call to the second Forking Destination.

To Activate (Type: 0 – ICM, 1 – Outside, 2 – Both; Destination#: 1 – first, 2 – second)

*26 + Destination# + Type + Ext No

*26 + Destination# + Type + * + (PSWD) + * + Outside Number

To Cancel

**26 → cancel the both forking destination.

**261 → cancel the first forking destination.

**262 → cancel the second forking destination.

Call Fork is not applied to Operator call, Paging call and UCD call

4.7 Call Forward

Call Forwarding reroutes incoming calls from one extension to another destination. The destination of a call forward can be another extension, voicemail box or an outside phone number (External Call Forward; ECF).

IG7600 support the following feature access codes to program Call Forwards for IP2061/M62/IP3054(-i) and FXS. It includes a “Type” setting for each Call Forward. It can be programmed to “ICM”, “Outside” or “Both” (Type: 0 – ICM, 1 – Outside, 2 – Both).

Direct Call Forward:

Forward all of the calls without regard to the extension status.

To enable, dial *21 + Type + Ext/VAA/UCD No.

*21 + Type + * + (PSWD) + * + Outside Number

To disable, dial **21.

Busy Call Forward:

Forward the calls if the extension is busy.

To enable, dial *22 + Type + Ext/VAA/UCD No.

*22 + Type + * + (PSWD) + * + Outside Number

To disable, dial **22.

No Answer Call Forward:

Forward the calls if the extension doesn't answer the call within No Answer Time.

To enable, dial *23 + Type + Ext/VAA/UCD No + * + Time.

*23 + Type + * + (PSWD) + * + Outside Number + * + Time

To disable, dial **23.

DND Call Forward:

Forward the calls if the extension enabled DND.

To enable, dial *24 + Type + Ext/VAA/UCD No

*24 + Type + * + (PSWD) + * + Outside Number

To disable, dial **24.

Follow Me Call Forward:

Forwards calls at your extension to the extension where you are currently working.

To enable, dial *25 + Type + Ext No + * + Password

To disable, dial **25 + Ext No + * + Password

These Call Forward features can also be set/cancelled in web page of IP2061/M62.

4.8 Call Hold

Trunk and Intercom calls can be placed on hold at any extension. Any PSTN/IP line caller placed on hold will hear the Music On Hold. The held trunk can be resumed by other extensions by pushing Feature Key.

For the Single Line phone, it's to put a call on hold, press flash then hang up (optional). It's to return to the original call, press flash or pick up the phone.

4.9 Call Log

The IP2061/M62 and IP3054(-i) phone can store a call log for your reference. To access your call log, use the LCD menus. There are three types of Call Logs - Missed Calls, Received Calls, or Dialed Calls. To dial from a listing, press the soft keys corresponding to the LCD menus display.

4.10 Call Park / Call Park Answer

The feature allows you to “park” a call at IP2061/M62 extension. It also allows any extensions to retrieve a parked call. Calls are parked by pressing the Park feature key. System supports two methods in the Call Park application.

- a. If the Park key has a specified Call Park number, any extension can retrieve the parked call by pressing the Call Park code or pressing the Park feature key with the same Call Park number. System supports to have 4 Call Park numbers.
- b. If the Park key has no Call Park number, the extension user could pick up the parked call back by pressing the Call Park key. For other extensions, they can press the Park key without Call Park number at idle state. Then enter the extension number that parks the call.

4.11 Call Pickup – Individual

You may answer the calls at another specified extension. The feature allows you to easily access calls ringing via the feature access code.

*53 + Extension Number

4.12 Call Waiting

If Call Waiting is enabled for a specific IP2061/M62/IP3054(-i) station, an alert (muted ring) will be played on the called party when a second call is received and the extension is in use.

To enable Call Waiting, dial *98

If Call Waiting is disabled for a specific station, the station will return a busy tone to any calling party while the station is in use.

To disable Call Waiting, dial **98

4.13 Caller Blocking

IP2061/M62 can block up to 10 phone numbers from reaching you at your phone when a caller attempts to call you from one of these numbers.

4.14 CO Flash

FXO Line is programmed setting that will determine what flash timing will be presented to the CO/PBX when the extension issues a Hook-Flash command while connected to a FXO Line.

4.15 COS Following

You can temporarily change the individual Class of Service of each extension on a per call basis. You may want to do this when the user goes to the office of low-priority COS extension and try to make an outgoing call, the user can use the function to use their own COS.

When using the COS Following feature the station COS change will revert to the station's original COS after a one minute idle time-out.

To set COS Following, dial *55 + (phone number) + (password)

4.16 Distinctive Ringing

Distinctive ring cadences can be selected allowing adjacent users to discern which extension is ringing. It also provides different ring tones for intercom and trunk calls.

Every Trunk Line may be allocated one of the available Ring Types. When the feature is used, the specific ring type assigned to the Trunk Line is the ring type heard when the Trunk Line rings. The feature helps to identify the Trunk Line and the Trunk Group to which it belongs to.

4.17 Do Not Disturb (DND)

Extension users can enable DND to reject all incoming calls. The DND on an extension can be allowed or denied through the feature access code.

To enable the Do Not Disturb feature, dial *4.

To disable the Do Not Disturb feature, dial **4.

DND and FWD can be set independently. If multiple features are set at the same time, it is applied in the order of Direct FWD > DND > Busy/No Answer FWD.

4.18 DSS/EDM

IG7600 supports to provide the status of the extensions and trunk lines. The status can be shown on the LED of IP2061/M62's flexible keys. They support EDM modules that can have 24 more keys.

PS: basically the button lamp will light when the button's corresponding destination is busy, but when the destination is an IP3054(-i), the lamp will not lit under the same circumstance.

4.19 Feature Button Reset

The feature is used to reset all feature buttons to be the same as the current settings in IG7600.

To reset the Feature Buttons, dial *68 + (Password)

4.20 Feature Key Programming

Feature Keys can be programmed by phone users. A feature key can be programmed for line appearance.

To program a Feature Key, dial *70 + (Feature Key number: 01 – 04/28^(*)) + (Feature Key Type; 00 - 08) + Number

Feature Key Type:

- 00: Null; Number should be null.
- 01: Extension; Number can be an Extension or Virtual number.
- 02: Trunk; Number can be a PSTN, IP Trunk or Trunk Group number.
- 03: Call-Park; Number can be a Park number.
- 04: Feature Key; Number can be a feature access code
- 05: Others; Number could be an outside phone number.
- 06: Do Not Disturb; Number should be null.
- 07: Live Record
- 08: Virtual Mailbox key; Number can be a Virtual number.

Note: IP2061 and M62 supports EDM module, it provides 24 more keys for feature access.

4.21 Feature Reset

When the feature is activated, the extension will return the features that can be programmed through feature codes to default settings. It will affect the following options:

- Call Waiting enabled
- Paging Accept
- Default Feature Key Setting
- Phone Lock disabled
- Call Forward (Direct, Busy, No Answer, DND, Call Fork) disabled
- DND disabled
- Agent Log on
- Auto Answer disabled
- Distribution List clean

To activate the Default Setting feature, dial *69+ (Extension Password or Administrator Password).

4.22 Hold Reminder

IP2061/M62 provides a programmable timer to remind you that a call has been left on Hold. When enabled, you will hear one ring tone repeated each time the selected hold time expires.

4.23 Hotline

The feature allows an extension to automatically access a given resource each time the extension goes off hook. The resource can be any system directory number or outside phone number. It can access the desired resource from 0 to 8 seconds after the

extension goes off hook. The delay allows the user to dial another resource before the hotline takes effect.

If the “Hotline Delay Time” of FXS is 0, it can cancel the setting by pressing Flash key after making a hotline call. Then dial the feature access code.

To enable, dial *9* + (any Number) + * + Time //Time: 0~8 seconds; 0: immediately
To disable: **9*

4.24 Live Recording (One Touch Record)

The Live Recording feature can be activated by using the Live Recording feature key on your telephone. When activated during an active call, the Live Recording feature will record the conversation as a voicemail message. After finishing the recording, the recording will be as a new leaving message into the extension’s mailbox.

During the recording, the LED of the Live Recording key is lit. Press the key when it’s lit, it will stop the recording. When the call is held or released, it stops the recording also. After stopping the recording, it disallows to enable it again in 10 seconds.

It allows having 4 Voice Recording calls maximum simultaneously. The maximum recording time is 30 minutes. Live Recording feature isn’t applied in the conference call.

4.25 Multi-Line Appearance

IG7600 provides PSTN line and IP line status to IP2061/M62, it also provides PSTN line or IP Line status to IP3054(-i).

Trunk LED:

Dark	–	the line is Null or Idle
Fast Flash	–	the line is ringing
Slow Flash	–	the line is held
Wink Flash	–	the line is held recall
Lit	–	the line is in talk

4.26 Mute

The Mute feature allows the user to disable the handset transmitter or the speakerphone microphone.

4.27 On Hook Dialing

IP2061/M62 phone extensions may make outgoing calls without lifting the handset and monitor the dialing status through the built-in speaker. The button lamp is lit when dialing.

4.28 Paging (All/Group) / Paging Answer

Paging function can be initiated from any extension in the IG7600. Dialing a Paging Group Directory number allows an extension to broadcast a page to all assigned members of the selected paging group.

IG7600 provides a Paging Range to define the paged extensions.

- LAN: the all assigned extensions on LAN side are paged.
- WAN: the all assigned extensions on WAN side and the extensions are connected to the same router with IG7600 are paged.

- Both: the all extensions on LAN and WAN are paged.

When receiving a Paging call, the paged IP2061/M62 extension can answer the call by pressing the “Answer” soft button.

IG7600 provides 3 Paging Group. Each Group can have 49 extensions.

4.29 Paging Allow/Deny

You can block one-way pages (internal, group, and all page) over the IP phone speaker by dialing the Page Deny code.

To enable Paging Deny, dial *99

To disable Paging Deny, dial **99

4.30 Phone Book

The IP2061/M62/IP3054(-i) provides users with a Phone Book, with each entry containing a user programmed Phone Number and User Name. You can also edit your Mobile Number and Display Name on an IP3054(-i).

4.31 Phone Lock/Unlock

You can use the Lock feature to prevent unauthorized trunk calls from being made from extension. A locked extension continues to receive incoming calls, and a user can continue to place and receive intercom calls. Outgoing Trunk calls are blocked.

To lock the phone, dial *97 + (Password)

To unlock the phone, dial **97 + (Password)

4.32 Plug & Play

While connecting IP2061/M62/ to IG7600's LAN port, it will register to IG7600 automatically. IG7600 will also assign a valid extension number to the phone directly.

When IP2061/M62 and IG7600 connect to the same Router, IG7600 will assign a valid extension number to the IP2061/M62 also.

IG7600 will do Plug & Play with IP3054(-i) only when the pairing button is pushed.

4.33 Reminder Tone

Play stutter dial tone to remind the user that DND or DCFW is enabled at your extension. If having MWI, it also plays the stutter dial tone

4.34 Service Mode Switching

The feature can be used by Operator phone only. Operator uses a programmed key or by feature access code to change IG7600 Service Mode.

*791: assign to Day mode.

*792: assign to Night mode

*793: assign to Time mode

IG7600 also provide a feature code “*790” to switch the Service mode. The rule is

- If “Service Mode” setting is “Day”, it changes the setting to “Night”.
- If “Service Mode” setting is “Night”, it changes the setting to “Day”

- If “Service Mode” setting is “Time”, it changes the Service Mode temporarily. The change will be clean when it reaches the time in “Time” service mode.

When the “*790” is programmed on the line key, it shows the current operating mode on the LED indication (the LED is lighten on Night time, dark on Day mode).

4.35 Transfer / Recall

Transfer is used to deliver calls at your extension to another extension. It means that calls can be routed to IG7600’s system destinations: an extension or an outside phone number.

When transferring a trunk call to another extension, if the call is not picked up within 30 seconds, the call will be recalled back to the transferring extension.

IP2061/M62/IP3054(-i) Phone supports Blind Transfer, Unscreened Transfer, and Screened Transfer.

FXS phone supports Unscreened Transfer, and Screened Transfer.

4.36 Volume Control

The IP2061/M62 is equipped with a volume control that is used to adjust the various volume settings of the telephone. The following functions can be adjusted:

- Ringing
- Handset
- Speaker
- Headset

4.37 Web Management

The IP2061/M62 is supported two-level web management. The Administrator has several pages to configure the IP phone. User is able to configure personal information by himself. User level is not including these two pages – software update, SIP configuration.

5. Quick Installation

This Quick Installation helps you to install the product quickly and easily. For detailed instructions on installation, and further setup option, please refer to the configuration chapter.

5.1 Connecting the IG7600

- (1) Place IG7600 in an optimum location.
- (2) Connect the included Category 5 Ethernet network cable to the IG7600's LAN port or WAN port. Then connect the other end of the network cable to a switch or hub or directly your PC's Ethernet port. The IG7600 will then be connected to your 10/100/1000 network.
- (3) Connect the AC power adapter to the IG7600's Power port. Only use the power adapter supplied with the IG7600. Use of a different adapter may result in product damage.
- (4) Now that you have connected the IG7600 to your network, you are ready to begin setting it up. The Setup Wizard will take you through all necessary steps to help you to configure the IG7600 easily.

5.2 Wizard Setup

This system administrator can configure the IG7600 remotely or locally via a Web Browser. When IG7600 return to default factory settings, its LAN address is "192.168.123.1", and username is "admin1234", password is "adminxxxxxx" ("xxxxxx" are the last 6 characters of IG's MAC Address with lower case).

Click "Wizard" on IG's home page to start the setup wizard. It allows system administrator to select the appropriate operation mode and configure the corresponding setting step by step. The following four items are supported.

- WAN Settings
- LAN Settings
- Wireless Basic
- Internet Time

In the configuration, the administrator presses "Next" or "Cancel" button to choose the setting item. If pressing "Save & Reboot", the settings will be saved and the IG7600 will be rebooted automatically.

5.2.1 WAN Setting

There are three modes that you can configure WAN IP address: Static IP mode, DHCP mode, and PPPoE mode. You can also select to enable or disable Firewall.

Note that Network Address Translation (NAT) function is default enabled and is not shown on the page to prevent it from being disabled.

This page shows that the current existing WAN interface in this system is Static IP mode. (Figure 5-1)

The screenshot shows the 'WAN Settings' configuration page in a web interface. On the left is a vertical navigation menu with links: Wizard, Device Info, Advanced Setup, Wireless, Voice, Management, Diagnostics, and Logout. The main content area is titled 'WAN Settings' and contains the instruction: 'Enter information provided to you by your ISP to configure the WAN IP settings.' Below this is a dropdown menu set to 'Static IP'. There are five text input fields: 'IP Address' (172.16.15.46), 'Subnet Mask' (255.255.224.0), 'Gateway' (172.16.0.2), 'Static DNS 1' (202.103.24.68), and 'Static DNS 2' (202.103.44.150). Below these fields is a section titled 'WAN Services' with an 'Enable Firewall' checkbox that is unchecked. At the bottom right are 'Next' and 'Cancel' buttons.

Figure 5-1. Wan Settings (Static IP mode)

The Dynamic Host Configuration Protocol (DHCP) is an Internet protocol for automating the configuration of computers that use TCP/IP. DHCP can be used to automatically assign IP addresses, to deliver TCP/IP stack configuration parameters such as the subnet mask and default router, and to provide other configuration information.

This page shows the current existing WAN interface in this system is DHCP mode (Figure 5-2).

The screenshot shows the 'WAN Settings' configuration page in a web interface, similar to Figure 5-1 but for DHCP mode. The left navigation menu is identical. The main content area is titled 'WAN Settings' with the same instruction: 'Enter information provided to you by your ISP to configure the WAN IP settings.' The dropdown menu is now set to 'DHCP'. There is one text input field for 'HostName' containing 'IG7600'. Below it are two radio buttons: 'Automatic Assigned DNS' (which is selected) and 'Static DNS'. Below these is a section titled 'WAN Services' with an 'Enable Firewall' checkbox that is unchecked. At the bottom right are 'Next' and 'Cancel' buttons.

Figure 5-2. Wan Settings (DHCP mode)

The Point-to-Point Protocol over Ethernet (PPPoE) requires a user name and password that your ISP has provided to you to establish your connection. This page shows that the current existing WAN interface in this system is PPPoE mode (Figure 5-3).

WAN Settings

Enter information provided to you by your ISP to configure the WAN IP settings. PPP usually requires that you have a user name and password to establish your connection. In the boxes below, enter the user name and password that your ISP has provided to you.

PPPoE

PPP Username: Tecomtest

PPP Password: ••••••••

Authentication Method: AUTO

☒ Automatic Assigned DNS
☐ Static DNS

WAN Services

Enable Firewall ☐

Next Cancel

Figure 5-3. Wan Settings (PPPoE mode)

5.2.2 LAN Setting

This page (Figure 5-4) allows you giving LAN IP and Subnet Mask for LAN interface. You can also select to enable or disable DHCP Server and configure related settings for that mode.

LAN Settings

Configure IP Address and Subnet Mask for LAN interface

IP Address: 192.168.123.1

Subnet Mask: 255.255.255.0

DSP IP Address: 192.168.123.254

☐ Disable DHCP Server
☒ Enable DHCP Server

Start IP Address: 192.168.123.2

End IP Address: 192.168.123.200

Start IP Camera Address: 192.168.123.201

End IP Camera Address: 192.168.123.208

Leased Time (hour): 24

☐ Configure the second IP Address and Subnet Mask for LAN interface

Back Next Cancel

Figure 5-4. LAN Settings

5.2.3 Wireless Basic

The page (Figure 5-5) allows you to configure basic feature of the wireless LAN interface. You can enable or disable the wireless LAN interface, hide the network from active scanning, set the wireless network name (also known as SSID), and restrict the channel set based on country requirement.

Figure 5-5. Wireless Basic

5.2.4 Internet Time

The page allows you to configure the NTP time server, so the IG7600 can have correct system time. It is useful such as reviewing the System Log. (Figure 5-6).

Figure 5-6. Internet Time – Automatic

5.2.5 Wizard Setup Finished

When you click “Save & Reboot” Button at above page, the wizard setup will save your setting and the wizard setup will be finished. Then the system will reboot as shown below.(Figure 5-7)

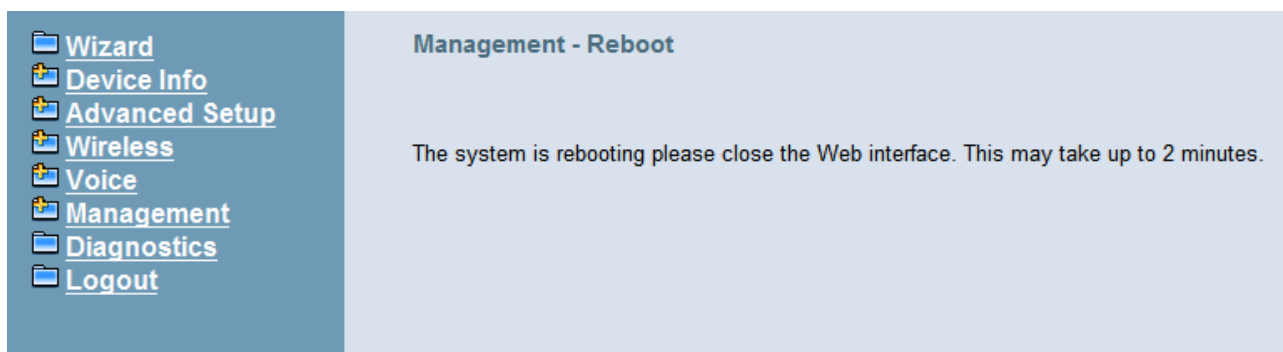


Figure 5-7. Wizard Setup finished

Congratulations! The wizard setup of the IG7600 is complete.

For additional details, advanced configuration, or any other questions, refers to the next chapter.

6. Configuration

6.1 Setup

- Connect the IG7600 to PC.
- The default LAN IP of the IG7600 is 192.168.123.1.
- The default WAN IP of the IG7600 depends on upper router's DHCP server.
- For web login, the default user name is "admin1234"; the default password is "adminxxxxxx". ("xxxxxx" are the last 6 characters of IG's MAC Address with lower case.)
- For telnet login, the name/password is the same as web login.

6.2 Establish the Connection

Enter the IP address of IG7600 from the Web Browser.

A Dialogue Box will pop up to request the user to enter username and password. (Figure 6-1)



Figure 6-1. Authentication

Please enter the management username/password into the fields then click the OK button (default username/password is admin1234/adminxxxxxx. "xxxxxx" are the last 6 characters of IG's MAC Address.)

When the authentication is OK, the home page "*Device Info – Summary*" will be displayed. In the Web Configuration, it is divided into eight categories (Figure 6-2):

- Wizard
- Device Info
- Advanced Setup
- Wireless

- Voice
- Management
- Diagnostics
- Logout

Device Info

Software Version:	V0.3.3.21
Bootloader (CFE) Version:	1.0.37-102.11
Wireless Driver Version:	5.10.120.0.cpe4.402.9
Serial Number:	198402912
MAC Address:	00:19:15:72:CE:55
System Up Time:	0 day, 0 hour, 18 minutes

LAN Info

LAN IP Address:	192.168.123.1
Subnet mask:	255.255.255.0
WLAN SSID (Primary):	IG7600-72CE55

WAN Info

Primary WAN Info

WAN IP Address:	172.16.15.50
Subnet mask:	255.255.224.0
Default Gateway:	172.16.0.2
Primary DNS Server:	202.103.44.150
Secondary DNS Server:	202.103.24.68
Type:	Static
Firewall Status:	Disabled
Connection Status:	Connected

DDNS Info

Domain name	IP Address	Last Update Time	DDNS Status
-------------	------------	------------------	-------------

Date / Time

Wednesday, 11 December 2013, 18:17:22

Figure 6-2. Device Info - Summary

6.3 Device Info

This information reflects the current Status of IG7600 connection. It includes the following topics:

- Summary
- Statistics
- Route
- ARP
- DHCP

6.3.1 Summary

In the page (Figure 6-2) you can get the information reflects the current software version and connection status. It includes Device Info, Network Info and Date/Time.

For Network Info, it includes the three parts:

- LAN Info: Ethernet LAN status
- Primary WAN Info: Ethernet WAN status
- Secondary WAN Info: Mobile Network status; shown when it exists.

6.3.2 Statistics

It's separated into two parts: LAN and WAN.

6.3.2.1 LAN

In this page (Figure 6-3) you can get the network statistics of the LAN and Wireless LAN interface. Click "Reset Statistics" to clean up all network statistics.

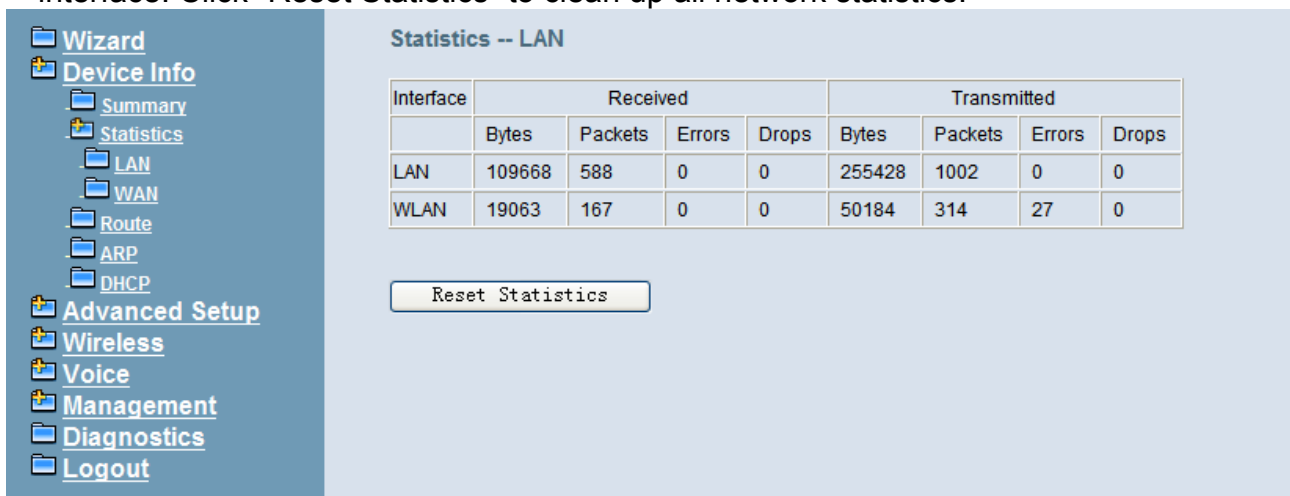


Figure 6-3. Device Info – Statistics – LAN

6.3.2.2 WAN

In this page (Figure 6-4) you can get the network statistics of the WAN interface. Click "Reset Statistics" to clean up all network statistics.

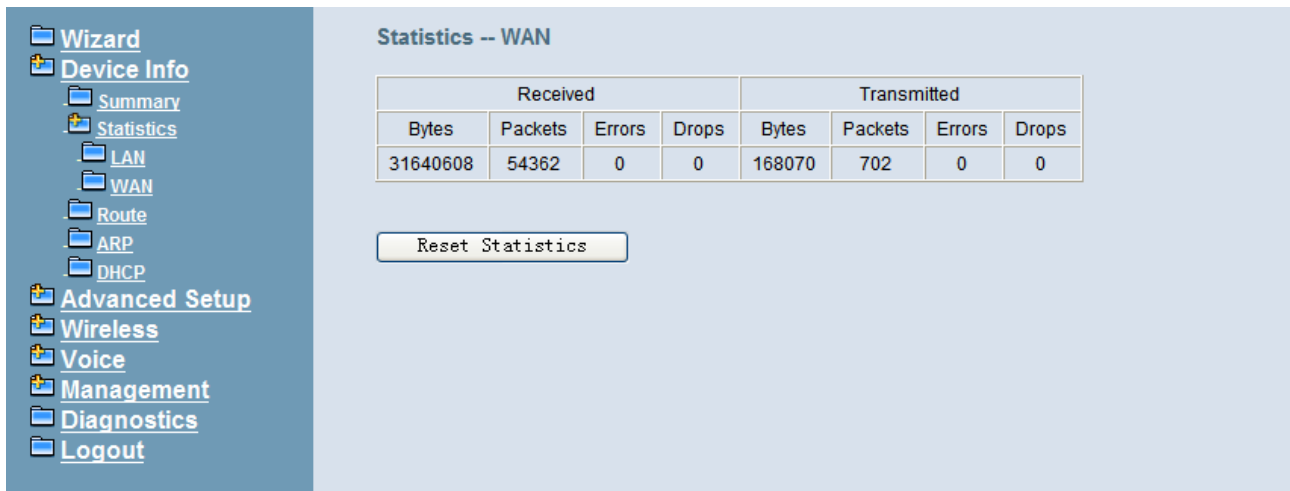


Figure 6-4. Device Info – Statistics – WAN

6.3.3 Route

In this page you can get the IP route information of the device. (Figure 6-5)

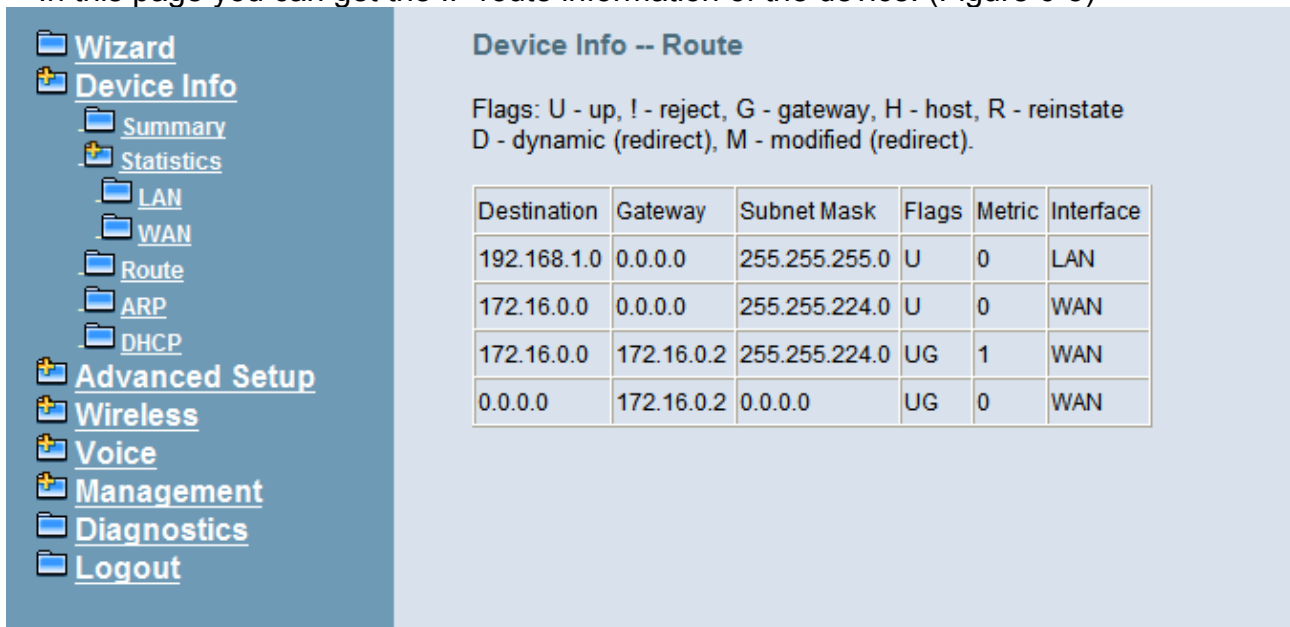


Figure 6-5. Device Info – Route

6.3.4 ARP

This page shows an ARP table which maps IP network addresses to hardware addresses used by data link level protocol. (Figure 6-6)

Wizard

Device Info

Summary

Statistics

LAN

WAN

Route

ARP

DHCP

Advanced Setup

Wireless

Voice

Management

Diagnostics

Logout

Device Info -- ARP

IP address	Flags	HW Address	Device
192.168.1.5	Complete	00:80:F0:8D:20:BF	LAN
172.16.0.2	Complete	00:19:15:08:00:20	WAN
192.168.1.2	Complete	00:19:15:6E:BE:C1	LAN
172.16.18.99	Complete	00:0C:29:3E:B1:4F	WAN
172.16.30.13	Complete	00:E0:4C:B3:9C:5C	WAN
172.16.1.144	Complete	00:E0:42:03:45:CF	WAN
172.16.1.70	Complete	E0:CB:4E:DD:7E:9A	WAN
172.16.1.241	Complete	00:14:78:20:B6:59	WAN
192.168.1.3	Complete	E8:8D:28:F1:80:B2	LAN
172.16.1.47	Complete	60:EB:69:73:64:27	WAN
172.16.2.100	Complete	00:E0:4C:B4:AE:AF	WAN
172.16.10.254	Complete	00:19:E0:2E:E6:17	WAN
172.16.1.131	Complete	BC:AE:C5:75:60:1C	WAN
172.16.1.21	Complete	00:1F:29:86:D5:4E	WAN
172.16.1.137	Complete	00:22:15:88:C7:41	WAN

Figure 6-6. Device Info – ARP

6.3.5 DHCP

This page shows a DHCP Leases table which shows the all used IP addresses under IG7600's DHCP Server. (Figure 6-7)

Wizard

Device Info

Summary

Statistics

LAN

WAN

Route

ARP

DHCP

Advanced Setup

Wireless

Voice

Management

Diagnostics

Logout

Device Info -- DHCP Leases

Hostname	MAC Address	IP Address	Expires In
	20:59:a0:03:7a:a0	192.168.1.2	21 hours, 1 minutes, 44 seconds
	00:01:02:05:04:58	192.168.1.10	22 hours, 10 minutes, 56 seconds
	04:18:0f:07:77:75	192.168.1.3	23 hours, 19 minutes, 2 seconds
	c4:6a:b7:50:69:28	192.168.1.4	23 hours, 22 minutes, 58 seconds
	00:11:22:33:44:55	192.168.1.5	18 hours, 27 minutes, 8 seconds
android-6b04f2e2ae2be56d	74:2f:68:28:7d:36	192.168.1.6	0 seconds
	98:4b:4a:80:3b:b7	192.168.1.7	20 hours, 30 minutes, 37 seconds
	00:0a:6b:a3:d2:12	192.168.1.8	0 seconds
	98:4b:4a:3d:09:8d	192.168.1.9	20 hours, 51 minutes, 37 seconds

Figure 6-7. Device Info – DHCP

6.4 Advanced Setup

Advanced Setup allows system administrator to configure the following topics:

- WAN
- LAN
- NAT
 - Virtual Servers
 - Port Triggering
 - DMZ Host
- Security
 - IP Filtering
 - Outgoing
 - Incoming
- Parental Control
 - Time Restriction
 - URL Filter
- Quality of Service
 - DSCP Marking
 - Bandwidth Control
- Routing
 - Static Route
- Dynamic DNS
- Upnp

6.4.1 WAN

There are three modes that you can give WAN IP address to IG7600: Static IP mode, DHCP mode and PPPoE mode. You can also enable or disable Firewall.

Network Address Translation (NAT) allows you to share one public WAN IP address for multiple computers on your LAN side. In IG7600, NAT is enabled by default and is not shown on the page to prevent it from being disabled.

This page shows the setting of WAN interface which is Static IP mode (Figure 6-8).

IP Settings

Configure the IP Address and Subnet Mask for WAN interface. "Save and Reboot" button saves the WAN configuration data and make the new configuration effective.
These settings as following will take effect after the unit reboot.

Network Type: Static

IP address: 172.16.15.46 Subnet mask: 255.255.224.0

Primary DNS: 202.103.24.68 Secondary DNS: 202.103.44.150

Gateway: 172.16.0.2 Enable Firewall: DISABLE

Static IP

IP Address: 172.16.15.46

Subnet Mask: 255.255.224.0

Gateway: 172.16.0.2

Static DNS 1: 202.103.24.68

Static DNS 2: 202.103.44.150

WAN Services

Enable Firewall ☐

Save and Reboot Save Settings

Figure 6-8. Advanced – WAN (Static IP Mode)

The Dynamic Host Configuration Protocol (DHCP) is an Internet protocol for automating the configuration of computers that use TCP/IP. DHCP can be used to automatically assign IP addresses, to deliver TCP/IP stack configuration parameters such as the subnet mask and default router, and to provide other configuration information.

This page shows the setting of WAN interface which is DHCP mode (Figure 6-9).

Wizard
Device Info
Advanced Setup
 WAN
 LAN
 NAT
 Security
 Parental Control
 Quality of Service
 Routing
 Dynamic DNS
 Upnp
 Wireless
 Voice
 Management
 Diagnostics
 Logout

IP Settings
Configure the DHCP for WAN interface. "Save and Reboot" button saves the WAN configuration data and make the new configuration effective.
These settings as following will take effect after the unit reboot.

Network Type: Static
IP address: 172.16.15.46 Subnet mask: 255.255.224.0
Primary DNS: 202.103.24.68 Secondary DNS: 202.103.44.150
Gateway: 172.16.0.2 Enable Firewall: DISABLE

DHCP
HostName: IG7600

☒ Automatic Assigned DNS
☐ Static DNS

WAN Services
Enable Firewall ☐

Save and Reboot Save Settings

Figure 6-9. Advanced – WAN (DHCP Mode)

The Point-to-Point Protocol over Ethernet (PPPoE) requires a user name and password that your ISP has provided to you to establish your connection. This page shows the setting of WAN interface which is PPPoE mode (Figure 6-10).

Wizard
Device Info
Advanced Setup
 WAN
 LAN
 NAT
 Security
 Parental Control
 Quality of Service
 Routing
 Dynamic DNS
 Upnp
 Wireless
 Voice
 Management
 Diagnostics
 Logout

IP Settings
PPP usually requires that you have a user name and password to establish the connection. In the boxes below, enter the user name and password that your ISP has provided to you.
These settings as following will take effect after the unit reboot.

Network Type: Static
IP address: 172.16.15.46 Subnet mask: 255.255.224.0
Primary DNS: 202.103.24.68 Secondary DNS: 202.103.44.150
Gateway: 172.16.0.2 Enable Firewall: DISABLE

PPPoE
PPP Username: tecomaccount
PPP Password:
Authentication Method: AUTO

☒ Automatic Assigned DNS
☐ Static DNS

WAN Services
Enable Security ☐

Save and Reboot Save Settings

Figure 6-10. Advanced – WAN (PPPoE Mode)

6.4.2 LAN

It allows you to set LAN IP and Subnet Mask for LAN interface. A DSP IP address can be configured for FXO/FXS application. You can also enable or disable DHCP Server and configure related settings. End IP Camera Address cannot be configured; it is generated automatically when you configure the Start IP Camera Address. The “Static IP Lease List” allows to program 32 entries to have the fixed IP address for the specified devices. If needed, it can also configure the second IP address and Subnet Mask for the LAN interface (Figure 6-11).

Info: If the DHCP Pool is changed, and the new “Start IP Address” is bigger than the older one or the new “End IP Address” is smaller than the older one, the Static IP Lease List will be cleared automatically.

LAN Settings
Configure the IP Address and Subnet Mask for LAN interface. "Save and Reboot" button saves the LAN configuration data to make the new configuration effective.
These settings as following will take effect after the system reboot.

IP address:	192.168.123.1	Subnet mask:	255.255.255.0
Dsp IP address:	192.168.123.254	Enable DHCP Server:	ENABLE
Start IP Address:	192.168.123.2	End IP Address:	192.168.123.200
Leased Time:	24	Enable Secondary IP:	DISABLE
Secondary IP address:		Secondary Subnet mask:	

IP Address : 192.168.123.1
Subnet mask: 255.255.255.0
DSP IP Address: 192.168.123.254

☐ Disable DHCP Server
☒ Enable DHCP Server

Start IP Address: 192.168.123.2
End IP Address: 192.168.123.200
Start IP Camera Address: 192.168.123.201
End IP Camera Address: 192.168.123.208
Leased Time (hour): 24
Static IP Lease List: (A maximum 32 entries can be configured)

MAC Address	IP Address	Remove
<input type="button" value="Add Entries"/> <input type="button" value="Remove Entries"/>		

☐ Configure the second IP Address and Subnet Mask for LAN interface

Figure 6-11. Advanced – LAN

6.4.3 NAT

It's separated into three parts: Virtual Servers, Port Triggering, and DMZ Host.

6.4.3.1 Virtual Servers

Virtual Server allows you to direct incoming traffic from WAN side identified by Protocol and External port to the internal server with private IP address on the LAN side. The “Internal Port” can be modified if the “External Port” needs to be converted to a different port number used by the server on the LAN side. The remote IP should be specified in the table to allow the access. A maximum 32 entries can be configured. (Figure 6-12, Figure 6-13)

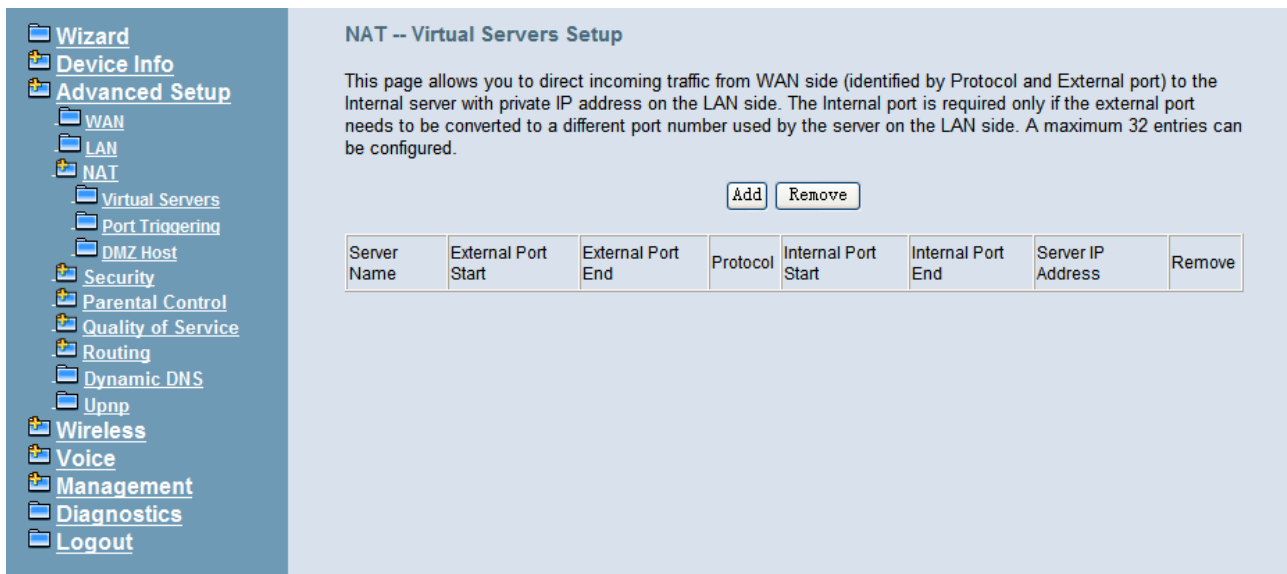


Figure 6-12. Advanced – NAT – Virtual Servers

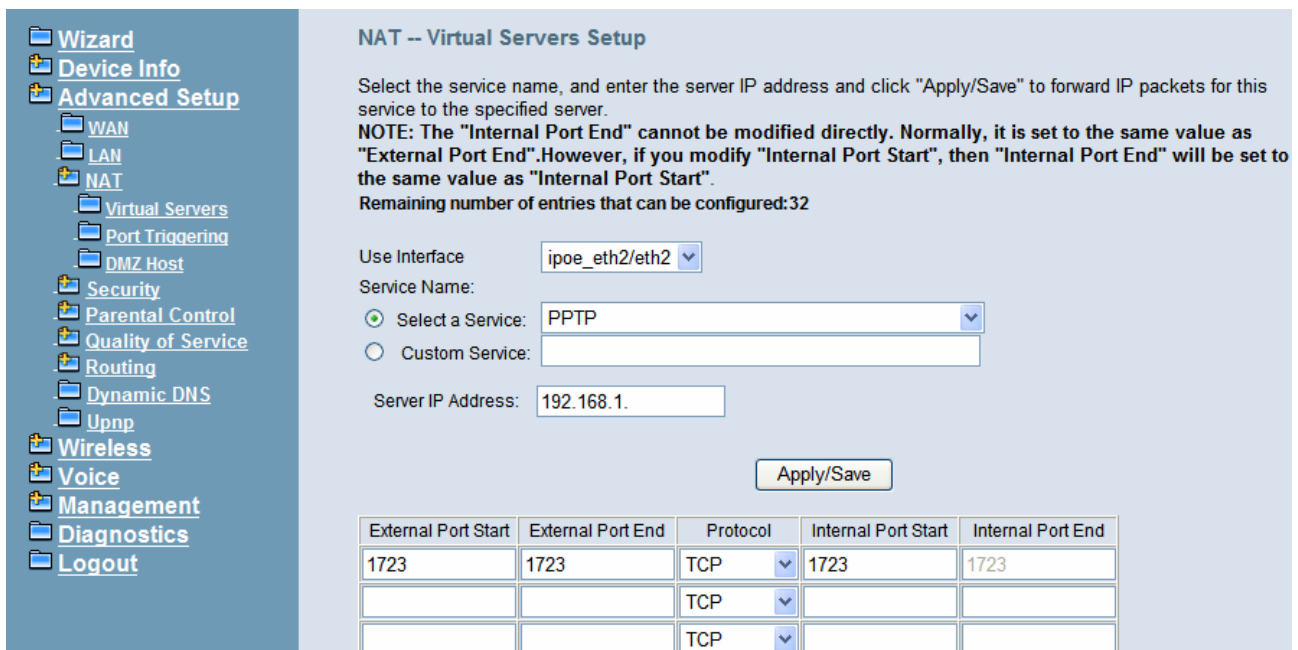


Figure 6-13. Advanced – NAT – Virtual Servers – Add

6.4.3.2 Port Triggering

Some applications require that specific ports in the IG7600's firewall opened for access by the remote parties. Port Triggering dynamically opens up the "Open Ports" in the firewall when an application on the LAN initiates a TCP/UDP connection to a remote party using the "Trigger Ports". IG7600 allows the remote party from the WAN side to establish new connections back to the application on the LAN side using the "Open Ports". A maximum 32 entries can be configured. (Figure 6-14, Figure 6-15)

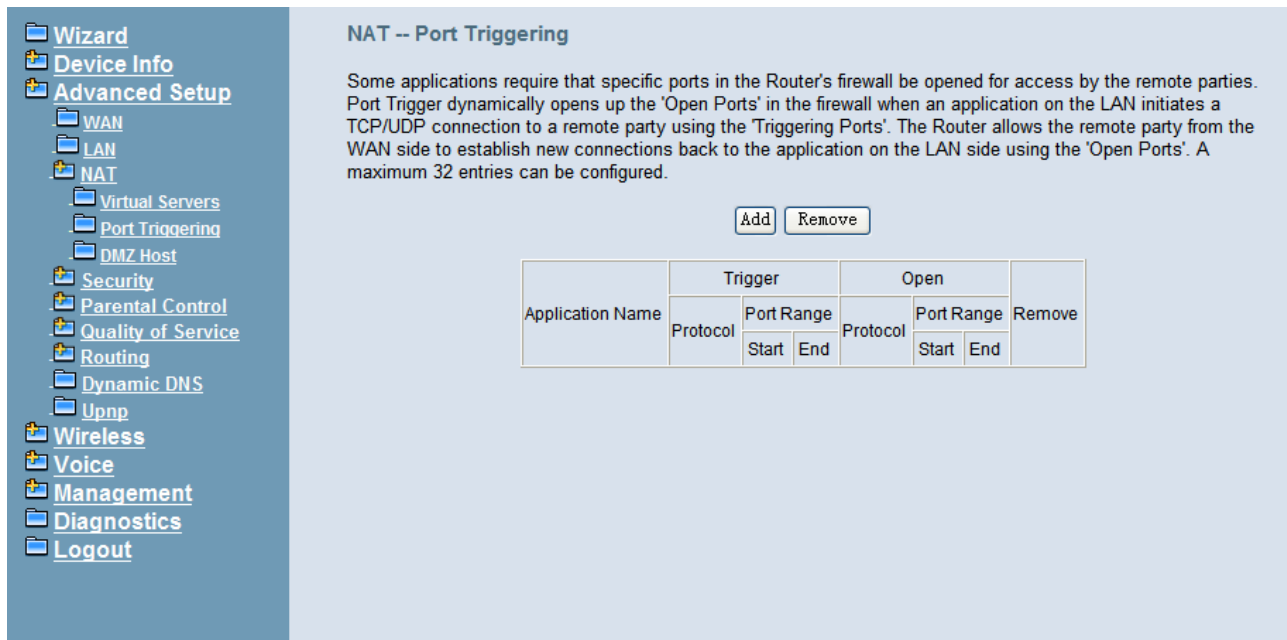


Figure 6-14. Advanced – NAT – Port Triggering

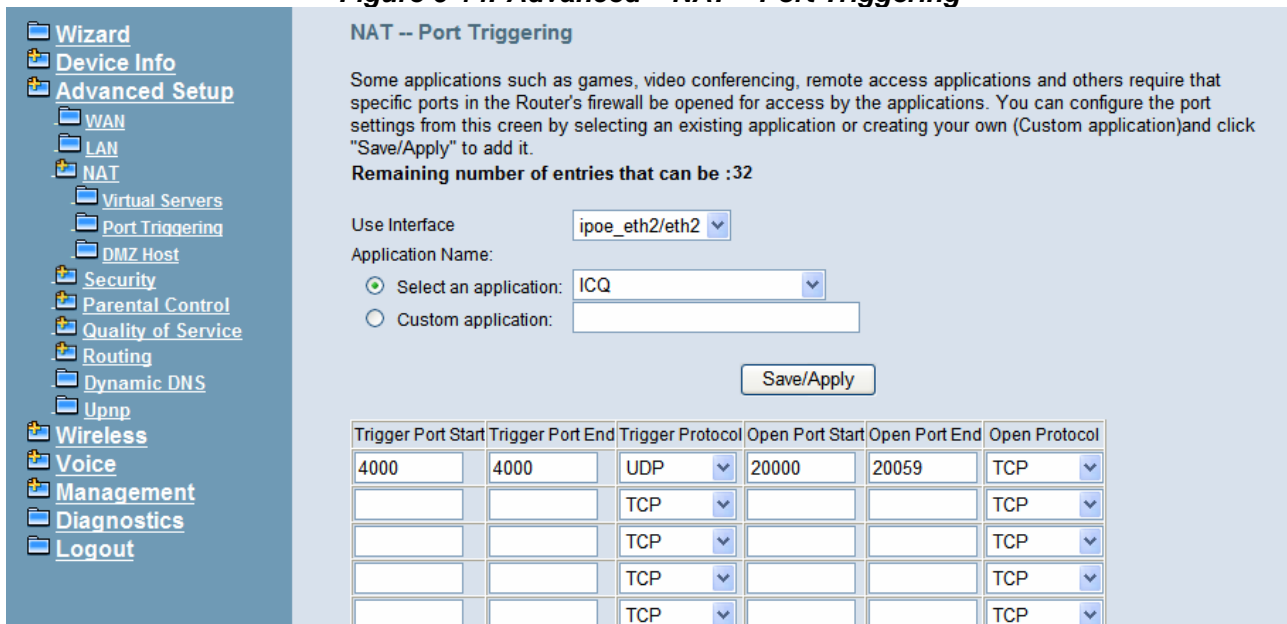


Figure 6-15. Advanced – NAT – Port Triggering – Add

6.4.3.3 DMZ Host

IG7600 will forward IP packets that do not belong to any of the applications configured in the Virtual Servers table to the DMZ host computer. Enter the computer's IP address and click "Save Settings" to activate the DMZ host. Clear the IP address field and click "Save Settings" to deactivate the DMZ host. (Figure 6-16)

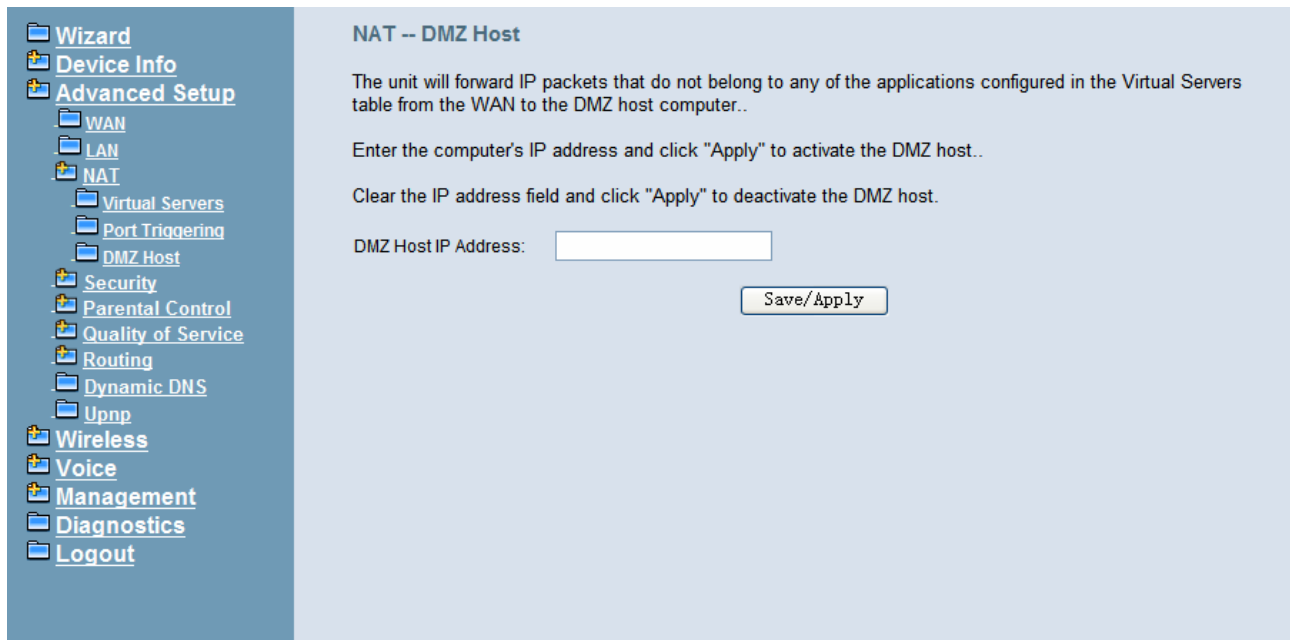


Figure 6-16. Advanced – NAT – DMZ

6.4.4 Security

It supports IP Filtering Setup. It's separated into two parts: Outgoing and Incoming.

6.4.4.1 IP Filtering - Outgoing

It allows the administrator to create a filter rule to identify outgoing IP traffic by specifying a new filter name. At least one condition is needed. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. (Figure 6-17, Figure 6-18)

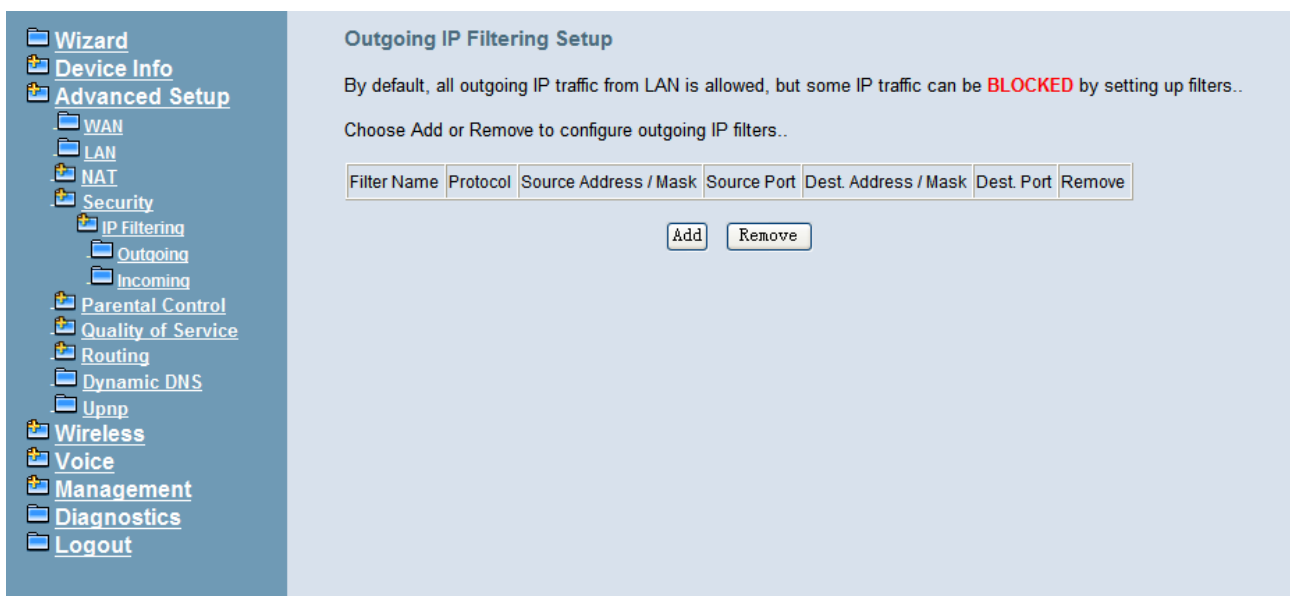


Figure 6-17. Advanced – Security – IP Filtering – Outgoing

Figure 6-18. Advanced – Security – IP Filtering – Outgoing – Add

6.4.4.2 IP Filtering - Incoming

It allows the administrator to create a filter rule to identify incoming IP traffic by specifying a new filter name. At least one condition is needed. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. (Figure 6-19, Figure 6-20)

By default, all incoming IP traffic from the WAN will be blocked if it is not consistent with the incoming filter rules. In fact, IG7600 has opened some necessary ports such as web port, sip port, and rtp port, to make sure that voice application can communicate well.

Filter Name	Protocol	Source Address / Mask	Source Port	Dest. Address / Mask	Dest. Port	Remove

Figure 6-19. Advanced – Security – IP Filtering – Incoming

Figure 6-20. Advanced – Security – IP Filtering – Incoming – Add

6.4.5 Parental Control

It's separated into two parts: Time Restriction, and URL Filter.

6.4.5.1 Time Restriction

The administrator can add time restriction to a special LAN device connected to IG7600. The "Browser's MAC Address" automatically displays the MAC address of the LAN device where the browser is running. To restrict other LAN device, click the "Other MAC Address" button and enter the MAC address of the other LAN device. (Figure 6-21, Figure 6-22)

Username	MAC	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Start	Stop	Remove
<div>Add Remove</div>											

Figure 6-21. Advanced – Parental Control – Time Restriction

Access Time Restriction

This page adds time of day restriction to a special LAN device connected to the Router. The 'Browser's MAC Address' automatically displays the MAC address of the LAN device where the browser is running. To restrict other LAN device, click the "Other MAC Address" button and enter the MAC address of the other LAN device. To find out the MAC address of a Windows based PC, go to command window and type "ipconfig /all".

User Name

☒ Browser's MAC Address

☐ Other MAC Address

(xxxxxxxxxxxx)

Days of the week	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Click to select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Start Blocking Time (hh:mm)

End Blocking Time (hh:mm)

Figure 6-22. Advanced – Parental Control – Time Restriction – Add

6.4.5.1 URL Filter

The administrator can add 100 entries maximum to include/exclude the URL address and Port number. Choose "Include" means the user can only connect to the URL that you add. Choose "Exclude" means the user cannot connect to the URL that you add. "Include" and "Exclude" are exclusive. The all entries are for the selected type. (Figure 6-23, Figure 6-24).

URL Filter -- Please select the list type first then configure the list entries. Maximum 100 entries can be configured..

URL List Type: ☐ Exclude ☐ Include

Address	Port	Remove
<input type="button" value="Add"/> <input type="button" value="Remove"/>		

Figure 6-23. Advanced – Parental Control – URL Filter

Figure 6-24. Advanced – Parental Control – URL Filter – Add

6.4.6 Quality of Service

It's separated into two parts: DSCP Marking, and Bandwidth Control

6.4.6.1 DSCP Marking

IP QoS is applied to the traffic from LAN to WAN; the traffic from WAN to LAN will not be applied. (Figure 6-25)

If "Enable DSCP Mark" checkbox is selected, choose a default DSCP mark to automatically mark incoming traffic without reference to a particular classifier. Click "Save Settings" button to save it. Note: If "Enable DSCP Mark" checkbox is not selected, all QoS will be disabled for all interfaces. The default DSCP mark is used to mark all egress packets.

Figure 6-25. Advanced – Quality of Service – DSCP Marking

6.4.6.2 Bandwidth Control

Bandwidth Control allows you to control WAN port's upstream bandwidth according to your settings, and it can ensure the highest priority IP packet traffic throughput. By default,

all voice packets have been queued in the highest IP packets, and the others have been queued in the normal IP packets if they have not been set in the traffic class rule.

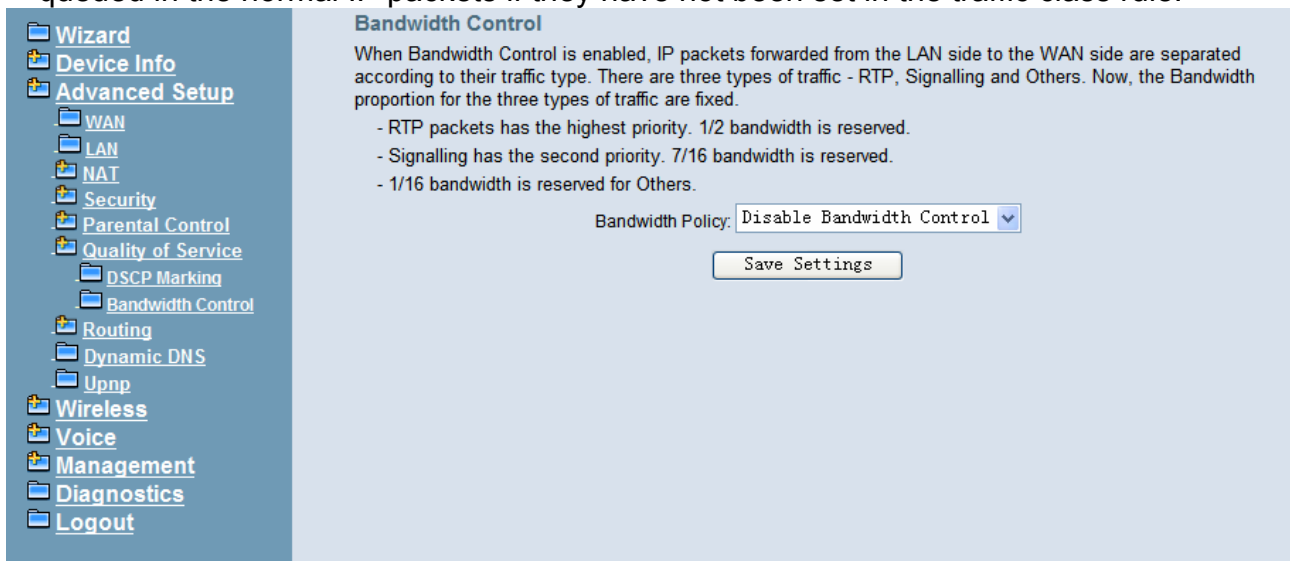


Figure 6-26. Advanced – Quality of Service – Bandwidth Control

6.4.7 Routing

6.4.7.1 Static Route

The Static Route allows you to add special routing rules into routing table.

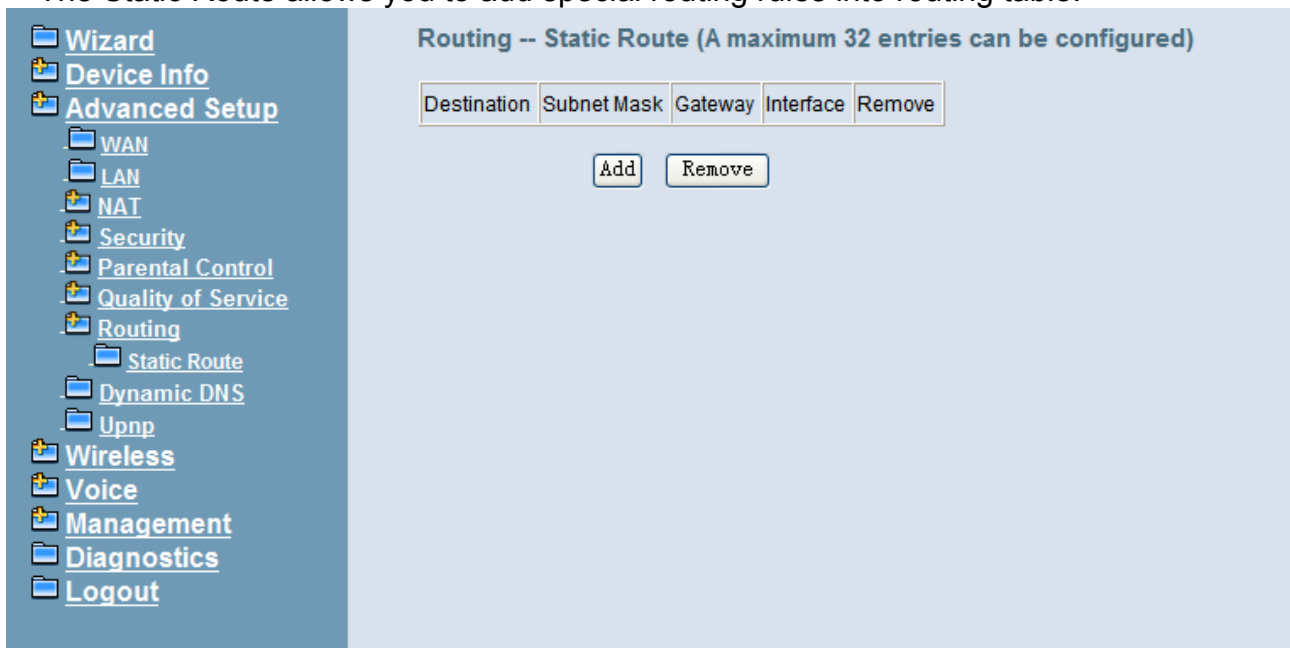


Figure 6-27. Advanced – Route – Static Route

Click “Add” to create a new Static Route. Enter the destination network address, subnet mask, gateway AND/OR available WAN interface then click "Save Settings" to add the entry to the routing table. (Figure 6-27, Figure 6-28)

Figure 6-28. Advanced – Route – Static Route – Add

6.4.8 Dynamic DNS

The Dynamic DNS service allows you to alias a register domain name to a dynamic IP address. It allows IG7600 to be more easily accessed from various locations on the Internet. Click “Add” or “Remove” to configure Dynamic DNS. (Figure 6-29)

Figure 6-29. Advanced – Dynamic DNS

Now IG7600 support for three DDNS provider, DynDNS.org and TZO and custom provider. Specify the register hostname and choose the related interface. Fill in the username/password or email/key and click “Apply/Save”. IG7600 will update the current IP with DDNS provider when click “Apply/Save” or system reboot successfully. IG7600 will also update the current IP automatically with DDNS provider in the programmed Update Cycle. (Figure 6-30, Figure 6-31, Figure 6-32)

The screenshot shows the 'Add Dynamic DNS' configuration page. On the left is a navigation menu with options: Wizard, Device Info, Advanced Setup (selected), WAN, LAN, NAT, Security, Parental Control, Quality of Service, Routing, Static Route, Dynamic DNS, Upnp, Wireless, Voice, Management, Diagnostics, and Logout. The main content area is titled 'Add Dynamic DNS' and includes the text: 'This page allows you to add a Dynamic DNS address from DynDNS.org or TZO.' Below this, there are fields for 'D-DNS Provider' (set to 'DynDNS.org'), 'Hostname', and 'Interface'. A section titled 'DynDNS Settings' contains fields for 'Username' and 'Password'. At the bottom, there is an 'Update Cycle' dropdown set to 'every 15 minutes' and an 'Apply/Save' button.

Figure 6-30. Advanced – Dynamic DNS – DynDNS.org

The screenshot shows the 'Add Dynamic DNS' configuration page for TZO. The navigation menu on the left is identical to the previous figure. The main content area is titled 'Add Dynamic DNS' and includes the text: 'This page allows you to add a Dynamic DNS address from DynDNS.org or TZO.' Below this, there are fields for 'D-DNS Provider' (set to 'TZO'), 'Hostname', and 'Interface'. A section titled 'TZO Settings' contains fields for 'Email' and 'Key'. At the bottom, there is an 'Update Cycle' dropdown set to 'every 15 minutes' and an 'Apply/Save' button.

Figure 6-31. Advanced – Dynamic DNS – TZO

The screenshot shows the 'Add Dynamic DNS' configuration page. On the left is a navigation menu with options: Wizard, Device Info, Advanced Setup (selected), WAN, LAN, NAT, Security, Parental Control, Quality of Service, Routing, Static Route, Dynamic DNS, Upnp, Wireless, Voice, Management, Diagnostics, and Logout. The main content area is titled 'Add Dynamic DNS' and includes the following fields:

- A descriptive text: 'This page allows you to add a Dynamic DNS address from DynDNS.org or TZO.'
- 'D-DNS Provider' dropdown menu set to 'Custom-Provider'.
- 'Hostname' text input field.
- 'Interface' text input field.
- 'Custom DDNS Settings' section with:
 - 'Provider's Domain' text input field.
 - 'Username' text input field.
 - 'Password' text input field.
 - 'Update Cycle' dropdown menu set to 'every 15 minutes'.
- 'Apply/Save' button at the bottom right.

Figure 6-32. Advanced – Dynamic DNS – Customer-Provider

6.4.9 Upnp

It's used to enable or disable the universal plug and play function. (Figure 6-33)

The screenshot shows the 'Upnp Configuration' page. On the left is the same navigation menu as in Figure 6-32, with 'Advanced Setup' selected. The main content area is titled 'Upnp Configuration' and includes:

- A checkbox labeled 'Enable Upnp protocol.' which is checked.
- 'Apply/Save' button at the bottom right.

Figure 6-33. Advanced – Upnp

6.5 Wireless

Use the Wireless screen to configure the IG7600 for wireless access. It is separated into 7 parts:

- Basic
 - Primary
 - Additional

- Security
- MAC Filter
- Wireless Bridge
- Advanced
- Station Info
- Power Saving

The configurable items for each part would be described in the following.

6.5.1 Basic

It's separated into two parts: Primary, and Additional.

6.5.1.1 Primary

This page allows you to configure the basic features of the wireless LAN interface. You can enable or disable the wireless LAN interface, hide the network from active scans, active the client isolation, disable WMM advertise and enable wireless multicast forwarding.

User can set the wireless network name (also known as SSID) and restrict the channel set based on country requirements. The max clients are 16. (Figure 6-34)

Figure 6-34. Wireless – Basic – Primary

6.5.1.2 Additional

IG7600 supports to configure 3 additional Wireless networks. Each SSID can have different name and configurations. (Figure 6-35)

Wizard

Device Info

Advanced Setup

Wireless

- Basic
 - Primary
 - Additional
- Security
- MAC Filter
- Wireless Bridge
- Advanced
- Station Info
- Power Saving

Voice

Management

Diagnostics

Logout

Wireless--Additional Networks

This page allows you to configure additional Wireless Networks.

Enabled	SSID	Hidden	Isolate Clients	Disable WMM Advertise	Enable WMF	Max Clients	BSSID
<input type="checkbox"/>	wl0_Guest1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	128	N/A
<input type="checkbox"/>	wl0_Guest2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	128	N/A
<input type="checkbox"/>	wl0_Guest3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	128	N/A

Apply/Save

Figure 6-35. Wireless – Basic – Additional

6.5.2 Security

This page allows you to configure security features of the wireless LAN interface. It allows you to select your Security Mode: Manual and WPS.

In WPS mode, it follows the Wi-Fi Protected Setup standard for easy and secure wireless network set up and connection. User can use Push-Button or PIN to configure the connection with IG7600. In Push-Button method, IG7600 and client must press the WPS button to establish connection. In PIN mode, when the Access Point Pin is used, client can input the PIN to establish the connection. When the External Device PIN is used, client device PIN can be entered in the field to establish connection (Figure 6-36).

Figure 6-36. Wireless – Security

In Manual mode, you can set the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength. Click "Apply/Save" to configure the wireless security options. (Figure 6-37, Figure 6-38)

The following items will be configured in the page:

Network Authentication: Set the network Authentication method. Open and Shared can use the WEP Encryption. 802.1X and WPA require setting valid RADIUS parameters. WPA-PSK requires a valid WPA Pre-Shared Key to be set.

802.1X: As the IEEE standard for access control for wireless and wired LANs, 802.1x provides a means of authentication and authorizing devices to attach to a LAN port. This standard defines the Extensible Authentication Protocol (EAP), which uses a central authentication server to authenticate each user on the network.

WPA/WPA2: The Wi-Fi Alliance put together WPA/WPA2 as a data encryption method for 802.11 wireless LANs. WPA is an industry-supported, pre-standard version of 802.11i utilizing the Temporal Key Integrity Protocol (TKIP), which fixes the problems of WEP, including using dynamic keys.

WPA/WPA2 Pre-Shared Key: Set the WPA/WPA2 Pre-Shared Key (PSK).

WPA/WPA2 Group Rekey Interval: Set the WPA/WPA2 Group Rekey Interval in seconds. Leave blank or set to zero to disable periodic re-keying.

Wizard
Device Info
Advanced Setup
Wireless
 Basic
 Security
 IG7600-BCB2E5
 MAC Filter
 Wireless Bridge
 Advanced
 Station Info
 Power Saving
Voice
Management
Diagnostics
Logout

Wireless -- Security

Please select your Security Mode ☒ Manual ☐ WPS

Manual Setup AP

You can set the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength.
 Click "Apply/Save" when done.

Network Authentication:

WEP Encryption:

Encryption Strength:

Current Network Key:

Network Key 1:

Network Key 2:

Network Key 3:

Network Key 4:

Enter 13 ASCII characters or 26 hexadecimal digits for 128-bit encryption keys
 Enter 5 ASCII characters or 10 hexadecimal digits for 64-bit encryption keys

Figure 6-37. Wireless – Security – 1

Wizard
Device Info
Advanced Setup
Wireless
 Basic
 Security
 IG7600-BCB2E5
 MAC Filter
 Wireless Bridge
 Advanced
 Station Info
 Power Saving
Voice
Management
Diagnostics
Logout

Wireless -- Security

Please select your Security Mode ☐ Manual ☒ WPS

Keep existing Clients ☒ Yes ☐ No

Select WPS Method ☐ Push-Button ☒ PIN

☒ Access Point Pin [Help](#)

☐ External Device Pin

Currently authorized Clients: 0

Figure 6-38. Wireless – Security – 2

WEP Encryption: Selecting Disabled disables WEP data encryption. Selecting Enabled enables WEP data encryption and requires that a valid network key be set and selected unless 802.1X is enabled.

WEP, short for Wired Equivalent Privacy, is a protocol for wireless LANs or local area networks. This WEP is defined in the 802.11 Standard. WEP is designed so security levels are maintained at the same level as the wired LAN. WEP's aim is to provide security by encrypting data over radio waves. WEP protects data as it's transmitted from one end point to another. WEP is used at two lowest layers, the data link and

physical layer. WEP is designed to make up for the inherent security in wireless transmission as compared to wired transmission.

Network Key: Set whether shared key authentication is required to associate. A valid network key must be set and selected if required.

6.5.3 MAC Filter

Figure 6-39. Wireless – MAC Filter

This page allows users to Add/Remove hosts with the specified MAC addresses that are able or unable to access the wireless network. When users decide to use Allow, only the MAC addressed in the user-defined list can access the wireless network. When users use Deny, only the user specified MAC addresses are unable to access to wireless network. And if the Disable option is selected, all users will be able to access to wireless network.

Note: The MAC addresses in the list would immediately take effect when Allow or Deny is checked. (Figure 6-39, Figure 6-40)

Figure 6-40. Wireless – MAC Filter – Allow/Deny

6.5.4 Wireless Bridge

This page allows you to configure wireless bridge features of the wireless LAN interface. You can select Wireless Bridge (also known as Wireless Distribution System) to connect to other wireless bridge device, but the access point functionality will be disabled. Selecting Access Point enables access point functionality. Wireless bridge functionality will still be available and wireless stations will be able to associate to the AP. Select Disabled in Bridge Restrict which disables wireless bridge restriction. Any wireless bridge will be granted access. Selecting Enabled or Enabled (Scan) enables wireless bridge restriction. Only those bridges selected in Remote Bridges will be granted access. Click "Refresh" to update the remote bridges. Wait for few seconds to update. Click "Save Settings" to configure the wireless bridge options. (Figure 6-41)

Wireless -- Bridge

This page allows you to configure wireless bridge features of the wireless LAN interface. You can select Wireless Bridge (also known as Wireless Distribution System) to disable access point functionality. Selecting Access Point enables access point functionality. Wireless bridge functionality will still be available and wireless stations will be able to associate to the AP. Select Disabled in Bridge Restrict which disables wireless bridge restriction. Any wireless bridge will be granted access. Selecting Enabled or Enabled(Scan) enables wireless bridge restriction. Only those bridges selected in Remote Bridges will be granted access. Click "Refresh" to update the remote bridges. Wait for few seconds to update. Click "Apply" to configure the wireless bridge options.

AP Mode:

Bridge Restrict:

Remote Bridges MAC Address:

Figure 6-41. Wireless – Wireless Bridge

6.5.5 Advanced

It allows you to configure advanced features of the wireless LAN interface. You can select a particular channel on which to operate, force the transmission rate to a particular speed, set the fragmentation threshold, set the RTS threshold, set the wakeup interval for clients in power-save mode, set the beacon interval for the access point, set XPress mode and set whether short or long preambles are used. Click "Save Settings" to configure the advanced wireless options. (**Figure 6-42**)

Band: Default setting is 2.4GHz.

Channel: Select the appropriate channel from the list provided to correspond with your network settings. All devices in your wireless network must use the same channel in order to function correctly.

Auto Channel Timer: The IG7600 should search for the best wireless channel in this period (minute).

802.11n/EWC: Automatic or disable 802.11n support.

Bandwidth: User can choose 20MHz/40MHz in both band or 20MHz in 2.4G band/40MHz in 5G band.

Control Sideband: Specify if the extension channel should be in the “Upper” or “Lower” sideband.

802.11n Rate: Set the Physical Layer rate. These rates are only applicable when the “802.11n/EWC” is configured as “Auto”.

802.11n Protection: In “Auto” mode, the wireless devices use RTS/CTS to improve 802.11n performance in mixed 802.11g/802.11b networks. Turn protection off to maximize 802.11n throughput under most conditions. Do not disable 802.11n protection if there is a possibility that 802.11b or 802.11g devices will use your wireless network.

Support 802.11n Client Only: “On” enables support for 802.11n clients only. Off will enable support for clients that are not 802.11n.

54g® Rate: The default setting is Auto. The range is from 1 to 54Mbps. The rate of data transmission should be set depending on the speed of your wireless network. You can select from one transmission speed, or keep the default setting, Auto, to have the IAD automatically use the fastest possible data rate.

Multicast Rate: The default setting is 54Mbps. The range is from 1 to 54Mbps. The rate of data transmission should be set depending on the speed of your wireless network. You can select from one transmission speed, or keep the default setting, to have the IAD automatically use the fastest data rate for multicast packets.

Basic Rate: Select the basic rate that wireless clients must support.

Fragmentation Threshold: This value should remain at its default setting of 2346. The range is 256~2346 bytes. It specifies the maximum size for a packet before data is fragmented into multiple packets. If you experience a high packet error rate, you may slightly increase the Fragmentation Threshold. Setting this value too low may result in poor network performance. Only minor modifications of this value are recommended.

Wireless -- Advanced

This page allows you to configure advanced features of the wireless LAN interface. You can select a particular channel on which to operate, force the transmission rate to a particular speed, set the fragmentation threshold, set the RTS threshold, set the wakeup interval for clients in power-save mode, set the beacon interval for the access point, set XPress mode and set whether short or long preambles are used. Click "Apply/Save" to configure the advanced wireless options.

Band:	2.4GHz	
Channel:	Auto	Current: 6
Auto Channel Timer(min)	0	
802.11n/EWC:	Auto	
Bandwidth:	20MHz in 2.4G Band and 40MHz in 5G Band	Current: 20MHz
Control Sideband:	Lower	Current: None
802.11n Rate:	Auto	
802.11n Protection:	Auto	
Support 802.11n Client Only:	Off	
54g™ Rate:	1 Mbps	
Multicast Rate:	Auto	
Basic Rate:	Default	
Fragmentation Threshold:	2346	
RTS Threshold:	2347	
DTIM Interval:	1	
Beacon Interval:	100	
Global Max Clients:	128	
XPress Technology:	Disabled	
Transmit Power:	100%	
WMM(Wi-Fi Multimedia):	Enabled	
WMM No Acknowledgement:	Disabled	
WMM APSD:	Enabled	

Apply/Save

Figure 6-42. Wireless – Advanced

RTS Threshold: This value should remain at its default setting of 2347. The range is 0~2347 bytes. Should you encounter inconsistent data flow, only minor modifications are recommended. If a network packet is smaller than the packet RTS threshold size, the RTS/CTS mechanism will not be enabled. The IAD sends Request of Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission.

DTIM Interval: The default value is 3. This value, between 1 and 255 milliseconds, indicates the interval of the Delivery Traffic Indication Message (DTIM). A DTIM field is a countdown field informing clients of the next window for listening to broadcast and multicast messages. When the router has buffered broadcast or multicast for associated clients, it sends the next DTIM with a DTIM Interval value. Its clients hear the beacons and awaken to receive the broadcast and multicast message.

Beacon Interval: The default value is 100. Enter a value between 1 and 65535 milliseconds. The Beacon Interval value indicates the frequency interval of the beacon. A beacon is a packet broadcast by the router to synchronize the wireless network.

Global Max Clients: Maximum number of wireless clients.

XPress™ Technology: Select "Enable" to improve the wireless performance. It is a technology that utilizes standards based on frame bursting to achieve higher throughput.

Transmit Power: User can set the transmit power as 20%, 40%, 60%, 80% and 100%

WMM (Wi-Fi Multimedia): Feature that improves the experience for audio, video and voice applications over a Wi-Fi network.

WMM No Acknowledgement: When the “WMM No Acknowledgement” is enabled, the receiver will not acknowledge received packets during wireless packet transmit. It is suitable in the environment where communication quality is good and interference is weak. It can improve transmission efficiency.

WMM APSD: WMM Automatic Power Save Delivery. APSD is useful for VoIP phone to achieve low power consumption.

6.5.6 Station Info

Authenticated wireless stations and their status will be shown here. (Figure 6-43)

Wireless -- Authenticated Stations

This page shows authenticated wireless stations and their status.

MAC	Associated	Authorized	SSID	Interface
00:15:00:4B:47:73			IG7600-BCB2E5	wl0

Refresh

Figure 6-43. Wireless – Station Info

6.5.7 Power Saving

The Power Saving Features provide the ability to turn off specific interfaces at specific times. (Figure 6-44)

Power Saving - Configuration

This Power Saving Features provide the ability to turn off specific interfaces at specific times. Select the desired configuration and click "Apply/Save" to use this features.

☒ Turn off WLAN at a specific time of the day.

Please enter the time in a 24 hour format.

WLAN off at: 00:00

WLAN on at: 07:00

Apply/Save

Figure 6-44. Wireless – Power Saving

6.6 Voice

Use the Voice screen to configure the IG7600's voice related parameters. It allows system administrator to configure the following topics:

- Phone
 - Phone Extension
 - Programmable keys
- Trunk
 - IP Trunk
 - Trunk DID
 - Trunk Group
 - Answering Position
 - Call Routing
 - Call Restriction
 - Emergency Numbers
- System
 - Numbering Plan
 - Service Mode
 - Transmission
 - SMDR
 - UCD Call Log
- Voicemail
 - General
 - Phone Extension
 - Virtual Extension
 - Update MOH File
 - Update Voice File
 - Holiday
 - Advanced
- NAT Traversal
- Diagnostics
 - Remote Maintenance
- Registered Phone

The configurable items for each part would be described in the following.

6.6.1 Phone

Use the Phone screen to configure IG7600's phone extension authentication and configure the default line key setting.

6.6.1.1 Phone Extension

The IG7600 combines Proxy and Register servers in its application. All phones registered to the internal Register server are set here. (Figure 6-45, Figure 6-46)

SIP Authentication

This table allows you to configure the authentication for SIP client.

The current range of the extension numbers is from 201 to 299.

NOTE: If you remove a phone number from the table, its configuration file and the voice messages will be removed from the system.

No.	Phone Number	Password	Mobile Number	Display Name	MAC Binding	Day COS	Night COS	PickUp Group
1	201	●●●●●●●●			00:0a:6b:00:c2:0	0 ▾	0 ▾	1 ▾
2						0 ▾	0 ▾	1 ▾
3						0 ▾	0 ▾	1 ▾
4						0 ▾	0 ▾	1 ▾
5						0 ▾	0 ▾	1 ▾
6						0 ▾	0 ▾	1 ▾
7						0 ▾	0 ▾	1 ▾
8						0 ▾	0 ▾	1 ▾
9						0 ▾	0 ▾	1 ▾
10						0 ▾	0 ▾	1 ▾
11						0 ▾	0 ▾	1 ▾
12						0 ▾	0 ▾	1 ▾
13						0 ▾	0 ▾	1 ▾
14						0 ▾	0 ▾	1 ▾
15						0 ▾	0 ▾	1 ▾
16						0 ▾	0 ▾	1 ▾
17						0 ▾	0 ▾	1 ▾
18						0 ▾	0 ▾	1 ▾
19						0 ▾	0 ▾	1 ▾
20						0 ▾	0 ▾	1 ▾
21						0 ▾	0 ▾	1 ▾

Figure 6-45. Voice – Phone – Phone Extension – 1

46						0 ▾	0 ▾	1 ▾
47						0 ▾	0 ▾	1 ▾
48						0 ▾	0 ▾	1 ▾
49						0 ▾	0 ▾	1 ▾

FXS Phone Display Name Day COS Night COS PickUp Group

Registration Configuration

The settings allow you to change the parameters for SIP Registration.

NOTE: You need to reboot the system to make the changes to take effect.

Minimal Expire (10 - 3600)

SIP Port (1024 - 65535)

Session Timeout

Session Timeout (0, 90 - 3600)

Figure 6-46. Voice – Phone – Phone Extension – 2

SIP Authentication: It provides 49 IP phones or Smart phones to register.

Phone Number: The phone number is a station number. If it conflicts with the setting in Numbering Plan, it fails to add or make the change. Its value range is limited by Start Extension Number and End Extension Number settings in Numbering Plan page.

Password: The user password of this phone. The length is up to 24 digits or characters. It's used for Digest Authentication.

Mobile Number: If a smart phone registers to it, it can tell its mobile number to IG7600.

Display Name. If a smart phone registers to IG with its display name, this column will display the name.

Mac Binding: If a phone number is assigned by Plug-and-Play, the number is bound to the extension's Mac address. You can also add Mac binding at IG7600's web page. If Mac binding exists, only the extension with this Mac address will be accepted to be registered.

Day COS: The field assigns Class of Service for day mode operation. Acceptable values are 0-7. At default, all extensions are unrestricted.

Night COS: The field assigns Class of Service for night mode operation. Acceptable values are 0-7. At default, all extensions are unrestricted.

Pickup Group: The field assigns the extension to a specific pickup group. Each extension can be assigned to one pickup group only. Four pickup groups are available.

FXS Phone: It shows the FXS phone number. It's programmed in Numbering Plan.

- **Display Name:** The FXS user's Calling Name.
- **Day COS:** The FXS's Class of Service for day mode operation.
- **Night COS:** The FXS's Class of Service for night mode operation.
- **Pickup Group:** The FXS's pickup group number

Registration Configuration:

The settings allow you to change the parameters for SIP Registration. You need to reboot the system to make the changes to take effect.

Minimal Expire: Minimal registered period of IP phone.

SIP Port: The IG7600 listens for requests on the SIP port. This port is used for UDP application and 5070 is its default value. The port number cannot be the same as the "Local SIP Port for IP Trunk" for IP Trunk application.

Session Timeout:

The settings allow you to change the parameters for session timer.

Session Timeout: It defines how long IG7600 sends "UPDATE" packet to extension.

6.6.1.2 Programmable keys

This page allows you to configure the default settings for IP phone's programmable Keys. While a new-allocated IP phone is registering to IG7600, IG7600 will send these settings to the phone. You can select Extension, Trunk, Call Park, Feature key, Do Not Disturb, Live Record, Virtual Mailbox and Others to these Programmable keys. (Figure 6-47)

Line keys are for IP Trunk setting is only for IP3054(-i)'s 4 line keys. By default it is disabled and the 4 line keys on IP3054(-i) will show the status of PSTN Trunk; You can enable it here. If you enable it, IP3054(-i) will show the status of IP Trunk on its 4 line keys.

Programmable Keys 1-16 are specially for M62.

EDM Key 1-24 can be applied to IP2061's or M62's EDM.

Auto Hold: When you are using a line and press another key, IG7600 can hold the original line. Select "Enable" to open this function.

[Wizard](#)
[Device Info](#)
[Advanced Setup](#)
[Wireless](#)
[Voice](#)
 [Phone](#)
 [Phone Extension](#)
 [Programmable keys](#)
 [Trunk](#)
 [System](#)
 [Voicemail](#)
 [NAT Traversal](#)
 [Diagnostics](#)
 [Registered Phone](#)
[Management](#)
[Diagnostics](#)
[Logout](#)

Line Keys Are for IP Trunk

This setting allows you to configure if the 4 line keys are used as IP Trunks, it only applies to smart phones.

Line Keys Are for IP Trunk Disable ▾

Extension Line Keys

This table allows you to configure the default settings for extension's line keys.

Line Key 1 Type	Trunk ▾	Value	700
Line Key 2 Type	Trunk ▾	Value	701
Line Key 3 Type	Trunk ▾	Value	702
Line Key 4 Type	Trunk ▾	Value	703

Extension Programmable Keys

This table allows you to configure the default settings for extension's programmable keys.

Programmable Key 1 Type	Extension ▾	Value	201
Programmable Key 2 Type	Extension ▾	Value	202
Programmable Key 3 Type	Extension ▾	Value	203
Programmable Key 4 Type	Extension ▾	Value	204
Programmable Key 5 Type	Extension ▾	Value	205
Programmable Key 6 Type	Extension ▾	Value	206
Programmable Key 7 Type	Extension ▾	Value	207
Programmable Key 8 Type	Extension ▾	Value	208
Programmable Key 9 Type	Extension ▾	Value	209
Programmable Key 10 Type	Extension ▾	Value	210
Programmable Key 11 Type	Extension ▾	Value	211
Programmable Key 12 Type	Extension ▾	Value	212
Programmable Key 13 Type	Extension ▾	Value	213
Programmable Key 14 Type	Extension ▾	Value	214
Programmable Key 15 Type	Extension ▾	Value	215
Programmable Key 16 Type	Extension ▾	Value	216

Extension EDM Keys

This table allows you to configure the default settings for extension's EDM keys.

EDM Key 1 Type	None ▾	Value	
EDM Key 2 Type	None ▾	Value	
EDM Key 3 Type	None ▾	Value	

Extension EDM Keys

This table allows you to configure the default settings for extension's EDM keys.

EDM Key 1 Type	None	Value
EDM Key 2 Type	None	Value
EDM Key 3 Type	None	Value
EDM Key 4 Type	None	Value
EDM Key 5 Type	None	Value
EDM Key 6 Type	None	Value
EDM Key 7 Type	None	Value
EDM Key 8 Type	None	Value
EDM Key 9 Type	None	Value
EDM Key 10 Type	None	Value
EDM Key 11 Type	None	Value
EDM Key 12 Type	None	Value
EDM Key 13 Type	None	Value
EDM Key 14 Type	None	Value
EDM Key 15 Type	None	Value
EDM Key 16 Type	None	Value
EDM Key 17 Type	None	Value
EDM Key 18 Type	None	Value
EDM Key 19 Type	None	Value
EDM Key 20 Type	None	Value
EDM Key 21 Type	None	Value
EDM Key 22 Type	None	Value
EDM Key 23 Type	None	Value
EDM Key 24 Type	None	Value

Auto Hold

Auto Hold Disable

Extension List

201 Configure

Save Settings Cancel Changes

Figure 6-47. Voice – Phone – Programmable keys

When there are IP phones registered to IG7600, you can configure their key setting. In Extension List, press “Configure” to configure keys of the specific phone.

Follow Gateway Settings: Use default IG7600 key setting for the IP phone. If you check the checkbox, all the input operations are disabled, and the Ext’s programmable keys settings will use the Gateway settings. You can configure the settings manually only if the check box “Follow Gateway Settings” is not checked.

Ext. 201 Configuration

Follow Gateway Settings

This table allows you to configure whether you use the gateway default settings to set the extension's programmable keys.

☒ Follow Gateway Settings

Extension Line Keys

This table allows you to configure line key settings for each extension.

Line Key 1 Type	Trunk	Value	700
Line Key 2 Type	Trunk	Value	701
Line Key 3 Type	Trunk	Value	702
Line Key 4 Type	Trunk	Value	703

Extension Programmable Keys

This table allows you to configure programmable key settings for each extension.

Programmable Key 1 Type	Extension	Value	201
Programmable Key 2 Type	Extension	Value	202
Programmable Key 3 Type	Extension	Value	203
Programmable Key 4 Type	Extension	Value	204
Programmable Key 5 Type	Extension	Value	205
Programmable Key 6 Type	Extension	Value	206
Programmable Key 7 Type	Extension	Value	207
Programmable Key 8 Type	Extension	Value	208
Programmable Key 9 Type	Extension	Value	209
Programmable Key 10 Type	Extension	Value	210
Programmable Key 11 Type	Extension	Value	211
Programmable Key 12 Type	Extension	Value	212
Programmable Key 13 Type	Extension	Value	213
Programmable Key 14 Type	Extension	Value	214
Programmable Key 15 Type	Extension	Value	215
Programmable Key 16 Type	Extension	Value	216

Extension EDM Keys

This table allows you to configure EDM key settings for each extension.

EDM Key 1 Type	None	Value	
EDM Key 2 Type	None	Value	
EDM Key 3 Type	None	Value	
EDM Key 4 Type	None	Value	
EDM Key 5 Type	None	Value	
EDM Key 6 Type	None	Value	
EDM Key 7 Type	None	Value	
EDM Key 8 Type	None	Value	
EDM Key 9 Type	None	Value	
EDM Key 10 Type	None	Value	
EDM Key 11 Type	None	Value	
EDM Key 12 Type	None	Value	
EDM Key 13 Type	None	Value	
EDM Key 14 Type	None	Value	
EDM Key 15 Type	None	Value	
EDM Key 16 Type	None	Value	
EDM Key 17 Type	None	Value	
EDM Key 18 Type	None	Value	
EDM Key 19 Type	None	Value	
EDM Key 20 Type	None	Value	
EDM Key 21 Type	None	Value	
EDM Key 22 Type	None	Value	
EDM Key 23 Type	None	Value	
EDM Key 24 Type	None	Value	

Auto Hold

Figure 6-48. Voice – Phone – Extension Linekey-Configure

6.6.2 Trunk

Use the Trunk screen to configure the PSTN/IP Trunk function related parameters. It is separated into 7 parts:

- IP Trunk
- Trunk DID
- Trunk Group
- Answering Position
- Call Routing
- Call Restriction

- Emergency Numbers

6.6.2.1 IP Trunk

This page allows you to configure the Proxy and Register server of IP Trunks; up to 12 lines of IP Trunk are supported. (Figure 6-49, Figure 6-50)

Figure 6-49. Voice – Trunk – IP Trunk – 1

Figure 6-50. Voice – Trunk – IP Trunk – 2

Subscriber Information:

Phone Number: It's the assigned phone number from uplink server.

Auth ID: The Account ID of registration to uplink server. It's used for Digest Authentication.

Auth Password: The Password of registration to uplink server. It's used for Digest Authentication.

SIP Proxy: The position of uplink SIP proxy server. IP address and domain name are all supported.

SIP Proxy Port: The SIP signal port of uplink registrar server.

Outbound Proxy: The address of uplink outbound proxy server. All sip request packet will be sent to this server that will determine their next hops.

Outbound Proxy Port: The SIP signal port of uplink outbound proxy server.

Register Proxy: The position of uplink register server. IP address and domain name are all supported.

Register Proxy Port: The SIP signal port of uplink registrar server.

Outbound Registrar: The address of uplink outbound Registrar server. All REGISTER packets will be sent to this server that will determine their next hops.

Outbound Proxy Port: The SIP signal port of uplink outbound registrar server.

Register Expires: It's the time for IG7600 sends REGISTER to uplink register server. It counts based on second.

Outgoing Caller ID: It's used as the Caller ID for the outgoing calls.

Registration: If "Registration" is No, the IP Trunk will not send REGISTER to the Register Proxy.

Support E.164: If "Support E.164" is Yes, the IP Trunk follows E.164 format to send to outgoing phone number.

Support DID: If "Support DID" is a digit, the IP Trunk is used in DID operation. The IP Trunks from the current one to the specified IP Trunk are applied in the specified account. For example, if the setting is "5" in IP Trunk 1, the account is applied for IP Trunk 1 to 5. It means it can have 5 concurrent calls in the account.

Server Type: If "Server Type" is CHTM, and if the Caller ID of the incoming Trunk call exists, IG7600 will use the Caller ID in From and P-Asserted-Identify header in the outgoing IP Trunk call.

Local Port:

Local SIP Port for IP Trunk: SIP control signal packet Port of IP Trunk Client. The port number cannot be the same as the "SIP Port" for Extension Registration.

Local RTP Port for IP Trunk: Real-Time Protocol packet Port of IP Trunk Client. It's the start RTP port address for these IP Trunks.

End Dial:

If "Support End Dial on #" is Yes, outgoing number from IP trunk will be sent out immediately after pressing pound key (#).

Interdigit Timeout:

If there is no any dialed number after the setting time, the number will be sent out immediately. Its range is form 2 to 9 seconds.

Pause Time:

The pause time of alphabet “p” in the process of call dialing

Session Timeout:

It means the longest communication time for IP trunks, zero means no restriction.

RPort:

When client is behind a NAT, the rport and received filed can allow SIP proxy to append the public IP address and port of NAT and transfer SIP message correctly. Choose “Enable” to use this function.

Transmission Timer:

If an outgoing trunk call matches more than one entries in Call Routing Table, if the former matched entry gets timeout after this specific seconds, IG7600 will try the next one.

6.6.2.2 Trunk DID

The table offers its individual phone number for each extension (Figure 6-51). Up to 50 DID number are supported.

DID Number: It's the assigned phone number from uplink server for incoming calls. If “Outgoing Call ID” is null, it will be as Caller ID number for outgoing calls also.

Destination: the specified ringing extension(s) for the individual DID phone number.

Outgoing Call ID: It's the assigned Caller ID number from uplink server.

Display Name: the specified extension user name for the individual number. It will be used as Caller ID name in the outgoing calls.

Trunk: The DID item is for the specified trunk(s). If it's “All”, the DID number can be applied to all IP Trunks.

DID Table					
No.	DID Number	Destination	Outgoing Call ID	Display Name	Trunk
1	2700001	501			All
2	2700002	503			All
3	2700003	502			All
4	2700004	400			All
5	2700005	0			All
6					All
7					All
8					All
9					All
10					All
11					All
12					All
13					All
14					All

Figure 6-51. Voice – Trunk – Trunk DID

6.6.2.3 Trunk Group

This page allows you to configure the virtual Trunk Group. Up to 4 Trunk Groups are supported. (Figure 6-52, Figure 6-53)

Trunk Group & Label Name:

This item allows you to assign physical Trunk to virtual Trunk Group. For four PSTN lines and four IP lines you can choose from Group1 to Group 4.

PS: There is a special trunk group named Group ALL, all lines are considered to be a member of the group.

Label Name:

This item allows you to configure a specified string as incoming Caller ID name. For PSTN incoming call, it will be applied if no Caller ID received in the call. For IP Trunk call, it will replace the original Caller ID name.

Ring Type:

The specific ring type assigned to the Trunk Line is the ring type heard when the Trunk Line rings. The ring type is applied for IP2061/M62 phone only.

Trunk Group Priority:

This Item allows you to define 4 Trunk Groups and Group All's interior priority.

Access Priority:

This Item allows you to define 4 Trunk Groups and Group All's interior priority. For the five groups you can choose IP first or PSTN first. This will take effect if call routing entry's destination has been set as Group choice.

Search Order:

You can choose the search order to use the specified access priority. For example, when you choose IP First and increase, IG7600 will try to find an available IP Trunk and search from the first IP Trunk in the Group.

Trunk Line	Group Assign	Enable Label	Label Name	Ring Type
PSTN Line 1	Group 1	Disable		0
PSTN Line 2	Group 1	Disable		0
PSTN Line 3	Group 1	Disable		0
PSTN Line 4	Group 1	Disable		0
IP Line 1	Group 1	Disable		0
IP Line 2	Group 1	Disable		0
IP Line 3	Group 1	Disable		0
IP Line 4	Group 1	Disable		0
IP Line 5	Group 1	Disable		0
IP Line 6	Group 1	Disable		0
IP Line 7	Group 1	Disable		0

Figure 6-52. Voice – Trunk – Trunk Group – 1

IP Line 8	Group 1	Disable		0
IP Line 9	Group 1	Disable		0
IP Line 10	Group 1	Disable		0
IP Line 11	Group 1	Disable		0
IP Line 12	Group 1	Disable		0

Trunk Group Priority

Trunk group Priority allows you to define the four trunk groups' call priority.

Group 1	Access Priority	PSTN First	Search Order	Increasing
Group 2	Access Priority	PSTN First	Search Order	Increasing
Group 3	Access Priority	PSTN First	Search Order	Increasing
Group 4	Access Priority	PSTN First	Search Order	Increasing
Group All	Access Priority	PSTN First	Search Order	Increasing

Save Settings Cancel Changes

Figure 6-53. Voice – Trunk – Trunk Group – 2

6.6.2.4 Answering Position

Answering Position

Answering Position allows you to configure an answering position for each Trunk line's incoming call including PSTN trunk and IP Trunk. You can choose Auto Attendant, Operator, UCD group or manually configure the target phone number on Day/Night basis.

Line Selection: PSTN Line 1

Day Answer Mode	Extension	Night Answer Mode	Extension
Day Number	201	Night Number	201

Save Settings Cancel Changes

Figure 6-54. Voice – Trunk – Answering Positions

This page allows you to configure an answering position for each Trunk line's incoming call including PSTN trunk and IP Trunk. You can choose Auto Attendant, Operator, UCD Group or manually configure the target extension phone number on Day/Night basis. (Figure 6-54)

Choose Auto Attendant, you can configure an AA Menu number. An idle VAA will auto-answer this incoming trunk call.

Choose Extension, you must configure the target phone number on Day/Night basis.

Choose UCD Group, you can configure an UCD group. The maximum phones for one UCD group are 50.

Choose Operator, the incoming trunk call will be redirected to Operator.

6.6.2.5 Call Routing

This page allows you to configure the call routing table. A maximum 40 entries are allowed. Each entry is a routing rule for outgoing call. From/To define the number range, Min/Max define the match length, Del/Insert can change the target number, Destination to define the outbound call interface. (Figure 6-55)

Call Routing Table Configuration

Call Routing allows you to configure the call routing table. Each item will be a routing rule for outgoing call. From/To define the number range, Min/Max define the match length, Del/Insert can change the target number, Destination to define the outbound call interface.
 Note: IP-Trunk will ignore the prefix 'P' or 'p'.

Add a new Call routing entry. A maximum 100 entries are allowed.

From:

To:

MinLength:

MaxLength:

Delete:

Insert:

Destination:

No.	From	To	Min	Max	Del	Insert	Destination	Remove	Edit	Change Order
1	0	#	1	99	0		Group 1	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Up"/> <input type="button" value="Down"/>

Figure 6-55. Voice – Trunk – Call Routing Table – 1

6.6.2.6 Call Restriction

This page allows you to configure the call restriction table. A maximum 40 entries are allowed. If the caller's COS priority is higher than the entry's COS value, the call is allowed. (Figure 6-56)

The allowed intervals are made up of "From" and "To" entry which establish a numeric range. For example, an entry of "From 1700", "To 1800" would include the following range of numbers as the leading: 1700, 1701, 1702... 1799, 1800. Each From/To entry can be from 1 to 13 digits long and may contain any digit 0-9. The "From" entry must be less than or equal to the "To" entry.

Call Restriction Table Configuration

Call Restriction allows you to configure the call restriction allowed table and denied table. A maximum 40 entries can be configured.

Add a new Call restriction entry. A maximum 40 entries are allowed.

From:

To:

Trunk Access:

COS:

Table Type:

Call Restriction Table -- Allowed

No.	From	To	Trunk Access	COS	Remove	Edit	Change Order
1	0	#	YN	7	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Up"/> <input type="button" value="Down"/>

Figure 6-56. Voice – Trunk – Call Restriction

If the Trunk Access value is set to Y, the call will follow the restriction setting only when seizing line and make a call. If the Trunk Access value is set to N, the call will follow the restriction only when dialing a number directly. If the Trunk Access value is set to YN, it's suitable for both operations. If the Table Type is set "Denied" and the caller match the restriction in call restriction table, the caller will be denied to call. If the Table Type is set "Allow" and the caller match the restriction in call restriction table, the caller will be allowed to call. You can also select the check priority between the allowed and denied call restriction table.

6.6.2.7 Emergency Numbers

When they dial a pre-configured emergency number, any user can make an emergency call regardless of call routing table, call restriction, and station lock. Notice: The numbers of emergency dial must not collide with the numbers in Numbering Plan.

This page allows you configure five emergency call numbers and lines with which emergency calls are sent out. (Figure 6-57)

Emergency Numbers	
This page allows you configure five emergency call numbers and lines with which emergency calls are sent out.	
Number 1	911
Number 2	
Number 3	
Number 4	
Number 5	
Line Selection	PSTN First ▼
<input type="button" value="Save Settings"/> <input type="button" value="Cancel Changes"/>	

Figure 6-57. Voice – Trunk – Emergency Dial

6.6.3 System

Use the System screen to configure the System function related parameters. It is separated into five parts:

- Numbering Plan
- Service Mode
- Transmission
- SMDR
- UCD Call Log

6.6.3.1 Numbering Plan

Numbering Plan		
Numbering Plan allows you to configure the extension number range. You can define the special extension number or service number.		
These settings will take effect after the system reboot.		
Start Extension: 201	End Extension: 299	FXS Phone Number: 299
Start Extension	201	
End Extension	299	
FXS Phone Number	299	
Operator code	0	Configuration
Start AA & VM Service Number	500	
Start Virtual Extension Number	830	
Start PSTN Line number	700	
Start IP Trunk number	710	
Start Trunk Group number	80	
All Paging number	400	
All Paging Range	Both	
Start Paging Group number	401	Configuration
Start UCD Group number	430	Configuration
Start Pick Up Group number	440	
System Speed Dial	600	Configuration
Start Call Park number	731	
Start Conference Room number	300	
<input type="button" value="Save Settings"/> <input type="button" value="Cancel Changes"/>		

Figure 6-58. Voice – System – Numbering Plan

This page allows you to configure extension number range. You can also define some special service numbers in the table. (Figure 6-58)

Start extension: It's the start phone number of system internal extension. All valid extension number can't be smaller than it.

End extension: It's the end phone number of system internal extension. All valid extension number can't be greater than it. If receiving an IP2061/M62's Plug & Play request, IG7600 will allocate the first unused number from this limited region.

FXS Phone Number: It determines the FXS phone number.

Operator speed-dial number: If dial this number, the operator extension will be called. The length is limited on 1 character.

When you press the "Configuration" button, the operator-related settings can be configured: (Figure 6-59)

Figure 6-59. Voice – System – Numbering Plan – Operator Configuration

Operator day: It's the system operator number during day. If dial Operator speed-dial number, this extension will be called during day.

Operator Night: It's the system operator number during night. If dial Operator speed-dial number, this extension will be called during night.

Alternate Operator day: When the Operator during day does not answer a call, the call will be rerouted to alternate operator during day.

Alternate Operator night: When the Operator during night does not answer a call, the call will be rerouted to alternate operator during night.

Reroute Time: Set the length of operator no answer time to reroute to alternate operator. The time is applied to the call for alternate operator also. If alternate operator doesn't answer the call in the Reroute time, the call is reroute to Operator's Voice Mail box. "0" means it keeps ringing to the operator.

Start AA&VM Service Number: IG7600 provides 10 menus. If dial this number, internal user can enter IG7600's voicemail system and do some operations such as listening personal message.

Start Virtual Extension Number: IG7600 provides virtual extension number for the members not works in the office, or as a secondary mailbox.

Start PSTN Line number: IG7600 provides 4 PSTN lines at most. Every line has its own internal alias number. You can dial these numbers directly to access PSTN trunks.

Start IP Trunk number: IG7600 provides 12 IP Trunk lines at most. Every line has its own internal alias number. You can dial these numbers directly to access IP Trunks.

Start Trunk Group number: IG7600 provides 4 trunk groups at most. If dialing trunk group number,

All Paging number: If dialing this number, all internal IP2061/M62 will be paged.

All Paging range: You can select the range of the paged extensions. If it's LAN, it pages the IP2061/M62 on IG7600's LAN side. If it's WAN, it pages the IP2061/M62 on IG7600 WAN side, but under the same Router with IG7600. If it's Both, it pages the all IP2061/M62 on LAN and WAN.

Start Paging Group number: 3 paging groups are defined in IG7600. If dialing a Paging Group number, the call will page to predefined internal IP phones. It can also select the Range like All Paging Number. The maximum phones for each paging group are 49.

While pressing “Configuration” in “Start Paging Group number”, it shows Paging Group Configuration screen. (Figure 6-60)

Paging Group Configuration

Make sure the phone numbers you enter are what have been configured in the Phone Extension page.

Paging Group 1	Paging Group 2	Paging Group 3
Range: Both	Range: Both	Range: Both

Figure 6-60. Voice – System – Numbering Plan – Paging Group

Start UCD Group number: 4 UCD groups are defined in IG7600. The maximum phones for each UCD group are 50. If one UCD Group is assigned to Answering Position of certain line, when there is an incoming trunk call, extensions of the UCD group will be called and ringing

While pressing “Configuration” in “Start UCD Group number”, it shows UCD Group Configuration screen. (Figure 6-61)

UCD Group Configuration

UCD Group Number	Ring Mode	No Answer Time	Timer Enable	Reroute Time	Reroute Destination Type	Destination	UCD Group Name (no spaces)
430	All Ring			30 seconds	AA Menu	500	
431	All Ring			30 seconds	AA Menu	500	
432	All Ring			30 seconds	AA Menu	500	
433	All Ring			30 seconds	AA Menu	500	

UCD Group 1 Extension	UCD Group 2 Extension	UCD Group 3 Extension	UCD Group 4 Extension

Figure 6-61. Voice – System – Numbering Plan – UCD Group

There are seven items to be decided.

For Ring Mode, IG7600 supports “All Ring”, “Linear” and “Distributed” mode. The “All Ring” mode is no needed to use “No Answer Time” and “Timer Enable”.

For other items, if “Timer Enable” is YES, the incoming call will be transferred to another UCD Group’s member every “No Answer Time”. If NO, the call will ignore “No Answer Time” and finally reroute to “Reroute Destination” after “Reroute Time”. “Reroute Destination” can be an Auto Attendant Menu, an extension, a virtual extension, or phone extension’s mailbox. “UCD Group Name” is shown on the phone when receiving the UCD Group call.

Start Pickup Group number: The start number is used as All Pickup number. The next 4 numbers are used for the four pickup groups.

System Speed Dial: Speed Dialing allows you to store frequently outgoing numbers. There are 100 sets to be configured. Extension’s Class of service (COS) can also be checked or not. (Figure 6-62)

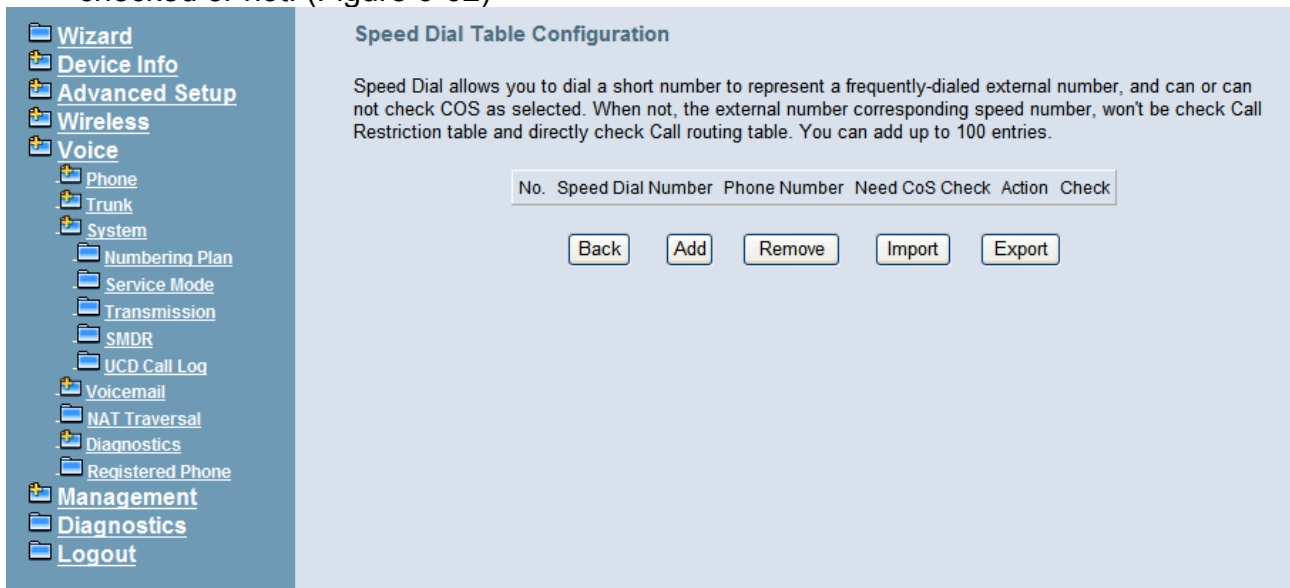


Figure 6-62. Voice – System – Speed Dial

Start Call Park Number: IG7600 supports to park 4 trunk calls maximum. The Call Park number can be programmed on the line keys.

Start Conference Room Number: Conference Room Number allows the users to build a conference conversation.

6.6.3.2 Service Mode

This page allows you to configure the Day/Night/Time service mode. You can also customize the working time manually for each weekday.

If you choose Time Mode, it's for the specified day of week. The time is entered in 24-hour format. Valid entries are 00:00 to 23:59 in 1-minute increments. The first four digits are for the start time. The last four digits are for the end time. (Figure 6-63)

Working Hours: It's applied in Answering Positions and Auto Attendant Greeting.

Lunch Break: It's applied in Auto Attendant Greeting

Service Mode Configuration

Service Mode configuration allows you to configure the day/night service mode. You can also customize the working time manually for each week day.

☐ Time ☒ Day ☐ Night

Figure 6-63. Voice – System – Service Mode

Service Mode Configuration

Service Mode configuration allows you to configure the day/night service mode. You can also customize the working time manually for each week day.

☒ Time ☐ Day ☐ Night

Week Day	Working Hours	Lunch Break
Sun	00000000	12001300
Mon	09001700	12001300
Tue	09001700	12001300
Wed	09001700	12001300
Thu	09001700	12001300
Fri	09001700	12001300
Sat	00000000	12001300

Figure 6-64. Voice – System – Service Mode

6.6.3.3 Transmission

This page allows you to configure the Audio, FXS, and FXO settings. Click “Save Settings” button to save the new configuration. (Figure 6-65)

Wizard

Device Info

Advanced Setup

Wireless

Voice

Phone

Trunk

System

Numbering Plan

Service Mode

Transmission

SMDR

UCD Call Log

Voicemail

NAT Traversal

Diagnostics

Registered Phone

Management

Diagnostics

Logout

Audio

Country NORTH AMERICA

RTP Packet Size 20 ms

Codec G.711 u-law Second

Codec G.711 a-law Seventh

Codec G.726-40 Third Payload 96

Codec G.726-32 Fourth Payload 97

Codec G.726-24 Fifth Payload 98

Codec G.726-16 Sixth Payload 99

Codec G.729 First

RFC2833 Payload 100

DTMF Type RFC2833

Hold Recall Time 60 sec

Conference Timeout 60 min

FXS

Fax Support G711_PASS

Caller ID Method FSK After Ring

Interdigit Timeout 5.0 sec

FXS Hotline Disable

FXS Hotline Number

FXS Hotline Delay Time 0 sec

FXO

Loop-break Detection Time

Port 1 600 ms Port 2 600 ms

Port 3 600 ms Port 4 600 ms

Dialing Type

Port 1 DTMF Port 2 DTMF

Port 3 DTMF Port 4 DTMF

Pulse Dialing

Make/Break Ratio 40/60

Interdigit Time 700 ms

PPS 10

PR Detection Time Disable ms

Ring Recognition Time 200 ms

Delay Ring Time 6.0 sec

Dial Wait Time 1 sec

Interdigit Timeout 5.0 sec

Flash Time 700 ms

Flash New Call Disable

FXO to FXO Call Duration 5 min

DTMF Signal On Duration 100 ms

DTMF Signal Off Duration 100 ms

Pause Time 1.5 sec

Ring Abandon Time 6.0 sec

Release Guard Time 1.0 sec

Busy Tone Detection Time 3 sec

Save Settings

Cancel Changes

Figure 6-65. Voice – System – Transmission

Audio: It is used to set many Audio-related options. It will be applied to the all FXS and PSTN lines.

Country: It may be used to determine not only the Caller ID detection/transmission method but also ring/tone cadence/frequency.

RTP Packet Size: 10/20/30/40/50/60 ms.

Codec G.711 u-law, G.711 a-law, G.726-16, G.726-24, G.726-32, G.726-40, and G.729: IG7600 supports different audio priority. You can choose "None", "First", "Second", "Third", "Fourth", "Fifth", "Sixth" and "Seventh".

RFC2833 Payload: It's used as the default RFC2833 payload type when making the outbound calls.

DTMF Type: In IG7600, there are two methods for transmitting DTMF tone. Select RFC2833 Method, the DTMF tone will be transmitted by event packet. Select SIP-INFO Method, the DTMF tone will be represent in SIP INFO Message.

Hold Recall Time: IG7600 provides hold recall line LED indication. When the hold recall time expires, IG changes the Line LED to Hold Recall indication.

Conference Timeout: This configuration is to limit the time of a conference call. After the time, conference call will end.

FXS: It is used to set many FXS-related options.

Fax Support: The system supports FAX/modem tone detection with G.711 and T38 mode.

Call ID Method: The system provides the ability to detect the calling party identification provided by PSTN lines. It also transmits the calling party identification to POTS ports. There are four choices: NONE, DTMF Before Ring, DTMF After Ring, FSK Before Ring, and FSK After Ring.

Inter-digit Timeout: Its range is from 2 to 9 seconds.

FXS Hotline: Enable/Disable

FXS Hotline Number: FXS dialing number in Hotline application.

FXS Hotline Delay Time: At idle state, FXS lifts the handset or press the Speaker button. A call is built to the Hotline Number either immediately or after the delay time.

FXO: It is used to set many central office line options.

Loop-break Detection Time: For every PSTN/FXO call, system provides the facility to monitor the call status. If the remote party hangs up, the ongoing call must be terminated. The PSTN line monitor is done by the loop-break signal or busy tone. The value range is: Disable/100/200/.../1000 ms.

Dialing Type: It determines how the dialing digits will be generated, either in DTMF or Pulse (Rotary) signaling format.

Pulse Dialing: This specifies the parameters of Pulse Dialing, you need to check with your service provider for the correct settings to make the outgoing call to work properly.

PR Detection Time: Some PSTN service providers provide the PR (Polarity Reversal) signal to indicate the call progress status (remote answer/hang up).

Ring Recognition Time: The timer determines the minimum ring duration recognized as a valid incoming ring on a FXO port. Shorter ring signals are ignored. The timer range is 200ms to 600ms in 40ms increments.

Delay Ring Time: The timer is to allow the Central Office to send ICLID before the call is answered. Once the timer expires, the programmed extensions will ring and the ICLID number will be sent to the ringing extensions. The timer range is 3 to 6 seconds on 0.5 second increments.

Dial Wait Time: When the user seizes a PSTN/FXO line, the Stable Time delay is needed to wait the dial tone from Central Office. The timer range is 0 to 8 seconds on 1 second increments.

Inter-digit Timeout: Its range is from 2 to 9 seconds.

Flash Time: The on-off duration for sending the FLASH signal. Its range is from 90 to 3000 ms.

Flash New Call: If this item is set "Enable", a call will be taken account of a new call when the CO FLASH feature is used.

FXO to FXO Call Duration: The maximum calling time between two FXO lines.

DTMF Signal On/Off Duration: The on/off time duration of DTMF signals. Their ranges are from 50 to 200 ms.

Pause Time: The pause time of alphabet "p" in the process of call dialing. The timer range is 1 to 5 seconds on 0.5 second increments.

Ring Abandon Time: It specifies the maximum time between valid ring signals from the CO/PBX. If the duration between rings exceed the Ring Abandon time, IG7600 stops ringing the destination(s) and the port returns to idle. The timer range is 1 to 10 seconds on 1 second increments.

Release Guard Time: The guard time to ignore the noise signal when releasing the call. The timer range is 1.0 to 3.0 seconds on 0.5 second increments.

Busy Tone Detection Time: System detects the busy tone to monitor the call status. When it reaches the detection time, system assumes the remote party hangs up. The ongoing call will be terminated. When setting the time to "0", the Busy Tone detection will be disabled.

6.6.3.4 SMDR

SMDR (Station Message Detail Recording) will take down user's dialing record. It contains every calling period. From the log of SMDR, the administrator can charge some fees from the user.

This page allows you to view the SMDR record and configure the SMDR. Click "View SMDR" button to view the SMDR record, and click "Configure SMDR" button to configure the SMDR. (Figure 6-66, Figure 6-67, Figure 6-68)

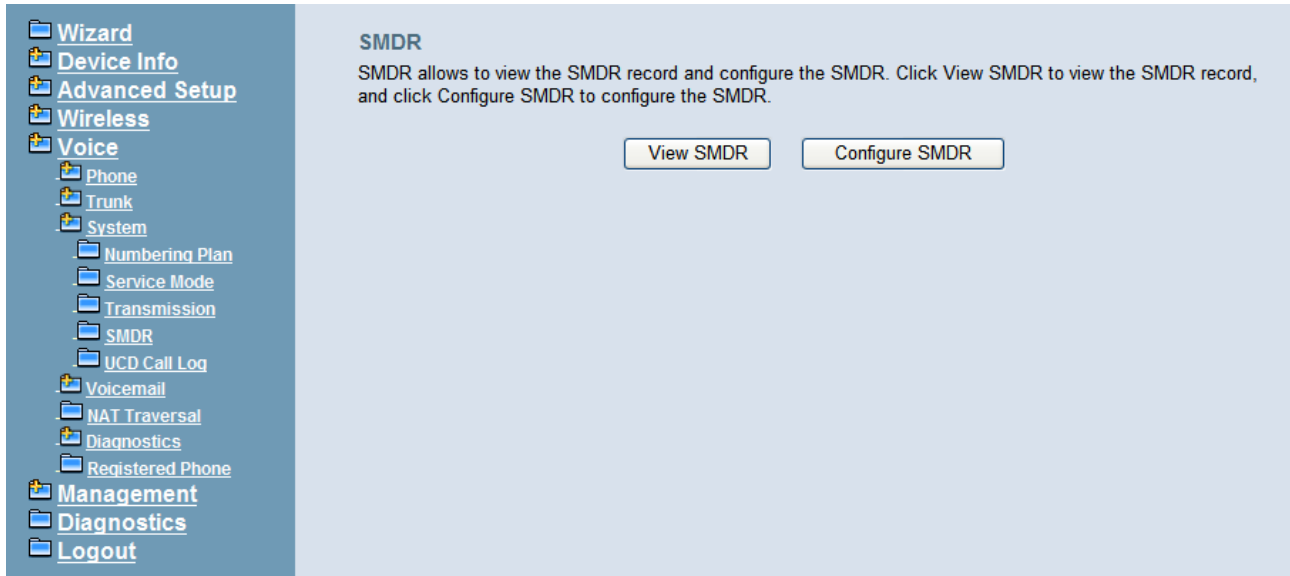


Figure 6-66. Voice – System – SMDR

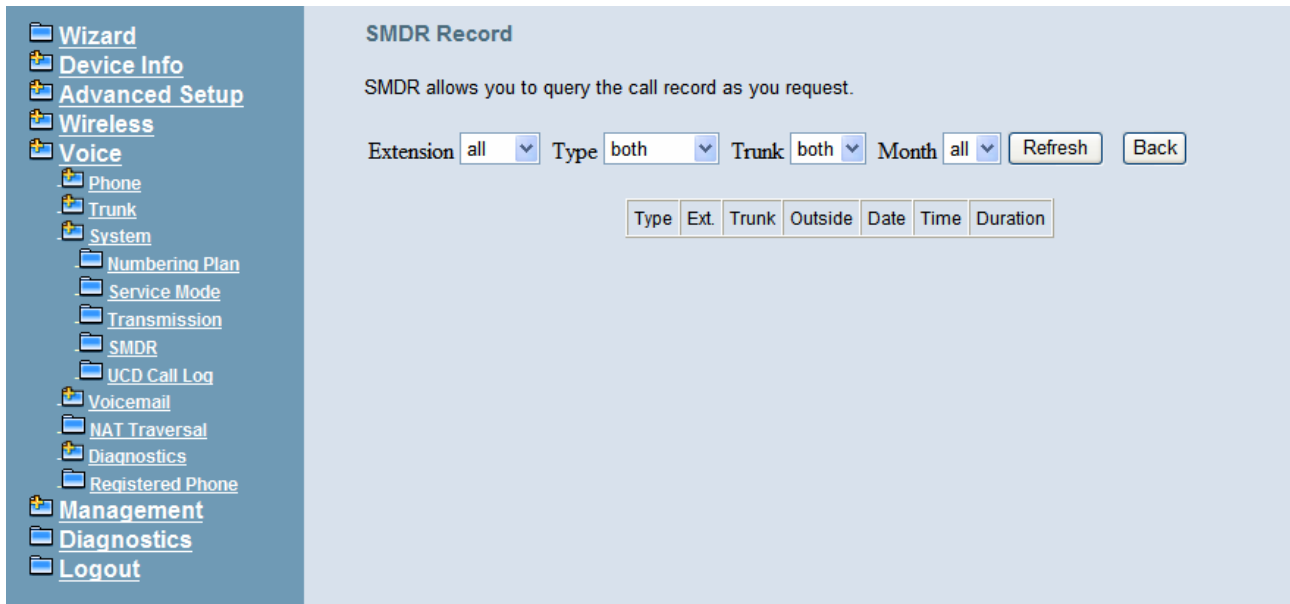


Figure 6-67. Voice – System –SMDR – View SMDR

The “PSTN Outgoing Call Duration Start Time” is used to estimate whether the PSTN outgoing call to be recorded. If the duration is less than it, the call won't be recorded. If log mode is configured, the specified SMDR record will be sent to local or/and remote log server.

SMDR Configuration

The PSTN Outgoing Call Duration Start Time is used to estimate whether the PSTN outgoing call has connected, and if its duration is less than it, the call won't be recorded. If log mode is configured, the specified SMDR record will be sent to local or/and remote Syslog.

PSTN Outgoing Call Duration Start Time: s

Log Mode: ▼

Local Type: ▼

Figure 6-68. Voice – System –SMDR Configuration

6.6.3.5 UCD Call Log

This page shows the Call Log for incoming call to UCD group. (Figure 6-69)

Incoming Call Log for UCD

Incoming Call Log for UCD show the incoming missed call record for UCD group.

Caller ID Name	Caller ID Number	UCD Group	Date	Time
----------------	------------------	-----------	------	------

Figure 6-69. Voice – System – UCD Call Log

6.6.4 Voice Mail

IG7600 provides a built-in Auto Attendant and Voice Mail System. It is separated into 7 parts:

- General
- Phone Extension
- Virtual Extension
- Update MOH File
- Update Voice File
- Holiday
- Advanced

The configurable items for each part would be described in the following.

6.6.4.1 General

This page allows you to configure the general settings of the auto attendant and voice mail.

Auto Attendant: (Figure 6-70)

Admin Password: The password of administrator.

AA No Answer Time: When a call is being transferred by AA, this timer will do a count down. When time is up, the callee is considered to be unavailable. AA will play 10206.vox then, to guide the caller what to do next.

Note: The timer must be shorter than the Reroute Timer of UCD Group, because only one of them can take effect.

Max Try Time: Maximum error times for extension's key input.

Action When Max Error Reached: You can set the system "Forward to operator" or "Disconnect" when reaching the "Max Try Time" errors for key input.

Prompt Language: Automated Attendant language type. It provides one or two languages to be chosen.

VAA Codec: Choose the codec of auto attendant.

RTP Packet Size: Choose the RTP packet size of auto attendant.

DISA: Enable/Disable DISA. When enable DISA, Auto Attendant plays the Greeting message and the Caller dials "#" key, caller can make an outside call. When disable DISA, caller can't make an outside call.

Dial by Name Code: This code is used as an entry code of Dial by name function in AA process. It is a disabled function by default. You should activate it manually by input a number here.

Single Digit Table: This entry is for users to configure a speed dial table for each AA menu. (Figure 6-71)

Greeting Mode: This controller is for you to select greeting mode of AA

Auto Attendant

Admin Password: 6 digits

AA No Answer Time: 20 15-60

MAX Try Time: 3 1-9

Action When Max Error Reached: Forward to Operator

Prompt Language: Language 1 Only

VAA Codec: G729

RTP Packet Size: 20 ms

DISA: Disable

Dial by Name Code:

Single Digit Table: Configuration

Greeting Mode: Working

Voice Mail

Days for Keeping Voice Mail: 30 0-30

Max recording time: 5 min

Silence detection for VM recording: Enable

Email Notify with Voice Files: No

Figure 6-70. Voice – Voice Mail – General – 1

Single Digit Table

This table allows you to configure speeddial number for multilevel auto attendant

AA Menu Selection: AA Menu 0

Speeddial Number	Type	Destination
0	Operator	
1	NULL	
2	NULL	
3	NULL	
4	NULL	
5	NULL	
6	NULL	
7	NULL	
8	NULL	
9	NULL	

Back Save Settings Cancel Changes

Figure 6-71. Voice – Voice Mail – General – Single Digit Table

Figure 6-72. Voice – Voice Mail – General – 2

Voice Mail: (Figure 6-72),

Days for Keeping Voice Mail: Keep days for leaving messages. 0 means that the messages are kept until the users delete them.

Max recording time: The range of recording time is form 1 to 30 minutes.

Silence detection for VM recording: Set “Enable” of this item will do the silence detection in VM recording. If “silence” is detected, IG7600 will terminate the recording and release the line. It doesn’t work when AA’s codec is G.729.

Email Notify with Voice Files: Add attached WAV file in notifying email for leaved message.

SMTP Support SSL: Choose “Yes” to support SSL.

SMTP Server: SMTP Mail Server.

SMTP Server Port: SMTP Mail Server port. The default value is 25.

Sender Email Address: Email Address of Sender.

Sender User Name: User Name of Sender’s Email.

Sender Password: Password of Sender’s Email.

Voicemail Tag: Voicemail tag

Email header: Email header

Email Test Account: Input a Target Mailbox here. Press the button [Email Test] To send a test Email to the Target Mailbox.

6.6.4.2 Phone Extension

Voice Mail extension configuration allows you to configure voice mail settings for each extension. While pressing “Configure”, it shows Extension Voice Mail Configuration screen. (Figure 6-73)

Phone Extension

Phone Extension configuration allows you to configure voice mail settings for each extension.

No.	Ext.	First Name	Last Name	Operation
1	299			Configure
2	201			Configure
3	202			Configure
4	203			Configure
5				
6				
7				
8				
9				
10				

Navigation buttons: << < > >>

Figure 6-73. Voice – Voice Mail – Phone Extension

The following items will be configured in the Extension Configuration (Figure 6-74):

Voice Mail: Enable/Disable. To disable this item, there is not allowed to listen to the message from outside party.

Password: Password of voice mailbox of the extension.

E-mail Address: Phone user's E-mail Address.

Prompt Language: Provides one of the two languages to be chosen.

Email Message: This item is used when the message file is attached. You can select "Save as New"; the message will be displayed as a new message. Select "Save as Old"; the message will be a listened message. Select "Delete", the message will be deleted.

Leaving Message: When disabling it, the mailbox stops recording the new leaving messages.

Extension Configuration
This page allows you to configure voice mail settings for each extension.
Ext. 299 Configuration

Voice Mail

Password 4 digits

E-mail Address

Prompt Language

Email Message

Leaving Messages

Figure 6-74. Voice – Voice Mail – Phone Extension – Extension Configuration

6.6.4.3 Virtual Extension

IG7600 provides 50 Virtual Mailboxes. These Virtual Mailboxes can be used by the members not works in the office, or as a secondary mailbox (Figure 6-75).

When selecting “Configuration”, it also has an Extension Configuration page to be configured (Figure 6-76)

Virtual Extension
Virtual Extension configuration allows you to configure voice mail settings for each virtual extension.

No.	Ext.	First Name	Last Name	Operation
1	830			<input type="button" value="Configure"/>
2				
3				
4				
5				
6				
7				
8				
9				
10				

Figure 6-75. Voice – Voice Mail – Virtual Extension

Extension Configuration
This page allows you to configure voice mail settings for each extension.

Ext. 830 Configuration

Voice Mail:

Password: 4 digits

E-mail Address:

Prompt Language:

Email Message:

Leaving Messages:

Figure 6-76. Voice – Voice Mail – Virtual Extension Configuration

6.6.4.4 Update MOH File

The Music On Hold (MOH) could be uploaded from the Local PC side. Click the “Browse” to locate the new MOH file in the PC. Then, click “Update File” to process the file upload. NOTE: The device do not allow “stereo” MOH format, please upload a MOH file with “mono” format. (Figure 6-77)

Update MOH File
This page allows you to upload the Music On Hold (MOH) file.

NOTE:

1. The device does not allow "stereo" MOH format, please upload a MOH file with "mono" format and ".wav" suffix.
2. The MOH file will only be converted to .vox file with PCMU and PCMA codec.

Step 1: Click the "Browse" button to choose the MOH file.

Step 2: Click the "Upload File" button to upload this file.

MOH File:

Figure 6-77. Voice – Voice Mail – Update MOH File

6.6.4.5 Update Voice File

The voice files could be uploaded from local PC side. These voice files are compressed in Linux System. It allows a “.tar”, “.tgz” or “.tar.gz” compressed format file. (Figure 6-78)

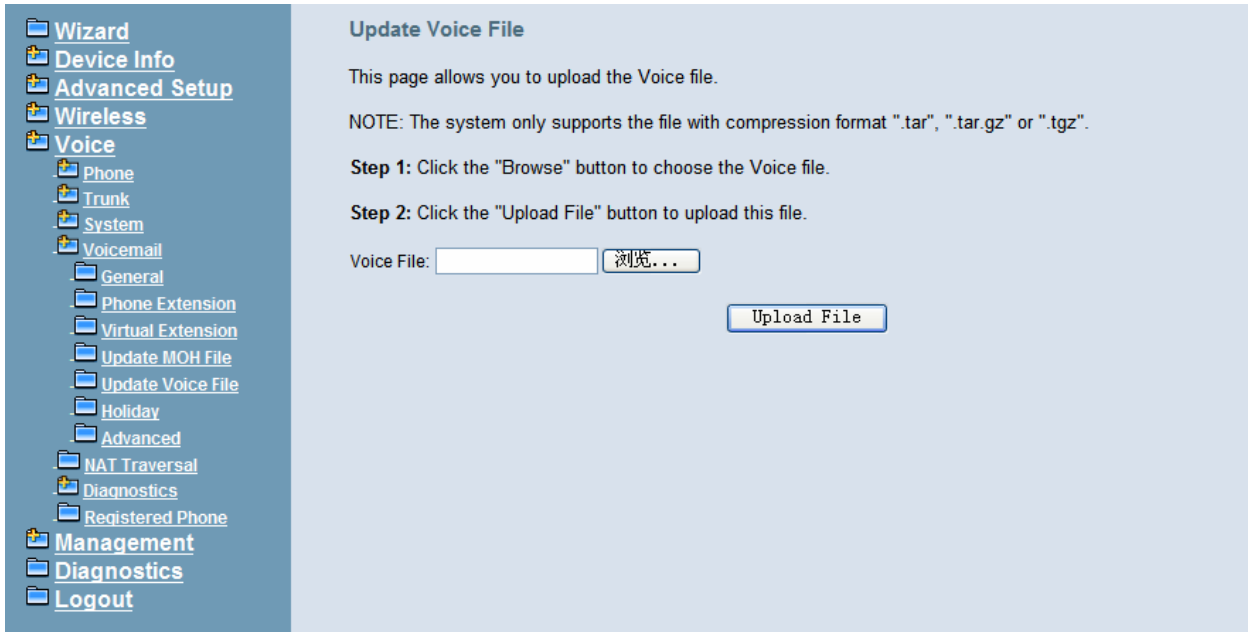


Figure 6-78. Voice – Voice Mail – Update Voice File

6.6.4.6 Holiday

This page allows you to configure the holiday or special off-duty days. You can click the buttons under the table to choose pages. (Figure 6-79)

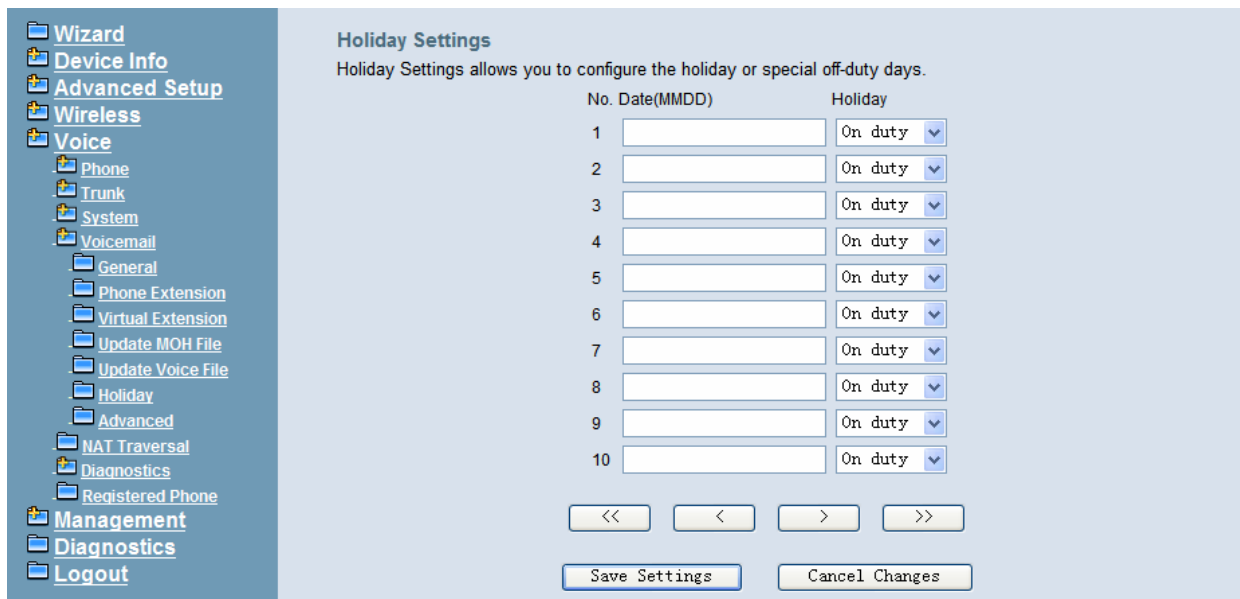


Figure 6-79. Voice – Voice Mail – Holiday

6.6.4.7 Advanced

This page allows you to browse, upload or download voice files through IG7600's ftp server. (Figure 6-80)



Figure 6-80. Voice – Voice Mail – Advanced

6.6.5 NAT Traversal

If IG is put behind a Router, you need to configure this page to enable NAT Traversal. (Figure 6-81, Figure 6-82)

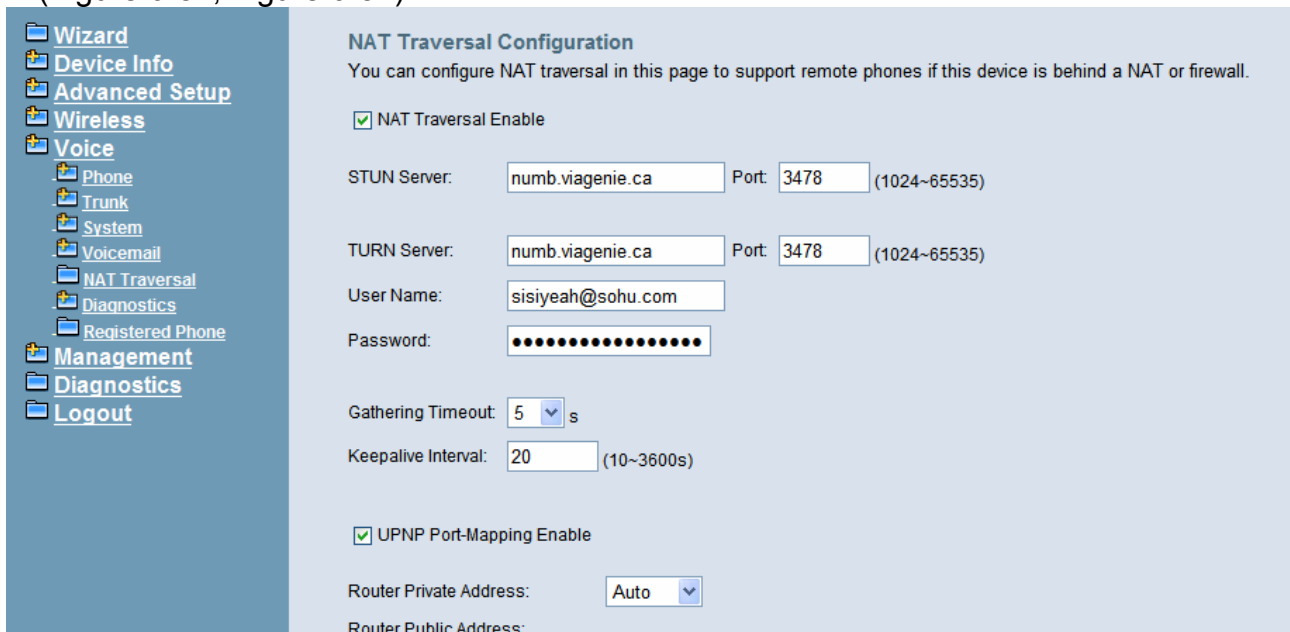


Figure 6-81. Voice – NAT Traversal – 1

The screenshot shows the 'NAT Traversal' configuration page. The left sidebar has a tree view with the following items: Wizard, Device Info, Advanced Setup, Wireless, Voice (expanded), Phone, Trunk, System, Voicemail, NAT Traversal (selected), Diagnostics, Registered Phone, Management, Diagnostics, and Logout. The main configuration area includes the following fields:

- Gathering Timeout: 5 s
- Keepalive Interval: 20 (10~3600s)
- ☒ UPNP Port-Mapping Enable
- Router Private Address: Auto
- Router Public Address:
- External Registration SIP Port: 5070 (1024~65535)
- External IP Trunk SIP Port: 5060 (1024~65535)
- External Crypto Protocol Port: 38600 (1024~65535)
- External RTP Proxy Port Start: 35000 (1024~65535)
- External IP Trunk RTP Port Start: 30000 (1024~65535)
- External DSP RTP Port Start: 40000 (1024~65535)
- External IP-Camera Port: 38800 (1024~65535)

Figure 6-82. Voice – NAT Traversal - 2

The following items will be configured in the NAT Traversal page:

NAT Traversal Enable: Enable/Disable. IG can work properly if it's pub behind NAT only when it's enabled.

STUN Server: A STUN server located at Internet.

TURN Server: A TURN server located at Internet.

Username: Most TURN server needs username/password to authenticate.

Password: Most TURN server needs username/password to authenticate.

Gathering Timeout: The expire timer to collect self information by ICE.

Keep alive Interval: Keep alive interval for STUN server.

UPNP Port-Mapping Enable: To enable/disable UPNP client.

Router Private Address: If you choose "Auto" UPNP client will detect Router's private IP address by itself. If you choose "Manual" you should input Router's private IP address by yourself.

Router Public Address: It records Router's public IP address detected by STUN.

External Registration SIP Port: Port that will be opened on Router for SIP port.

External IP Trunk SIP Port: Port that will be opened on Router for IP Trunk's SIP port.

External Crypto Protocol Port: Port that will be opened on Router for Crypto protocol between IG and IP2061/M62/IP3054(-i).

External RTP Proxy Port Start: Port range that will be opened on Router for RTP proxy, it will reserve 300 ports.

External IP Trunk RTP Port Start: Port range that will be opened on Router for IP Trunk RTP, it will reserve 100 ports.

External DSP RTP Port Start: Port range that will be opened on Router for DSP RTP, it will reserve 14 ports.

External IP Camera Port Start: Port range that will be opened on Router for IP Cameras, it will reserve 8 ports.

RTP Transmission

This entry is for when two or more sip clients are behind the same router, how will the clients exchange their RTP Packets? If you choose Always, IG will always do rtp relay, i.e. IG will transport rtp packets for the two parties, and if you choose Auto the two sip clients will exchange rtp packets directly with each other.

The screenshot shows the 'RTP Transmission' configuration page. On the left is a navigation menu with links: Voicemail, NAT Traversal, Diagnostics, Registered Phone, Management, Diagnostics, and Logout. The main content area has the following settings:

- External DSP RTP Port Start: 40000 (1024~65535)
- External IP-Camera Port: 38800 (1024~65535)
- RTP Transmission**

When set to Auto, IG7600 will check if both Calling and Called parties are behind the same router, if yes, let the RTP to be transmitted to each other directly without IG7600's relaying. It may not work properly under multiple-layer NAT environment.
- RTP Relay: ☒ Always ☐ Auto (experimental)
- Save Settings button

6.6.6 Diagnostics

This page can help you to collect debugging information for trace easily.

6.6.6.1 Remote Maintenance

The screenshot shows the 'Remote Maintenance -- Configuration' page. On the left is a navigation menu with links: Wizard, Device Info, Advanced Setup, Wireless, Voice, Phone, Trunk, System, Voicemail, NAT Traversal, Diagnostics, Remote Maintenance, Registered Phone, Management, Diagnostics, and Logout. The main content area has the following sections:

- Remote Maintenance -- Configuration**

If the log mode is enabled, the system will begin to log all the selected events. For the Log Level, all events above or equal to the selected level will be logged. If the email address is useful, the log will be sent to it by the specific feature code.

Remote Maintenance: ☒ Disable ☐ Enable

Log Level: Debug (dropdown)

Destination Email: [text input]

Save SIP packets: ☐

Save IP Trunk SIP packets: ☐

Save Crypto Protocol packets: ☐

Save CMS Log: ☐

Save Settings button
- Remote Maintenance -- Download Log**

Download the maintenance log.

Download button
- Remote Maintenance -- Delete Log**

Delete old maintenance logs.

Delete button

Figure 6-83. Voice – Remote Maintenance

The following items will be configured in the Remote Maintenance page:

Remote Maintenance: Enable/Disable. When it's enabled, IG will write necessary information to maintenance log.

Destination Email: If it's set, maintenance log file will be sent to this Email address automatically if user presses "*64" accordingly.

Save SIP packets: If it's checked, IG7600 will record SIP packets sent to or received from IP2061/M62/IP3054(-i).

Save IP Trunk SIP packets: If it's checked, IG7600 will record SIP packets sent to or received from each IP Trunk.

Download Log: You can download maintenance log to your local PC by pressing this button.

Delete Log: You can delete all old maintenance logs by pressing this button.

6.6.7 Registered Phone

This page lists the information of registered phones, and provides the link to access the phone's web page. (Figure 6-84)

Registered Phone

This page lists the information of registered phones, and provides the link to access the phone's web page.

Note: The "Link to Phone" may not work correctly with following cases:

- 1: The registered phone is a remote phone and is behind NAT.
- 2: The IG7600 is behind NAT.

Phone	Model	Version	IP Address	From	Execution
201	IP2032	V2.0_ICON_VN	192.168.1.2	LAN	Link to Phone
202	IP2061	V2.0_ICON_VN	192.168.1.5	LAN	Link to Phone
204	IP3054	V0.2.21.1	192.168.1.7	LAN	

Figure 6-84. Voice – Registered Phone

6.7 Management

The system administrator can do the following functions to manage the configurations, events, and software update of the IG7600.

- Settings
 - Backup
 - Update
 - Restore Default
- System Log
- TR-069 Client
- Time Settings
 - Internet Time
 - Daylight Saving Time
- Access Control
 - Service Port
 - Services
 - IP Addresses
 - Password
- PTC
- IP Camera
- Update Software
- Upgrade Phone Software
- APNS Certificate
- Reboot

6.7.1 Settings

The settings area allows the administrator to create a backup, update the system, and restore the system to factory default.

6.7.1.1 Backup

Click “Backup Settings”; you may save your IG7600’s configurations to a file on your PC. The backup file is a compress file (.tar). It includes System Configuration file, backupsettings.conf, and the individual extension’s voicemail configuration files (.ini) (Figure 6-85)

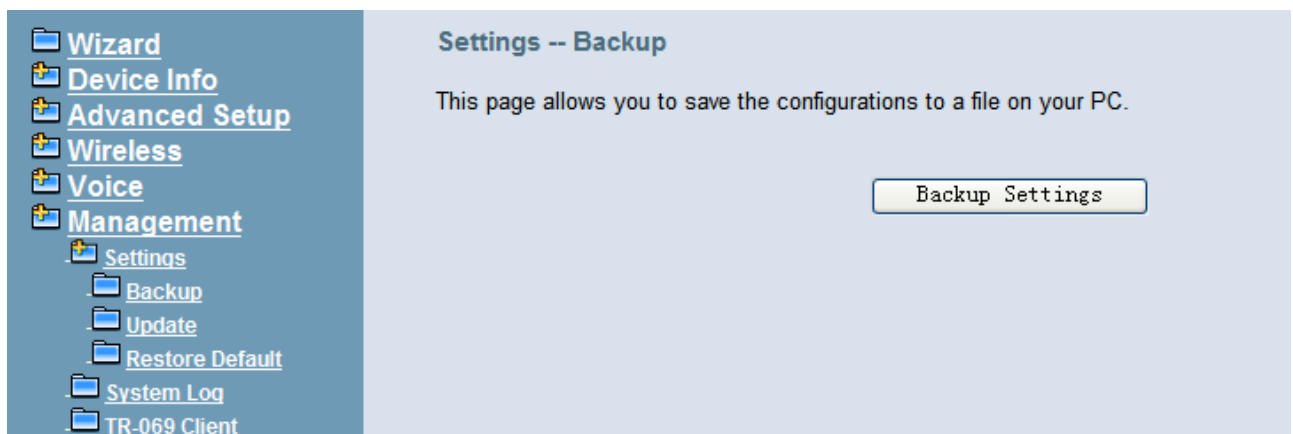


Figure 6-85. Management – Settings – Backup

6.7.1.2 Update

Click “Browse” to locate the setting file saved on the Local PC. The file can be a compress file (.tar) or a System Configuration file (backupsettings.conf). Then, click “Update

Settings” would apply the settings to the IG7600 according to the configuration file. (Figure 6-86)

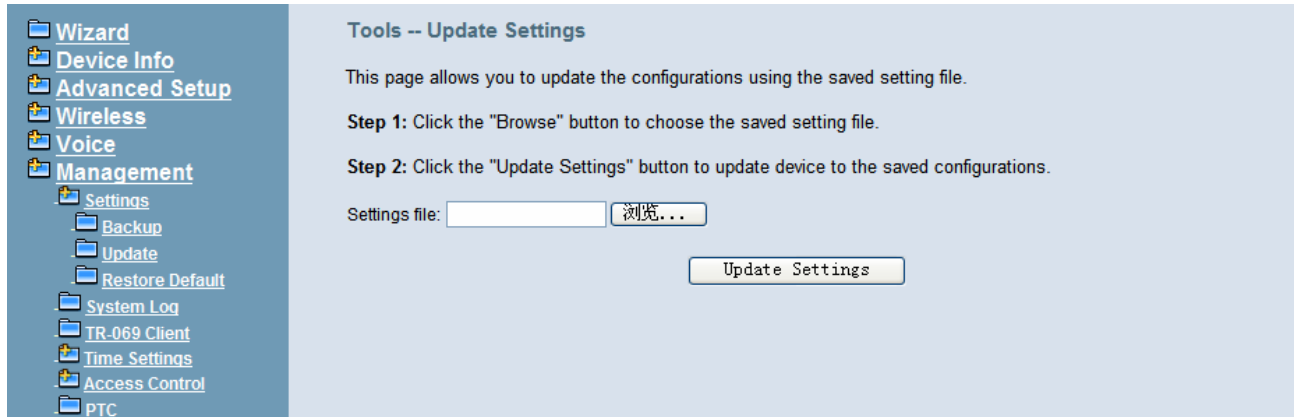


Figure 6-86. Management – Settings – Update

6.7.1.3 Restore Default

You can choose restore Voice Files or Default Settings or Restore All in the drop-down menu. Click “Restore” to restore selected default settings. This would be helpful when the voice files or settings are messed up. After IG7600 returns to factory default settings, the wizard setup is invoked automatically when the administrator accesses to IG7600’s web server. (Figure 6-87)

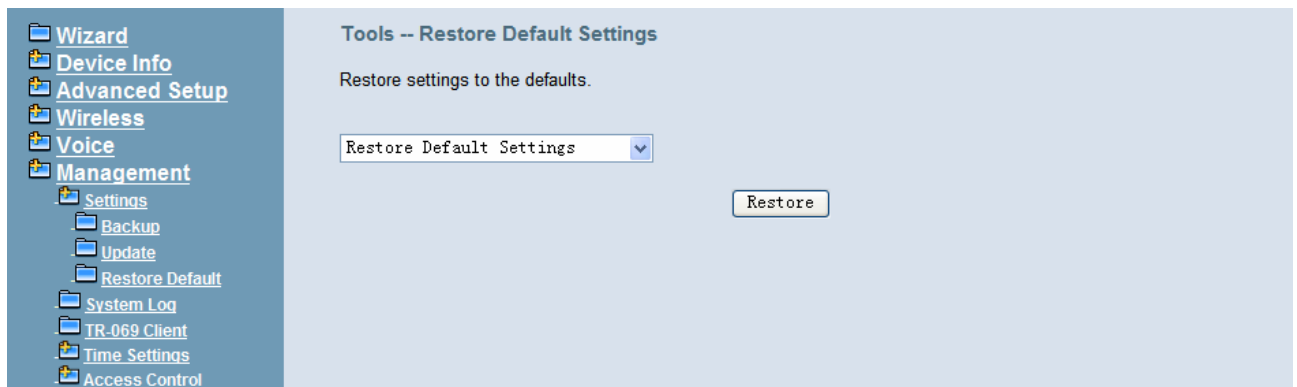


Figure 6-87. Management – Settings – Restore Default

6.7.2 System Log

This allows system administrator to view the system log and configure the system log options. Click “View System Log” to view the system log. Click “Configure System Log” to configure the system log options. (Figure 6-88, Figure 6-89)

When you configure the system log options, you can see Log Levels and Display Levels: Emergency, Alert, Critical, Error, Warning, Notice, Informational, and Debugging. The Log Level implies that what log level is applied to IG7600 to record the log. The Display Level would just show the users the log message that they want to know. As a result, Display Level was just a subset of total log messages. If “Mode” is set to “Remote” or “Both”, the log messages would be sent to the specified UDP port of the specified log server. Click “Apply/Save” button that you can save the new configuration.

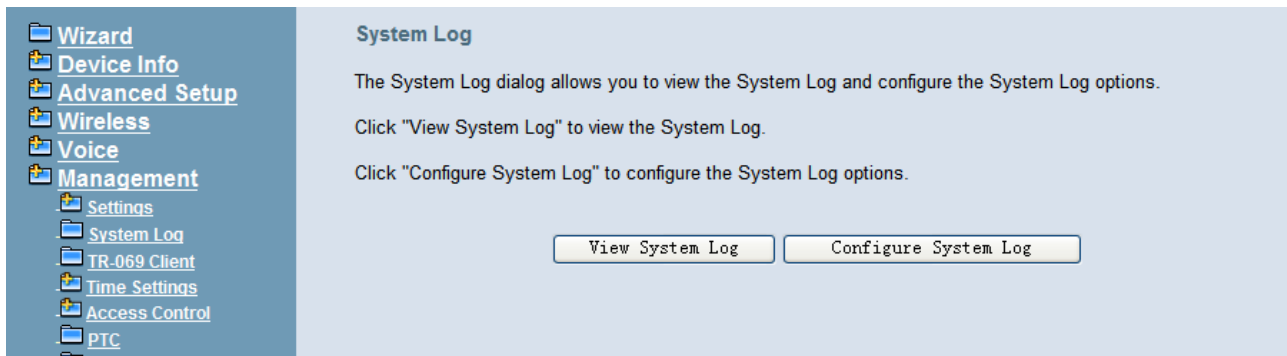


Figure 6-88. Management – System Log

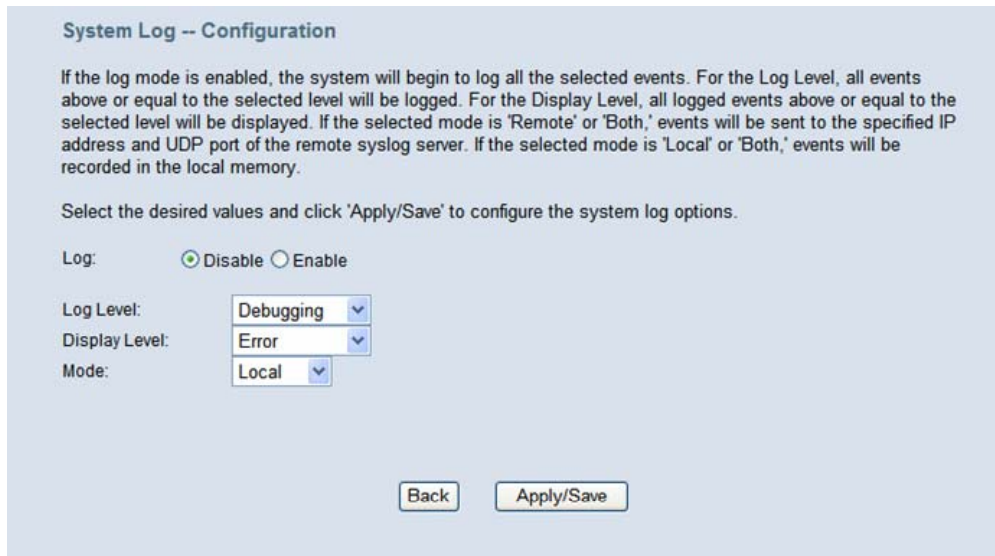


Figure 6-89. Management –System Log –Configure System Log

6.7.3 TR-069 Client

WAN Management Protocol (TR-069) allows an Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device. Firmware upgrade or vendor configuration file backup can be done remotely on ACS server. Select the desired values and click "Save Settings" to configure the TR-069 client options. (Figure 6-90)

Inform: It can be set to *Disable* or *Enable* for periodically inform every *Inform Interval*. Fill the correct ACS URL, ACS username/password and select Interface, the TR-069 client is able to connect to ACS server.

Display SOAP message on serial console: *Disable/Enable*.

Connection Request Authentication: The "Connection Request User Name" and "Connection Request User Password" are used for the server to initiate an ACS initiation connection.

TR-069 client - Configuration

WAN Management Protocol (TR-069) allows a Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device.

Select the desired values and click "Apply/Save" to configure the TR-069 client options.

Inform ☐ Disable ☒ Enable

Inform Interval:

ACS URL:

ACS User Name:

ACS Password:

Interface:

Display SOAP messages on serial console ☒ Disable ☐ Enable

☒ Connection Request Authentication

Connection Request User Name:

Connection Request Password:

Connection Request URL:

Figure 6-90. Management – TR-069 Client

6.7.4 Time Setting

This item allows you to configure system's time and the Daylight Saving Time.

6.7.4.1 Internet Time

This page allows you to configure the Internet time setting. You can choose the "Automatically synchronize with internet time servers". So the IG7600 can synchronize its system time with NTP time server automatically (Figure 6-91). When you choose "Manual Date and Time Settings", you can manually configure the date and time settings (Figure 6-92).

Time Settings

This page allows you to configure the time synchronization method of the unit.

☒ Automatically synchronize with Internet time servers.

First NTP time server:

Second NTP time server:

Third NTP time server:

Fourth NTP time server:

Fifth NTP time server:

Time zone offset:

☐ Manual Date and Time Settings

Figure 6-91. Management – Time Setting – Internet Time – Automatically

Figure 6-92. Management – Time Setting – Internet Time – Manually

6.7.4.2 Daylight Saving Time

This page allows you to configure the Daylight Saving Time (DST) which supports auto adjustment for daylight saving time. Click “Save Settings” button that you can save the new configuration. Click “Cancel Changes” button that you can cancel the changes. (Figure 6-93, Figure 6-94)

Figure 6-93. Management – Time Settings – Daylight Saving Time

Figure 6-94. Management –Time Settings – Day Light Saving Time – Manual DST Rule

Default International DST Rule: Default DST Rule obey international standard rule.

Manual DST Rule: Define your own DST Rule.

Start Time of DST: The date and time to start daylight saving.

If “Weekday” is 0, it means the date to start daylight saving is at exactly the given date.

If “Weekday” is not 0, the DST starts on the “Weekday” on or after the given date.

End Time of DST: The date and time to end daylight saving.

If “Weekday” is 0, it means the date to end daylight saving is at exactly the given date.

If “Weekday” is not 0, the DST ends on the “Weekday” on or before the given date.

Save Time during DST Period: The amount of hour/min/sec to add to the current time during daylight saving period.

6.7.5 Access Control

This item allows you to configure some service Ports, enable/disable some services, IP Address access control, and password for user, support, and administrator.

6.7.5.1 Service Port

This page allows you to change the IG7600's web port, ftp port, tftp port, ssh port and telnet port. And they will take effect after reboot. (Figure 6-95)

Figure 6-95. Management – Access Control –Service Port

6.7.5.2 Services

A Service Control List enables or disables services from being used. (Figure 6-96)

Services	LAN	WAN
FTP	Enable	<input type="checkbox"/> Enable
HTTP	Enable	<input type="checkbox"/> Enable
ICMP	Enable	<input type="checkbox"/> Enable
SSH	<input checked="" type="checkbox"/> Enable	<input checked="" type="checkbox"/> Enable
TELNET	<input checked="" type="checkbox"/> Enable	<input type="checkbox"/> Enable
TFTP	<input checked="" type="checkbox"/> Enable	<input type="checkbox"/> Enable

Figure 6-96. Management – Access Control –Services

6.7.5.3 IP Addresses

If the Access Control mode is enabled, permits access to local management services from IP addresses contained in the Access Control List. If disabling the mode, it will not validate IP addresses for incoming packets. WAN Only and WAN And LAN in Access Control Interface entries are for you to choose the rule executed on which side of your IG. Make sure you can connect to IG if you choose WAN and LAN mode. (Figure 6-97)



Figure 6-97. Management – Access Control –IP Addresses

6.7.5.4 Password

In this page you can define the passwords for administrator, support, and user. The Administrator has unrestricted access to change and view configuration of your IG7600. The Support is used to allow an ISP technician to access your IG7600 for maintenance and to run diagnostics. The User can access the IG7600, view configuration settings and statistics, as well as, update the router's software.

Use the password field to enter up to 16 characters. Note: Password cannot contain a space. (Figure 6-98)

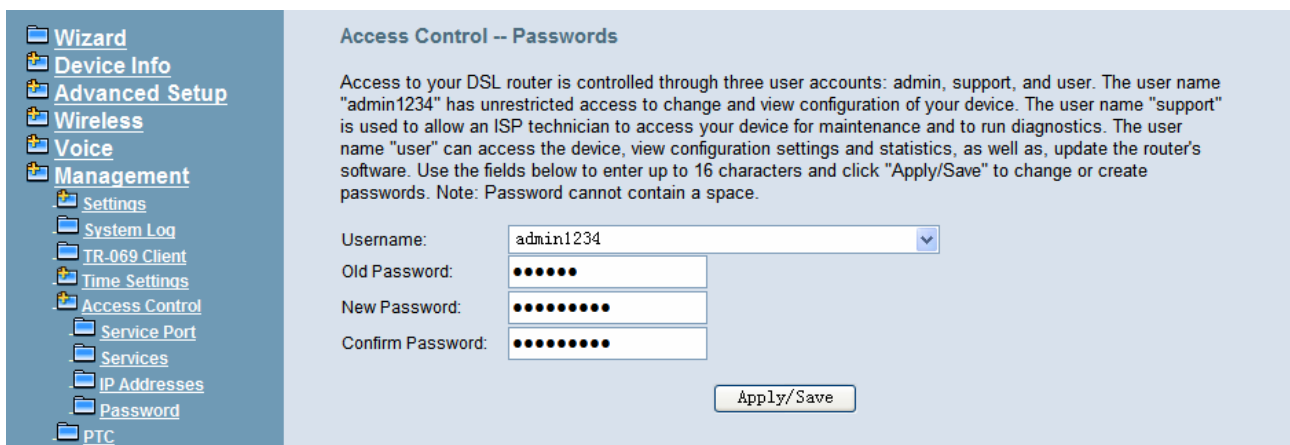


Figure 6-98. Management – Access Control – Password

6.7.6 PTC

This page is used to configure IG7600 to communicate with APS Server. IG7600 can connect to an APS to upgrade IG7600 firmware, IG7600 configuration and IP2061/M62 Phone firmware. You can configure IG7600 name, APS server URL and Time interval for check new firmware version. (Figure 6-99)

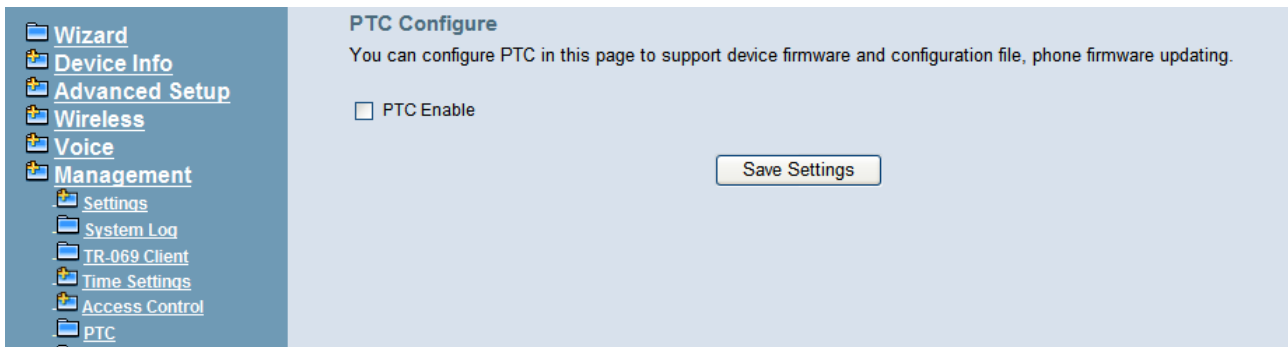


Figure 6-99. Management-PTC

6.7.7 IP Camera

IG7600 now provide 8 entries for IP Camera, You can either add IP Cameras automatically when you are configuring a MOCET special supported IP Camera, or manually add an ordinary one. (Figure 6-100)



Figure 6-100. Management – IP Camera

Click add to add a new entry (Figure 6-101)

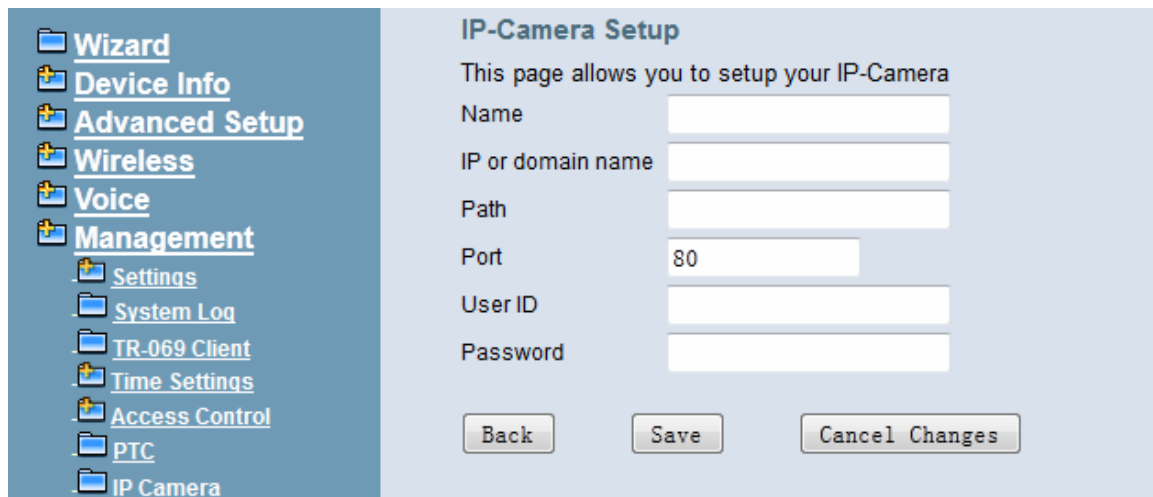


Figure 6-101. Management – IP Camera-Add

6.7.8 Upgrade Software

The new released software could be upgraded from the Local PC side or remotely. Click the “Browse” to locate the new software image file in the PC. Then, click “Update Software”

to process the software update. NOTE: The upgrade process takes about 5 minutes to complete, and your IG7600 will reboot. (Figure 6-102)

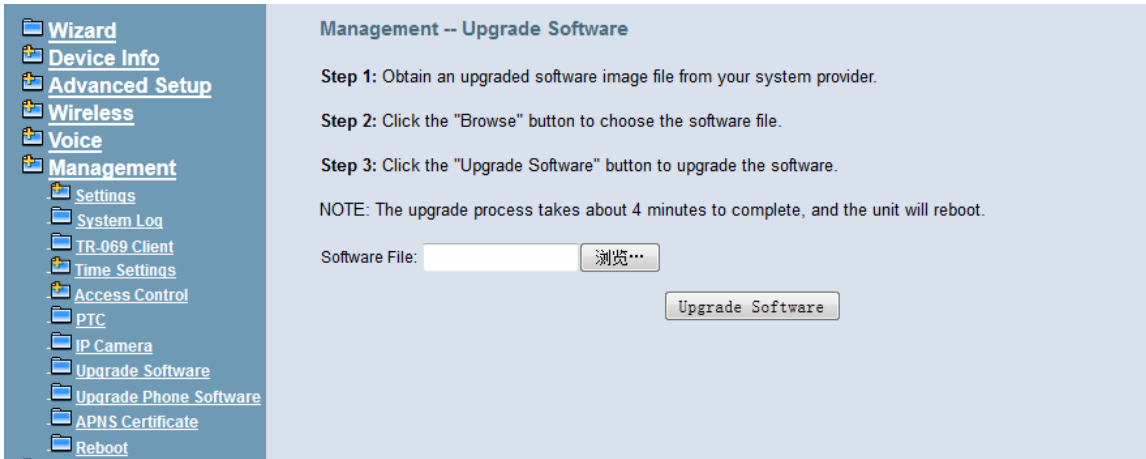


Figure 6-102. Management – Update Software

6.7.9 Upgrade Phone Software

Upgrade Phone Software page is for you to manage your IP Phones' software, when the IP Phone Extensions' software is different from the one we stored in system, IG will ask the IP Phone to upgrade its software using the image we stored.

You can delete the software if you don't want to use it.

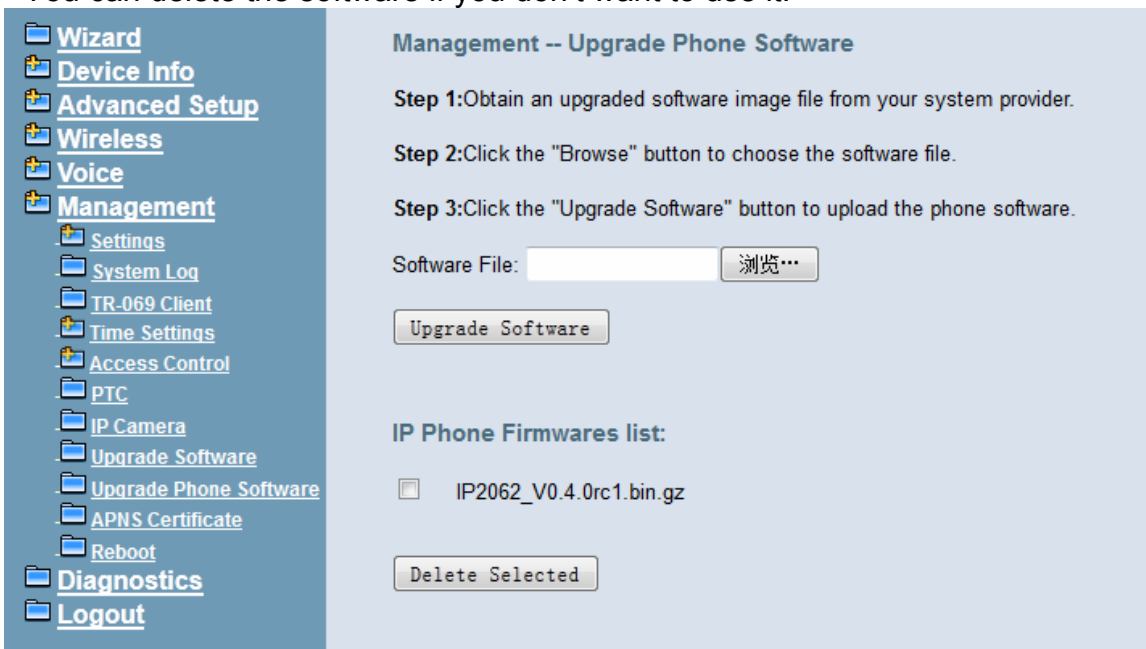


Figure 6-103. Management – Update Software

6.7.10 APNS Certificate

APNS Certificate page is for you to update your APNS certificate file for IG. You can use either Manual Mode or Auto Mode to update your certificate file. When you use Auto mode ask for the server URL from your Internet service provider. You should update the certificate file before your certification is expired, or your iOS device will not get push notifications any more. (Figure 6-104)

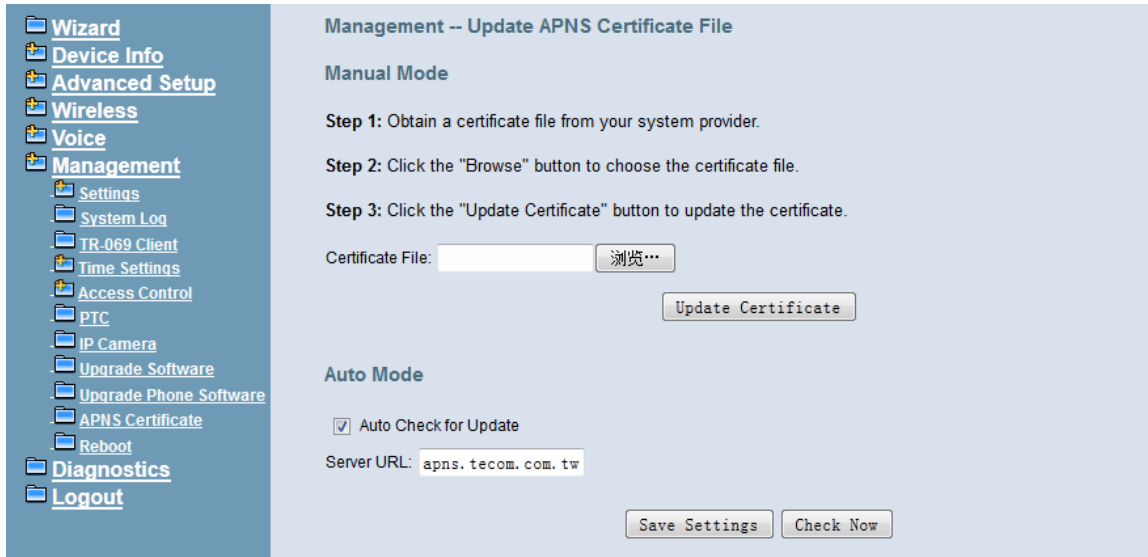


Figure 6-104. Management – APS Client

6.7.11 Reboot

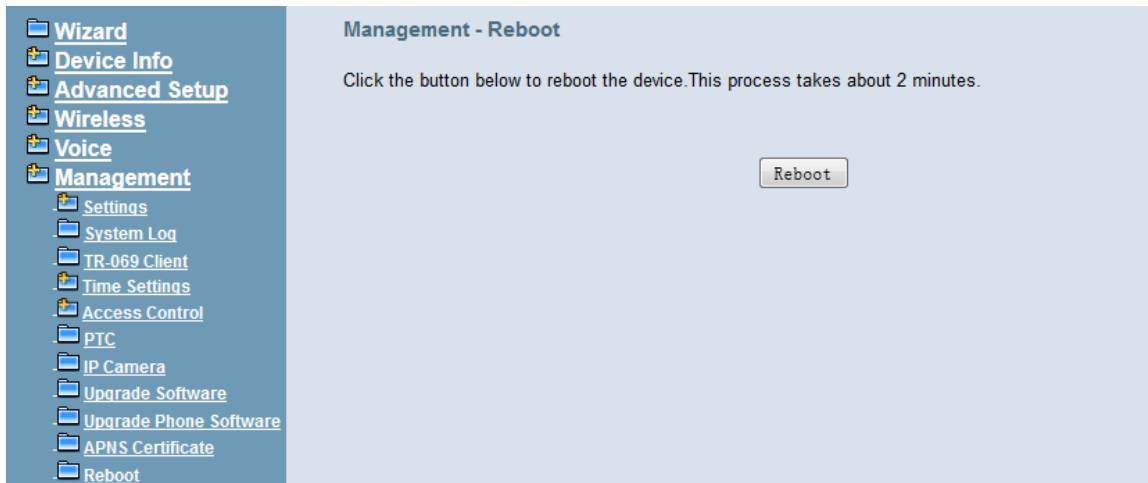


Figure 6-105. Management – Save/Reboot

Click “Reboot” to reboot the IG7600. The IG7600 would automatically save the configuration before reboot, so that modified settings would take effect after reboot. (Figure 6-105)

6.8 Diagnostics

This page provides the following information to users: (Figure 6-106)

- The network connection information on the net.
- The status of IG7600's PSTN Line.
- The status of IG7600's IP Trunk Line.
- The status of IG7600's AA Line.
- The status of IG7600's FXS.
- The Missed Voice Files. *Note: Displays only if there is any voice file missed. This column shows at most 5 missed files. If there are more than 5 ones, it shows first 5 files and adds a "... " symbol at the end.*

1) Network Connection

PASS: Normally connected

FAIL: Connecting fail

DOWN: No connection

2) PSTN Line / IP Trunk Line / AA / FXS

FAILED: Connecting fail or registering failure

IDLE: The line is idle

N/A: The line is not available

Busy: The line is in use

For Refresh Mode, if user select automatically refresh, the web page will automatically refresh for every 20 seconds.

Click "Disconnect" button will allow you release the selected trunk line or rescue the blocked one.

Figure 6-106. Diagnostics



Figure 6-107. Diagnostics - Missed Voice Files

6.9 Logout

Press “Logout”, you can logout the IG7600 web configuration page.

Appendix 1: Product Summary

TCP/IP Protocols

- IP Protocol (791)
- ARP (RFC 826) / RARP (RFC 903)
- ICMP (RFC792)
- TCP (RFC 793)
- UDP (RFC 768)
- SNTP
- DNS
- HTTP
- Telnet

IP Address Assignment

- Static
- Dynamic
- Subnet Mask
- PPPoE Client (RFC 2516)
- Primary and Secondary DNS
- DHCP Server (RFC 2131-2132)
- DHCP Client (RFC 2132)
- Dynamic DNS

Routing

- RIP v1/v2
- Static routing
- DHCP Server/Relay/Client
- DNS Relay
- NAT/NAPT
- NAT Traversal / Far End NAT Traversal
- SIP Firewall

Virtual Server

- Virtual Server
- Port Trigger
- DMZ

QoS

- IP ToS function (RFC 1349)
- DSCP
- IP Precedence
- Priority for Voice packet

VoIP Protocols

- SIP (RFC 3261)
- SDP(RFC2327, RFC3264)
- Real Time Protocol (RTP ; RFC 1889)
- MD5 (RFC3261 HTTP) digest authentication

- G.168 Echo Cancellation
- Voice Codec: G.711u, G.711a, G726-16, G726-24, G726-32 and G.726-40 (G.729a optional)
- Support FAX/modem tone detection and auto-fallback to G.711
- T.38

Digital Audio

- Codec: G.711 a-law/ μ -law 64Kbps, G.729
- SIP Call Offer /Answer: Codec auto capacity exchange
- Echo Cancellation: G.168 for each voice line
- Silence Detection/Suppression
- Comfort Noise Generation
- Adaptive jitter buffer
- Different frame size support (10,20,30,40, 50, and 60ms)
- Packet loss concealment
- Out-band (RFC2833) (In-band DTMF is not supported by AA now)

Security

- Password protected system management
- User authentication for PPP (PAP/CHAP/MSCHAP)
- Firewall
- Packet Filtering
- Access Control List
- Wireless Security:
 - Support WEP (64, 128-bit) encryption
 - 802.1x and WPA/WAP2 authentication
 - MAC Address-based access control
 - WDS support

Configuration Management

- LAN/WAN management via Telnet interface or Web-based browser interface
- Status display and event report from Web-based management
- Configuration Save and Restore from PC
- Reset to factory default
- System Clock Setting
- Manual / Automatic by Network NTP Server
- Remote Diagnostics
- Software Upgrade
- Remote management through MOCET PTS/PTC
- TR-069

Remote Diagnostic

- System for Debugging and Event log
- Device Diagnostic, Enable remote test following:
 - Test the connection to your local network,
 - The connection to your Internet service provider,
 - The status of PSTN Line,
 - The status of IP Trunk Line,
 - The status of VAA Line,
 - The status of FXS

Language Support

- English (North America) – default

LED Status

LED Name	Color	Status	Description
POWER	Red/Blue	Red On	Firmware updating
		Blue Flashing	System booting up
		Blue On	System initialized and running
		Off	Power off
WIRELESS	Blue	On	Wireless LAN is active
		Off	Wireless LAN is idle
LINE (1-6)	Blue	Off	PSTN Line is idle
		On	PSTN Line is active
TEL	Blue	Off	Phone is idle
		On	Phone is active
LAN	Blue	On	LAN is connected
		Off	LAN is not connected
		Flashing	LAN activity present (traffic in either direction)
WAN	Red/Blue	Blue On	WAN is connected and IP is obtained
		Red On	WAN is not connected or no IP assigned
		Flashing	WAN activity present (traffic in either direction)

Power Requirement

- Input : Voltage Range 90~230 VAC
- Output : 12V DC / 1.5A

Operating Environment

- Temperature : 0~40°C
- Humidity : 10 to 90%, non-condensing

Physical Specification

- Dimension : 190(W) x 280(L) x 34(D) (mm)

Appendix 2: Feature Access Codes

The Feature Access Codes are applied in IP2061 Phones, IP3054(-i) Smart Phones and FXS phone only. It's to activate/cancel some IG7600 user-specified functions.

These Feature Access Codes are used when the phone is at idle state.

Direct Call Forward

Forward all of the calls without regard to the extension status.

(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*21 + Type + Ext/VAA/UCD No.

*21 + Type + * + (PSWD) + * + Outside Number

To Cancel

**21

Busy Call Forward

Forward the calls if the extension is busy.

(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*22 + Type + Ext/VAA/UCD No.

*22 + Type + * + (PSWD) + * + Outside Number

To Cancel

**22

No Answer Call Forward

Forward the calls if the extension doesn't answer the call within No Answer Time.

(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*23 + Type + Ext/VAA/UCD No + * + Time.

*23 + Type + * + (PSWD) + * + Outside Number + * + Time.

To Cancel

**23

DND Call Forward

Forward the calls if the extension enables DND.

(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*24 + Type + Ext/VAA/UCD No

*24 + Type + * + (PSWD) + * + Outside Number

To Cancel

**24

Follow Me Call Forward:

Forwards calls at your extension to the extension where you are currently working.

(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*25 + Type + Ext No + * + Password

To Cancel

**25 + Ext No + * + Password

Call Fork

When extension gets an incoming call, the extension gets ringing. It rings another extension or rings an outside destination simultaneously.

(Type: 0 – ICM, 1 – Outside, 2 – Both; Destination: 1 – First; 2 – Second)

To Activate

*26 + Destination# + Type + Ext No

*26 + Destination# + Type + * + (PSWD) + * + Outside Number

To Cancel

**26 → cancel the both forking destination

**261 → cancel the first forking destination only

**262 → cancel the second forking destination only

Do Not Disturb

Extension users can enable DND to stop incoming calls from ringing at their phone.

To Activate

*4

To Cancel

**4

Call Pickup

Users can answer the calls at another extension. The feature allows you to easily access calls ringing via the feature access code.

*53 + Ext No.

COS Following

It changes the individual COS of the extension temporarily.

*55 + (phone number) + (password)

Call Back Busy

When remote party is busy, press 6 to wait call back. Press *66 to delete the record.

To Activate

6

To Cancel

*66

Remote Maintenance Simple Enable

*62 + Action Type + Admin. Password

“Action Type”: 1 – Enable; 2 – Disable.

To Activate

*621 + Admin. Password

To Cancel

*622 + Admin. Password

Remote Maintenance Simple Save

*63 + Admin. Password

Remote Maintenance

*64 + Action Type [+ Log Level] + * + Admin. Password

“Action Type”: 1 – Enable; 2 – Disable; 3 – Save and send the tar ball file through email.

“Log Level”: 0 – Error; 1 – Warning; 2 – Info; 3 – Debug

Reset Feature Buttons

Reset all feature buttons to IG7600's setting.

*68 + (Password)

Reset To Default

Selected IG7600 extension features can be returned to default setting.

*69 + (Extension/Administrator password)

Feature Key Programming

To program the line keys as a PSTN, IP Trunk, Trunk Group number, Call-Park number or Extension number.

70 + (Feature Key number: 01 – 28^()) + (Feature Key Type: 00 – 08) + Number

Feature Key Type:

00: Null; Number should be null.

01: Extension; Number can be an Extension number.

02: Trunk; Number can be a PSTN, IP Trunk or Trunk Group number.

03: Call-Park; Number can be a Park number.

04: Feature Key; Number can be a feature access code

05: Others; Number could be an outside phone number.

06: Do Not Disturb; Number should be null.

07: Live Record

08: Virtual Mailbox key; Number can be a Virtual number.

Note: IP2061 provides 4 keys for feature access.

IP2061 supports EDM module, it provides 24 more (total 28) keys for feature access.

Service Mode Selection

Change Service Mode from Operator

*79 + (Service Mode, 0 – 3)

(Service Mode:

0. Change the Service Mode

1: Day Mode

2: Night Mode

3: Time Mode)

Agent Log On/Off

It can control the status in an UCD group.

To Activate (Log On)

*91

To Cancel (Log Off)

**91

Phone Lock/Unlock

You can use the Lock feature to prevent unauthorized trunk calls from being made from extension.

To Activate Phone Lock

*97 + (password)

To Cancel Phone Lock

**97 + (password)

Call Waiting

If disabled, it returns busy response while getting second call at non-idle state

To Activate

*98

To Cancel

**98

Page Allow/Deny

Block one-way paging (group and all page) over the IP phone speaker

To Activate Page Deny

*99

To Cancel Page Deny

**99

Appendix 3: Auto Attendant and Voicemail System

The IG7600 Auto Attendant can greatly enhance business productivity by providing either a full-time automated attendant to handle all incoming system calls or part-time automated attendant to handle overflow traffic. The Voice Mail Module provides up to 16 hours recording time that are shared by all extensions. The system can handle four simultaneous calls

Appendix 3.1 Functions

Appendix 3.1.1 Auto Attendant Functions

The Auto Attendant provides an incoming caller with a customized welcome greeting and specific prompts that will describe the options available to the caller.

A. AA Service Mode

The Auto Attendant supports 3 different Service Mode: Working, Holiday and Temporary; each Service Mode plays the different Greeting Messages.

At Working mode, it follows the working time setting to play the greeting.

- "Working Time": it's to program the working time per weekday. If the current time is in the programming Time, it plays Day Greeting message. If the current time is out of the programming time, it plays Night Greeting message.
- "Lunch Break Time": It will be applied on Day time only. It plays Lunch Greeting message.
- "Holiday": It allows you to configure 20 off-duty holidays on "Holiday" mode. On-duty holiday will be seen as "Working" time.

At Holiday mode, it plays Holiday Greeting message always.

At Temporary mode, it plays Temporary Greeting message. If the greeting message does not exist, it follows Working mode to play the Greeting messages.

The system administrator can change the Service Mode remotely. Please refer 3.1.3.A ("Change the Greeting Mode")

B. Advertised Message

Support a message to be like an advertisement.

- a. Add a Virtual mailbox.
- b. Record the advertisement as the Greeting message of the mailbox.
- c. Disable "Leaving Message" of the Virtual Mailbox.

Program the Virtual Mailbox as Answering Position of the trunk, or the Destination of the specified phone number in DID Table, it plays the advertisement. After finishing the playing, the call will be released.

It also allows programming the virtual mailbox in Single Digit Table of AA Menu. After listening to the message, it's back to AA Menu.

C. Direct Inward System Access (DISA)

AA allows you to remotely access IG7600 lines to make the outside calls. Press "#" when AA plays the Welcome message. AA will ask the caller to input the extension number and the extension's VM password. After verifying, the caller dials the outside

phone number. AA will use the extension's COS (Class Of Service) to check the phone number in Call Restriction Table. Then, the phone number will be dialed out via Call Routing Table.

The DISA function is disabled by default.

D. DTMF Digit Receiving

AA supports to receive DTMF digits by using RFC2833 and SIP-INFO (In-Band DTMF is not supported by AA now).

E. Route the Call to the Appropriate Destination

When AA answers the call, the caller can dial one or more digits to the destination.

- ◆ Extension Number
- ◆ Virtual Extension Number: it's to leave a message in the Virtual VM box.
- ◆ UCD Group Number
- ◆ Operator Code
- ◆ Digit "*": it's to enter personal VM box.
- ◆ Digit "#": it's to make a DISA call.

Appendix 3.1.2 Voice Mail Functions

A. 16 Hours Recording Time

The Voice Mail Module provides up to 16 hours recording time that are shared by all extensions. When 90% of the VM size is used, it shows "Message Full" on the all IP2061/M62's LCD.

When VM size is full, the call will be released when the caller asks to leave the message.

B. 50 Extension Voice Mail Boxes

IG7600 support 49 IP extensions and 1 SLT extension. Each extension has a voice mail box. For IP extension, the voice mail box is formed automatically when the extension number is added in Phone Extension Table.

C. 50 Virtual Voice Mail Boxes

These Virtual Mailboxes can be used by the members not works in the office, or as a secondary mailbox, or as a guest mailbox.

The virtual VM boxes also can be programmed as the Destination for the specified DID Phone Number. The personal greeting can be used as the appropriate Main Greeting to be played.

D. 200 VM Messages per Mailbox

For each VM box, the maximum number of Voice Mail is 200. The maximum recording length for each message is 30 minutes. For each leaving message, it can

be saved 1 - 30 days or infinite.

When entering the VM box to hear the leaving messages, it will play the total in the message folder first. If it plays "99", it means it has 99 or more messages in the folder.

When the mailbox has no room to store the new messages, VM will play a warning message, and then release the call.

E. Email Notification

When a new message is left, VM supports to send a notification via email. VM also supports to add the message as the attachment in WAV format (for PCMU and PCMA format).

Envelop information indicates

- ◆ Time and date of the message received
- ◆ Sender information (Caller ID and Contact Number)
- ◆ Mailbox status (the count of the new and old messages)
- ◆ Email header can be programmed. The default is "You have a new voice mail message in your mailbox!")
- ◆ Voicemail Tag

When the email with leaving message is transmitted successfully, the leaving message could be "Save as New", "Save as Old" or "Delete" in the VM box. The choice is programmable per mailbox.

F. Enter Voice Mail Box

The VM user can enter its own VM box through the followings way

- a. Press the VM button. Then enter the VM password.
- b. Dial VM number (default: 500) on its own IP2061/M62/IP3054(-i) phone. Then enter the VM password.
- c. Dial VM number (or press the VM button) on another extension's phone. The press "*". VM will ask the user to enter the Mailbox number and password.
- d. Enter VM box from outside through AA. Press "*" when hearing AA's greeting message. Then, VM will ask the user to enter the Mailbox number and password.
- e. The virtual Mailbox user can enter its own VM box on any IP2061/M62/IP3054(-i) extension. Press the VM button, then press "*", VM will ask the user to enter the Mailbox ID and password.

G. Expert Mode Support When Reviewing Messages

The leaving messages will be played one by one continuously. When listening to the leaving messages, the VM user can press the specified digit to delete or skip messages.

- "1": listen the playing the message again
- "2": listen the next message
- "3": delete the message

“4”: forward the message to other mailboxes

“5”: listen the previous message

“*”: it plays the instruction message (10516.vox)

If the VM user dials an unadapted number (“0/6/7/8/9”), it will play the instruction message (10516.vox).

H. Forward Messages to Other Mailboxes

When listening to the leaving messages, the VM user can press “4” (10516.vox) to transfer the message to other mailboxes. It will ask the user to input the Destination (10501.vox). The Destination can be

- ◆ a Mailbox number
- ◆ All other mailboxes (press “0”)

I. Personal Greeting

Every VM user can record its own VM Greeting message when entering the VM box (press “3”). Before entering the VM box to leave the message, the caller will hear the personal greeting of the VM box first.

J. Personal VM Password

The personal VM password is 4 digits fixed (default: “0000”). It will be used when entering VM box.

The personal VM password can also be used in some other IG7600’s functions

- ◆ DISA function via AA
- ◆ Some IG7600’s feature access codes (for IP2061/M62/IP3054(-i) phones)

Every VM user can update its own VM password when entering the VM box (press “4”).

K. Messages Backup

When rebooting the system to the default, the all leaving messages will be removed. If it’d like to recover the files back, the administrator needs to backup the files through FTP before rebooting the system to the default. Then recover these files back after rebooting.

When connecting to the system through FTP, the following directories should be back up:

- /var/usb/disk1/vm/Msg: the all leaving messages
- /var/usb/disk1/vm/Greeting: the all personal greetings
- /var/usb/disk1/vm/Name: the all Display Name files.

Appendix 3.1.3 Management Menu

A. Change the Greeting Mode

Press “0” after entering Management Menu (19011.vox). It plays a message (10920.vox”) to ask Administrator to select the Greeting Mode.

- Press “1” to select Working mode.

- Press "2" to select Holiday mode.
- Press "3" to select Temporary mode.

B. Record the Greeting Messages

Press "1" or "2" after entering Management Menu (19011.vox). It selects the language type in the recording.

Then press "1" ~ "5" to select the Greeting type ("1" is for Day message; "2" is for Night message; "3" is for Lunch message; "4" is for Holiday message; "5" is for Temporary message.).

C. Record the process Message

Press "3" after entering Management Menu (19011.vox). Then type 5 digits file number to directly record prompt/greeting into the respective file name.

Appendix 3.2 Voice Messages

Appendix 3.2.1 File Format

A. Two Language Service

The file names of the all voice files for AA and VM are 5 digits length. For Language 1, the leading digit of the file name is "1". For Language 2, the leading digit of the file name is 2.

For Auto Attendant, when the both languages are enabled, AA will play 91000.vox before playing the Welcome message. It asks the caller to select the language.

For Voice Mail, every VM user can select one of the both languages in Web setting.

B. Codec Type: G711-ulaw, G711-alaw and G729

When changing the codec type, the previous leaving messages, personal greeting message of all VM Box will be deleted automatically. The Administrator should update the all voice files to the selected codec type by itself.

It has a sub-folder for each codec under vox folder. When changing the codec type, the previous VOX files will be overwritten by the VOX files in the sub-folder.

C. Record the Voice Files

You can change Voice Prompts by three ways:

Through IP Phone Client

- a. Enter VM box.
- b. Press "*" key right here, to enter the Administrator mode.
- c. Type in Voicemail Administrator password ("000000" at default)
- d. Listen to the prompt. Press "1" to record the first language greeting. Press "2" to record the second language greeting. After the selection, it will play 19012.vox. Administrator inputs 1~5 to record the respective greeting message.
- e. Or press "3" directly, then type 5 digits file number to directly record prompt/greeting into the respective file name

Through FTP Server directly

- a. All prompt/greeting files are saved in vox folder in PCMU or PCMA or G729 format. You can record your prompt in wav format first and then convert to the selected format.
- b. Login IG7600 embedded FTP server: <ftp://IG7600> IP address (Or in IG7600-Web, select “Voice” – “Voicemail” – “Advanced”, then press “Browser Voicemail file” button.).
- c. Save the new prompt to vox folder with the same file number to replace the old prompt. (Suggest you to save all old prompts before updating the new files.)

Through Web

In “Voice” – “Voicemail” – “Update Voice File” page, it allows to upload the voice files. Before uploading, the voice files are compressed into a file with .tar, .tar.gz or .tgz format.

D. Upload MOH File

IG7600 supports to upload the MOH (Music On Hold) file through Web. In web (Voice - Voicemail - Update MOH File), upload a MOH file with "mono" format (PCM signed, 16 bit, mono). IG7600 will convert it to MOH files with PCMU and PCMA format, and save them into IG7600.

E. Preset Voice Prompts

File#	Contents	Application
10001	Hello, your call has been answered by the voice processing system. This system can quickly get your call to the extension that you wish. You may dial that extension now or press zero for the attendant	It's a Welcome Message. It's played while getting an incoming FXO/IP line call in working hours.
10002	Hello, your call has been answered by the voice processing system. At this time, our office is closed. However, this system can quickly get your call to the extension that you wish. You may dial that extension now, or press zero to leave a message in attendant's voice mailbox.	It's a Welcome Message. It's played while getting an incoming FXO/IP line call in off hours.
10003	Hello, your call has been answered by the voice processing system. At this time, our office is closed. However, this system can quickly get your call to the extension that you wish. You may dial that extension now, or press zero to leave a message in attendant's voice mailbox.	It's a Welcome Message. It's played while getting an incoming FXO/IP line call in lunch hours.
10004	Thank you for calling. We are closed for the holiday. If you know your party's extension, please dial it now. To leave a message dial Zero and someone will contact you on the next business day.	It's a Welcome Message. It's played while getting an incoming FXO/IP line call in holidays.
10005		Temporary Greeting Message.
10051	Enter the extension number, and then press pound (#)	It requests to dial a phone number.
10097	This mailbox is full. There is no room for more messages.	It talks to the Caller it has no room to store the leaving messages.
10102	The operation you have requested cannot be completed, please wait while your call is transferred to the attendant.	AA gets non-existed extension number input many times. AA will transfer the call to Operator.
10103	Your selection is not one of those available.	It's played while the user makes an incorrect input
10104	Please check the number and try again later.	It's played before AA hangs up the call.
10106	Your entry doesn't match any of the choices, please try again.	AA gets non-existed extension number input and allows the caller to redial.
10107	Your entry doesn't match any of the choices. Good bye!	AA gets non-existed extension number input many times. AA will drop the call.

10201	Please wait while we transfer your call.	It's played before AA transfers the call to the transferred party.
10205	That extension is busy, press star (*) to wait a moment, for automatic retry.	The transferred destination is busy. AA provides some choices for the user.
10206	That extension does not answer, press star (*) to wait a moment, for automatic retry.	The transferred destination doesn't answer the call in 30 seconds. AA provides some choices for the user.
10207	To leave a message, press pound (#).	Same as 10205 or 10206, another choice.
10210	You may also dial another extension now, or press zero for the attendant.	Same as 10205 or 10206, another choice
10221	Your entry doesn't match any of the choices, please try again, or press zero for the attendant.	It's played while transferring a call to an extension set "Reject" of dial in.
10230	Using the letters on the telephone keypad, dial the person's first or last name and then press pound. For "q" press 7. For "z" press 9.	It reminds the user how to input the name.
10231	When you hear the correct name, press 1.	It reminds the user how to choose a name.
10232	I'm sorry; there are no matches for the name that you have entered.	It's played while the user makes an incorrect name input.
10233	Please record your name after the tone. Press pound (#) when finish or simply hang up.	It's reminds the user how to record his name.
10234	To search for another name press 1. To exit and return to the main menu, press 2.	Plays if no match found in the company directory
10301	Leave your message after the tone, Press pound (#) when finish or simply hang up.	It reminds the user how to leave messages.
10302	Your message has been recorded	Finish leaving message.
10303	To keep your message, press one. To listen to the message, press two. To rerecord the message, press three. To cancel the message, press four. To exit, press pound (#).	It's played after finishing leaving message.
10304	Your message has been recorded.	The leaving message is recorded.
10305	That was the last message.	Notify that all leaving messages are played
10306	Thank you, good bye.	It's played while finishing Voicemail System service.
10501	Please input the mailbox number	It's played first while the user gets into Voice Mail Box through the FXO/IP trunks.
10502	I'm sorry. The mailbox is not installed on this system, please try again.	It's played if the user dials an invalid mailbox ID.
10503	I'm sorry. The mailbox number that you entered is not installed on this system, please try again.	It's played if the user dials a valid, but disabled mailbox ID.
10504	Please input your password	It requests the user to enter the password of the mailbox.
10505	The password entered does not match the one stored, please try again	The user dials an incorrect password. It allows the user to try again.
10506	The password entered is not valid, please try again later.	The user dials incorrect password over 3 times. It disallows the user to try again.
10507	To listen to your messages, press one. To delete all messages, press two. To record your personal greeting, press three. To change the password of this mailbox, press four.	It's played after entering Voice Mail Box.
10508	To listen to your new messages, press one. To listen to your saved messages, press two. To undelete the message, press three.	Selects the message folder
10510	You are no messages in this mailbox.	No leaving message in the mailbox.
10511	You have	It will report how many leaving messages in the mailbox.
10512	voice messages	It reports how many leaving messages in the mailbox. "xx messages"
10513	voice message	"x message"
10514		(for Chinese only)
10515	new	
10516	To listen to this message again, press one. To skip this message, press two.	This message is played when user dial a digit other than 1~5 and # during message listening.

	To delete this message, press three. To copy this message to another mailbox, press four. To listen to the previous message, press five. Press pound to exit and return to the previous menu.	
10517	There are no more messages.	It's played if it has played the all messages.
10518	To confirm deletion, press star (*). To cancel, press pound (#).	
10519	First message.	It's played if user order playback previous message when it has played the first message.
10520	To undelete the message, press zero	Plays when in the deleted folder to restore a message to the Saved folder.
10521	Copy complete.	Transfer the leaving message to another mailbox well.
10522	Copy failure.	Fail to transfer the leaving message to another mailbox.
10523	Deleting, please wait	Voicemail system is deleting the all leaving messages.
10524	All messages have been deleted.	All leaving message are deleted.
10526	Please input the new four digit password.	It reminds the user how to input the new mailbox password.
10527	The password you entered is	It plays what the new input password is.
10528	If this is correct, press one. To re-enter, press two. To return to the previous menu, press the pound (#).	It's to ask whether the new input password is correct.
10529	Your password has been changed.	It's to report the password is changed successfully.
10531	To listen to your current greeting, press one. To record a new greeting, press two. To delete the current greeting and use the system greeting, press three. To exit and return to the previous menu, press pound (#).	It's for recording a user's temporally greeting.
10532	There is no greeting recorded	It's played if having no greeting message.
10533	Start recording after the tone. When you are finished, press pound (#).	It reminds the user how to record the greeting message.
10534	The recording is complete.	It's played after finishing recording.
10547	The programming is complete.	Finish setup.
10549	Deletion complete	It reports the leaving message is deleted successfully.
10550	Deletion failed	It fails to delete the leaving message.
10580	I'm sorry. The mailbox number that you entered is busy.	The mailbox is in use.
10601	Begin recording after the tone, press pound when you are finished. (#)	It reminds the administrator how to record the voice files.
10731	AM	ante meridiem
10732	PM	post meridiem
10733	Oh	Zero. Ex. February 3rd two oh two a.m. (Feb 03 2:02 a.m. = 2:02)
10898		(For Chinese Only)
10899		(For Chinese Only)
19001	Input the system administrator password	It requests administrator to enter the mailbox password.
19010	Enter the menu reading ID number to be notified. Valid entries are zero through nine	
19011	To record the English greeting, press one. To record the Chinese greeting, press two. To exit and return to the previous menu, press pound (#).	It's for Management menu.
19012	To record the system greeting used during regular office hours, press one. To record the system greeting used after hours, press two. To record the system greeting used during break	It's to choose what kind of greeting message will be recorded.

	periods, press three. To record the holiday greeting, press four. To record the temporary greeting, press five. To exit and return to the previous menu, press pound (#).	
19013	To listen to the current recording, press 1. To rerecord the greeting, press 2. To exit and return to the previous menu, press pound (#).	It's for recording voice files.
19015	There are no recordings.	The voice message is not yet recorded.
19073	The extension number that you entered is not installed on this system	It plays if entering a wrong extension number.
19200	Please input the five digit file number. To exit and return to the previous menu, press pound (#).	It's for entering voice file name.
19201	The voice file code you entered is	It's to play what voice file name is entered.
91000	To select English, press one. To select Chinese, press two. To exit and return to the previous menu, press pound (#).	If setting "Two Languages", it's played before Welcome message.
91100	(Beep Tone)	It's played before recording any message.
pcmudial		Dial Tone - PCMU
pcmadial		Dial Tone - PCMA
g726dial		Dial Tone - G726
g729dial		Dial Tone - G729
pcmurb		Ringback Tone - PCMU
pcmarb		Ringback Tone - PCMA
g726rb		Ringback Tone - G726
g729rb		Ringback Tone - G729
mohpcmu		Music On Hold - PCMU
mohpcma		Music On Hold - PCMA
mohg726		Music On Hold - G726
mohg729		Music On Hold - G729

10870	0 zero	10871	1 one	10872	2 two	10873	3 three
10874	4 four	10875	5 five	10876	6 six	10877	7 seven
10878	8 eight	10879	9 nine	10880	10 ten	10881	11 eleven
10882	12 twelve	10883	13 thirteen	10884	14 fourteen	10885	15 fifteen
10886	16 sixteen	10887	17 seventeen	10888	18 eighteen	10889	19 nineteen
10890	20 twenty	10891	30 thirty	10892	40 forty	10893	50 fifty
10894	60 sixty	10895	70 seventy	10896	80 eighty	10897	90 ninety
10700	first	10701	second	10702	third	10703	fourth
10704	fifth	10705	sixth	10706	seventh	10707	eighth
10708	ninth	10709	tenth	10710	eleventh	10711	twelfth
10712	thirteenth	10713	fourteenth	10714	fifteenth	10715	sixteenth
10716	seventeenth	10717	eighteenth	10718	nineteenth	10719	twentieth
10720	21th	10721	22th	10722	23th	10723	24th
10724	25th	10725	26th	10726	27th	10727	28th
10728	29th	10729	30th	10730	31th		

10760	January	10761	February	10762	March	10763	April
10764	May	10765	June	10766	July	10767	August
10768	September	10769	October	10770	November	10771	December

Appendix 3.2.2 File Storage

The all voice files serviced for Auto Attendant and Voice Mail are saved in /var/usb/disk1/vm/vox folder. Some sub-folders are created under the vox folder. It's a backup, and will be used when changing the codec of the voice files.

vox/pcmu: voice prompts with PCMU codec.

vox/pcma: voice prompts with PCMA codec

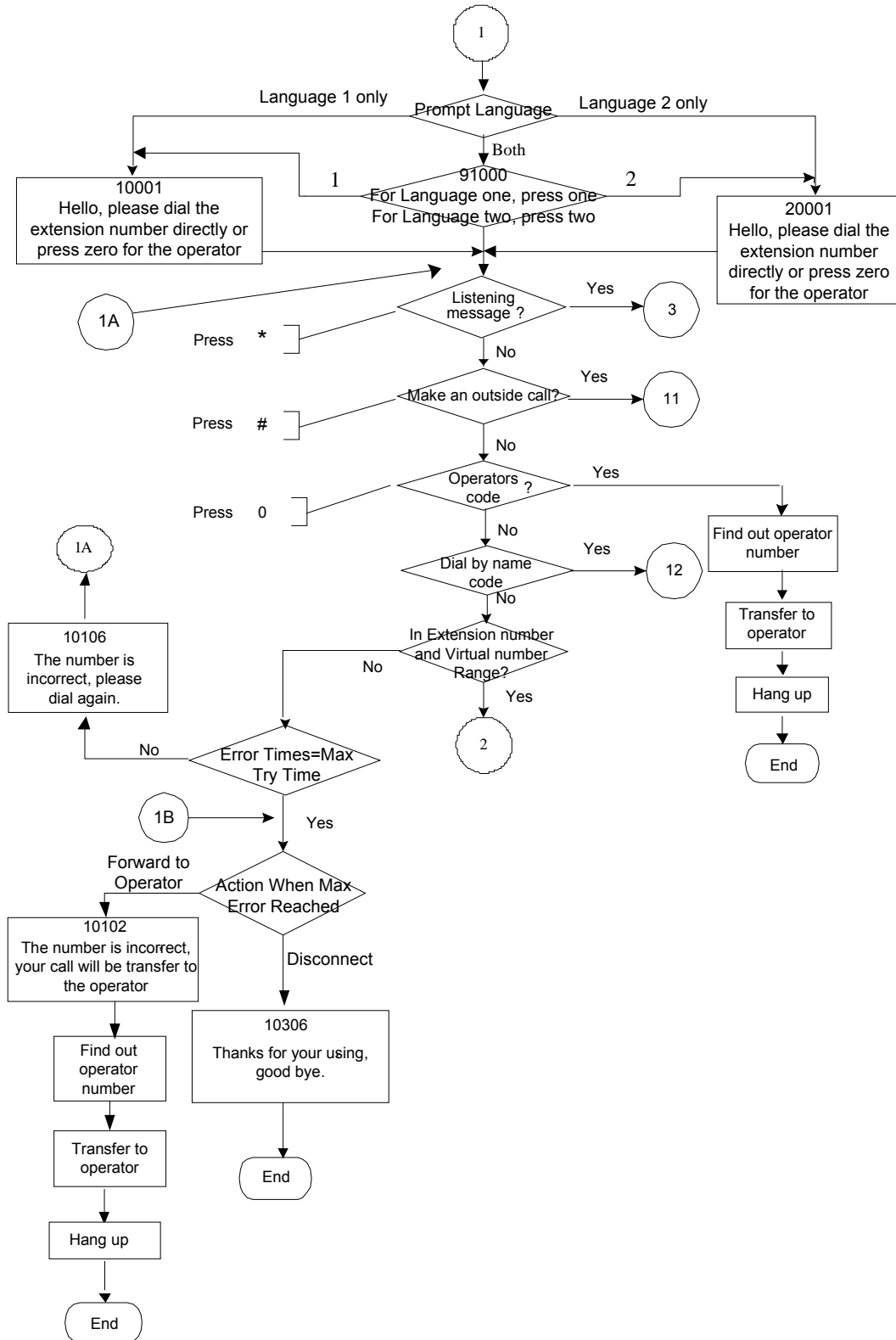
vox/G729: voice prompts with G729 codec

vox/General: Dial Tone files (pcmudial, pcmadial, g729dial),
Ringback Tone files (pcmurb, pcmarb, g729rb), and
Music-on-Hold files (mohpcmu, mohpcma, mohg729).

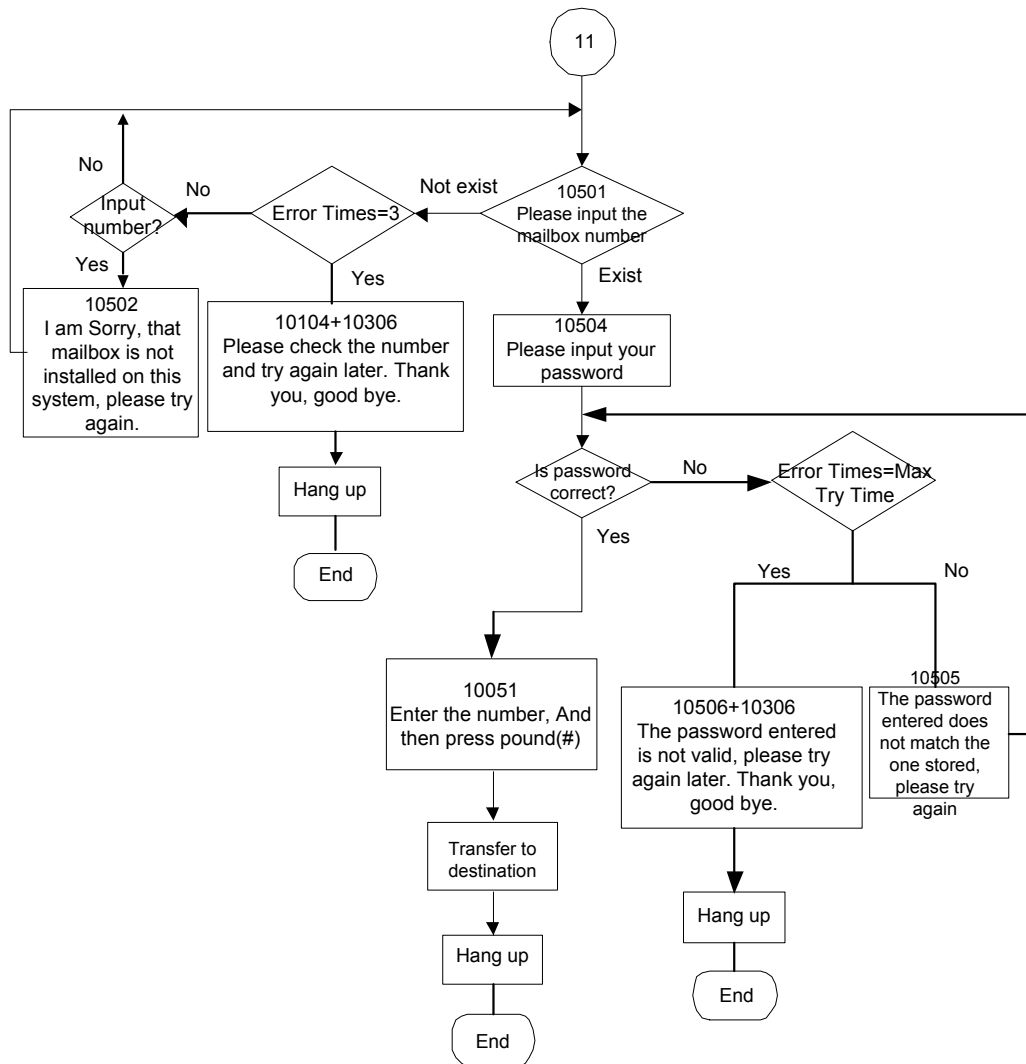
When changing "VAA Codec" settings, the files in the specified folder and vox/General folder will be copied into /vox to be serviced in the application.

Appendix 3.3 Flowchart

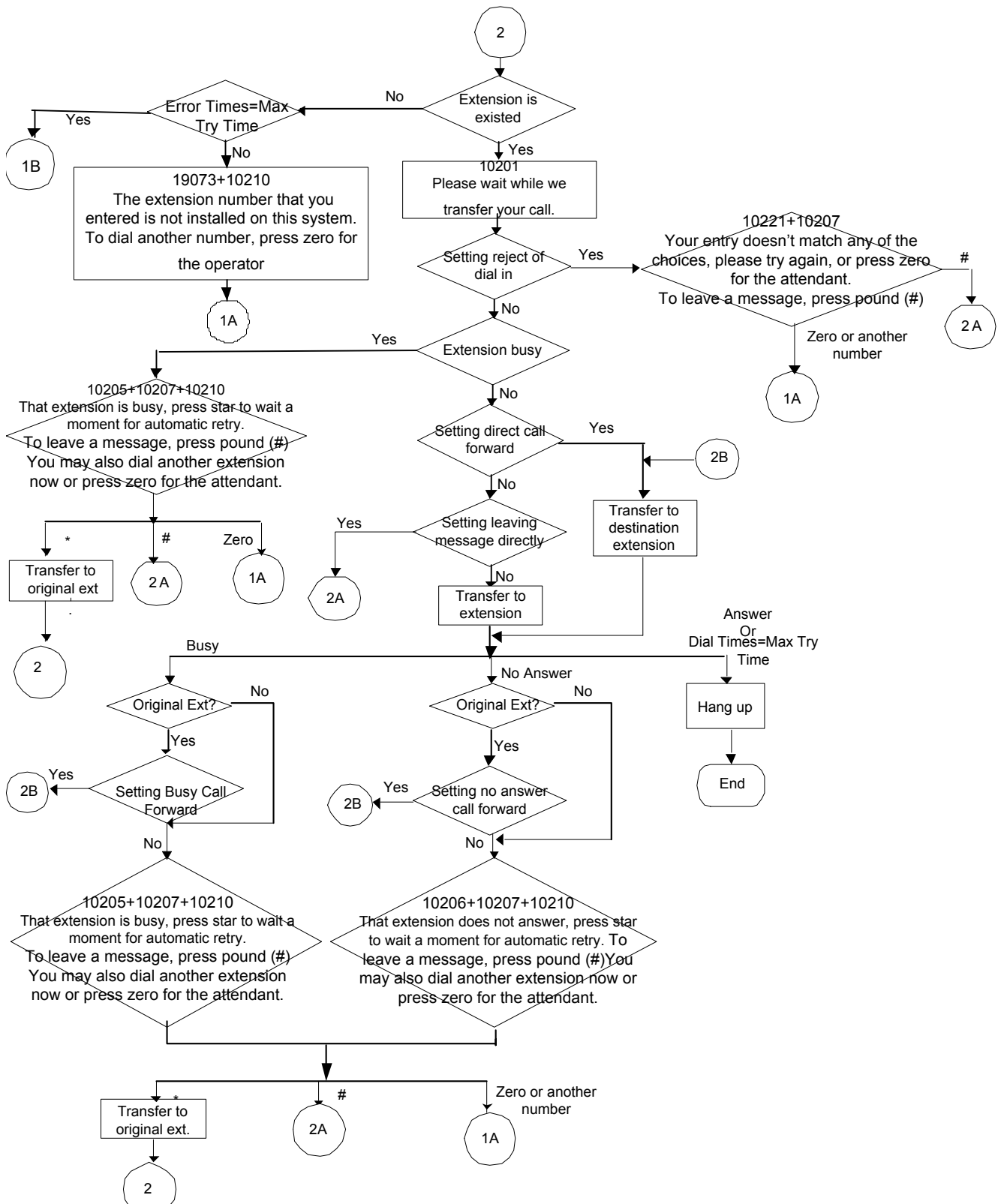
Appendix 3.3.1 Automated Attendant



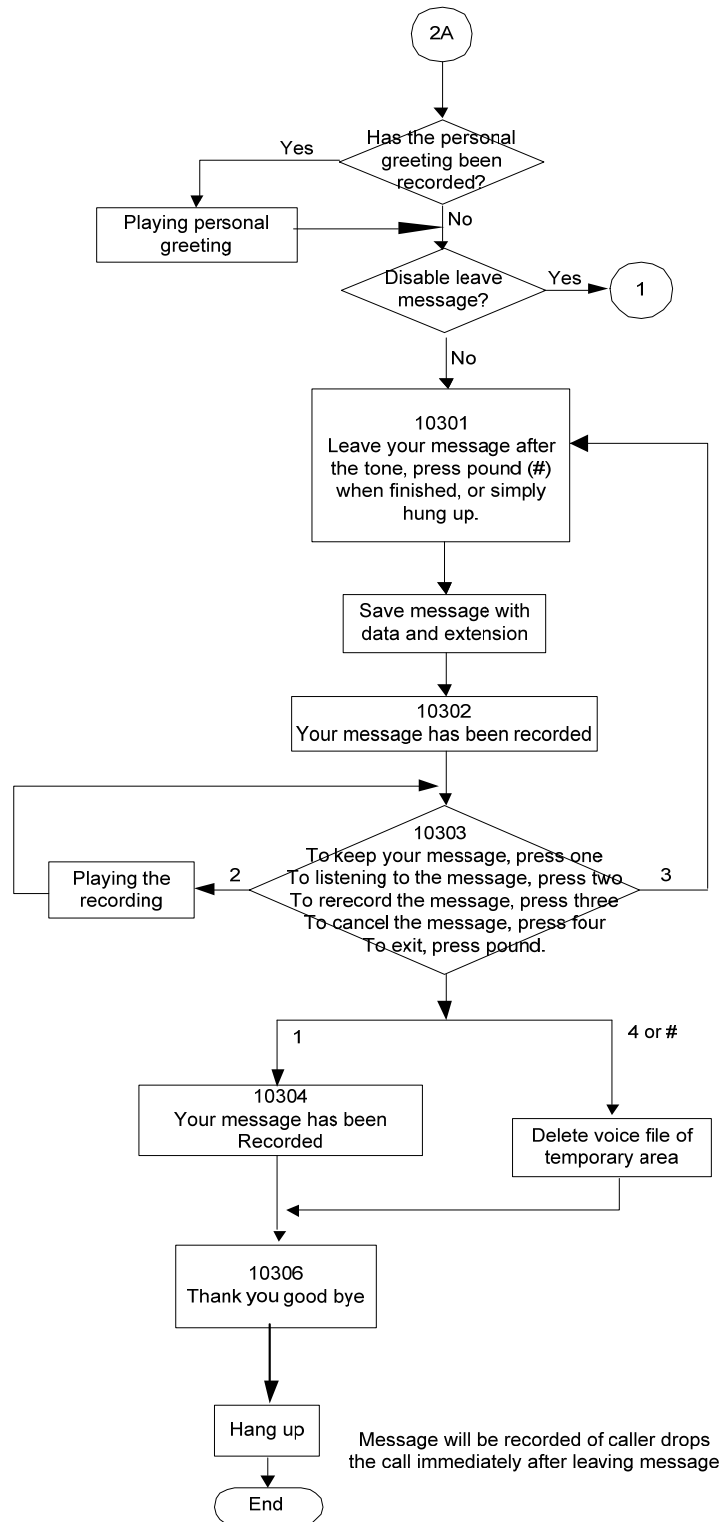
Appendix 3.3.1.1 Make an Outside Call



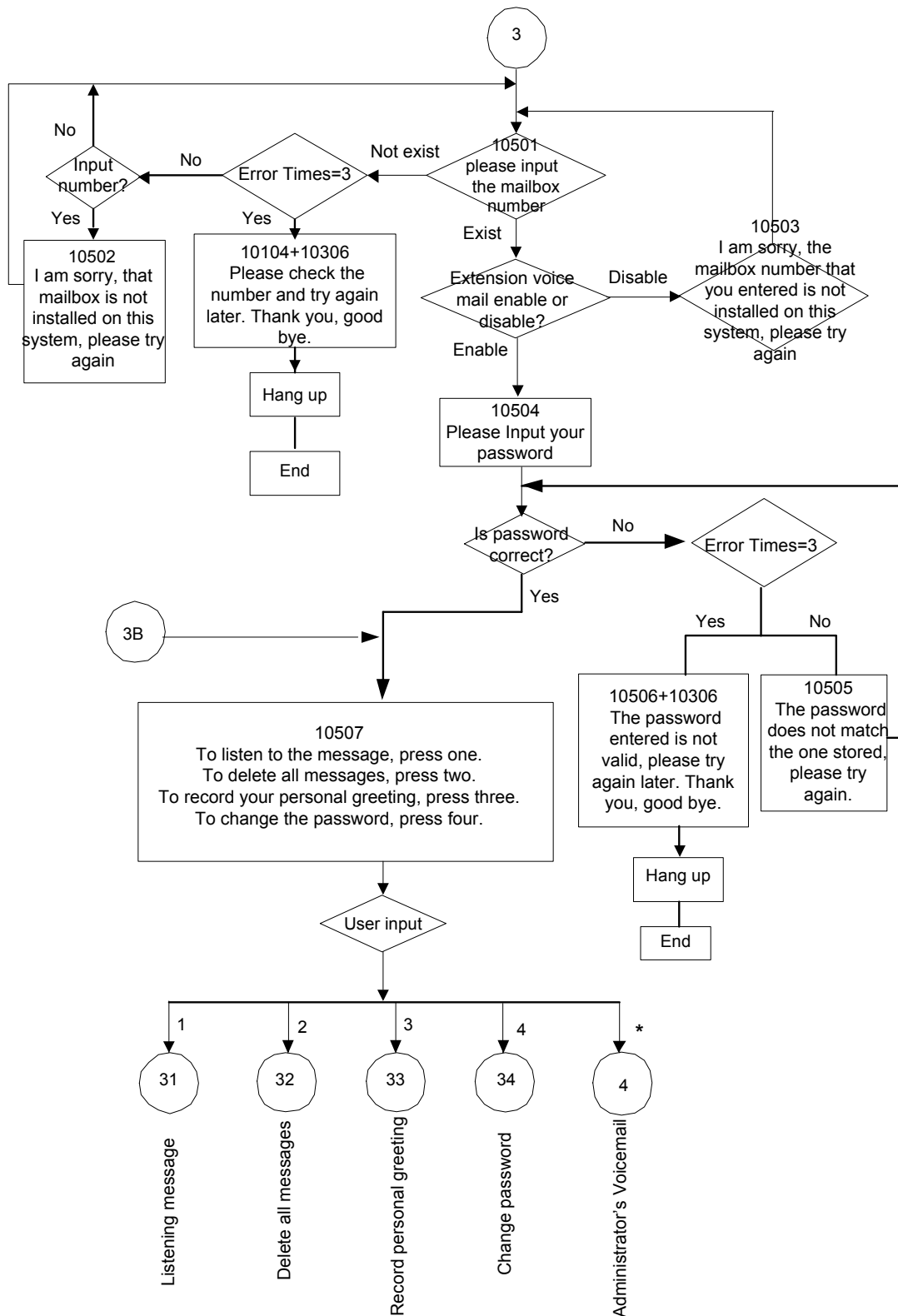
Appendix 3.3.2 Subscriber Voicemail Flowchart



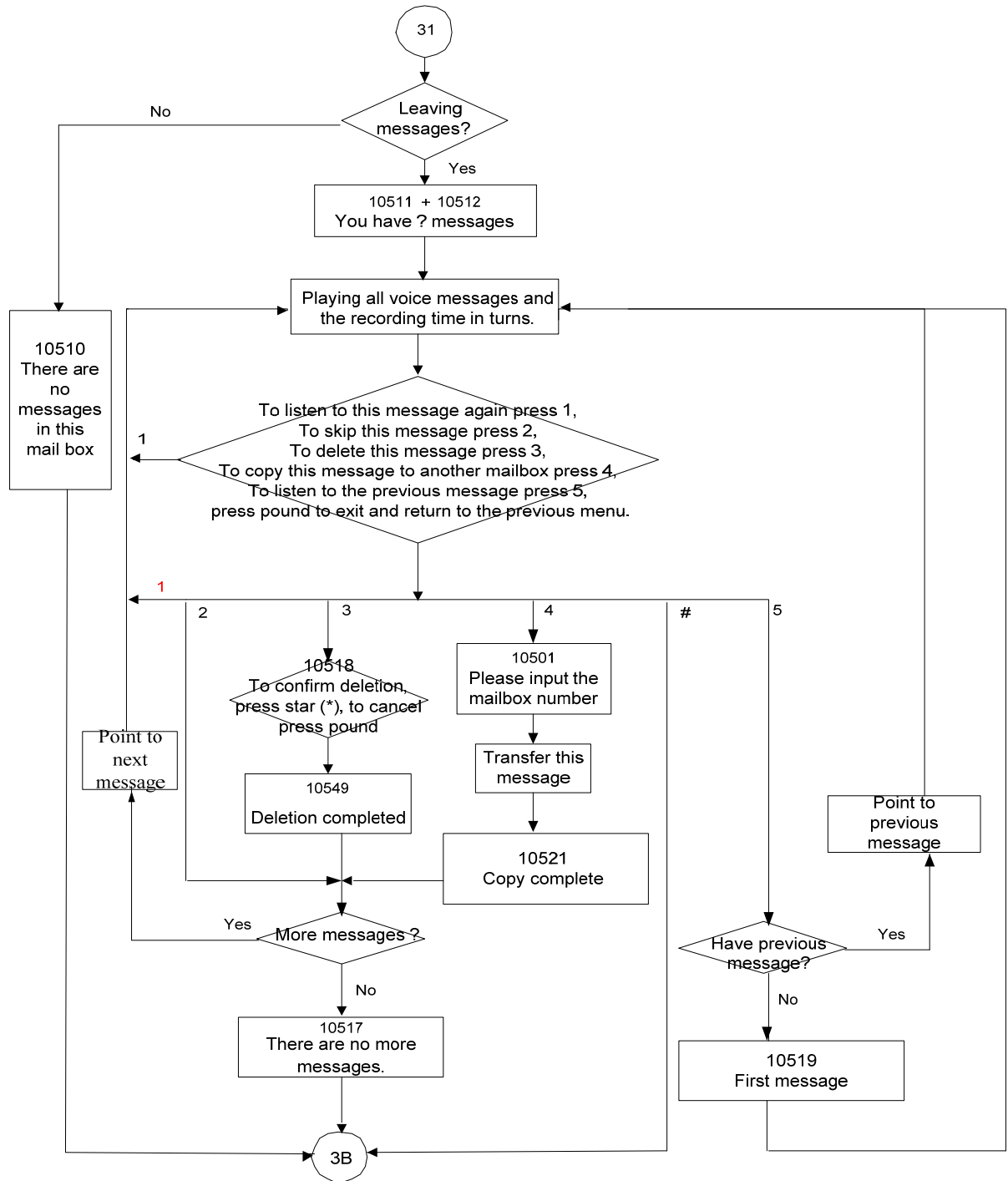
Appendix 3.3.2.1 Leaving messages



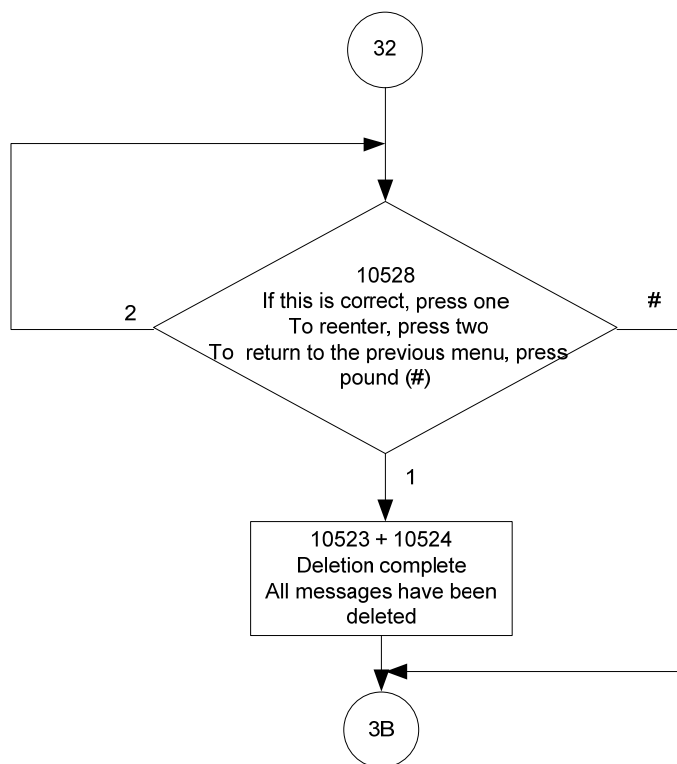
Appendix 3.3.3 Mailbox Administer Flowchart



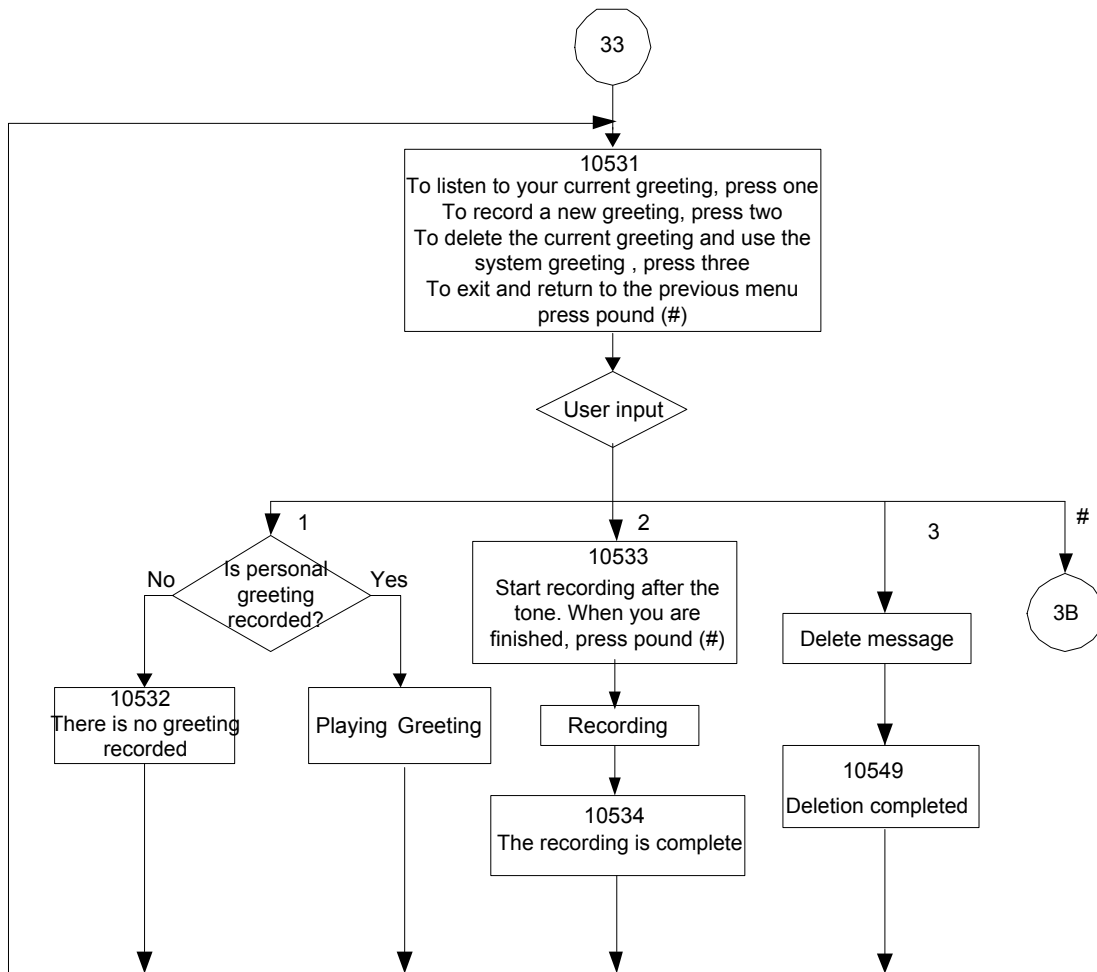
Appendix 3.3.3.1 Listening message



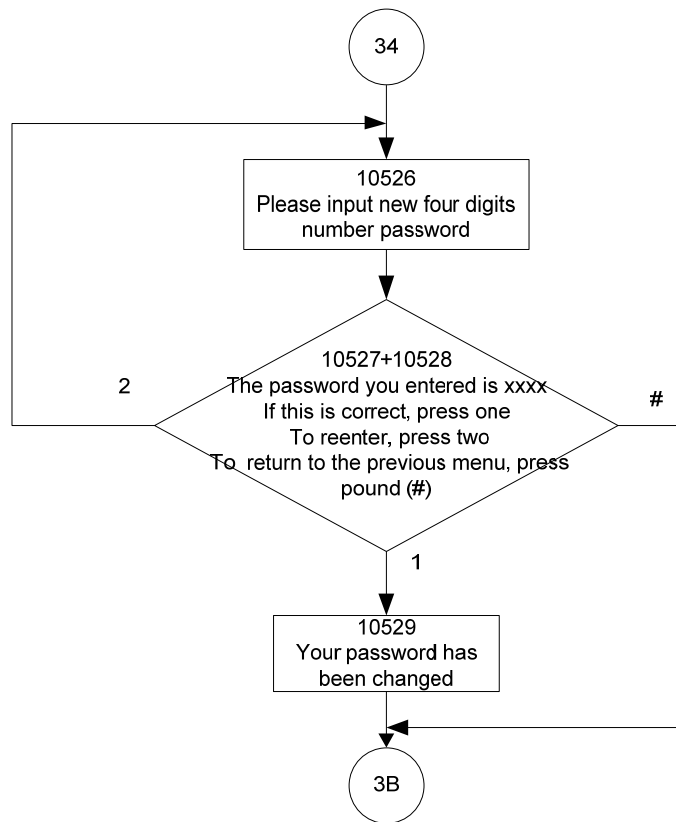
Appendix 3.3.3.2 Delete all Messages



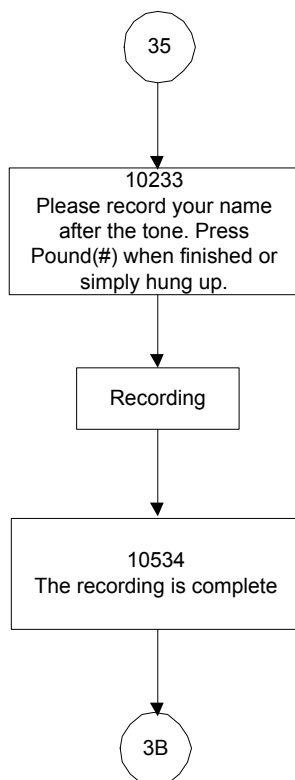
Appendix 3.3.3.3 Recording Personal Greeting



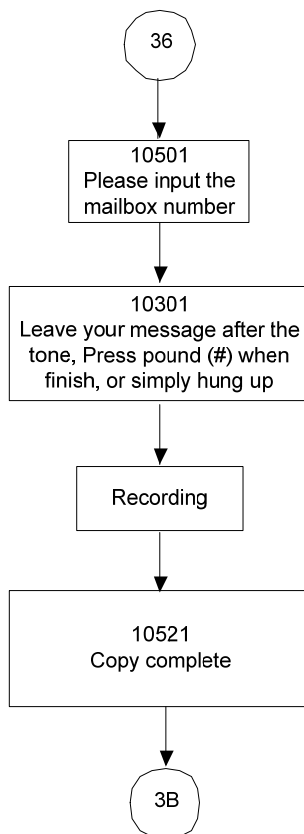
Appendix 3.3.3.4 Changing Mailbox Password



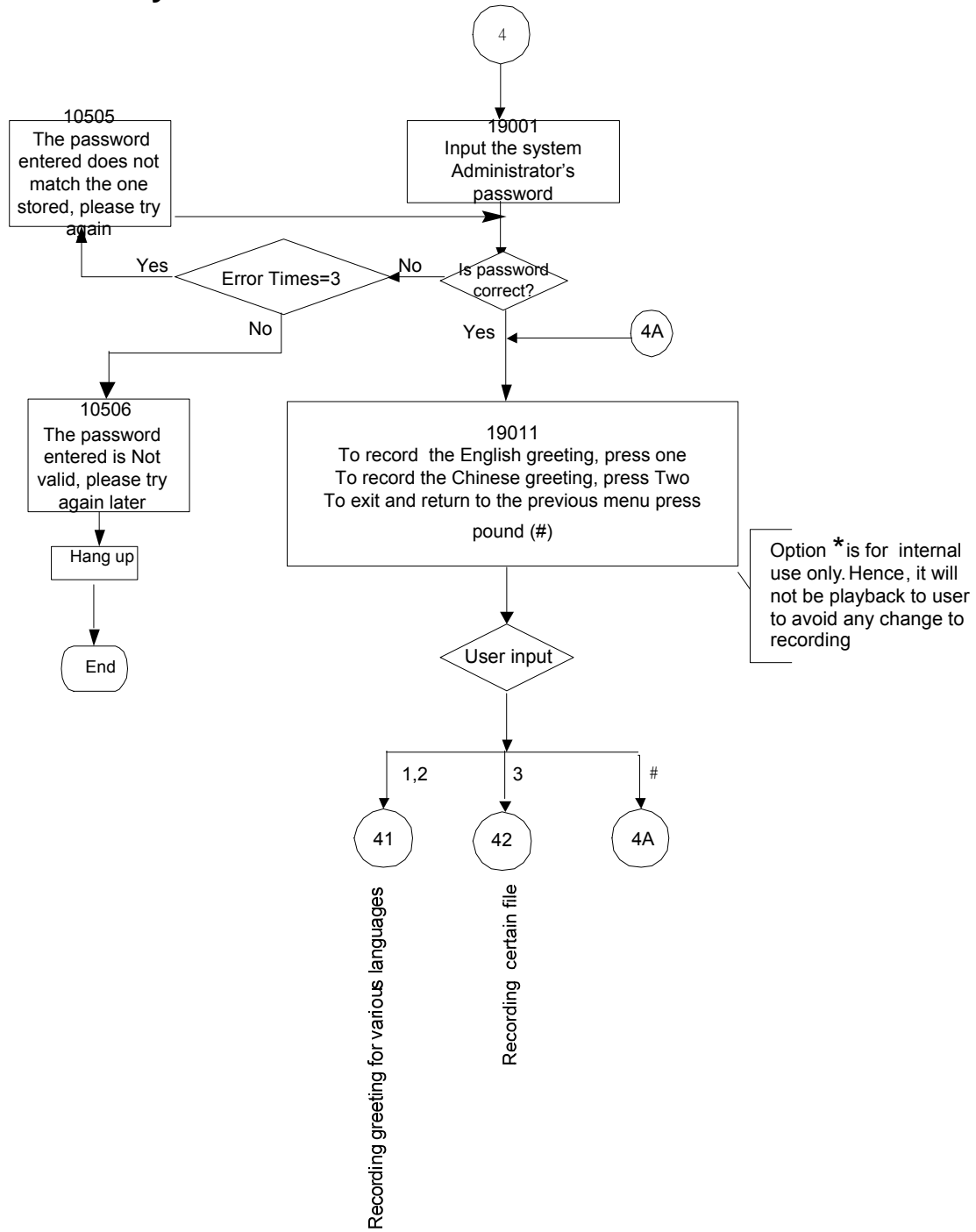
Appendix 3.3.3.5 Record your name



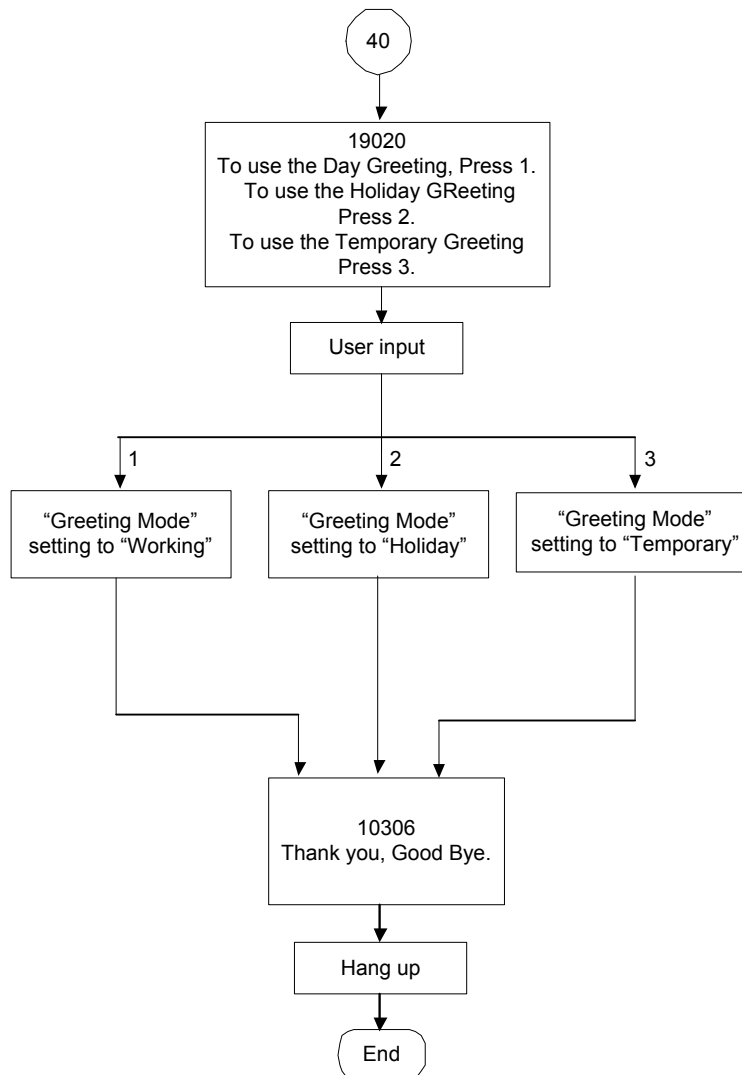
Appendix 3.3.3.6 Leave a Message to Other Extension(s)



Appendix 3.3.4 System Administrator's Voicemail Flowchart

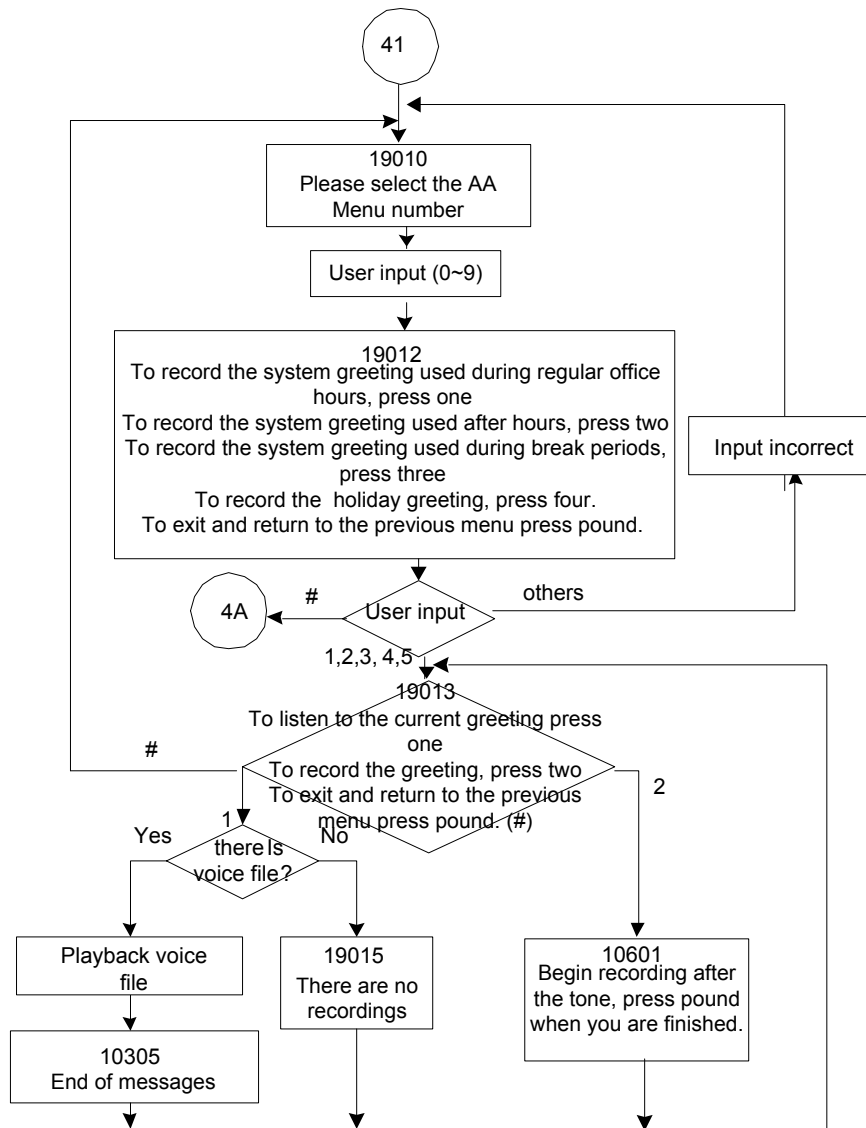


Appendix 3.3.4.1 Change the Greeting Mode

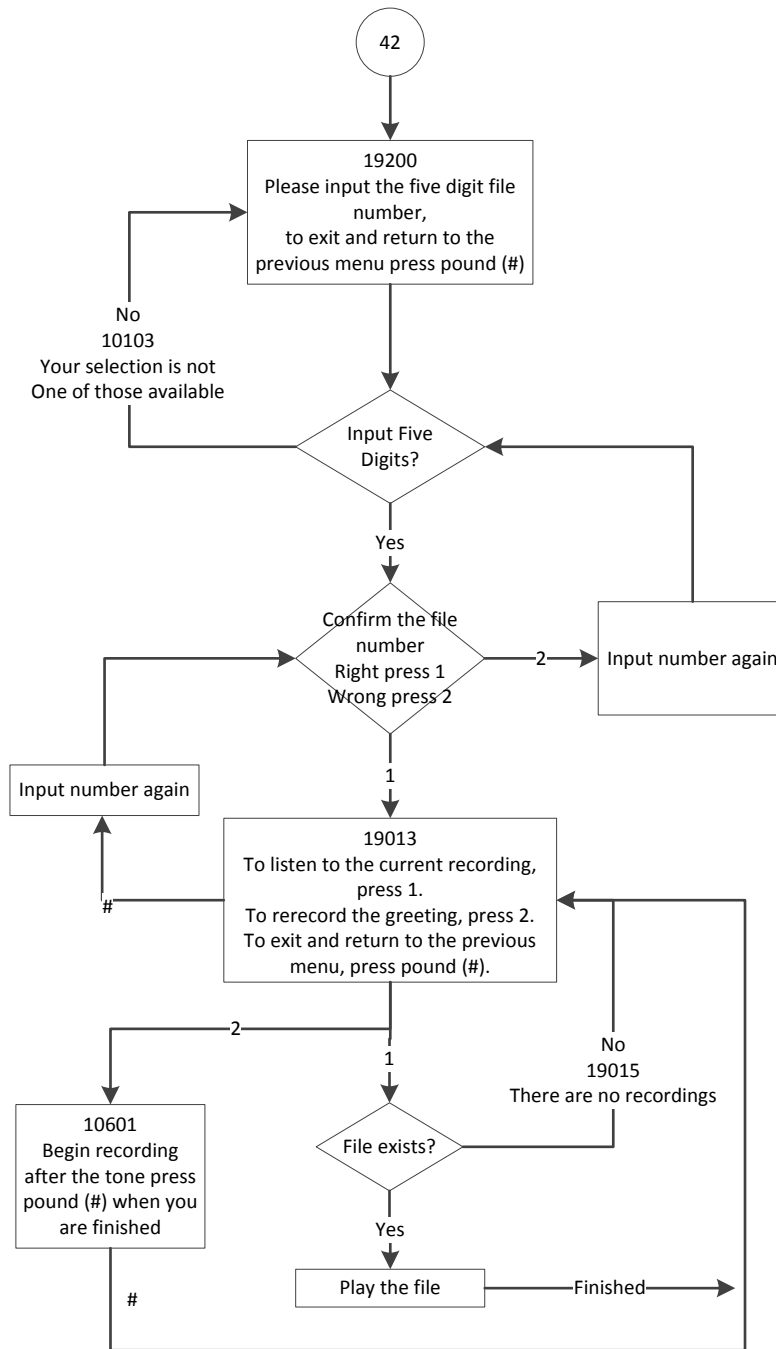


Note: At Temporary Greeting mode, it plays Temporary Greeting message. If the file is non-existed, it follows Working mode to play the Greeting messages.

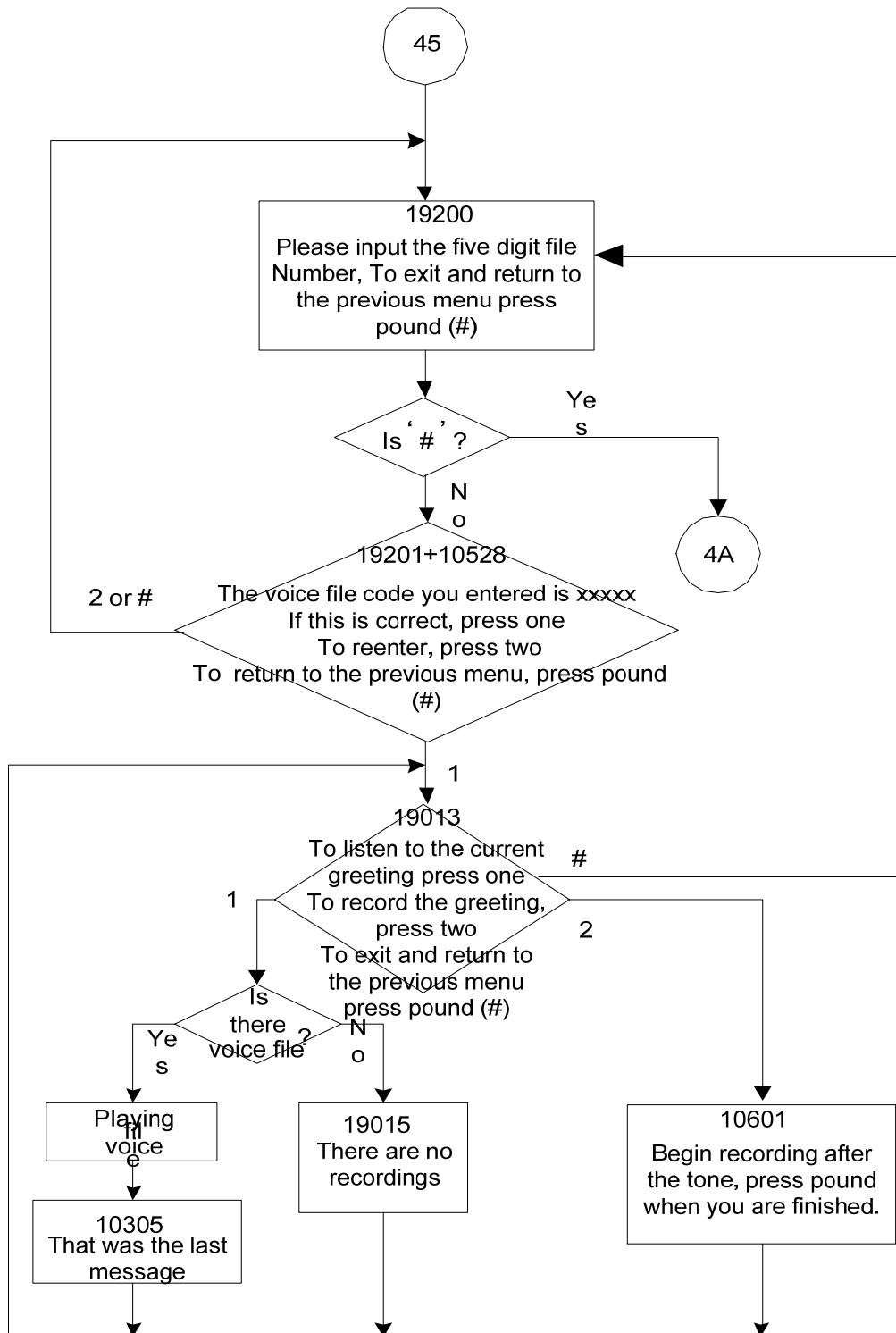
Appendix 3.3.4.2 Recording Various Greeting



Appendix 3.3.4.3 Recording Certain Voice files



Appendix 3.3.4.6 Recording Process Voice Files



Appendix 4: APS

APS is the remote Management for IG7600. The APS system consists of 2 components: APS and PTC.

APS is a Windows application that allows you to manage the system (Firmware and configuration update for IG7600 and firmware update for IP phones registered to the IG7600).

PTC is a client software that is embedded in the IG7600.

Appendix 4.1 Install APS on Windows

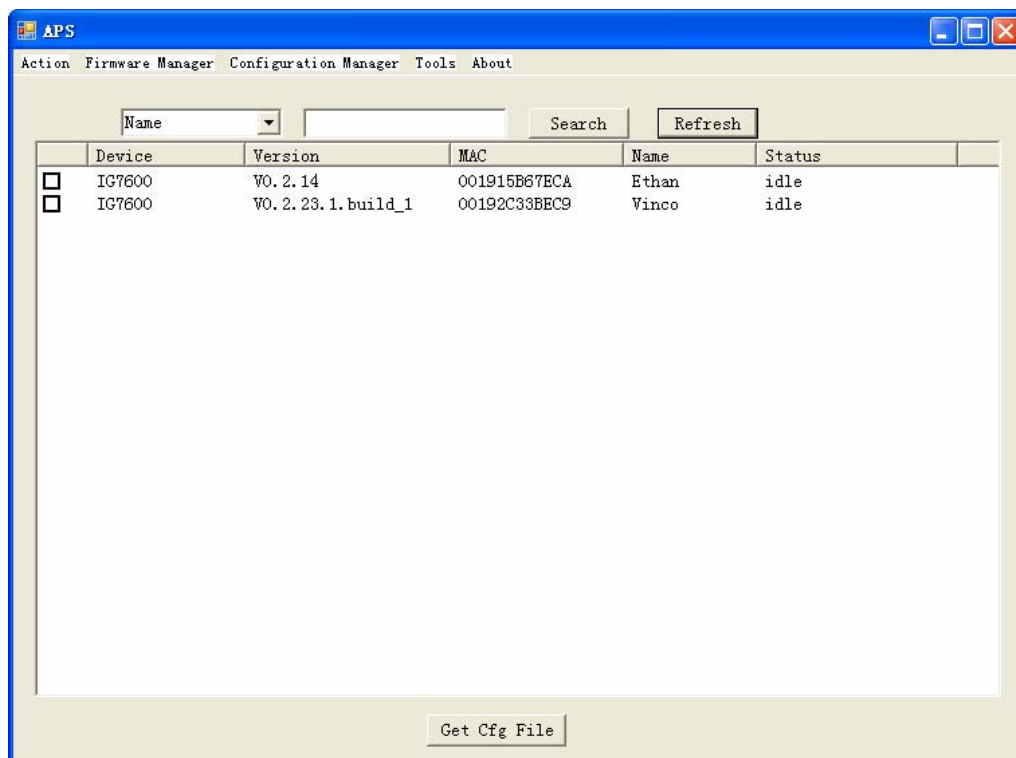
APS is a program that can be executed on MS Windows.

Typically you can get a tarball of APS, like APS-V0.6.9.rar, from your supplier.

When you get it, please unzip it on your PC, then you can get a directory named "Release", then please run the Setup.Exe file which makes an executable binary file "APS" installed on your PC.

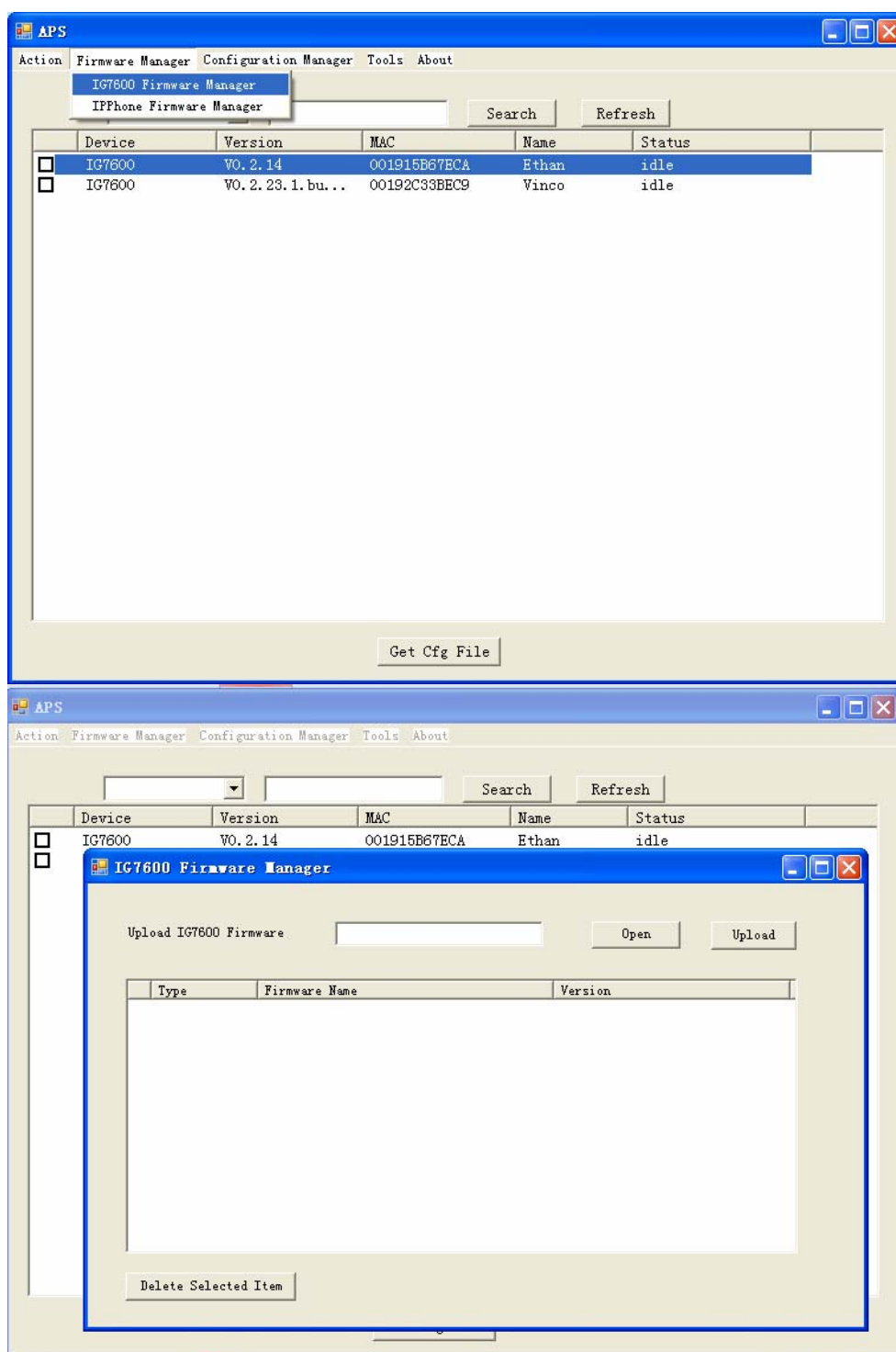
After APS is installed on your PC, you can use it to upgrade the firmware or configuration of IG7600 or IP Phones, and you can also reset all IP Phones to default with it.

If you execute the APS program, you can see the main window of APS is as following:

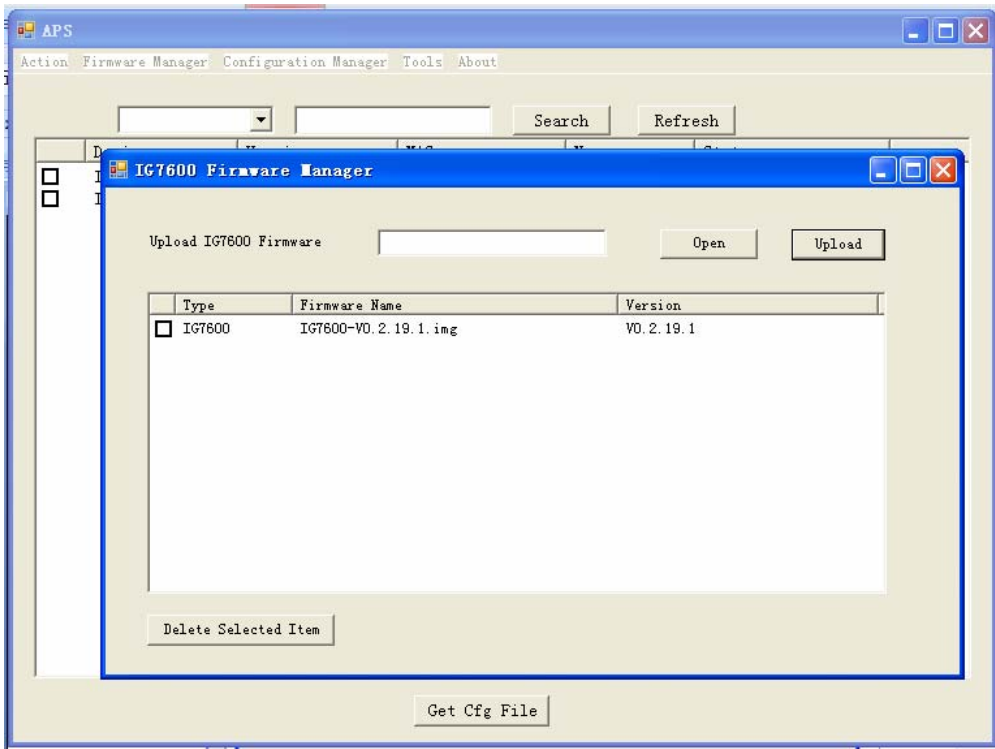


Appendix 4.2 Managing IG7600 Firmware

Press Firmware Manager -> IG7600 Firmware Manager, a new window will be popped up.

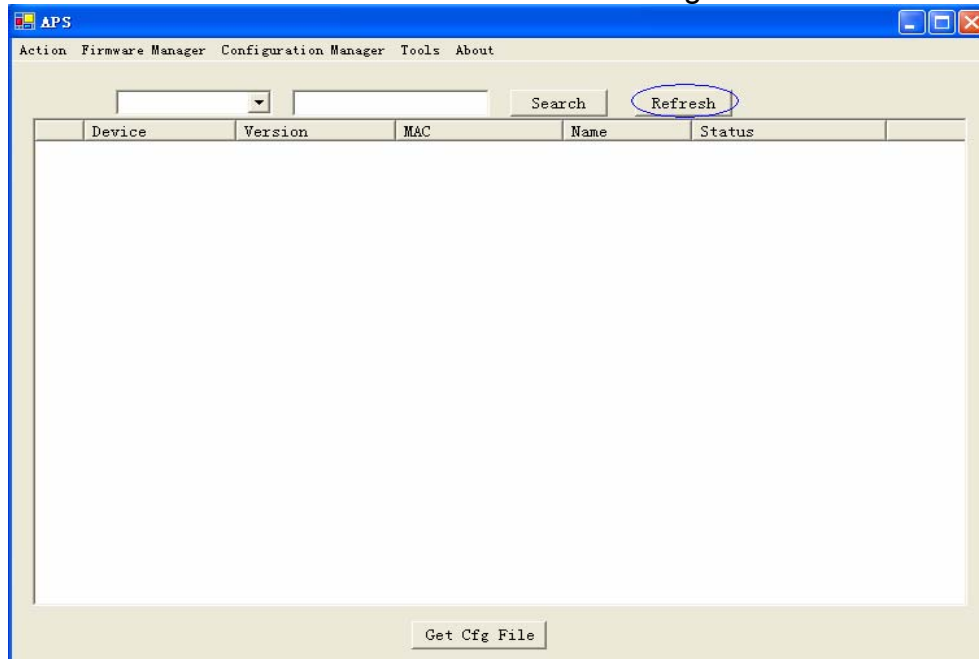


- Press Open button to select available firmware of IG7600 on your PC.
- Press Upload button to load available firmware to APS. After the loading is finished, you can see the following window:

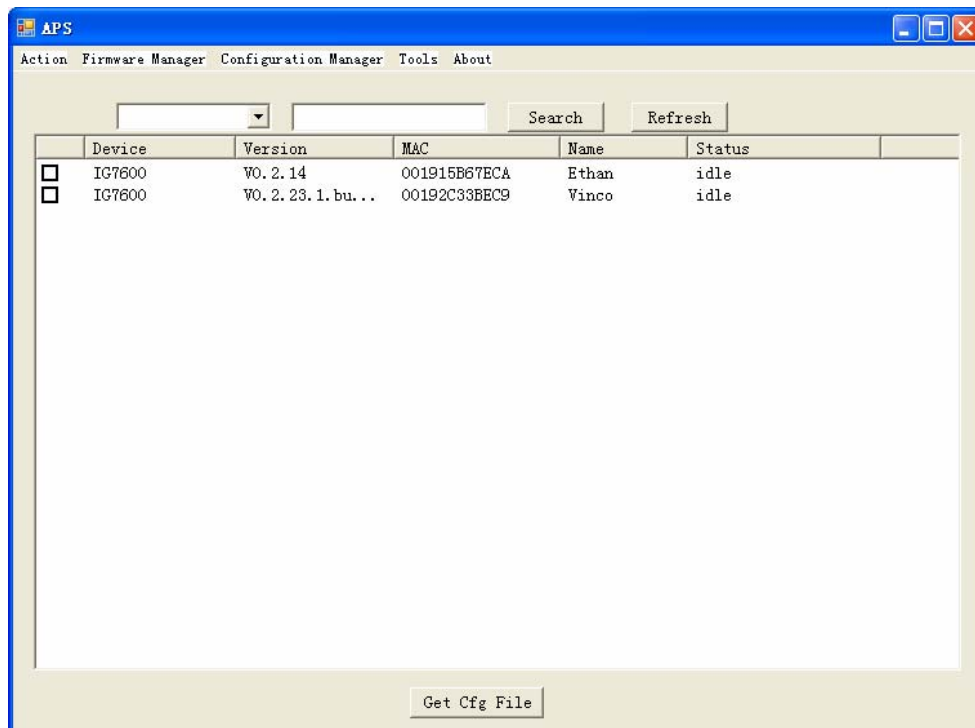


Appendix 4.3 Show all IG7600 managed

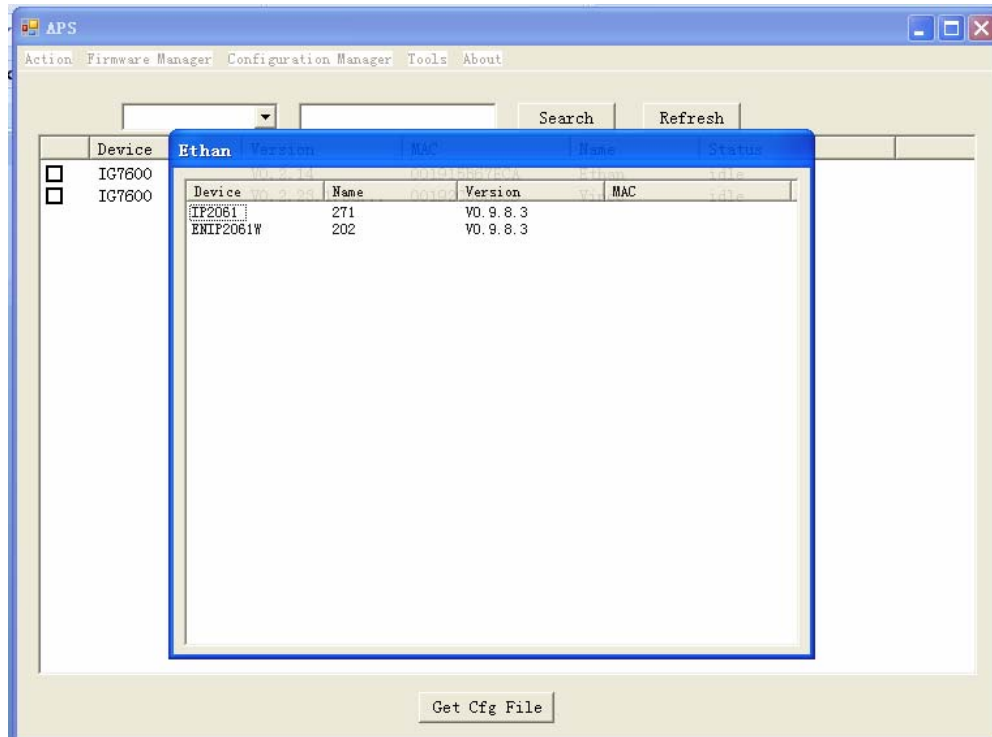
Press Refresh button on the main window as following:



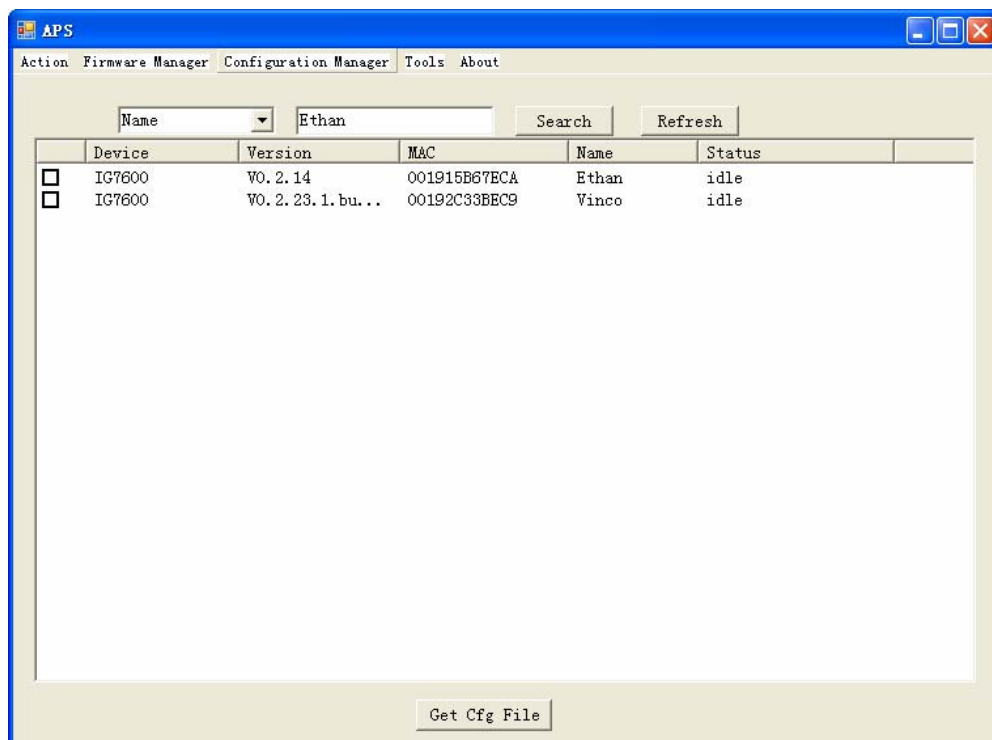
All available IG7600 managed will be shown as following:

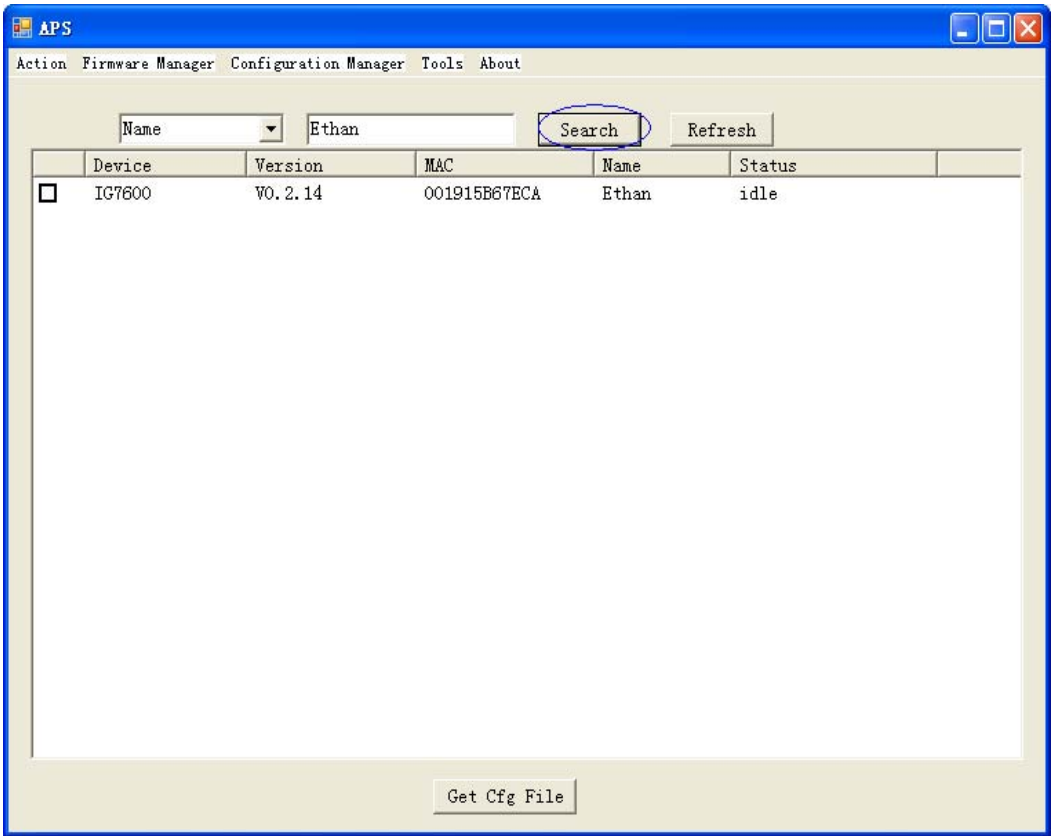


If you click on any one of them, all IP Phones that registered on it will be shown as following:



- If you press this new window, the window will be closed.
- If choose one searching type in down list, and put searching keys on text box, then press search button, the devices which meet the keys will be displayed.

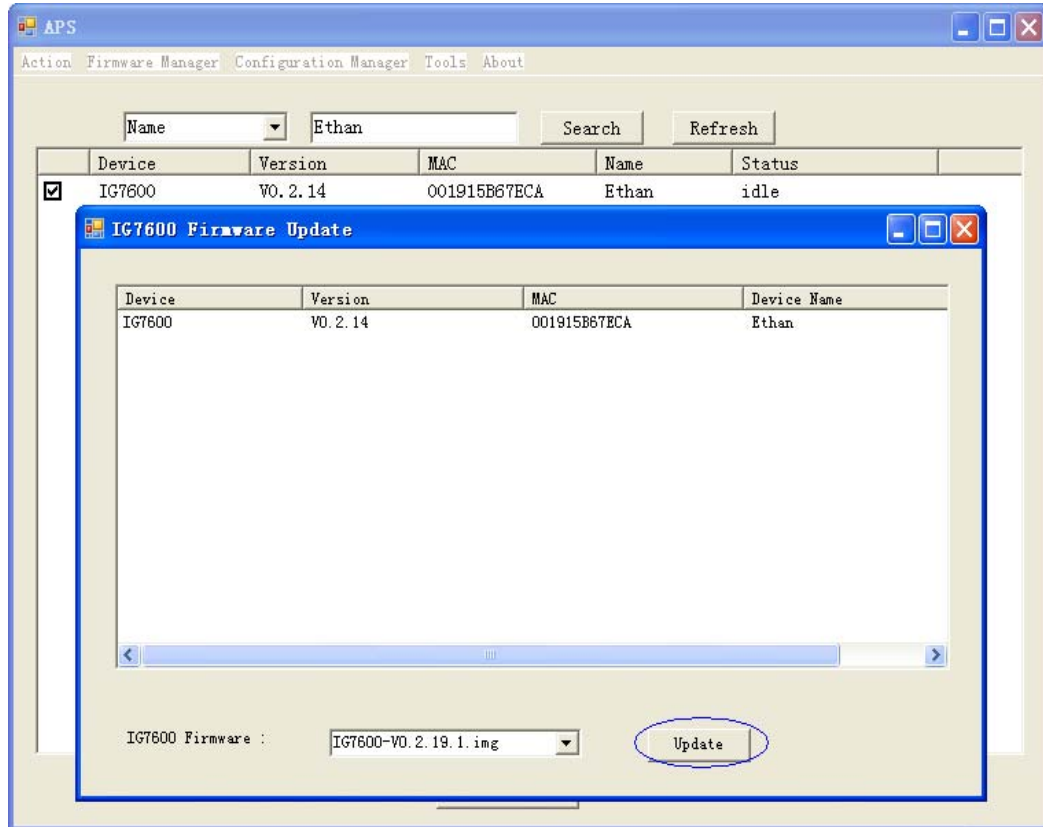




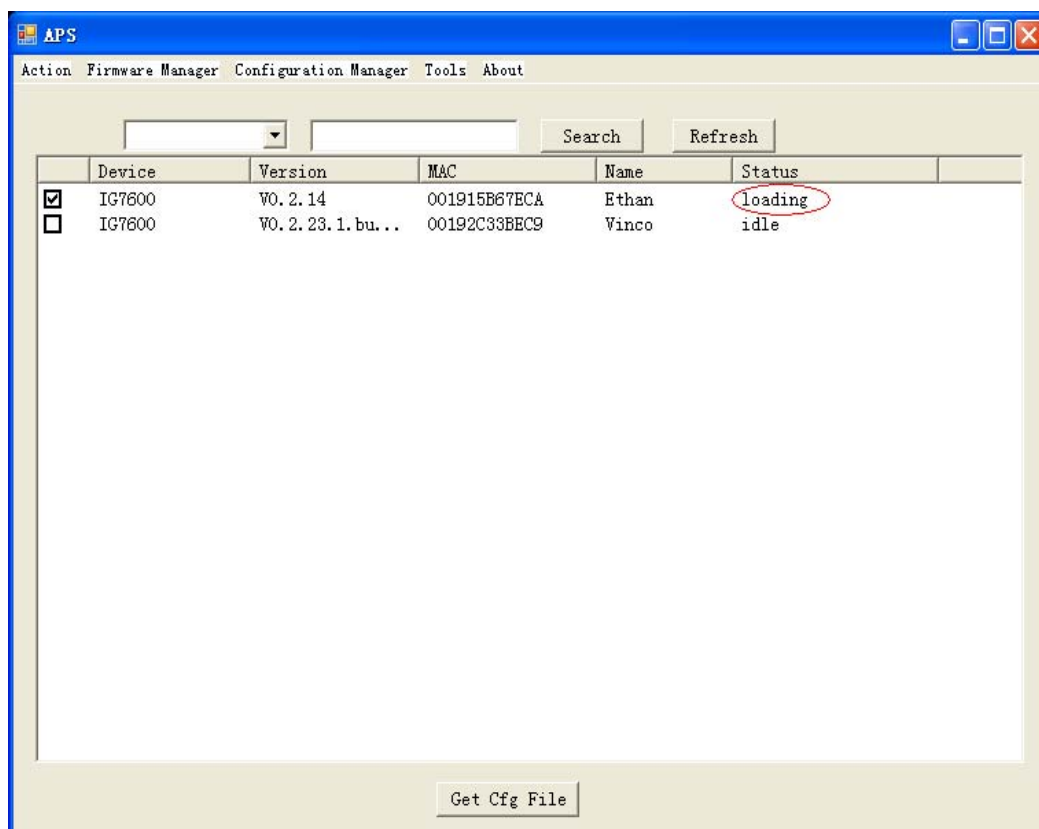
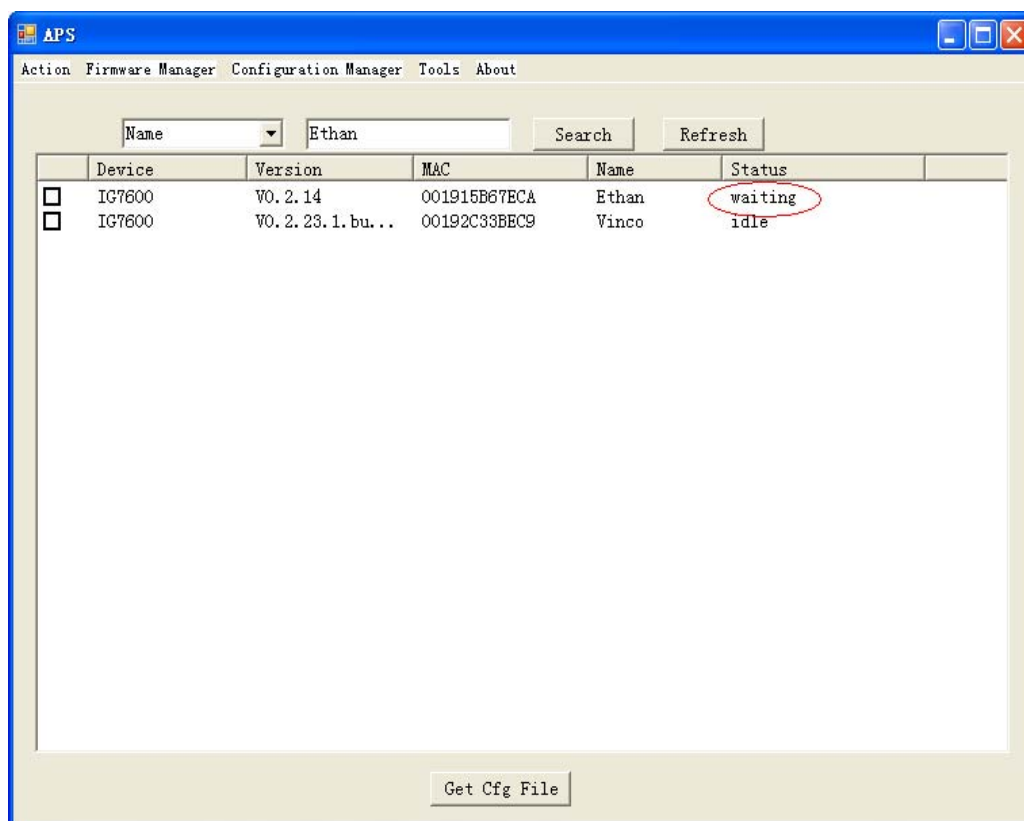
Appendix 4.4 Upgrading IG7600 Firmware

Select the IG7600 that you want to upgrade.

Press Action->IG7600 Firmware Update, then you can choose the firmware to upgrade to this IG7600.

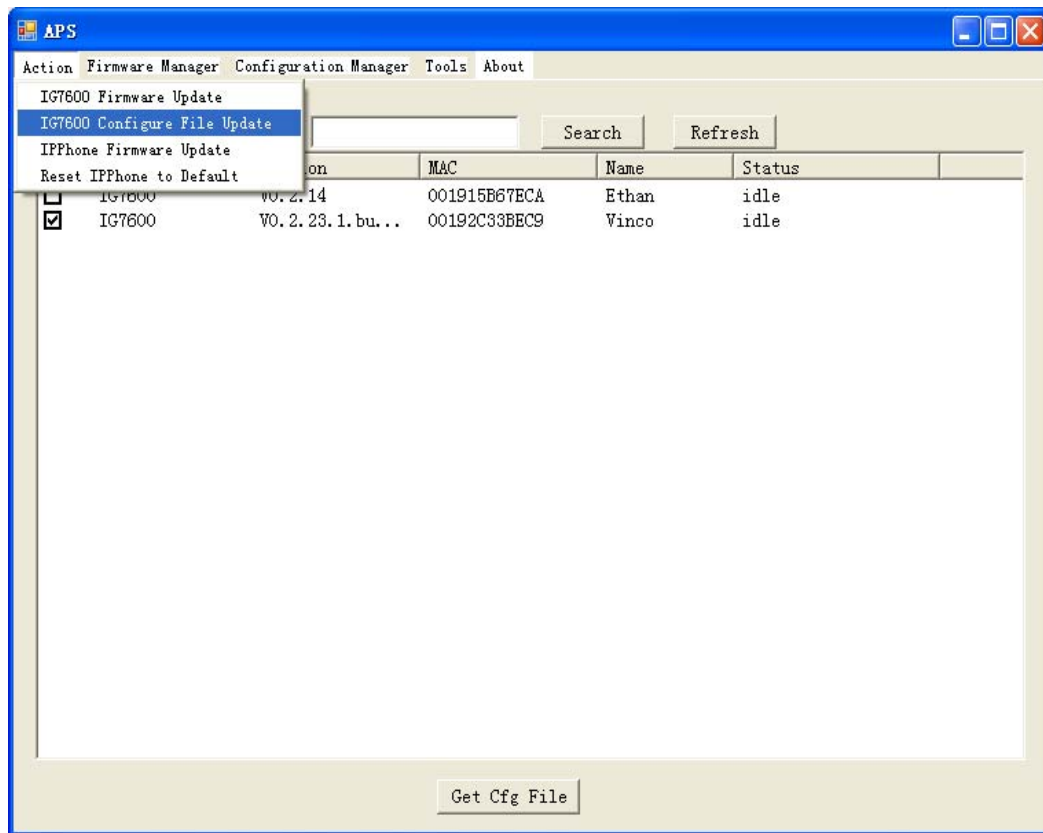


After you press Update button, the upgrading procedure begins, and the status of IG7600 will become “waiting” or “loading” before the upgrading procedure finishes.

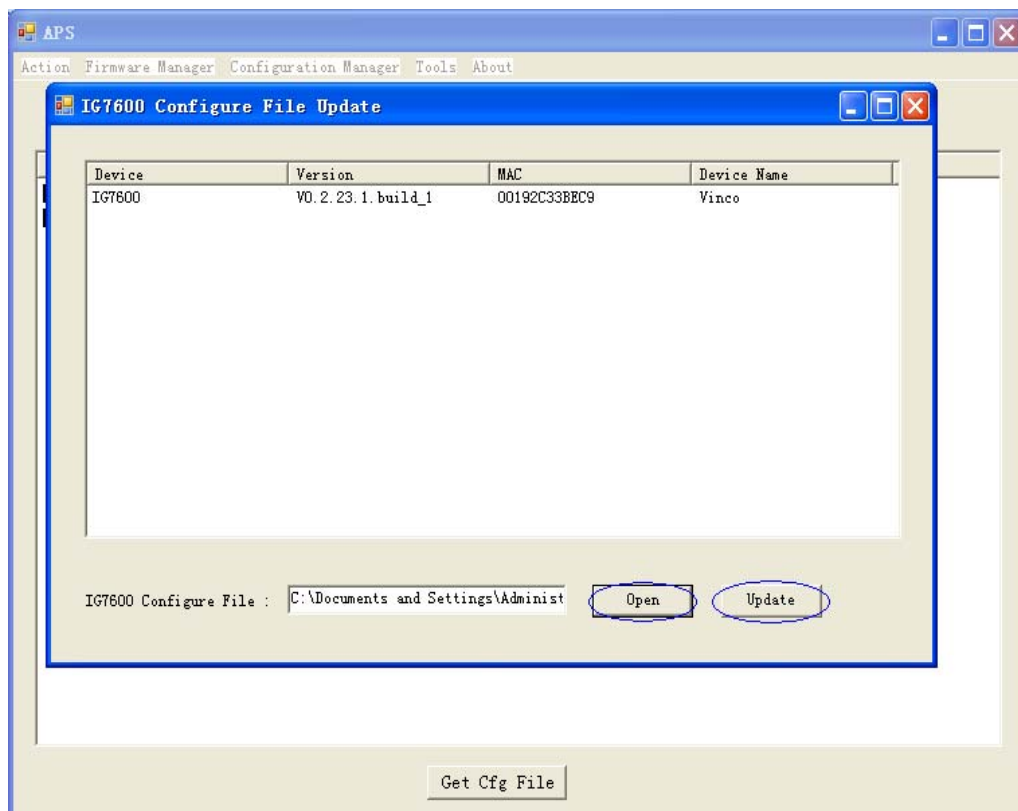


Appendix 4.5 IG7600 Configure File Update

Press Action->IG7600 Configure File Update.

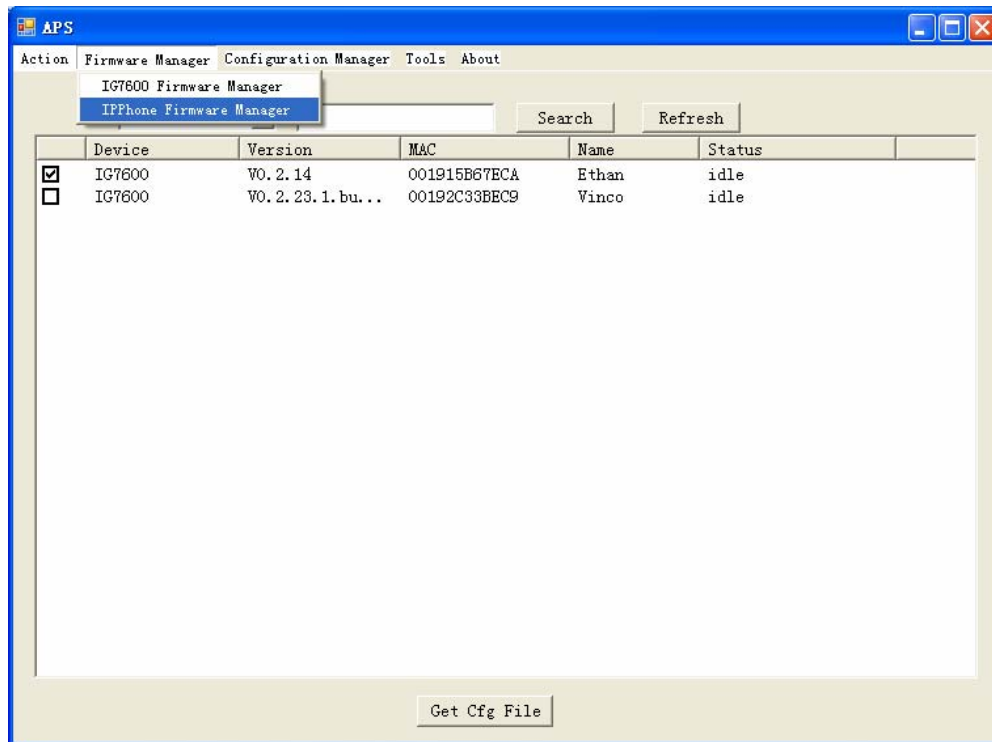


You can upgrade more than one IG7600 at one time.

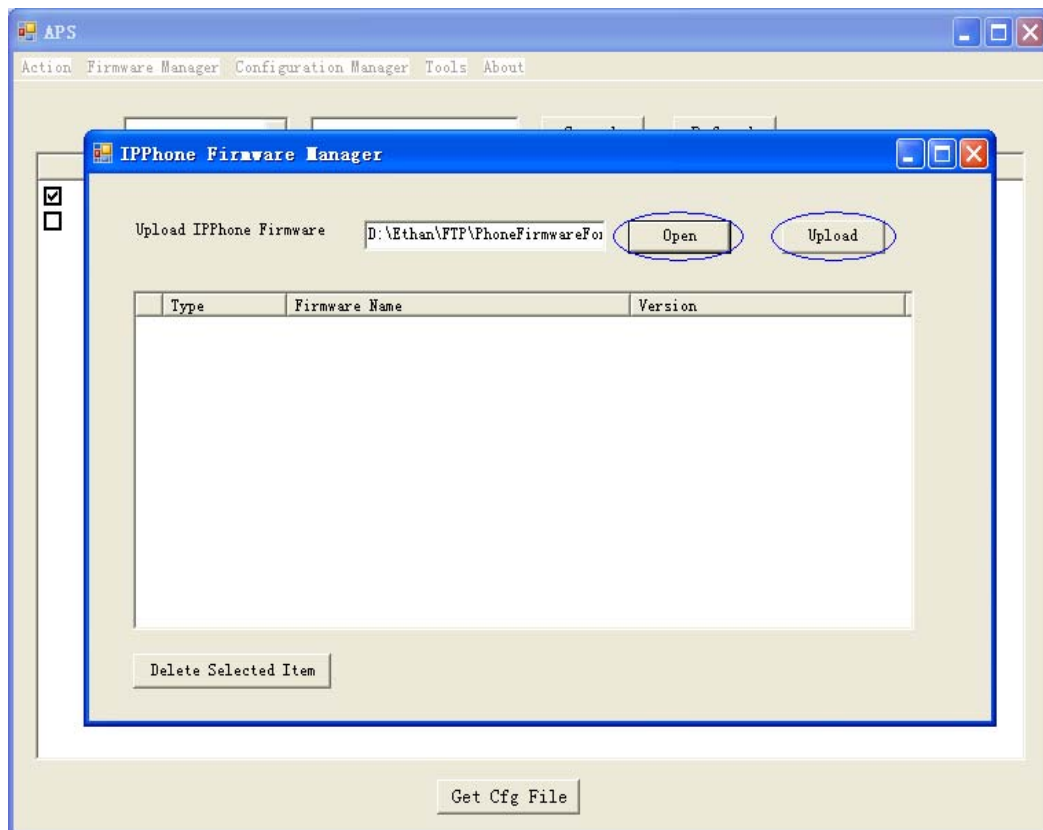


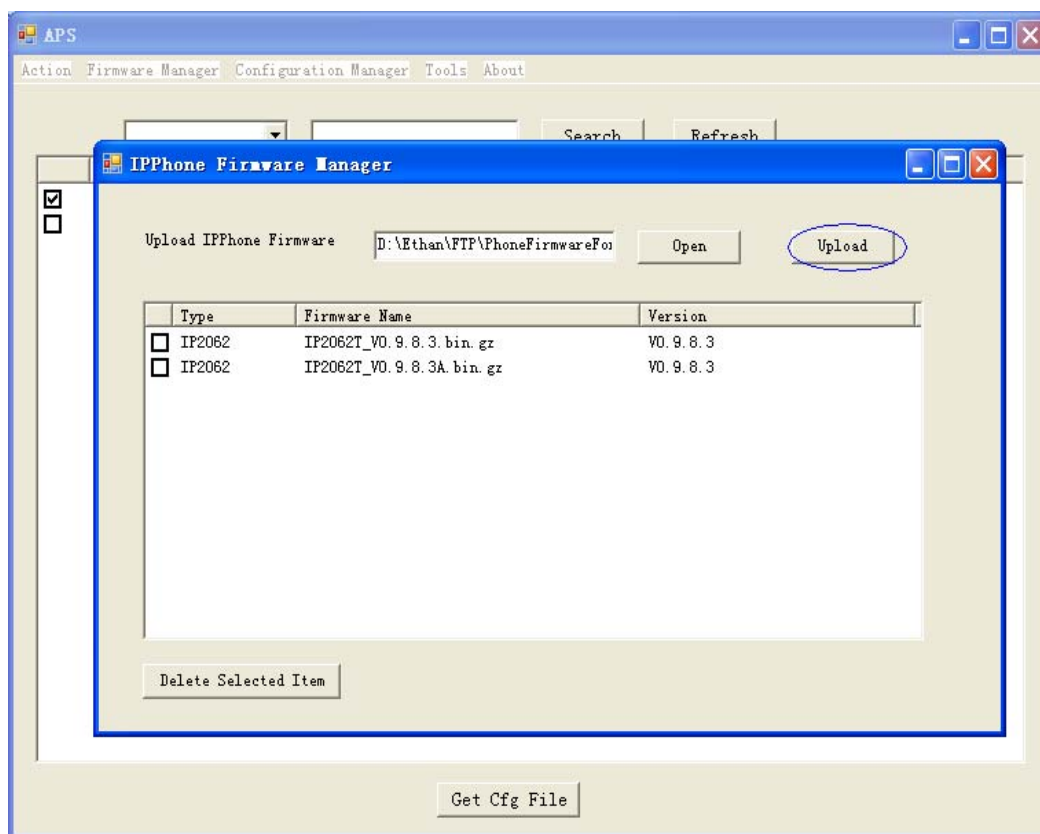
Appendix 4.6 Managing IP Phone Firmware

Press Firmware Manage->IP Phone Firmware Manager



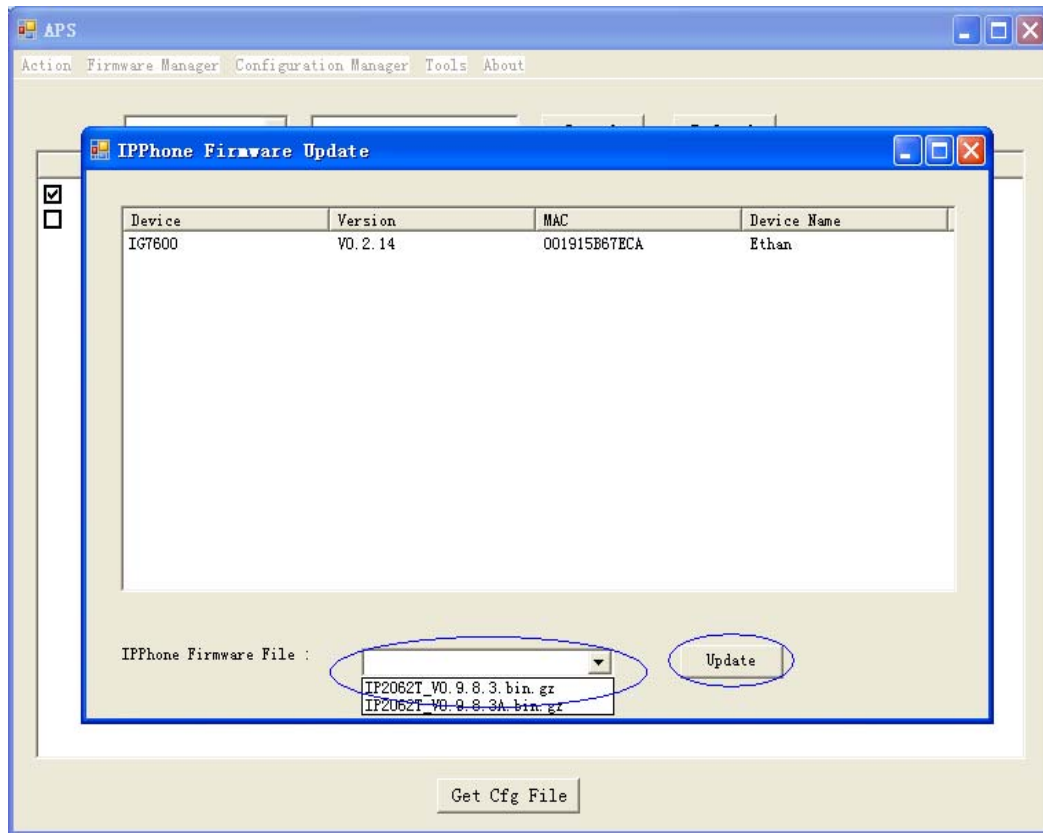
Press Open button to choose available IP Phone firmware on PC and press Upload button to load it to APS.





Appendix 4.7 Upgrading IP Phone Firmware

Choose one IP Phone Firmware file and press Update button to load it to IG7600.

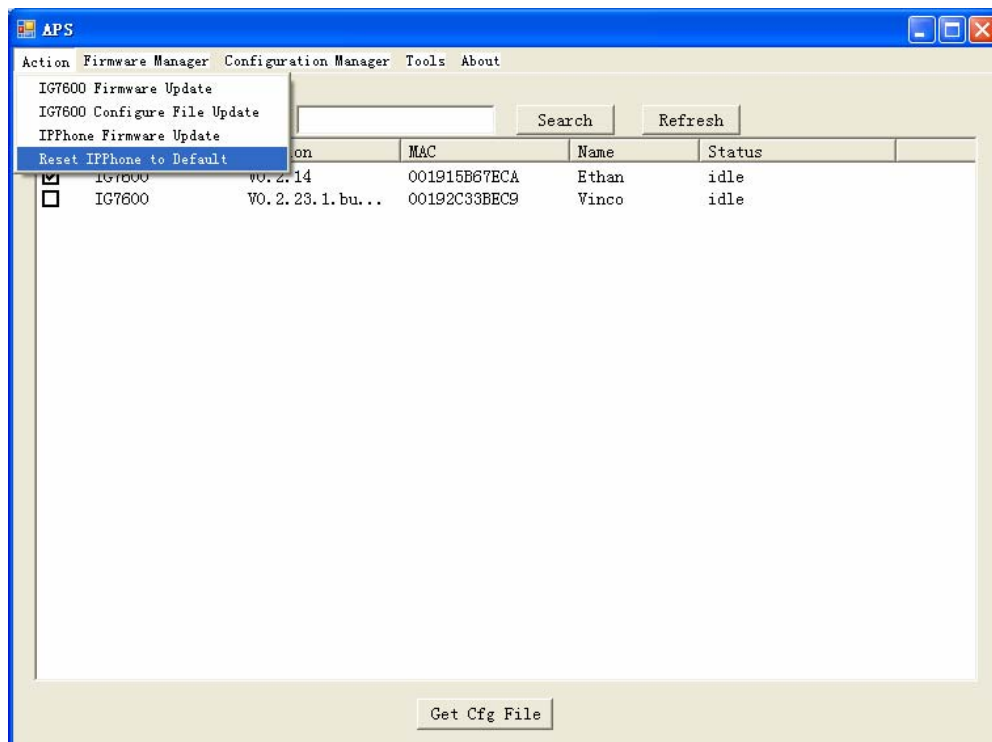


After the IP Phone firmware is uploaded to IG7600, all IP Phones with that model that register to this IG7600 will be upgraded with this firmware within 30 minutes (IG7600 will notify every IP Phone after a delay with a random time between 0 to 30 minutes).

Appendix 4.8 Reset IP Phone to Default

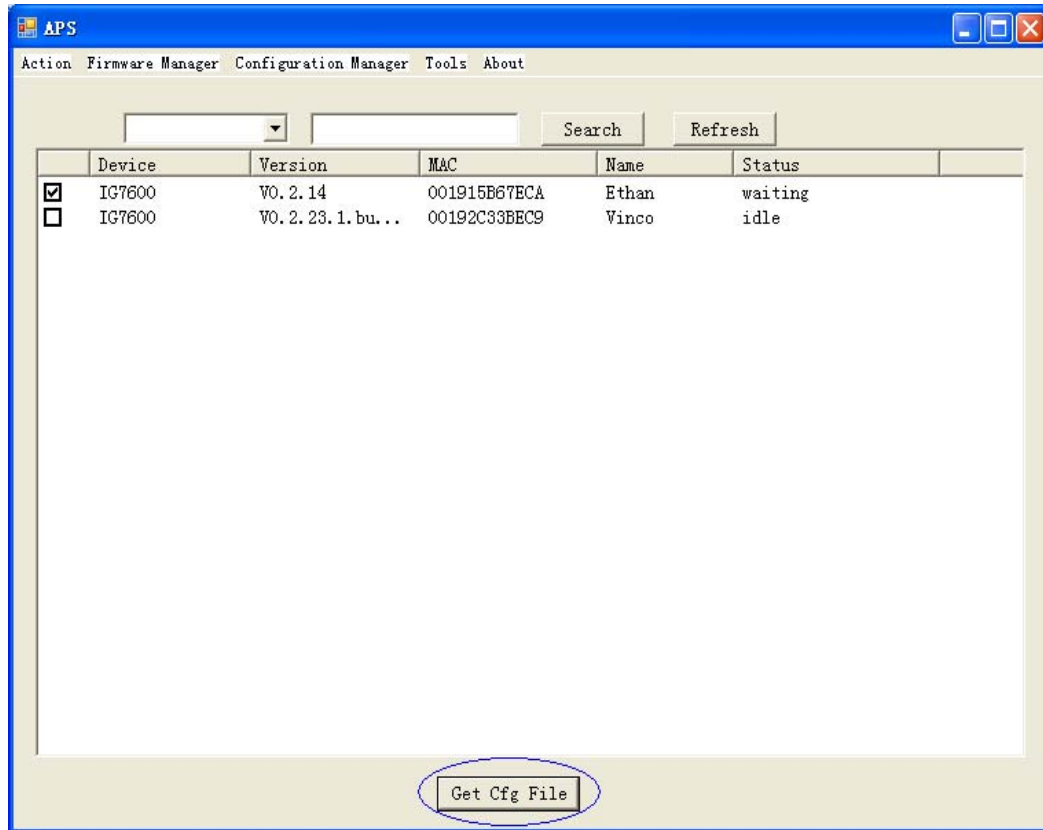
Press Action->Reset IP Phone to Default.

Then all IP Phones that register to this IG7600 will be reset to default.



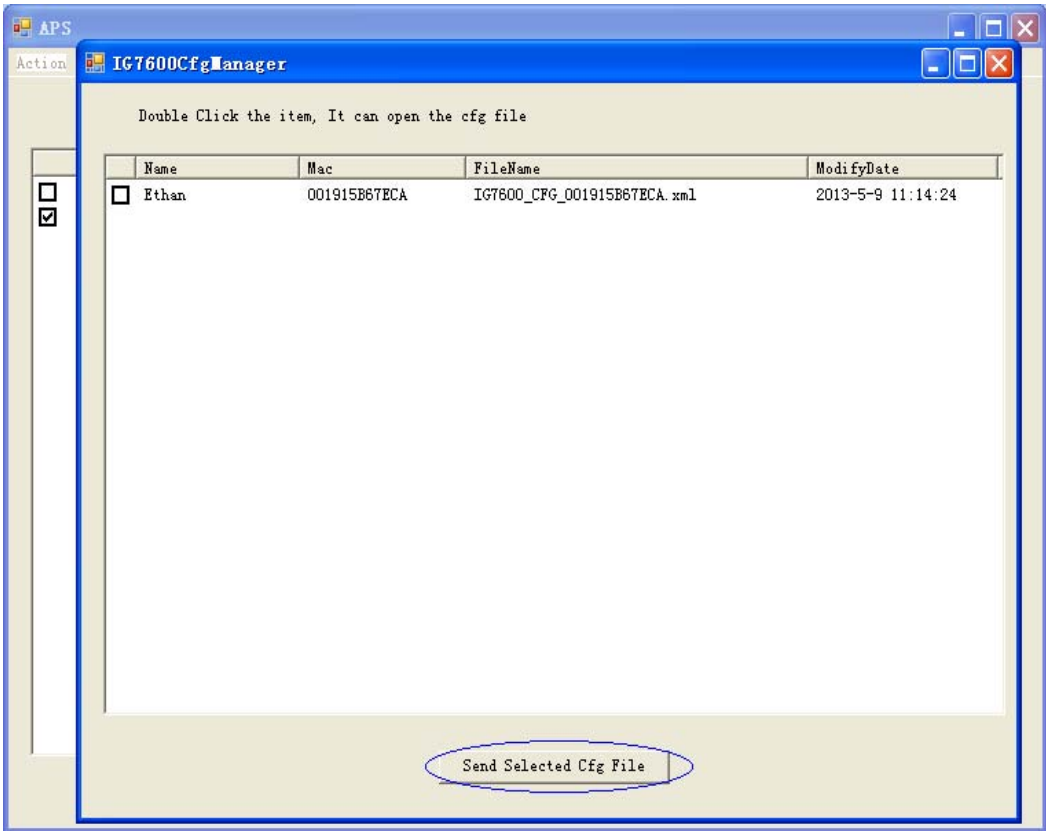
Appendix 4.9 Configuration Manager

Press Get Cfg File button on the main window, then the configuration file on the specific IG7600 is downloaded to your PC.



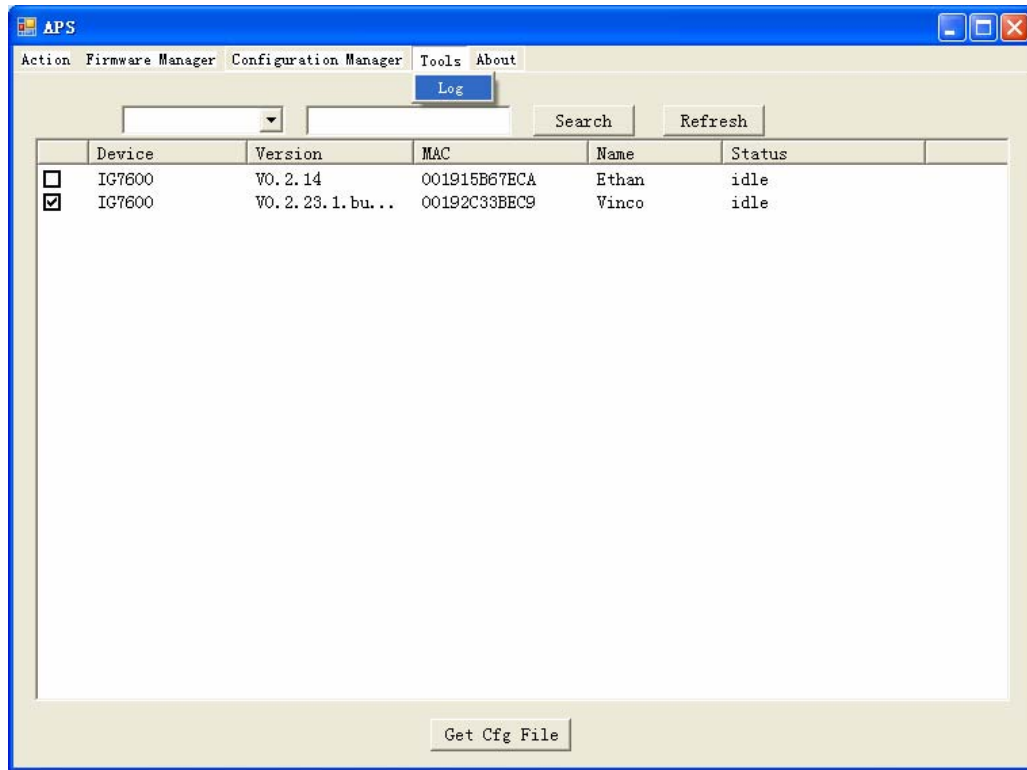
Press Configuration Manage button, then you can edit this configuration file.

After you modify the configuration and save it, you can send it back to this IG7600, and then this IG7600 will use this file as its configuration file and reboot itself to let it take effect.

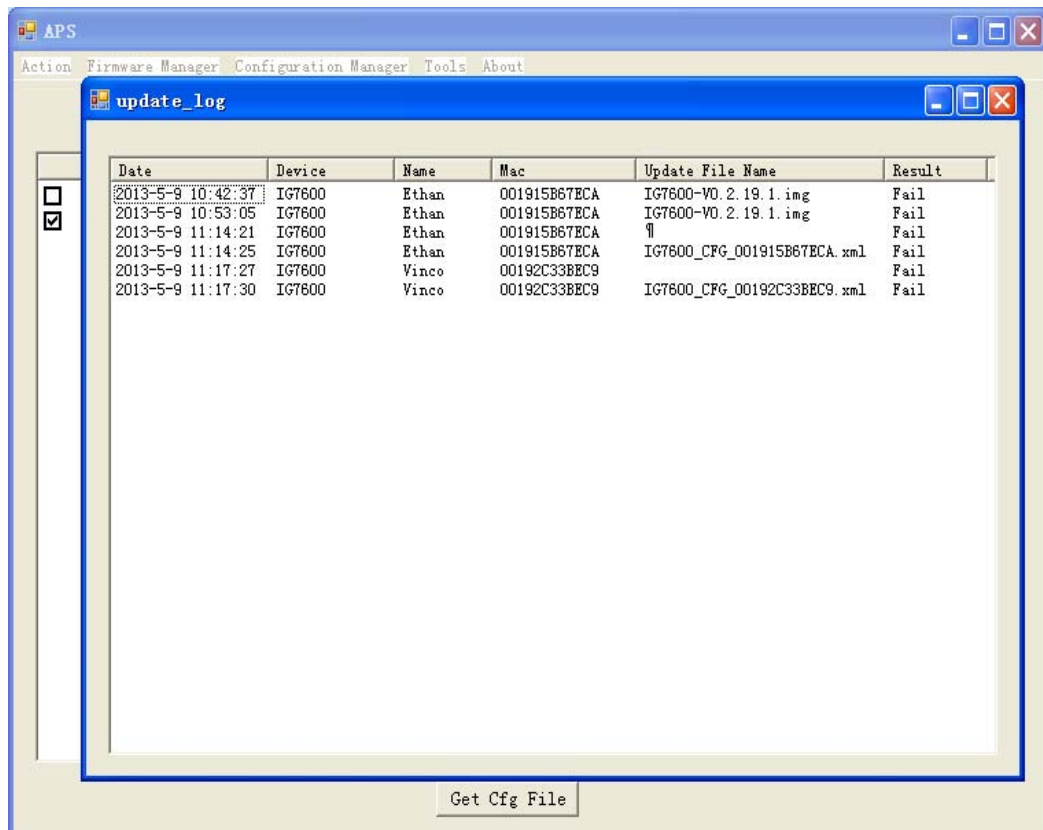


Appendix 4.10 Show Update Log

Press Tools->Log



A window showing the entire log for operations will display.



Appendix 4.11 About

Show APS version info here.

