

---

# IG7600

## Administration Manual



---

Copyright © 2013 TECOM Co., Ltd.  
All Rights Reserved.

## **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.

## **CE Declaration of Conformity**

This equipment complies with the requirements relating to electromagnetic compatibility, EN55022 class B for ITE and EN 50082-1. This meets the essential protection requirements of the European Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

## **Copyright Notice**

All rights reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in retrieval system or translated in to any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual, or otherwise, without the prior written permission of Company.

Company reserves the right to revise the publication and make changes from time to time in the contents hereof without obligation of this company to notify person of such revision or changes. The material contained herein is supplied without representation or warranty of any kind. The Company therefore assumes no responsibility and shall have no liability of any kind arising from the supply or use of this document or the material contained herein.

## **Trademarks**

Windows 98/NT/2000/XP/7™ and Internet Explorer™ are registered trademarks of Microsoft Corporation. All other company, brand and product names, like Netscape Navigator™ are trademarks or registered trademarks of their respective owners.



**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 equipments (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.

## Revision History

Version	Primary Author(s)	Description of Version	Date Completed
0.1.2	Icy, Ethan	<ol style="list-style-type: none"> <li>1 Add IPCamera page.</li> <li>2 Add Aps Server page.</li> <li>3 Update NAT Traversal page.</li> <li>4 Update Access Control page.</li> <li>5 Update Restore to default page.</li> <li>6 Wizard page changed.</li> <li>7 All Web UI pictures are updated for wizard page is added to main.html.</li> </ol>	2013-5-3
0.1.3	Ethan	<ol style="list-style-type: none"> <li>1 Modify based on Tommy/Leo/Jerrys' comments.</li> </ol>	2013-5-9
0.1.4	Ethan	<ol style="list-style-type: none"> <li>1 Modify figures to better one.</li> <li>2 Optimize typesetting.</li> <li>3 Fix some input errors.</li> </ol>	2013-5-13

Notice : The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**FCC RF Radiation Exposure Statement:**

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

# Table Of Contents

1.	Introduction .....	8
2.	Getting to Know the IG7600 .....	10
2.1	Front Panel .....	10
2.2	Rear Panel .....	11
3.	IG7600 Voice General Features .....	12
3.1.	3-Way Conference .....	12
3.2.	Access Control for Web Page .....	12
3.3.	Answering Position .....	12
3.4.	Auto Attendant & Voice Mail .....	12
3.5.	Auto Provisioning .....	14
3.6.	Basic Call .....	14
3.7.	Call Abandon .....	14
3.8.	Call Operator (Call Attendant) .....	14
3.9.	Call Pickup – Group .....	15
3.10.	Call Restriction .....	15
3.11.	Call Routing .....	16
3.12.	Caller ID Detection/Generation .....	17
3.13.	Class Of Service (COS) .....	17
3.14.	Daylight Saving Time .....	17
3.15.	Default Set .....	17
3.16.	Direct In Dialing (DID) .....	17
3.17.	Direct Inward System Access (DISA) .....	17
3.18.	Emergency Call .....	17
3.19.	Extension Password .....	17
3.20.	Fax/Modem .....	17
3.21.	Flash – Analog Port (SLT) Flash Recognition .....	17
3.22.	IP Trunk .....	17
3.23.	Message Waiting Indication (MWI) .....	17
3.24.	Music on Hold .....	17
3.25.	Numbering Plan .....	17
3.26.	PSTN Backup .....	17
3.27.	Registration Server .....	17
3.28.	Service Mode .....	17
3.29.	Station Message Detailed Recording (SMDR) .....	17
3.30.	System Speed Dial .....	17
3.31.	System Time & Date .....	17
3.32.	Trunk Group .....	17
3.33.	UCD (Uniform Call Distribution) Group (or Hunt Group) .....	17
3.34.	Wizard Setup .....	17
4.	IG7600 Voice Extension Features .....	17
4.1.	3-Way Conference .....	17
4.2.	Agent Log On/Off – UCD Group .....	17
4.3.	Alarm Clock .....	17
4.4.	Alphanumeric Display .....	17
4.5.	Automatic Callback Busy .....	17
4.6.	Auto Hold .....	17
4.7.	Call Fork .....	17
4.8.	Call Forward .....	17
4.9.	Call Hold .....	17
4.10.	Call Log .....	17
4.11.	Call Park / Call Park Answer .....	17
4.12.	Call Pickup – Individual .....	17
4.13.	Call Waiting .....	17

---

4.14.	Caller Blocking .....	17
4.15.	CO Flash.....	17
4.16.	Conference (3-way).....	17
4.17.	COS Following.....	17
4.18.	Distinctive Ringing.....	17
4.19.	Do Not Disturb (DND).....	17
4.20.	DSS/EDM.....	17
4.21.	Feature Button Reset .....	17
4.22.	Feature Key Programming .....	17
4.23.	Feature Reset.....	17
4.24.	Hold Reminder .....	17
4.25.	Hotline.....	17
4.26.	Live Recording (One Touch Record) .....	17
4.27.	Multi-Line Appearance.....	17
4.28.	Mute .....	17
4.29.	On Hook Dialing .....	17
4.30.	Paging (All/Group) / Paging Answer .....	17
4.31.	Paging Allow/Deny .....	17
4.32.	Phone Book .....	17
4.33.	Phone Lock/Unlock.....	17
4.34.	Plug & Play .....	17
4.35.	Reminder Tone .....	17
4.36.	Service Mode Switching .....	17
4.37.	Transfer / Recall .....	17
4.38.	Volume Control .....	17
4.39.	Web Management.....	17
5.	Quick Installation.....	17
5.1	Connecting the IG7600.....	17
5.2	Wizard Setup.....	17
5.2.1	WAN Setting.....	17
5.2.2	LAN Setting.....	17
5.2.3	Wireless Basic.....	17
5.2.4	Internet Time.....	17
5.2.8	Wizard Setup Finished .....	17
6.	Configuration.....	17
6.1	Setup.....	17
6.2	Establish the Connection .....	17
6.3	Device Info .....	17
6.3.1	Summary.....	17
6.3.2	Statistics.....	17
6.3.3	Route.....	17
6.3.4	ARP.....	17
6.3.5	DHCP.....	17
6.4	Advanced Setup .....	17
6.4.1	WAN .....	17
6.4.2	LAN .....	17
6.4.3	NAT .....	17
6.4.4	Security.....	17
6.4.5	Parental Control .....	17
6.4.6	Quality of Service .....	17
6.4.6.1	DSCP Marking.....	17
6.4.6.2	Bandwidth Control.....	17
6.4.7	Routing .....	17
6.4.8	Dynamic DNS.....	17
6.4.9	Upnp .....	17
6.5	Wireless .....	17
6.5.1	Basic .....	17
6.5.2	Security.....	17

---

6.5.3 MAC Filter.....	17
6.5.4 Wireless Bridge.....	17
6.5.5 Advanced .....	17
6.5.6 Station Info .....	17
6.5.7 Power Saving.....	17
6.6 Voice .....	17
6.6.1 Phone .....	17
6.6.2 Trunk.....	17
6.6.3 System .....	17
6.6.4 Voice Mail.....	17
6.6.5 NAT Traversal.....	17
6.6.6 Diagnostics .....	17
6.6.6.1 Remote Maintenance .....	17
6.6.7 Registered Phone .....	17
6.7 Management .....	17
6.7.1 Settings .....	17
6.7.2 System Log .....	17
6.7.3 TR-069 Client .....	17
6.7.4 Time Setting.....	17
6.7.5 Access Control.....	17
6.7.6 PTC.....	17
6.7.7 IP Camera .....	17
6.7.8 Update Software .....	17
6.7.9 APNS Certificate .....	17
6.7.10 Reboot.....	17
6.8 Diagnostics .....	17
6.9 Logout.....	17
Appendix 1: Product Summary .....	17
USB Host Application .....	17
Appendix 2: Feature Access Codes.....	17
Appendix 3: Auto Attendant and Voicemail System.....	17
Appendix 3.1 Functions.....	17
Appendix 3.1.1 Auto Attendant Functions.....	17
Appendix 3.1.2 Voice Mail Functions .....	17
Appendix 3.1.3 Management Menu .....	17
Appendix 3.2 Voice Messages .....	17
Appendix 3.2.1 File Format.....	17
Appendix 3.2.2 File Storage .....	17
Appendix 3.3 Flowchart .....	17
Appendix 3.3.1 Automated Attendant.....	17
Appendix 3.3.3 Mailbox Administer Flowchart .....	17
Appendix 3.3.4 System Administrator’s Voicemail Flowchart.....	17
Appendix 4: APS .....	17
Appendix 4.1 Install APS on Windows .....	17
Appendix 4.2 Managing IG7600 Firmware.....	17
Appendix 4.3 Show all IG7600 managed.....	17
Appendix 4.4 Upgrading IG7600 Firmware.....	17
Appendix 4.5 IG7600 Configure File Update.....	17
Appendix 4.6 Managing IP Phone Firmware.....	17
Appendix 4.7 Upgrading IP Phone Firmware.....	17
Appendix 4.8 Reset IP Phone to Default .....	17
Appendix 4.9 Configuration Manager.....	17
Appendix 4.10 Show Update Log.....	17
Appendix 4.11 About.....	17

# 1. Introduction

Tecom next generation of SOHO system is an all-wireless 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 Tecom soft client to be automatically detected and registered when they are connected. The IG7600 is so easy to be managed and configured by its integrated web server.

The IG7600 system is the best to work with Tecom's IP Phones IP3000 series and soft client for Android phone and iPhone to take advantages of powerful business features such as plug & play, all paging/group paging, multi line appearances, etc....The IG7600 has a FXS port to support traditional analog devices such as telephone, answering machine, FAX machine.

This product specification is Tecom product specification of IG7600 for MOCET brand. The ODM product features will be appended to meet customer's special requirements.



## 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

### **Terminals**

- ◆ 1 Analog Terminal (Analog Telephone or FAX)
- ◆ 16 IP Stations (Wired or WiFi IP-Phone; Smart Phone (Soft Client for iPhone and Android Phone))

### **Accessory**

- ◆ Wi-Fi Repeater

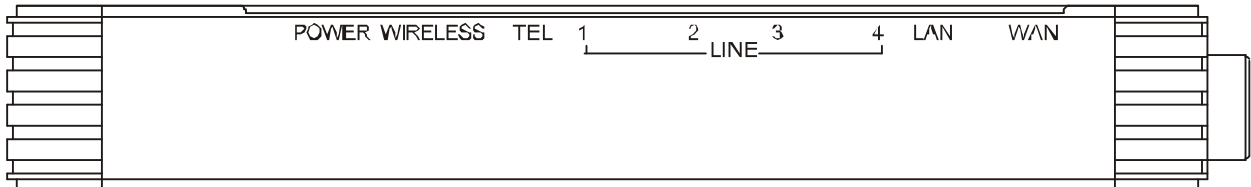
Basically, the Administration is required to do the following things:

- (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.

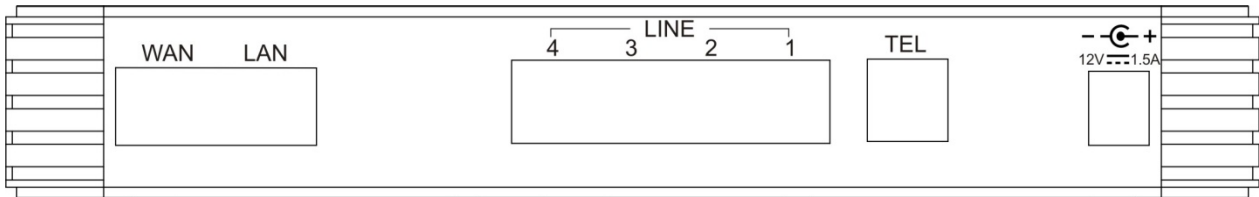


**Figure 2-1. Front Panel of IG7600**

LED Name	Color	Status	Description
POWER	Red/Blue	Red 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.

### **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 mode for Web Page

- Administrator mode: unrestricted access and program  
(Default: admin1234/123456)
- Support Mode: allow an ISP technician to maintain and run diagnostics  
(Default: support/support)
- User Mode: view some configuration settings and statistics.  
(Default: user/user)

### **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 17 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 trunkline (PSTN or SIP-Trunk).
- Enter Voicemail box.

- **AA Mode**

- Supports four types of AA mode: Normal mode, Simple mode, Access VM mode and Trunk mode. Each mode'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 Normal mode is 500, Simple mode is 501, Access VM mode is 502 and Trunk mode is 503.
- Normal mode is normal operation of AA or VM.
- If Simple mode 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.
- If Access VM mode AA is set as Destination of a DID entry or Answering Position of a trunk, the outside caller will be prompted to input a voicemail number that he wants to visits, it's used to allow outside devices to be able to access VM.
- Trunk mode is similar with Simple mode, only that it allows dialing to outside numbers. It's used to allow outside devices to be able to dial extension numbers and outside numbers.

- **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 IP20xx's LCD.
- For each extension, the maximum number of Voice Mail is 200.
- For each leaving message, it's saved 1 - 30 days or infinite
- Support 16 Virtual Mailboxes

- 
- Enter voicemail through another phone extension
  - **Management Menu**
    - ◆ Change the Greeting Mode: Working, Holiday, and Temporary.
    - ◆ Record the Greeting Messages
    - ◆ Record the process Messages
  - **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.

### 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. IG7600 also provides an Auto Provision Server (APS) to update IG7600 FW, Update / Retrieve IG7600 Configuration and the registered IP20xx firmware.

### 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 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.

### 3.8. 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.

### 3.9. 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.

### 3.10. 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.

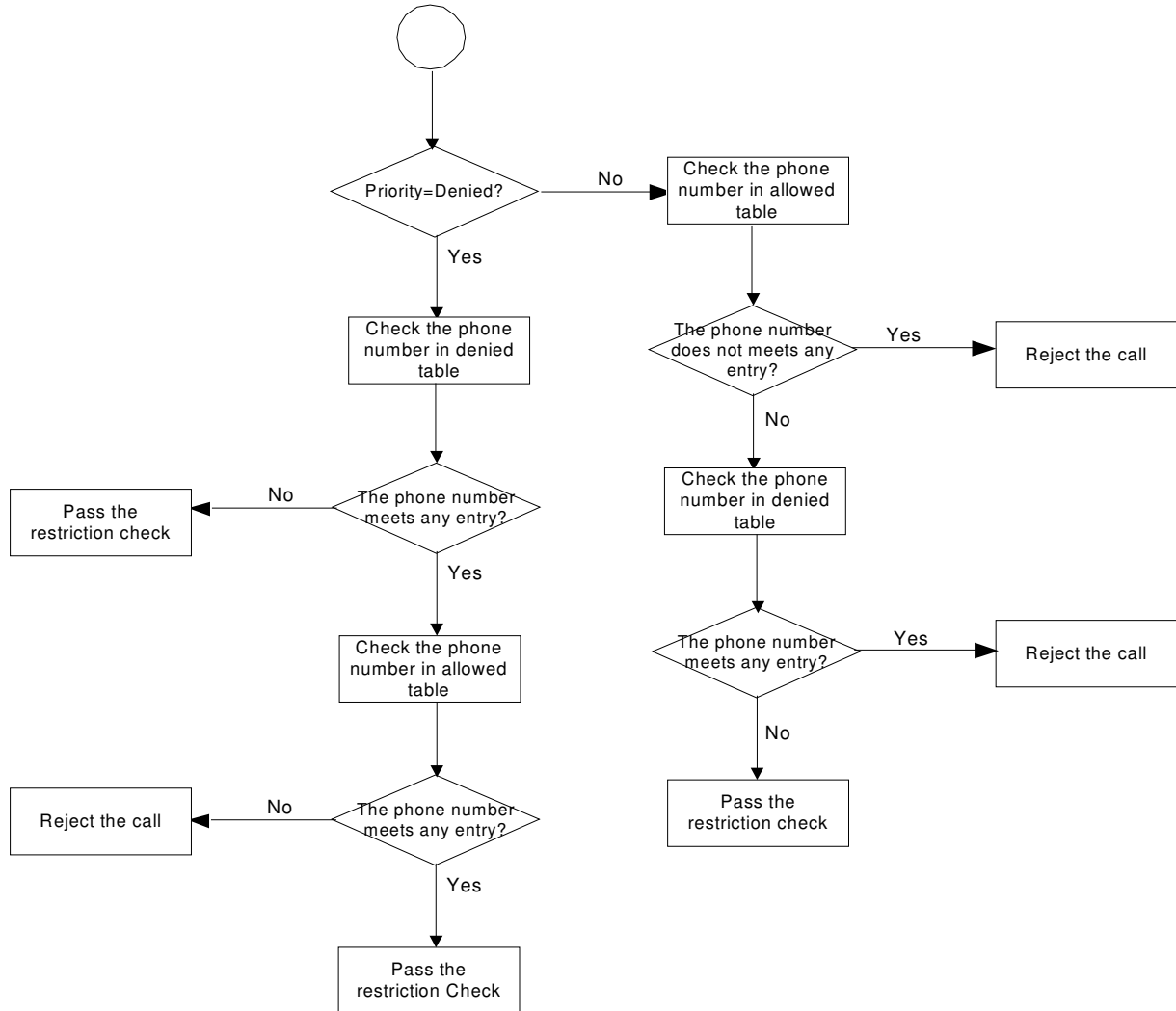
- **COS**

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:



### 3.11. 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

### 3.12. 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.

### 3.13. 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.

### 3.14. 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.

### 3.15. 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 (IP2032, IP2061, IP2062) 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

### 3.16. 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.

### **3.17. 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 star (“#”) 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.

### **3.18. 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. “119” and “110” are in it by default.

### **3.19. 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”.

### **3.20. Fax/Modem**

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

### **3.21. 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.

### **3.22. IP Trunk**

IG7600 can register up to 8 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.

### **3.23. 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.

### **3.24. Music on Hold**

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

### **3.25. 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

### **3.26. 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

### **3.27. 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.

### 3.28. 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.

### 3.29. 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.

### 3.30. 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.

### 3.31. 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.

### 3.32. 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 Trunk Groups. All PSTN Trunks are assigned to default Trunk Group 1 and all IP Trunks are assigned to default Trunk Group 2. 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

### 3.33. UCD (Uniform Call Distribution) Group (or Hunt Group)

IG7600 supports 4 UCD Groups. Each UCD Group can have up to 17 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.

### 3.34. Wizard Setup

The IG7600 has a setup Wizard that provides the system administrator with a series of step-by-step operations. The setup Wizard starts automatically when the IG7600 is powered up for the first time, or if the system is reset to default configuration via the reset switch on the IG7600 unit.

In IG7600's Wizard Setup, it has three ways to be selected.

- Update the configurations using the saved setting file
- Upgrade the software using an image file
- Manual setup

If having an IG7600 image file, you can select “Upgrade the software using an image file”. It chooses the image file to upgrade device to latest version.

If having an IG7600 configuration file, you can select “Update the configurations using the saved setting file”. It chooses the saved setting file to update device to the saved configurations.

If you don't have an IG7600 configuration file, you can select “Manual setup” to start the setup wizard to select the appropriate operation mode and configure the corresponding setting 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 (IP305x) and IP20xx phone (IP2032/IP2061/IP2062) 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 IP20xx/IP305x Phones. This section introduces these special phone features. Some features are only for IP20xx/IP305x phones and/or FXS phone.

The following features depend on whether the phone provides.

Feature	IP20xx	FXS	IP3054	Other SIP Phone
Agent Log On/Off – UCD Group	Yes	Yes	No	No
3-Way Conference	Yes	No	Yes	No
Alarm Clock	Yes	No	Depends	Depends
Alphanumeric Display	Yes	Depends	Yes	Depends
Automatic Callback Busy	Yes	No	No	No
Auto Hold	Yes	No	Yes	Depends
Call Fork	Yes	Yes	?	No
Call Forward – Direct	Yes	Yes	Yes	Depends
Call Forward – Busy	Yes	Yes	Yes	Depends
Call Forward – No Answer	Yes	Yes	Yes	Depends
Call Forward – DND	Yes	Yes	Yes	Depends
Call Forward – Follow Me	Yes	Yes	?	No
Call Hold	Yes	Yes	Yes	Depends
Call Log	Yes	No	Yes	Depends
Call Park	Yes	No	?	No
Call Park Answer	Yes	Yes	?	Yes
Call Pickup - Individual	Yes	Yes	?	Depends
Call Waiting	Yes	Yes	Yes	Depends
Caller Blocking	Yes	No	No	Depends
CO Flash	Yes	Yes	No	No
Conference (3-way)	Yes	Yes	Yes	Depends
COS Following	Yes	Yes	?	No
Default Setting	Yes	Yes	Yes	Depends
Distinctive Ringing	Yes	Partial	Yes	Depends
Do Not Disturb	Yes	Yes	Yes	Depends
DSS/EDM	IP2061 Only	No	No	No
Feature Key Programming	Yes	No	No	No
Hold Reminder	Yes	Yes	No	Depends
Hotline	Yes	Yes	No	Depends
LCD & Interactive Buttons	Yes	No	Yes	Depends
Live Recording	Yes	No	No	Depends
Multi-Line Appearance	Yes	No	Yes	Depends
Mute	Yes	No	Yes	Depends
On Hook Dialing	Yes	Depends	Yes	Depends
Page (All/Group) - Paging	Yes	Yes	Yes	Yes

Page (All/Group) - Paged	Yes	No	No	No
Page Answer	Yes	No	No	No
Page Allow / Deny	Yes	No	No	No
Phone Book	Yes	No	Yes	Depends
Phone Lock/Unlock	Yes	Yes	Yes	No
Plug and Play	Yes	Yes	Yes	No
Reminder Tone	Yes	Yes	No	Depends
Service Mode Switching	Yes	Yes	?	No
Transfer	Yes	Yes	Yes	Depends
Web Management	Yes	No	No	Depends
Volume Control	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.

#### 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. Alarm Clock

You may activate your own private alarm on your phone to remind you of special appointments, events, etc. When the alarm activates you will hear tone ringing for a programmable period from 10-600 seconds. You may program the alarm for one time or always. When programmed for always, the alarm will sound at the same time everyday.

#### 4.4. Alphanumeric Display

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

#### 4.5. Automatic Callback Busy

IP20xx 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.

#### 4.6. 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.

## 4.7. 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

## 4.8. 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 IP20xx 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 IP20xx.

## 4.9. 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.

## 4.10. Call Log

The IP20xx 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.

## 4.11. Call Park / Call Park Answer

The feature allows you to “park” a call at IP20xx 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 pickup 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.

## 4.12. 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

## 4.13. Call Waiting

If Call Waiting is enabled for a specific IP20xx/IP305x 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

## 4.14. Caller Blocking

IP20xx 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.

---

## 4.15. 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.

## 4.16. Conference (3-way)

IP20xx can establish a 3-way conference on the phone. IP3054 needs to use IG7600's resource to establish the 3-way conference call. IG7600 supports 1 set of 3-way conference for IP3054.

## 4.17. 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)

## 4.18. 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.

## 4.19. 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/NoAnswer FWD.

## 4.20. DSS/EDM

IG7600 supports to provide the status of the extensions and trunk lines. The status can be shown on the LED of IP20xx's flexible keys. For IP2061, it supports EDM module that can have 24 more keys.

## 4.21. 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)

## 4.22. 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<sup>(\*)</sup>) + (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 supports EDM module, it provides 24 more keys for feature access.

## 4.23. 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).

## 4.24. Hold Reminder

IP20xx 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.

## 4.25. 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\*

## 4.26. 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.

## 4.27. Multi-Line Appearance

IG7600 provides PSTN line and IP line status to IP20xx, it also provides PSTN line status to IP305x.

### 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

## 4.28. Mute

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

## 4.29. On Hook Dialing

IP20xx 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.

## 4.30. 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 IP20xx extension can answer the call by pressing the "Answer" soft button.

IG7600 provides 3 Paging Group. Each Group can have 16 extensions.

### 4.31. 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

### 4.32. Phone Book

The IP20xx/IP305x 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 IP305x.

### 4.33. 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)

### 4.34. Plug & Play

While connecting IP20xx/IP305x to IG7600's LAN port, it will register to IG7600 automatically. IG7600 will also assign a valid extension number to the phone directly.

When IP20xx/IP305x and IG7600 connect to the same Router, IG7600 will assign a valid extension number to the IP20xx also.

### 4.35. 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

### 4.36. 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).

## 4.37. 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.

IP20xx/IP305x Phone supports Blind Transfer, Unscreened Transfer, and Screened Transfer.

FXS phone supports Unscreened Transfer, and Screened Transfer.

## 4.38. Volume Control

The IP20xx 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

## 4.39. Web Management

The IP20xx 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 "192.168.1.1", and username is "admin1234", password is "123456".

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

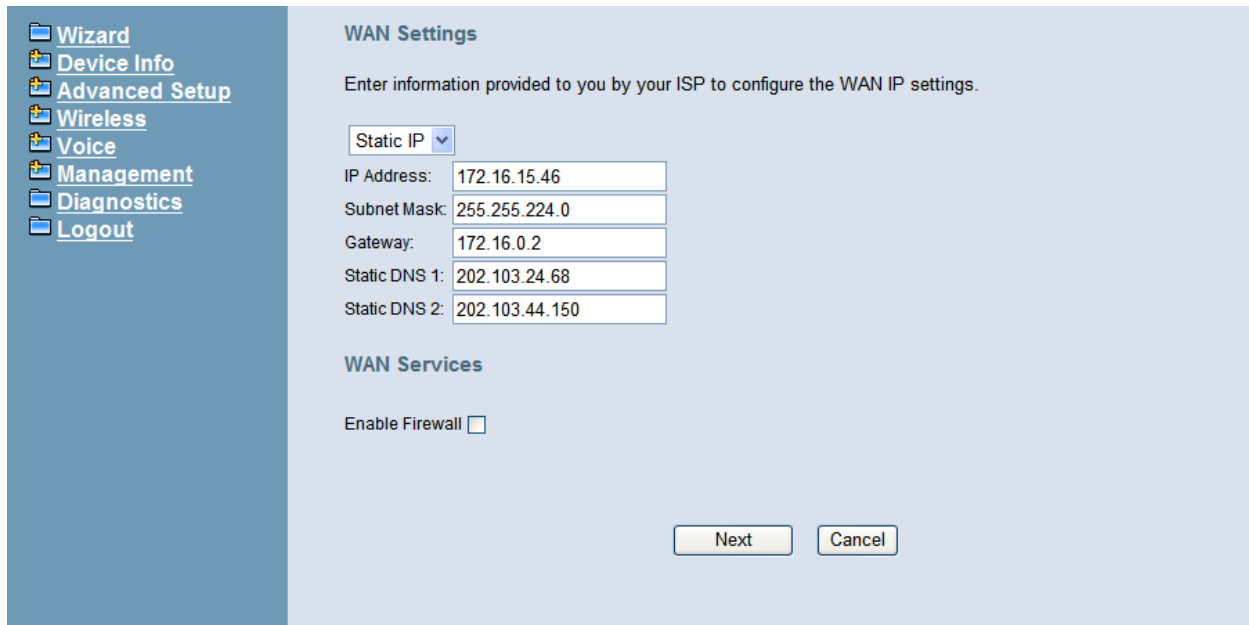
In the configuration, the administrator presses "Next" or "Cancel" button to choose the setting item. If pressing "Save & Reboot", the settings will be saved and the IG7600 will be rebooted automatically.

#### 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.

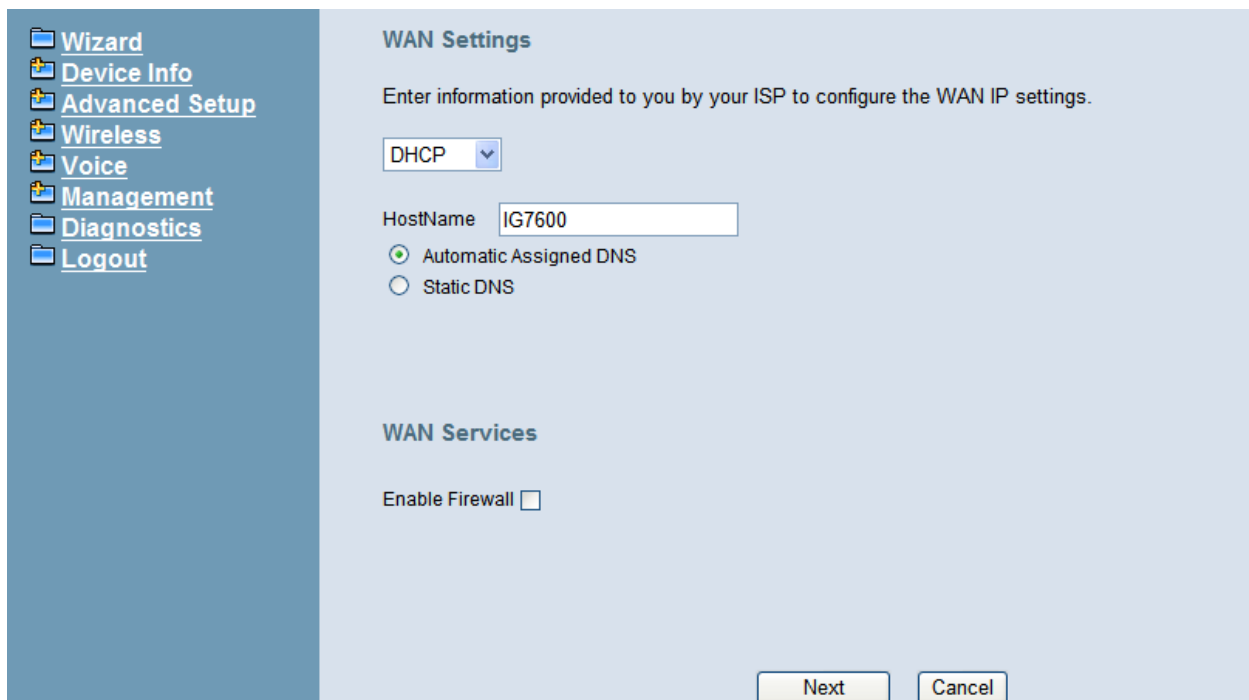
This page shows that the current existing WAN interface in this system is Static IP mode. (Figure 5-11)



**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 5-22).



**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 5-33).



**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 5-44) 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: 192.168.1.1

Subnet Mask: 255.255.255.0

DSP IP Address: 192.168.1.254

Disable DHCP Server  
 Enable DHCP Server

Start IP Address: 192.168.1.2

End IP Address: 192.168.1.253

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 5-55) 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.

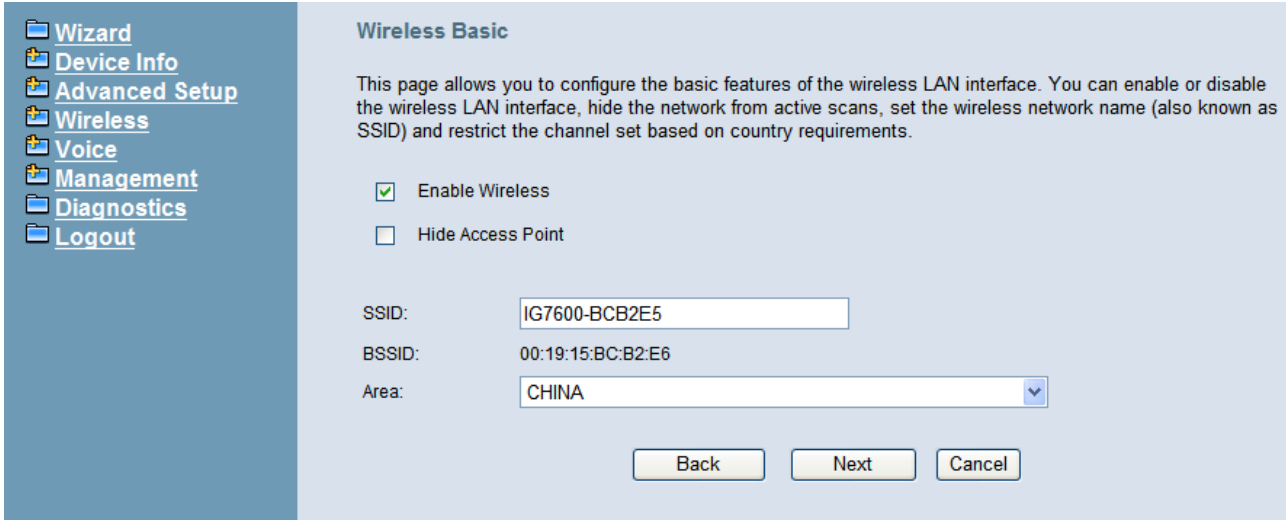


Figure 5-5. Wireless Basic

### 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. You can also choose “Manual Date and Time Settings” to specify the day and time (Figure 5-66, Figure 5-7).

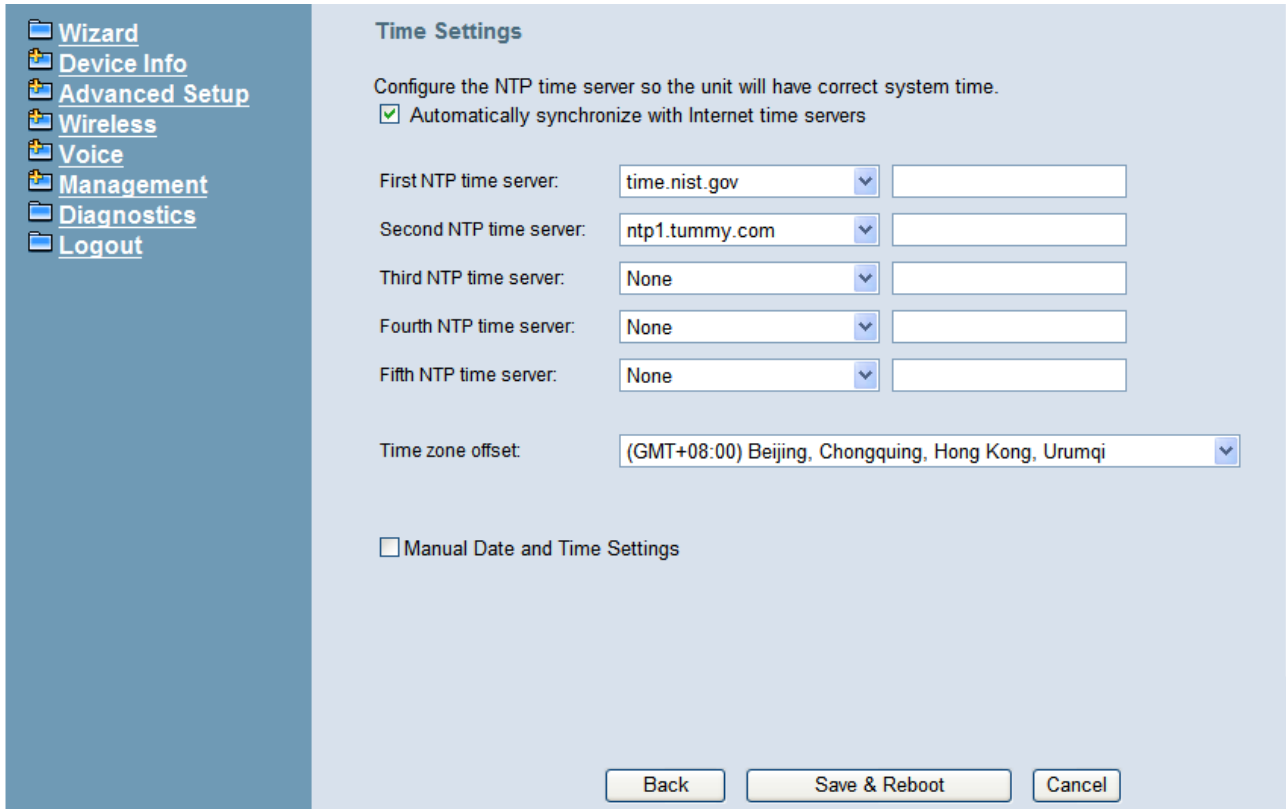
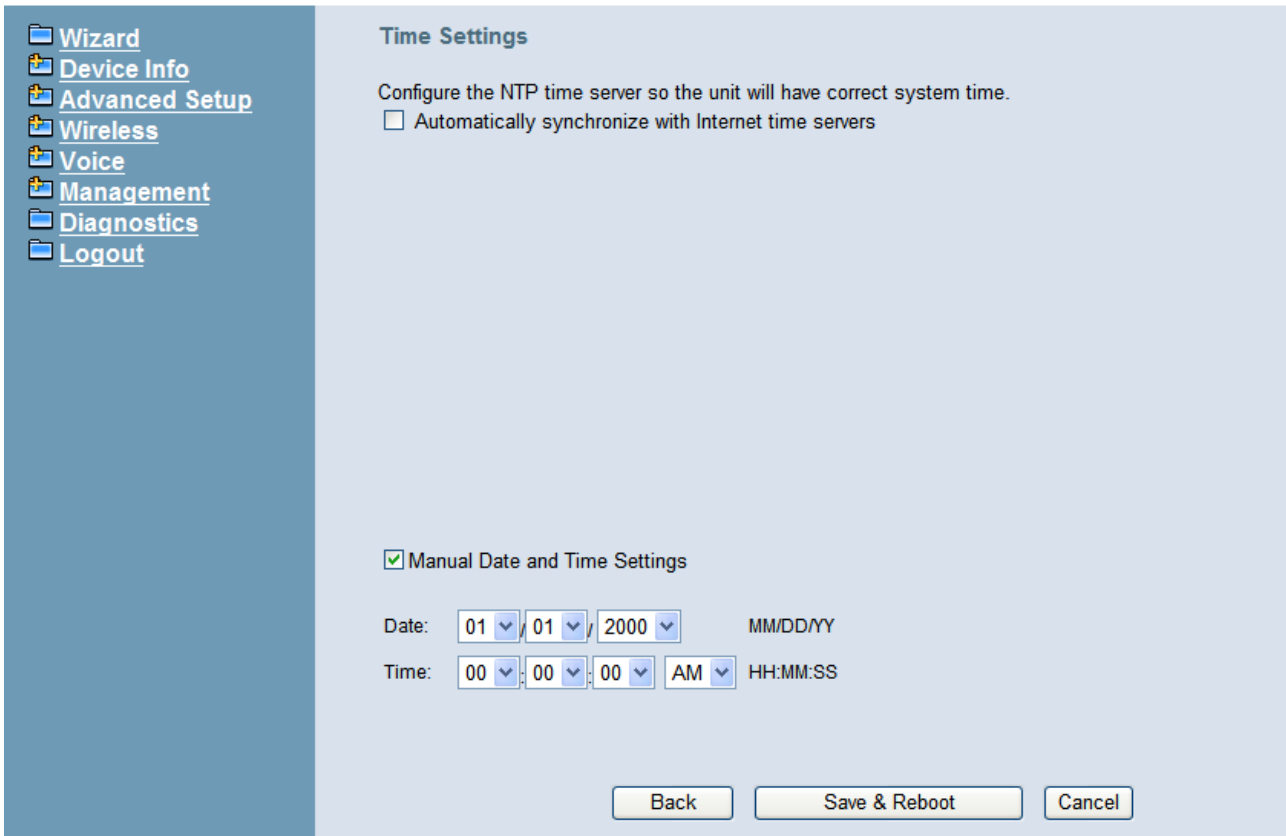


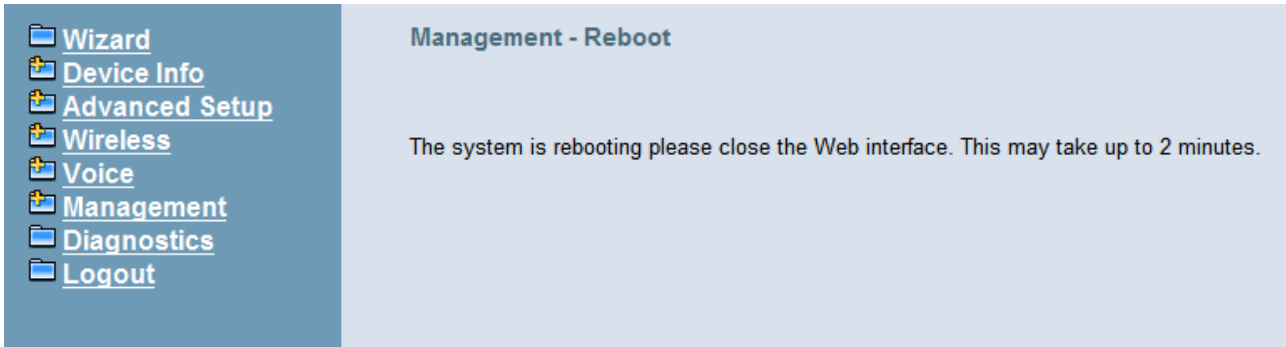
Figure 5-6. Internet Time – Automatic



**Figure 5-7. Internet Time - Manually**

### 5.2.8 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 5-8. 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

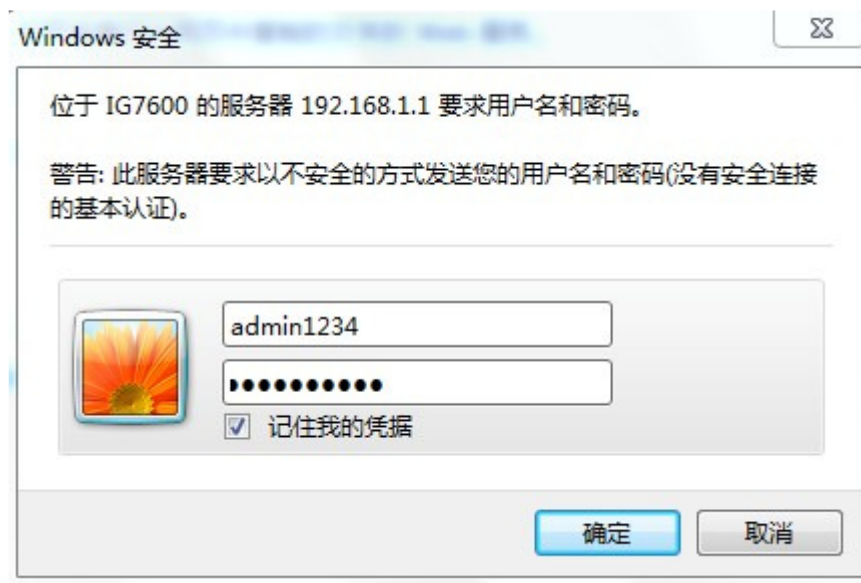
### 6.1 Setup

- Connect the IG7600 to PC.
- The default LAN IP of the IG7600 is 192.168.1.1.
- 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 "123456".
- 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 admin1234/123456).

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

- Device Info
- Advanced Setup
- Wireless
- Voice
- Management
- Diagnostics
- Logout

**Device Info**

Software Version:	V0.3.0
Bootloader (CFE) Version:	1.0.37-102.11
Wireless Driver Version:	5.10.120.0.cpe4.402.9
Serial Number:	ig7600-123487ajfdajs
MAC Address:	00:19:15:B6:7E:CA
System Up Time:	0 day, 0 hour, 1 minute

**LAN Info**

LAN IP Address:	192.168.123.1
Subnet mask:	255.255.255.0
WLAN SSID (Primary):	IG7600-B67ECA

**WAN Info**

**Primary WAN Info**

WAN IP Address:	172.16.15.46
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

**Date / Time**

Thursday, 9 May 2013, 15:43:35
--------------------------------

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.

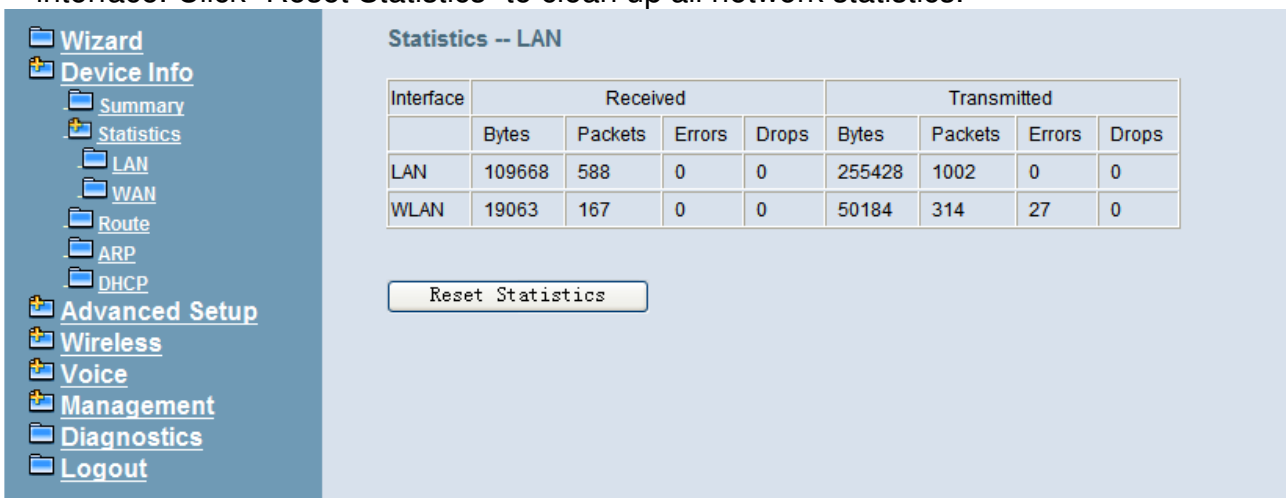


Figure 6-3. Device Info – Statistics – LAN

#### 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.

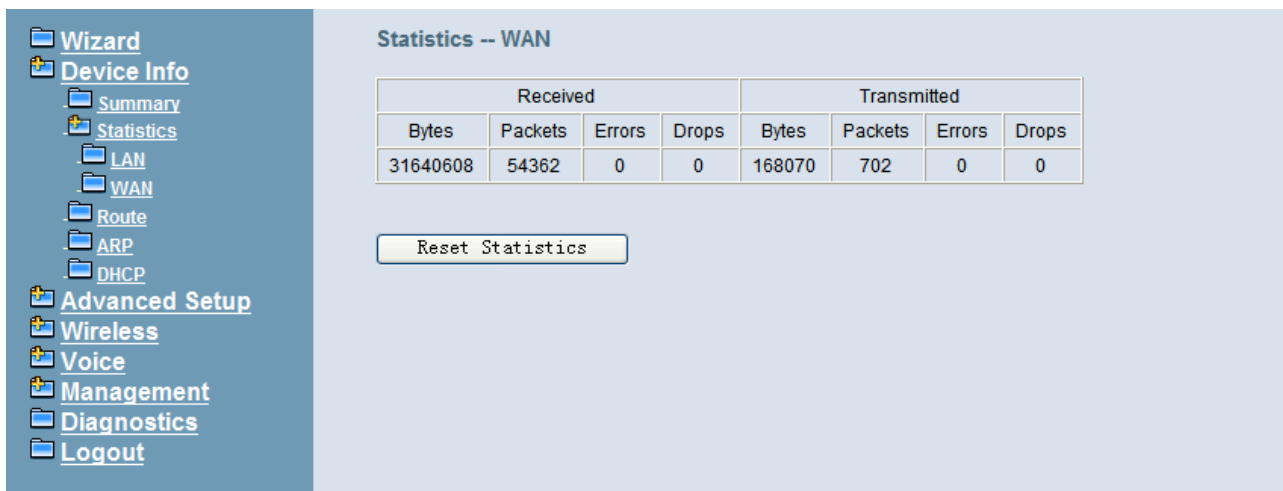


Figure 6-4. Device Info – Statistics – WAN

### 6.3.3 Route

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

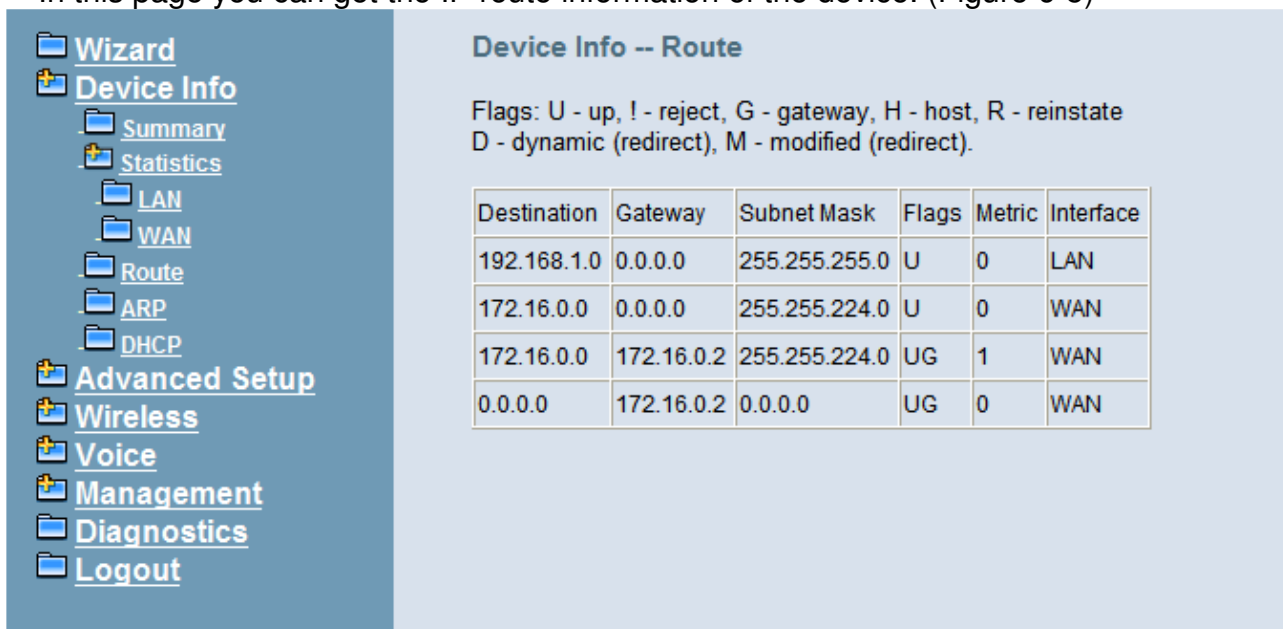


Figure 6-5. Device Info – Route

### 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)

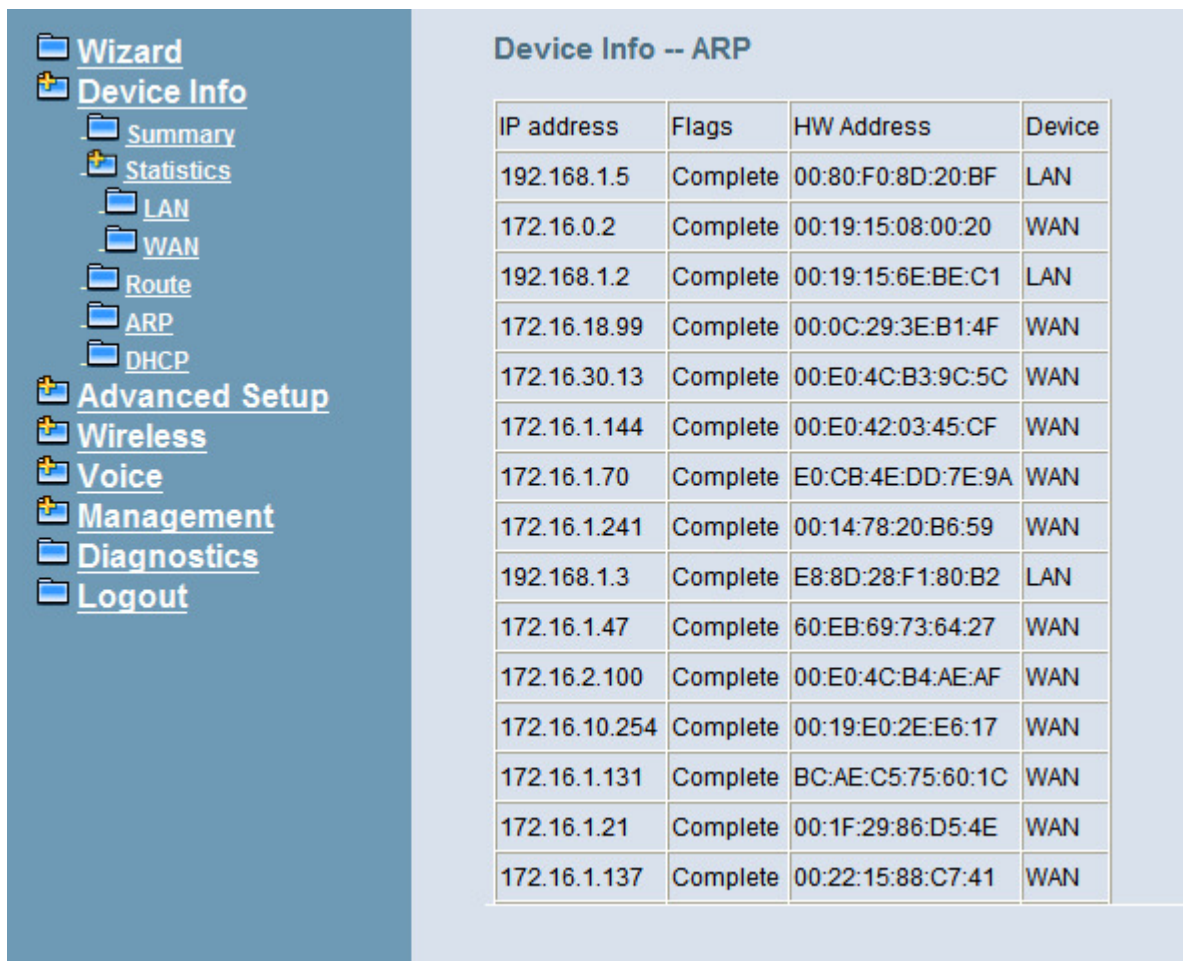


Figure 6-6. Device Info – ARP

### 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)



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 default enabled 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).

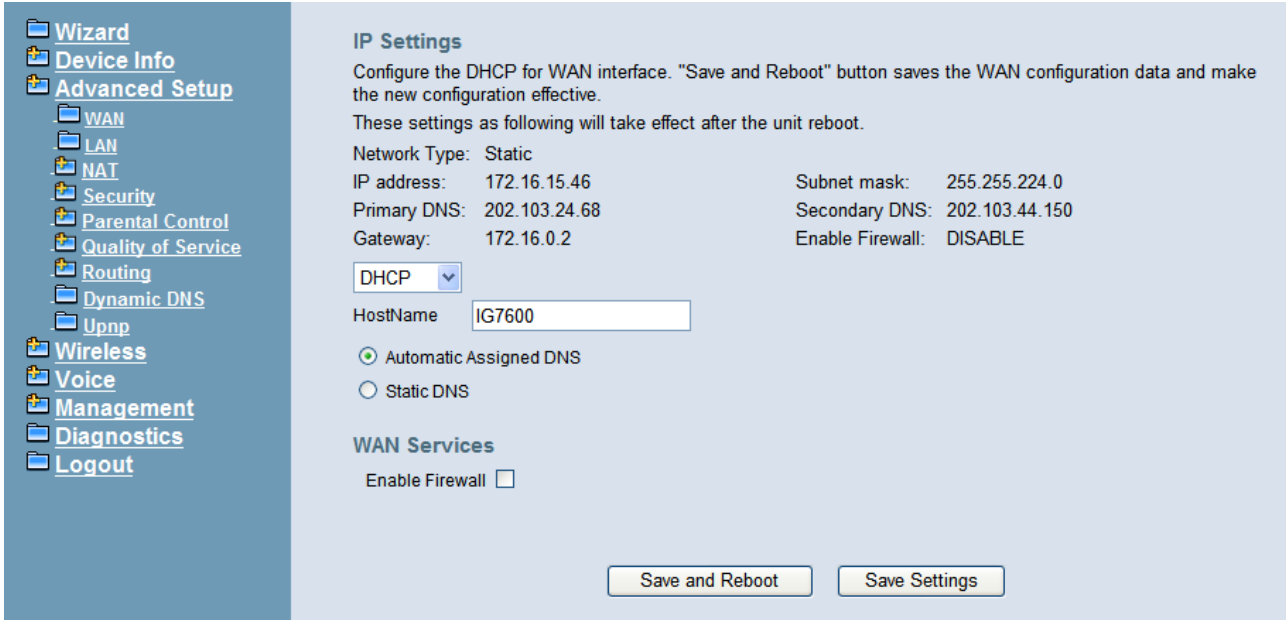


Figure 6-9. Advanced – WAN (DHCP Mode)

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).

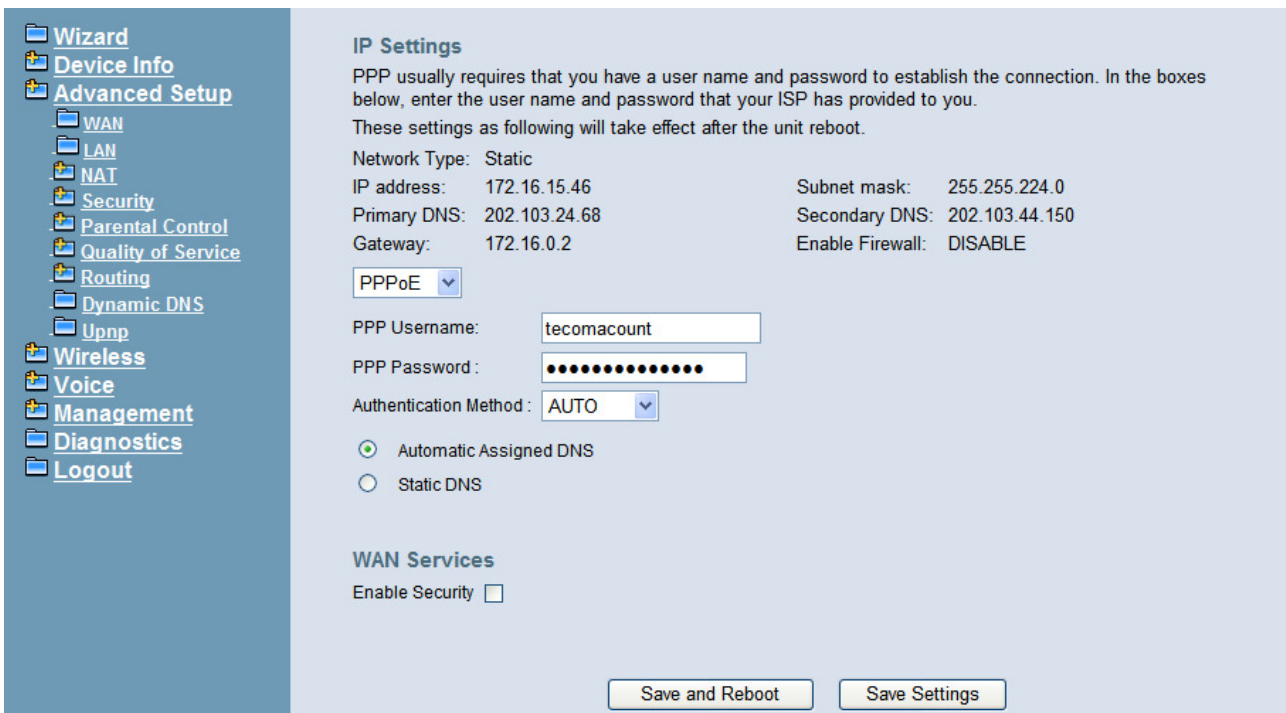


Figure 6-10. Advanced – WAN (PPPoE Mode)

### 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. 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).

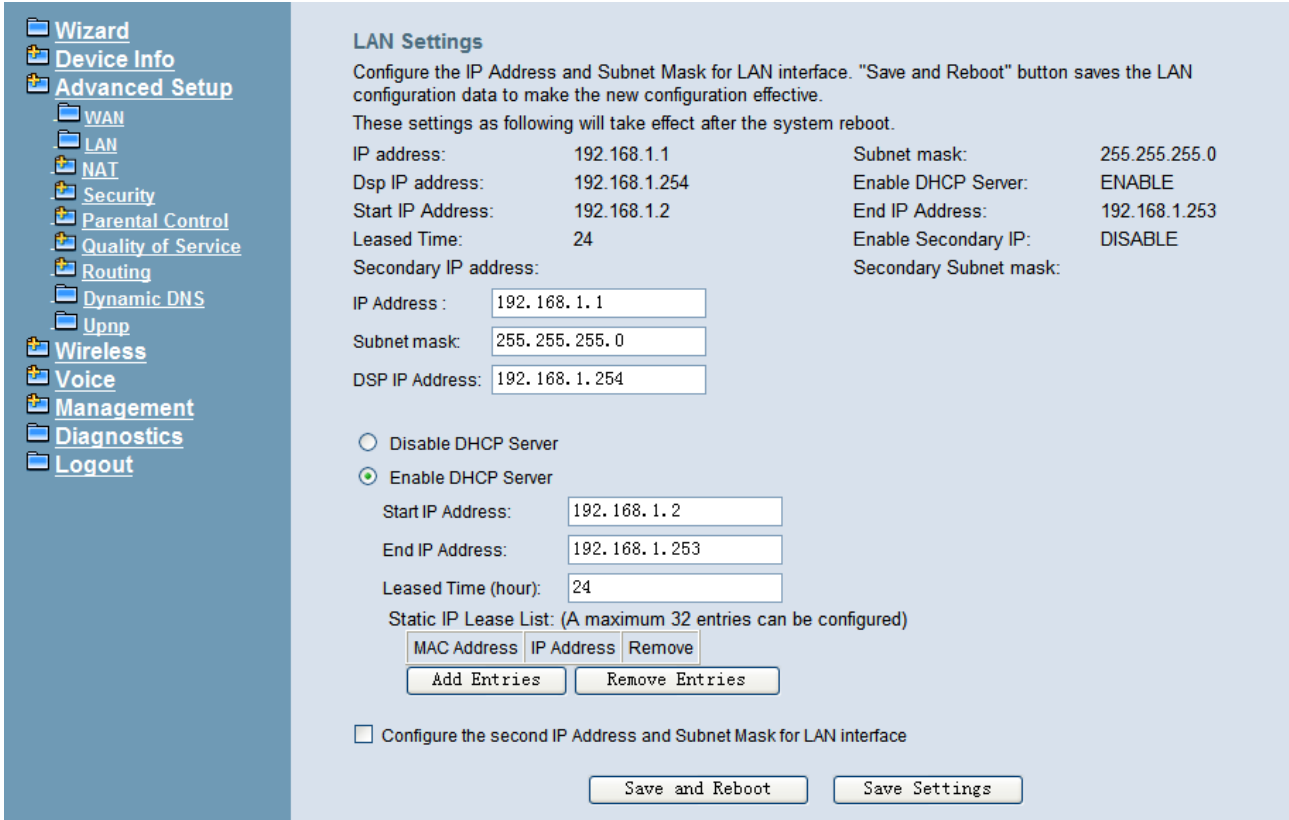


Figure 6-11. Advanced – LAN

### 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)

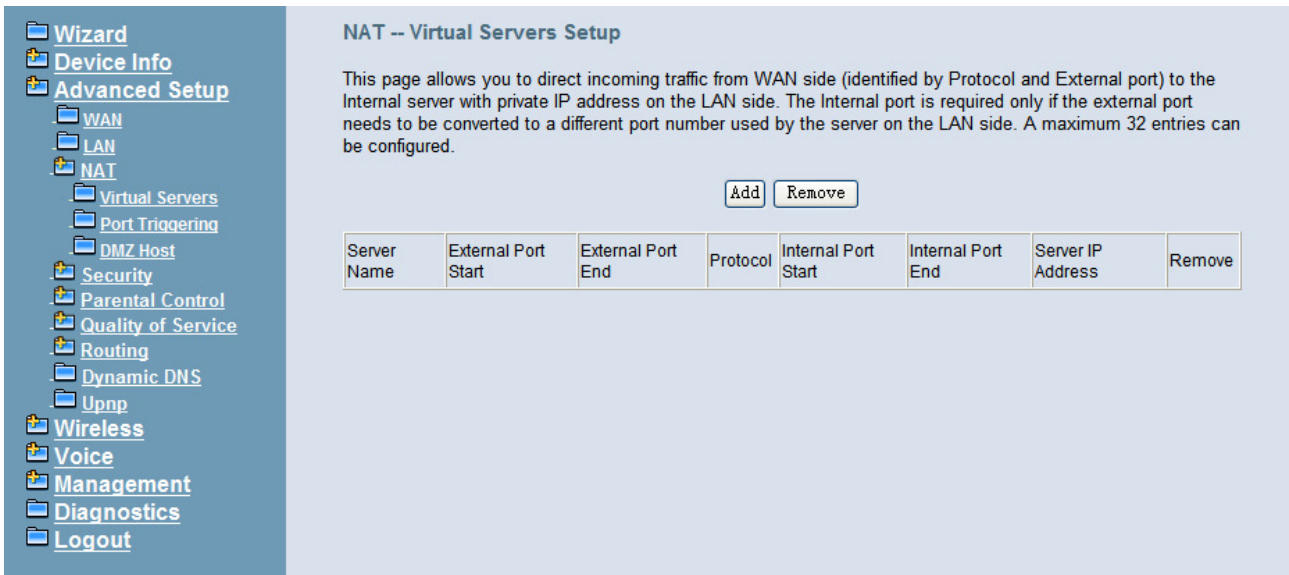


Figure 6-12. Advanced – NAT – Virtual Servers

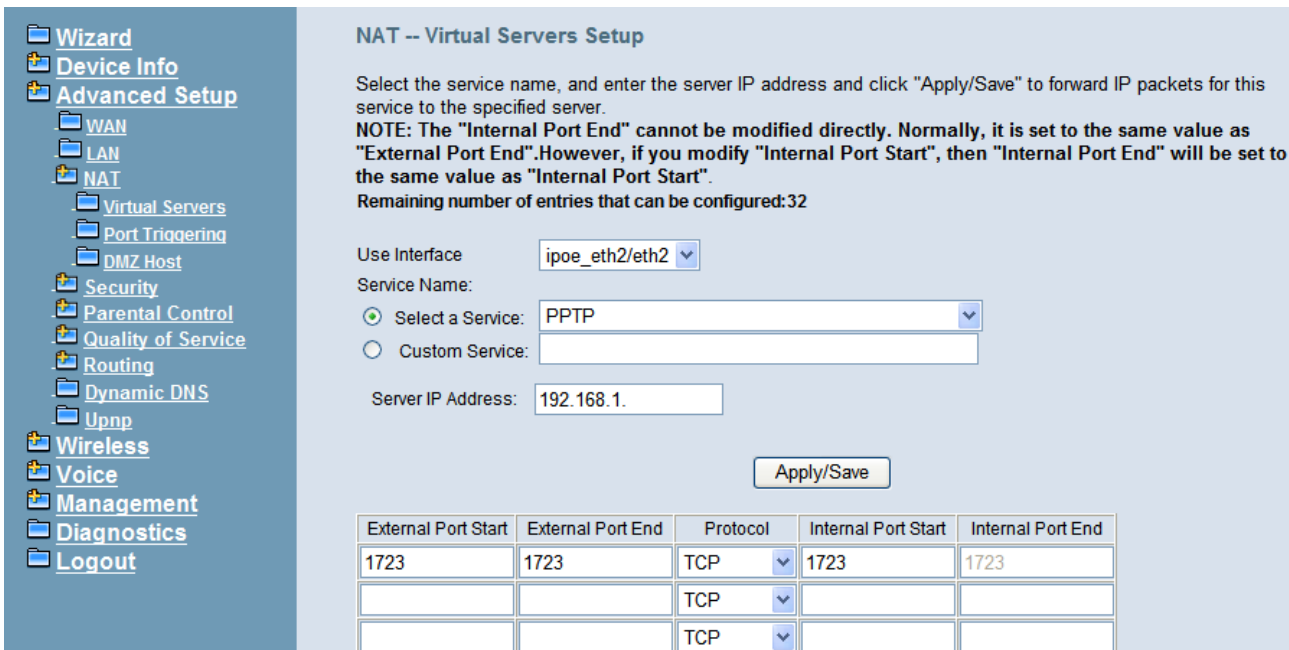
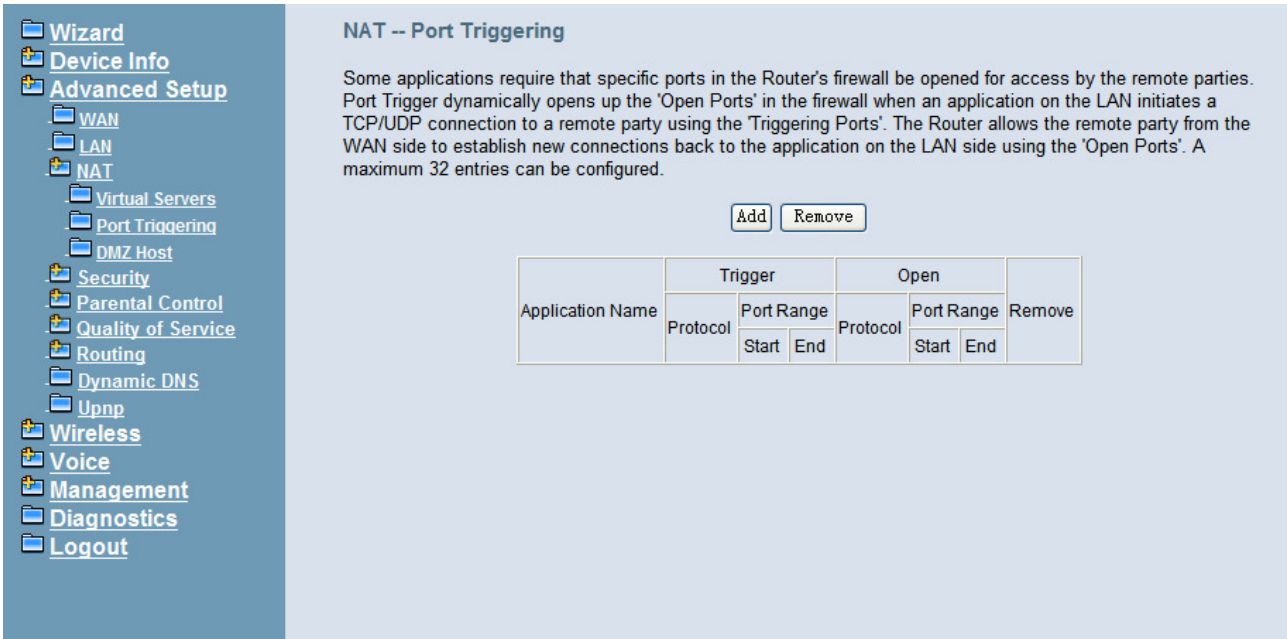


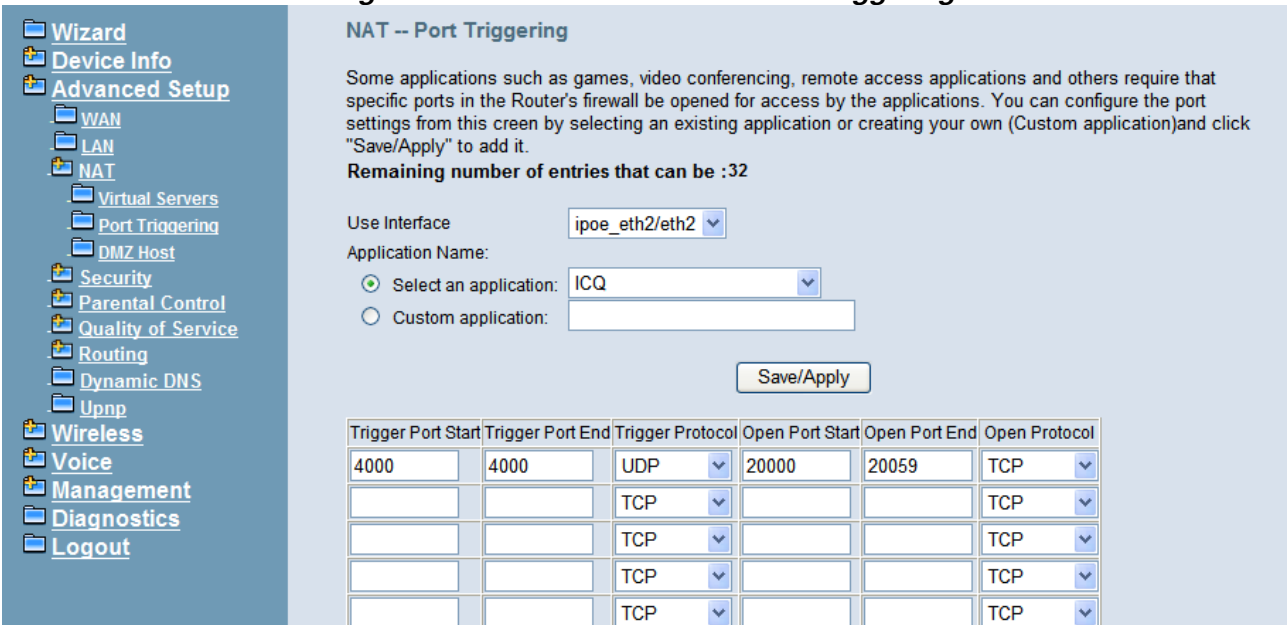
Figure 6-13. Advanced – NAT – Virtual Servers – Add

### 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)

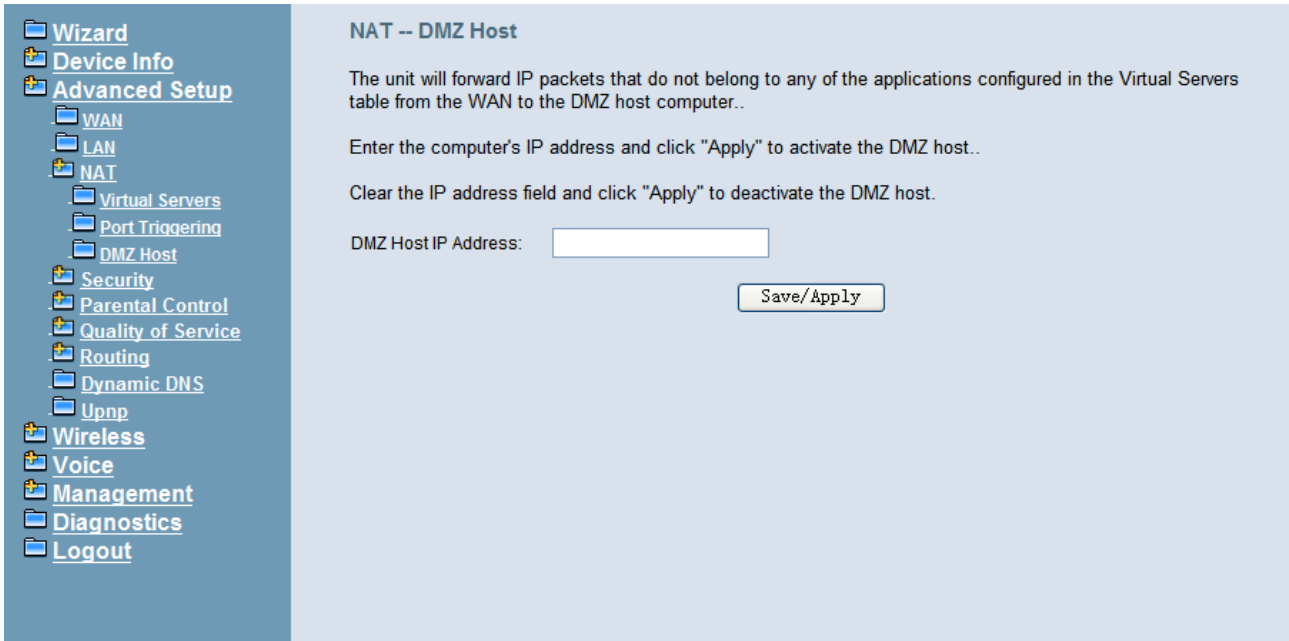


Figure 6-16. Advanced – NAT – DMZ

## 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)

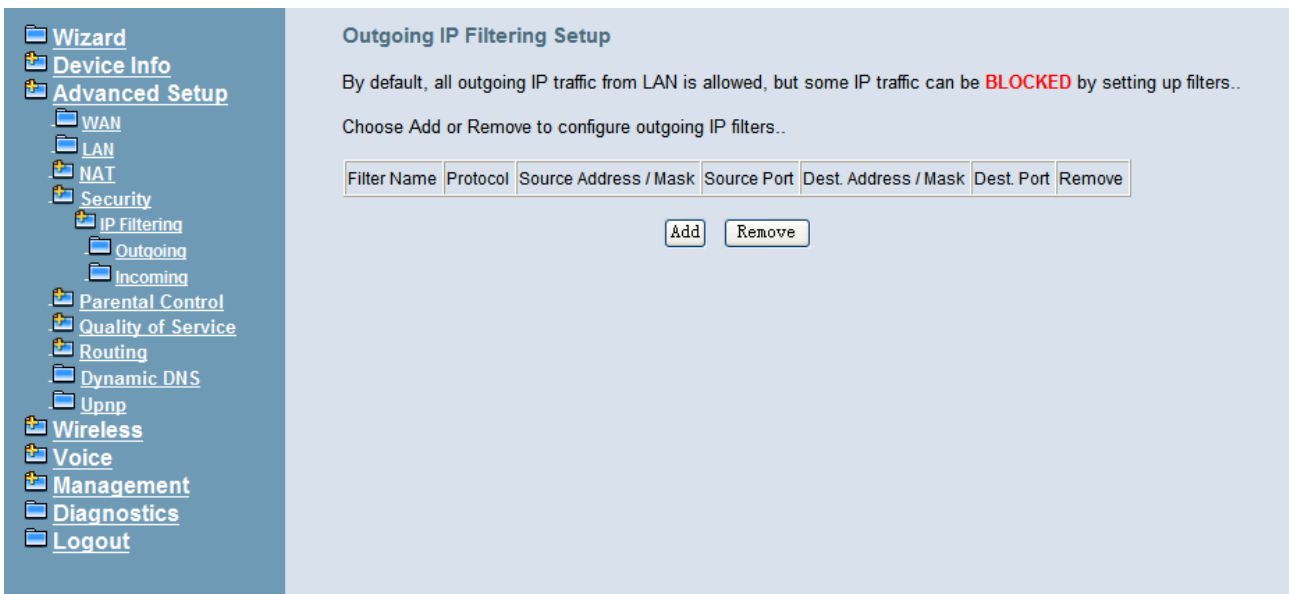


Figure 6-17. Advanced – Security – IP Filtering – Outgoing

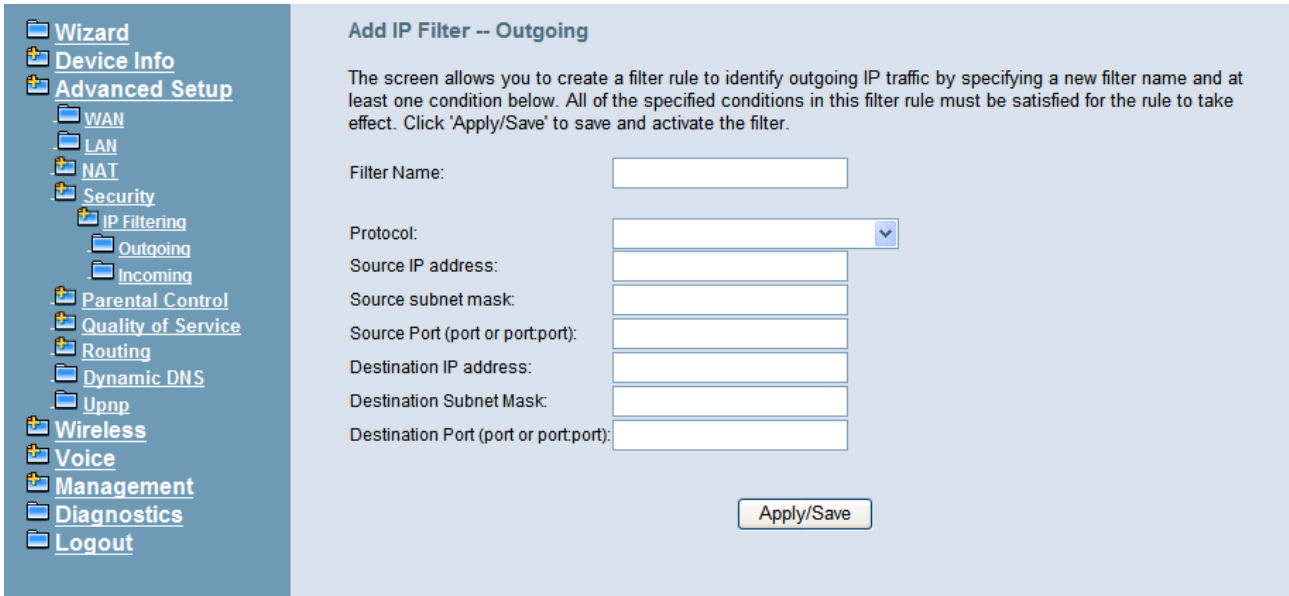


Figure 6-18. Advanced – Security – IP Filtering – Outgoing – Add

### 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.

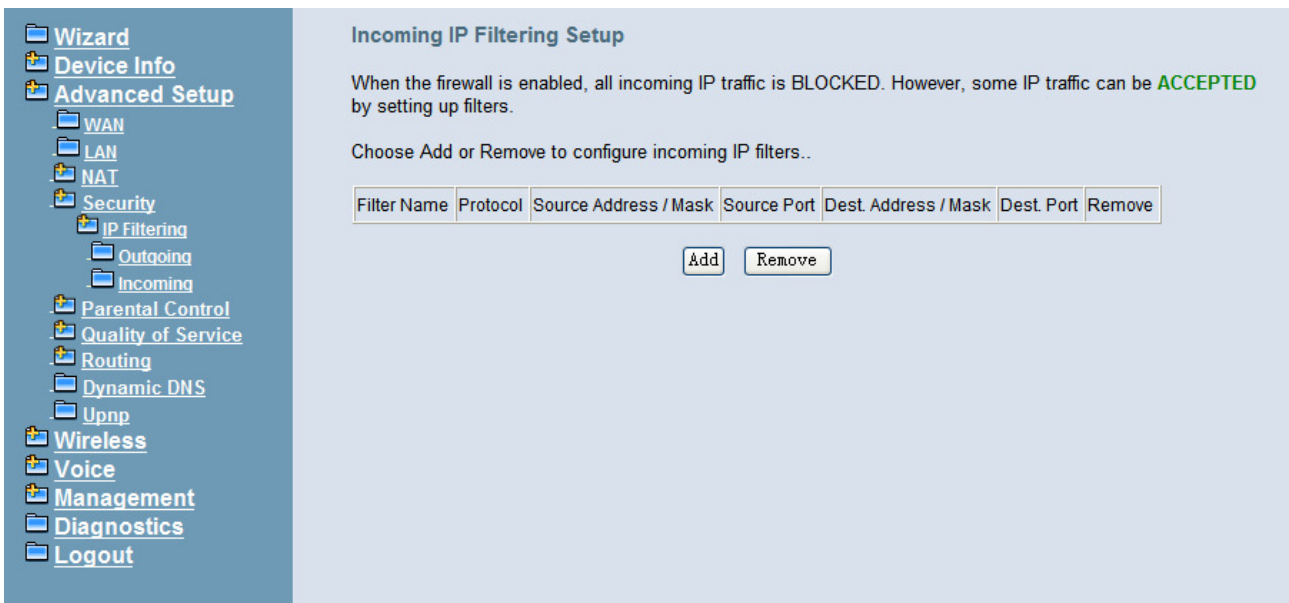


Figure 6-19. Advanced – Security – IP Filtering – Incoming

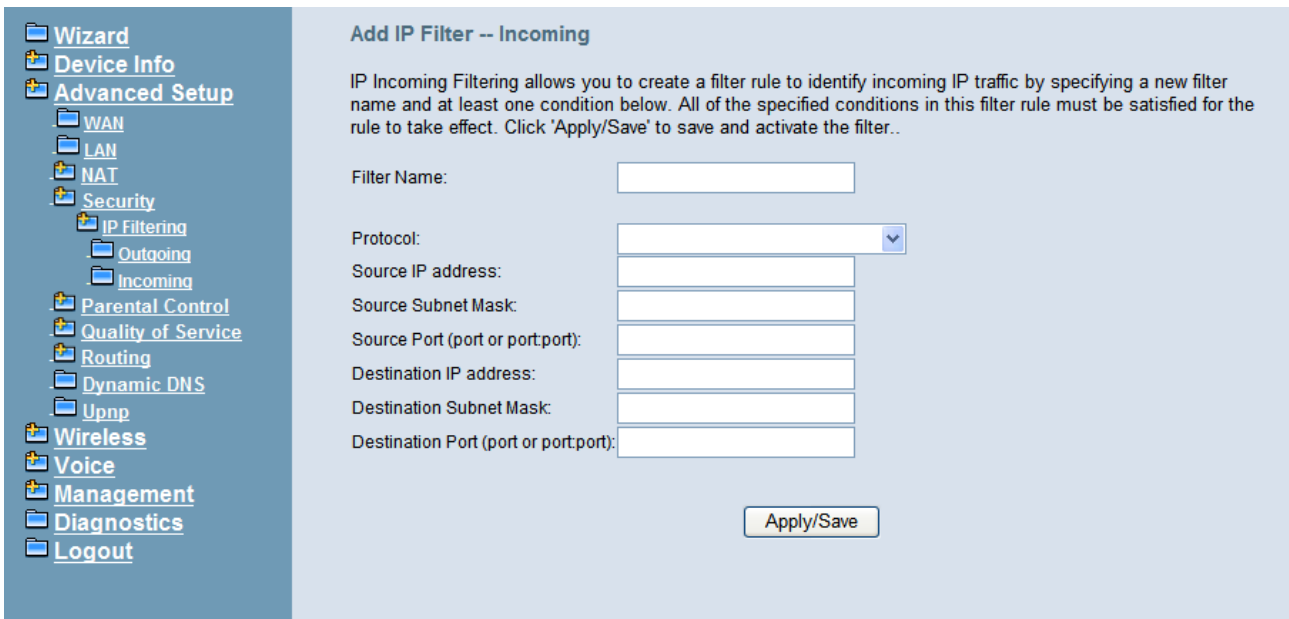


Figure 6-20. Advanced – Security – IP Filtering – Incoming – Add

### 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)

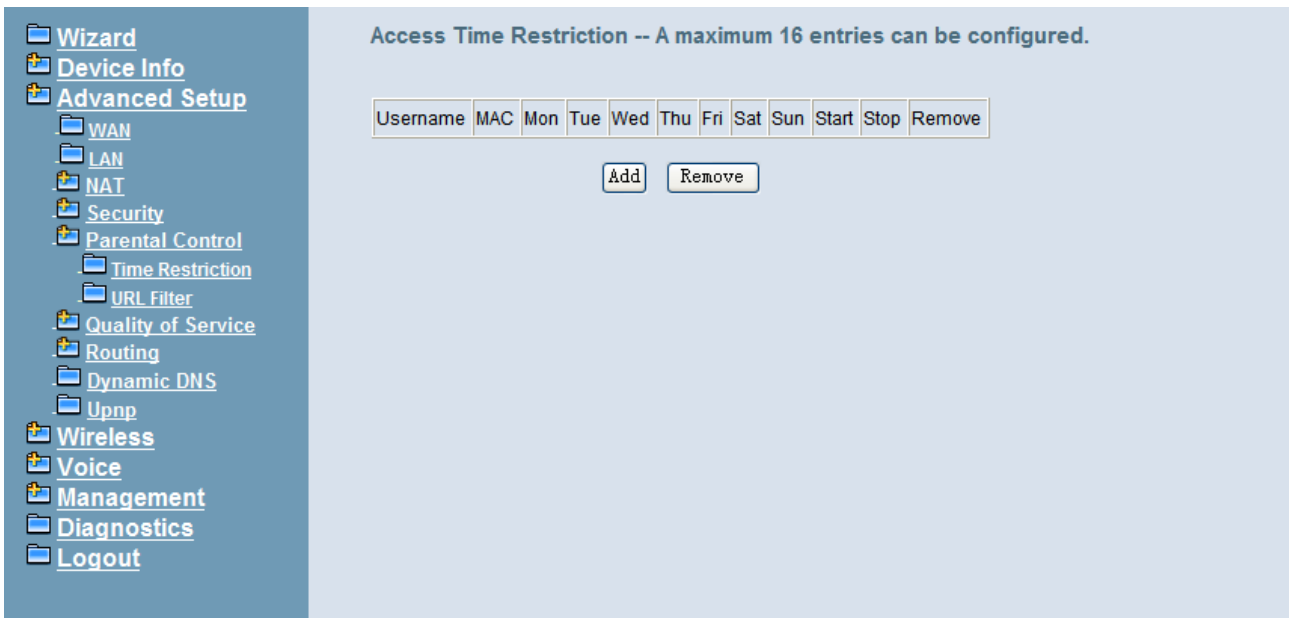


Figure 6-21. Advanced – Parental Control – Time Restriction



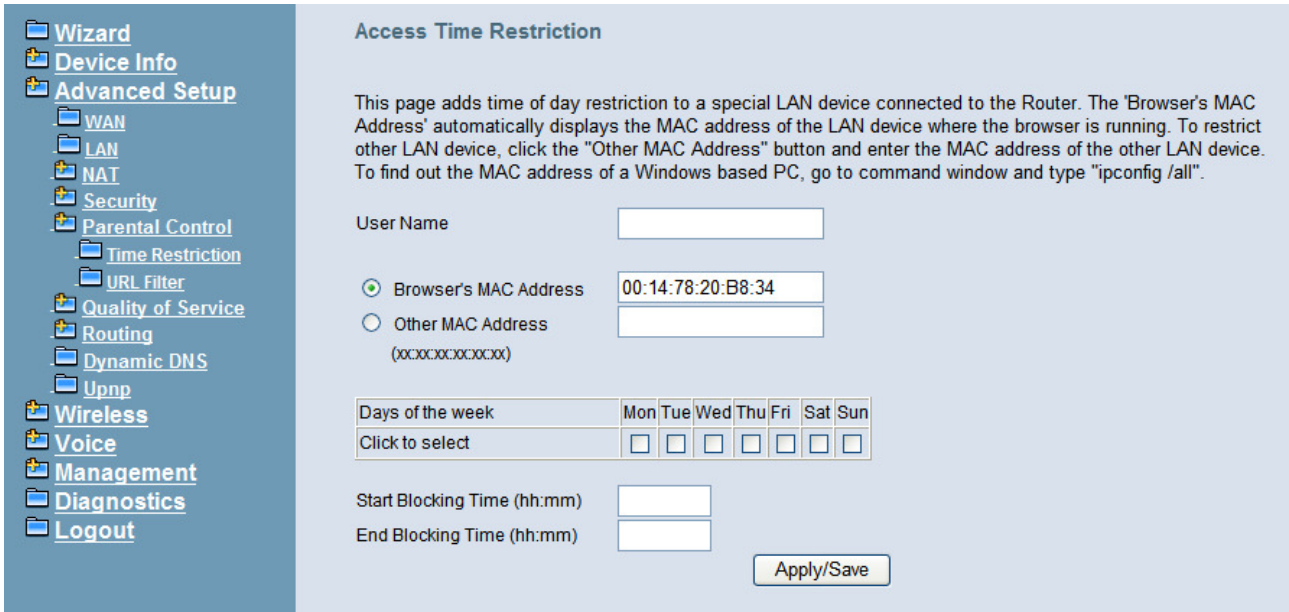


Figure 6-22. Advanced – Parental Control – Time Restriction – Add

### 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 can not 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).

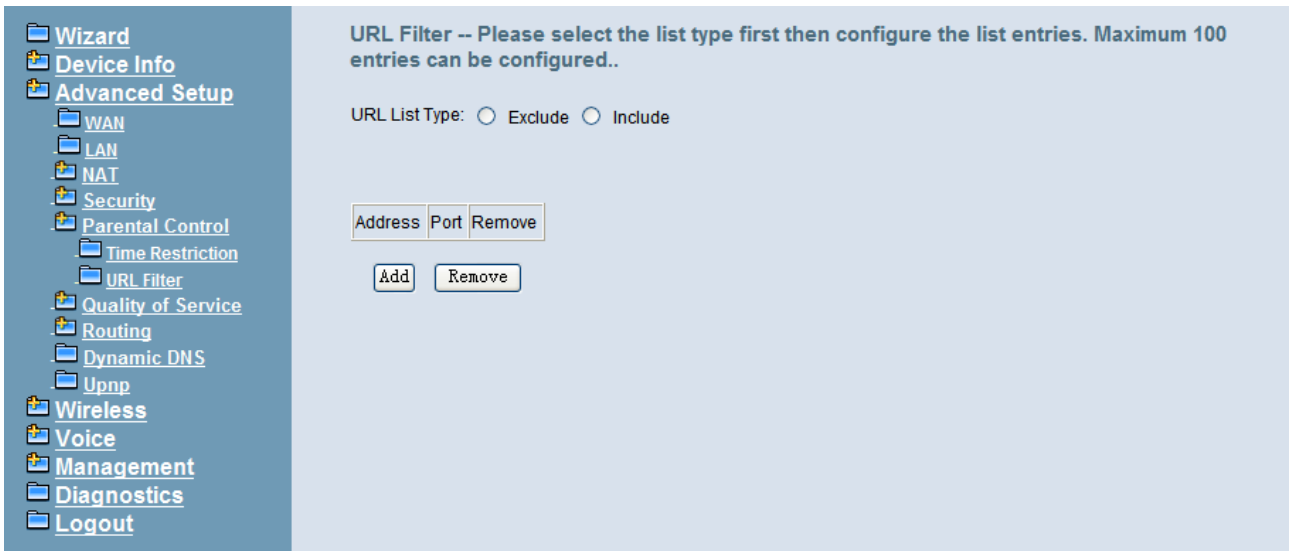


Figure 6-23. Advanced – Parental Control – URL Filter

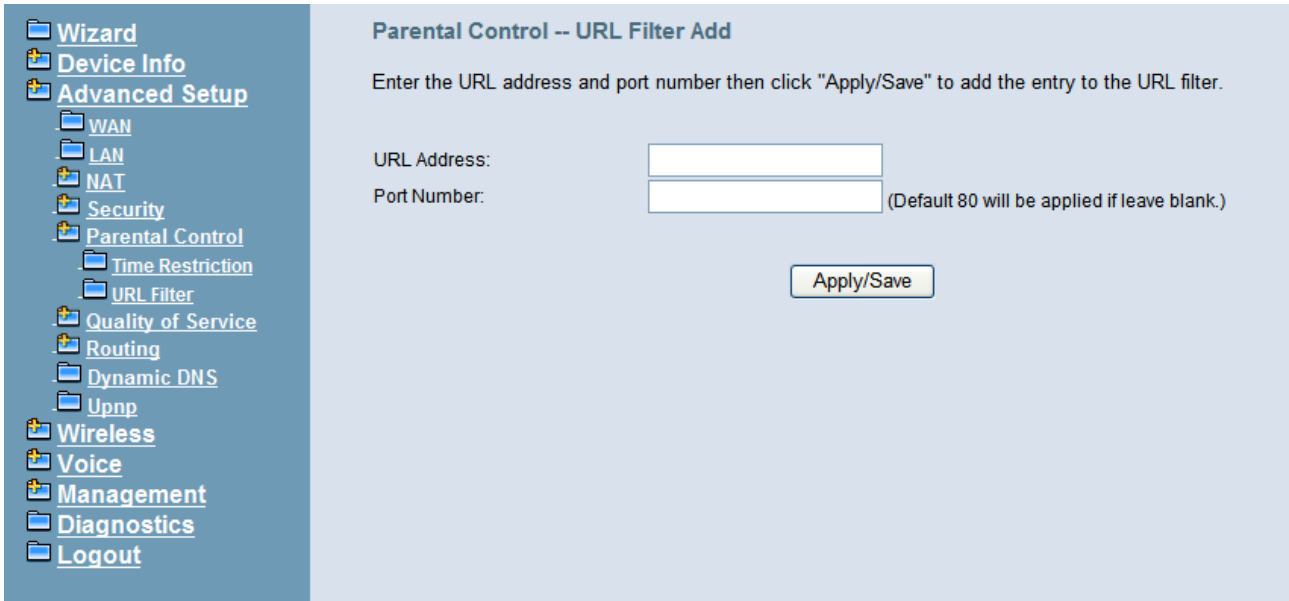


Figure 6-24. Advanced – Parental Control – URL Filter – Add

### 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.

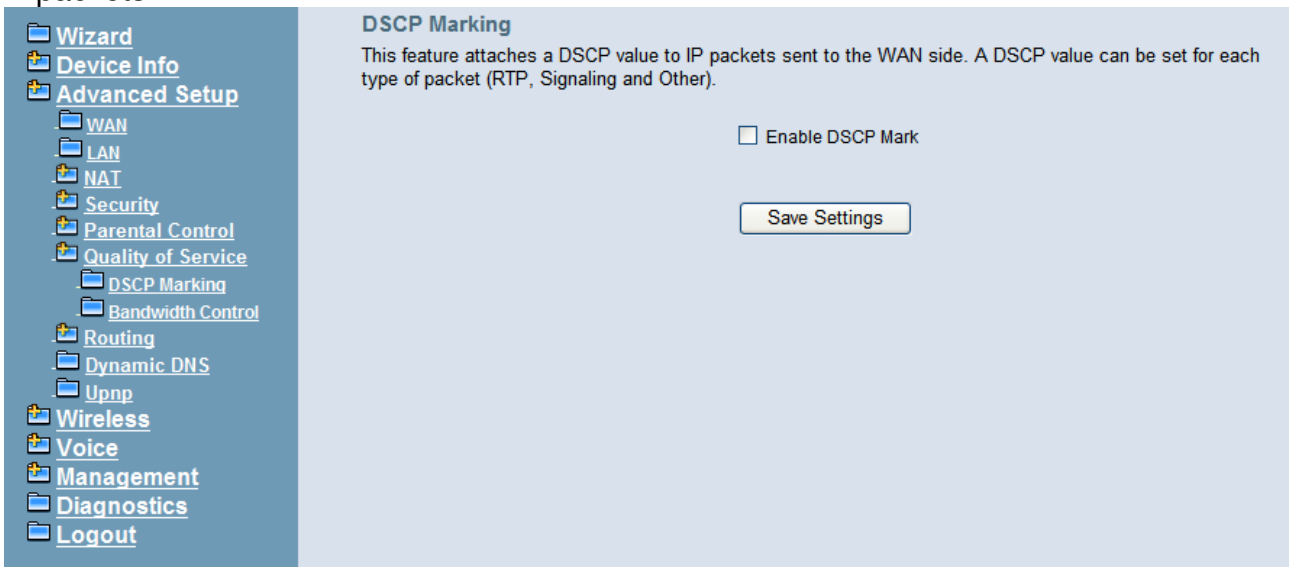


Figure 6-25. Advanced – Quality of Service – DSCP Marking

### 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.

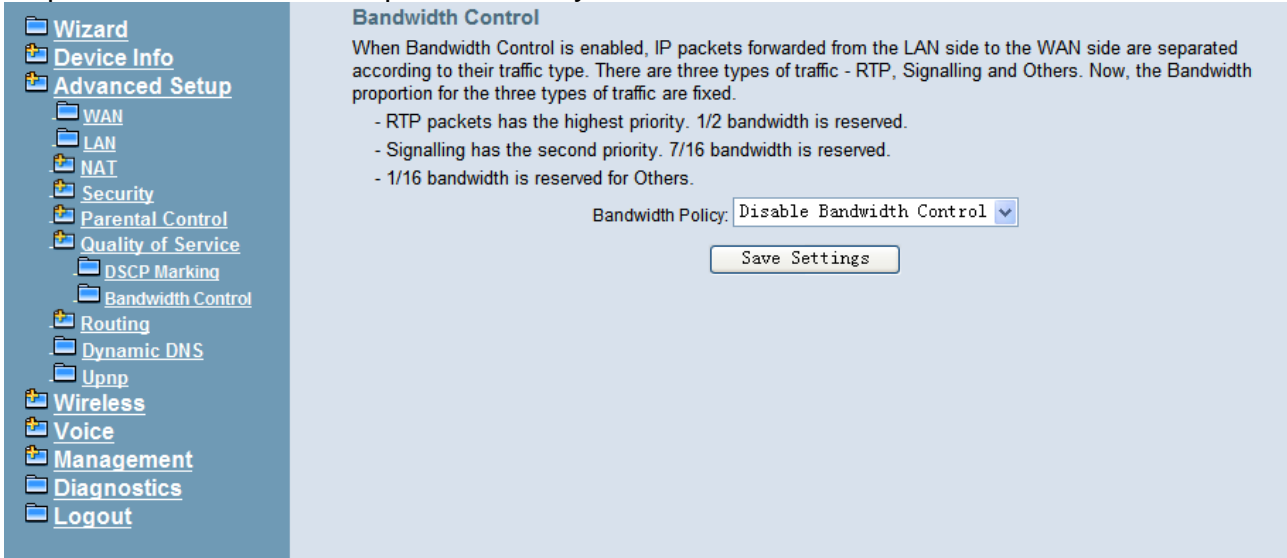


Figure 6-26. Advanced – Quality of Service – Bandwidth Control

### 6.4.7 Routing

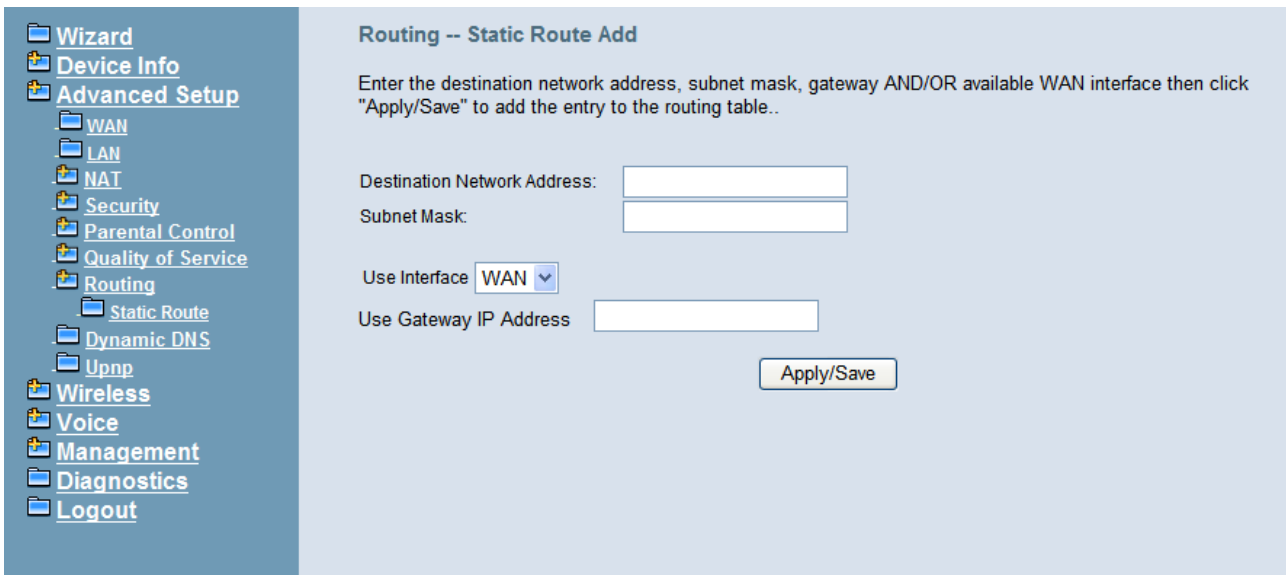
#### 6.4.7.1 Static Route

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



Figure 6-27. Advanced – Route – Static Route

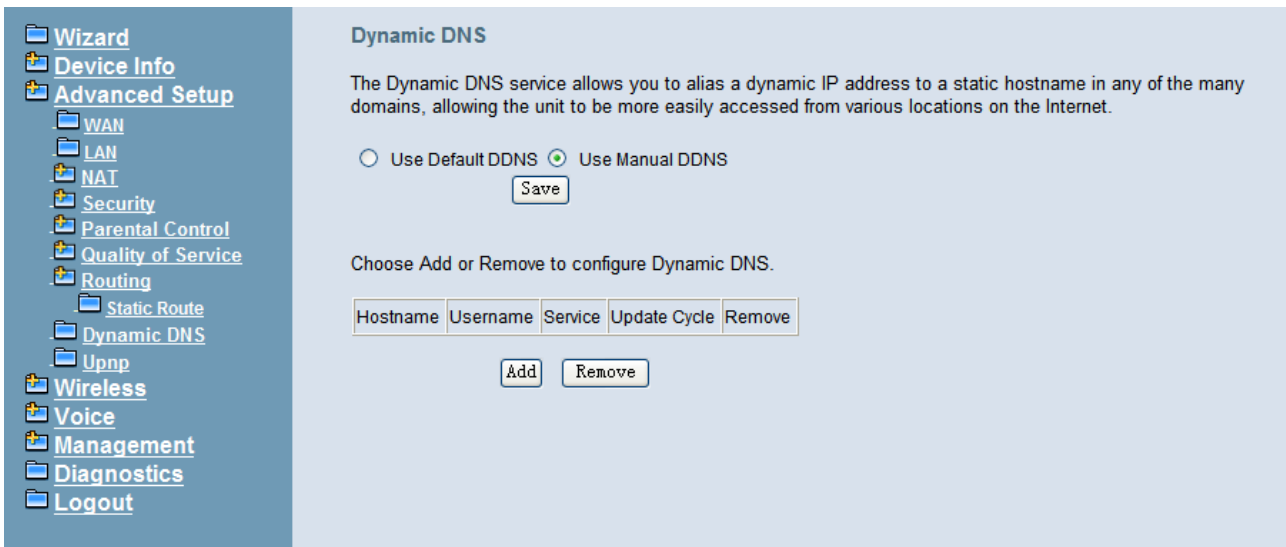
Click “Add” to create a new Static Route. Enter the destination network address, subnet mask, gateway AND/OR available WAN interface then click "Save Settings" to add the entry to the routing table. (Figure 6-27, Figure 6-28)



**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)

**Add Dynamic DNS**

This page allows you to add a Dynamic DNS address from DynDNS.org or TZO.

D-DNS Provider:

Hostname:

Interface:

**DynDNS Settings**

Username:

Password:

Update Cycle:

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

**Add Dynamic DNS**

This page allows you to add a Dynamic DNS address from DynDNS.org or TZO.

D-DNS Provider:

Hostname:

Interface:

**TZO Settings**

Email:

Key:

Update Cycle:

Figure 6-31. Advanced – Dynamic DNS – TZO

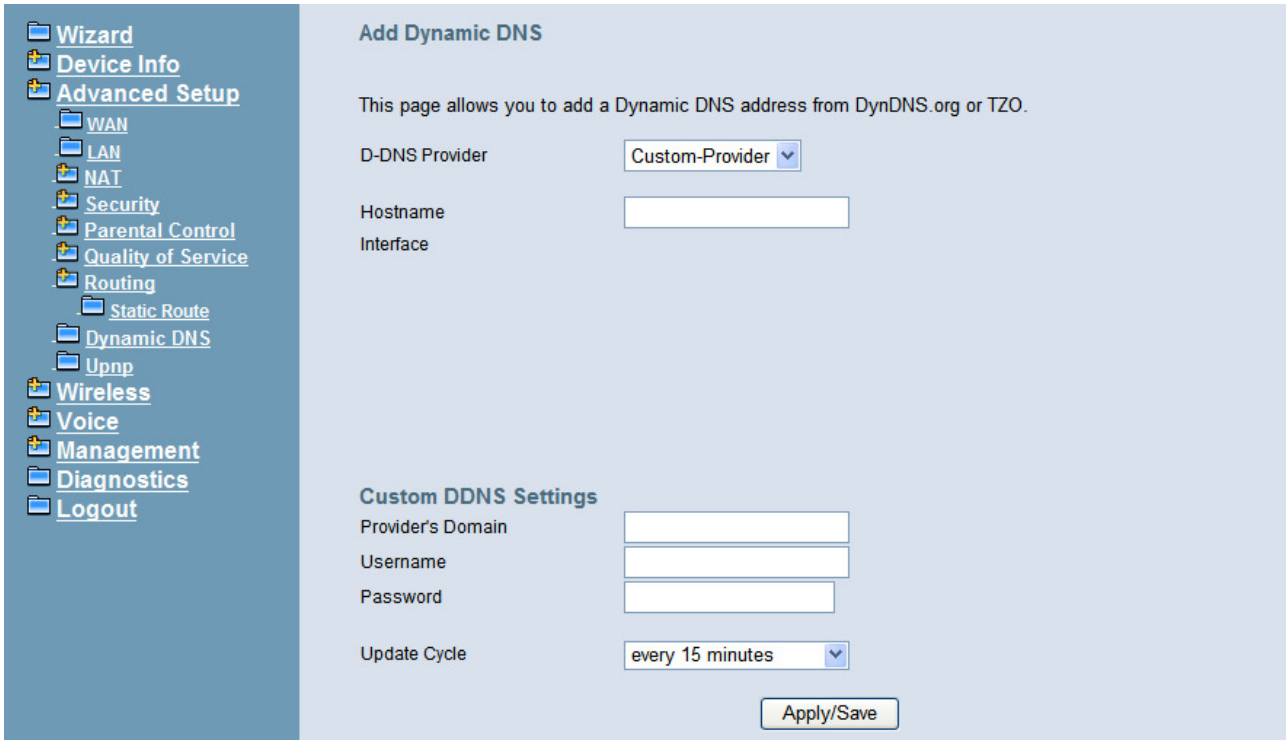


Figure 6-32. Advanced – Dynamic DNS – Customer-Provider

#### 6.4.9 Upnp

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

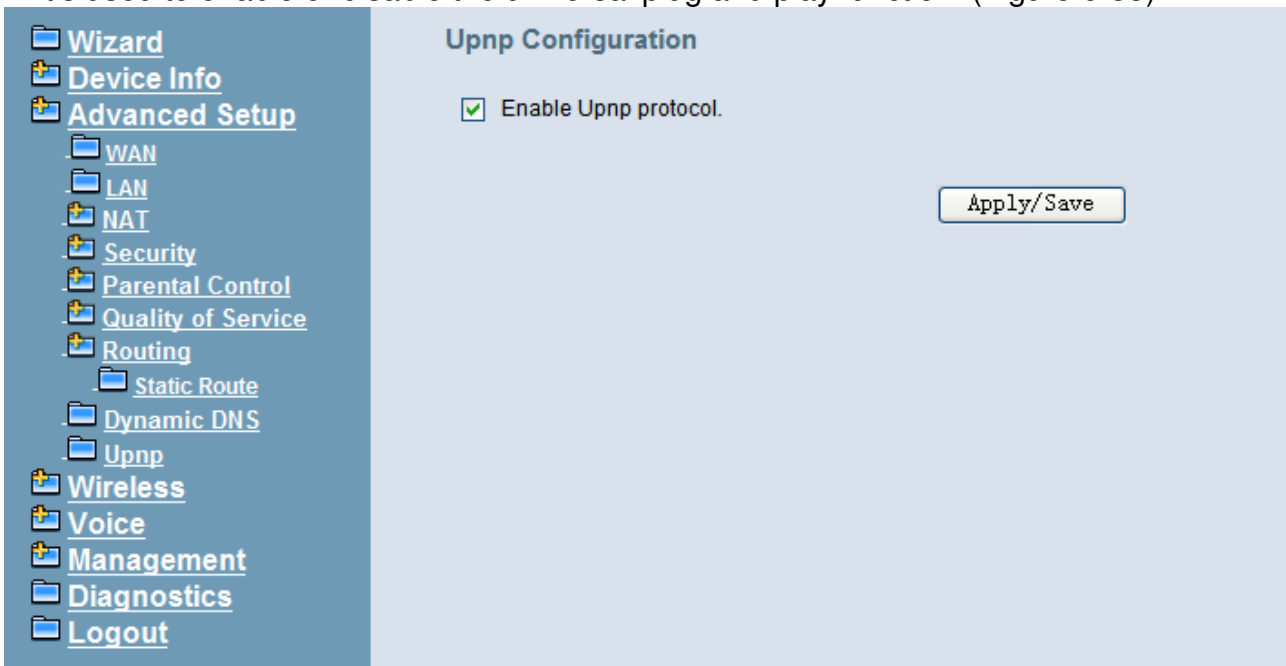


Figure 6-33. Advanced – Upnp

### 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.

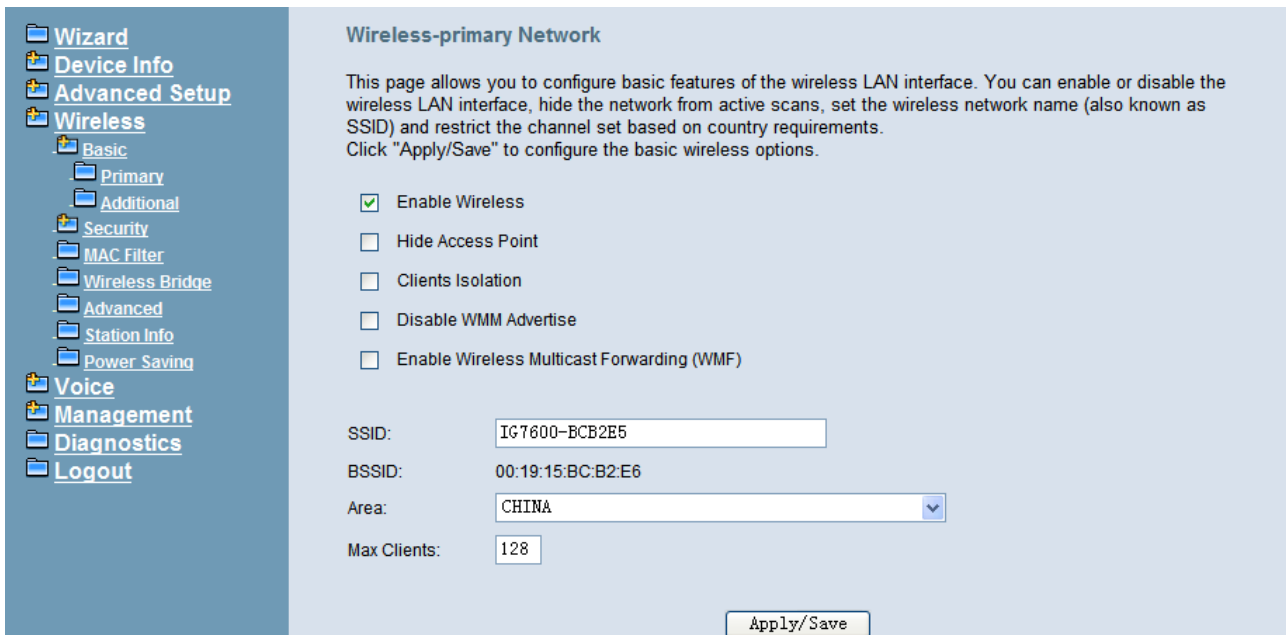
### 6.5.1 Basic

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)

**Wireless--Additional Networks**

This page allows you to configure additional Wireless Networks.

Enabled	SSID	Hidden	Isolate Clients	Disable WMM Advertise	Enable WMM	Max Clients	BSSID
<input type="checkbox"/>	w10_Guest1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	128	N/A
<input type="checkbox"/>	w10_Guest2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	128	N/A
<input type="checkbox"/>	w10_Guest3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	128	N/A

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.

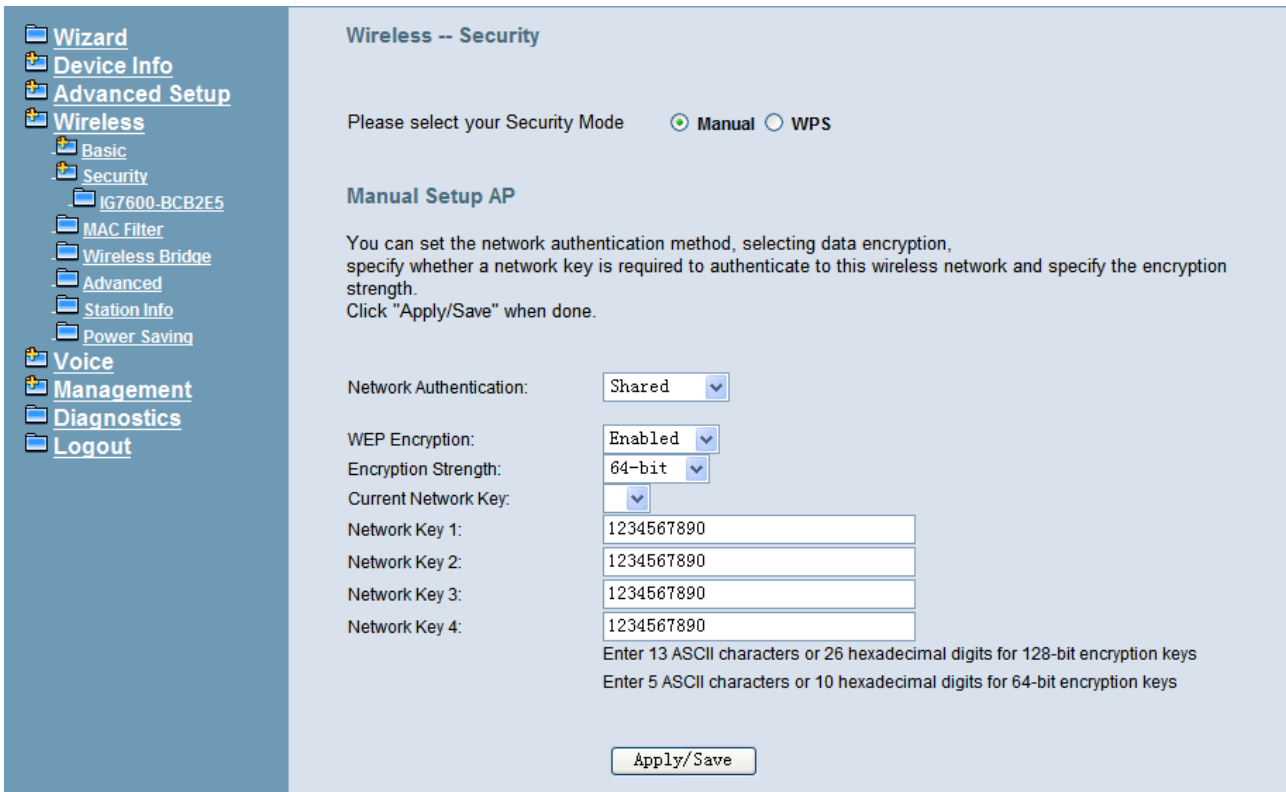


Figure 6-37. Wireless – Security – 1



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

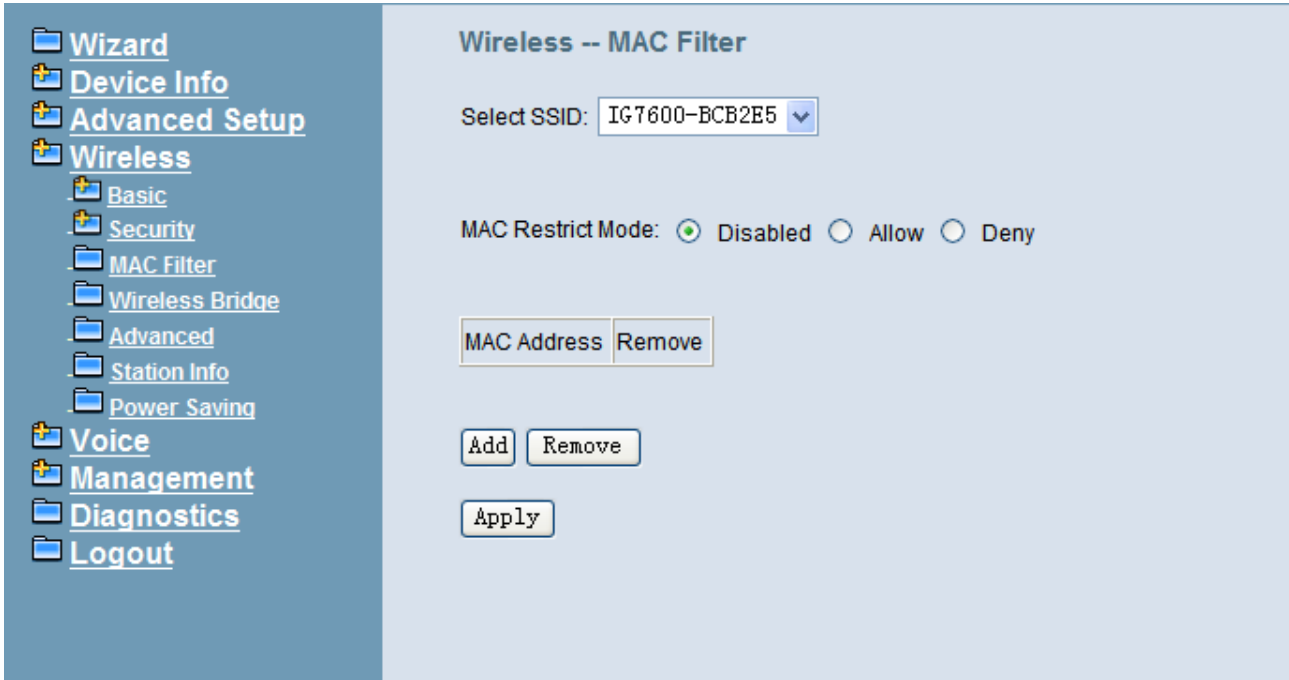


Figure 6-39. Wireless – MAC Filter

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)

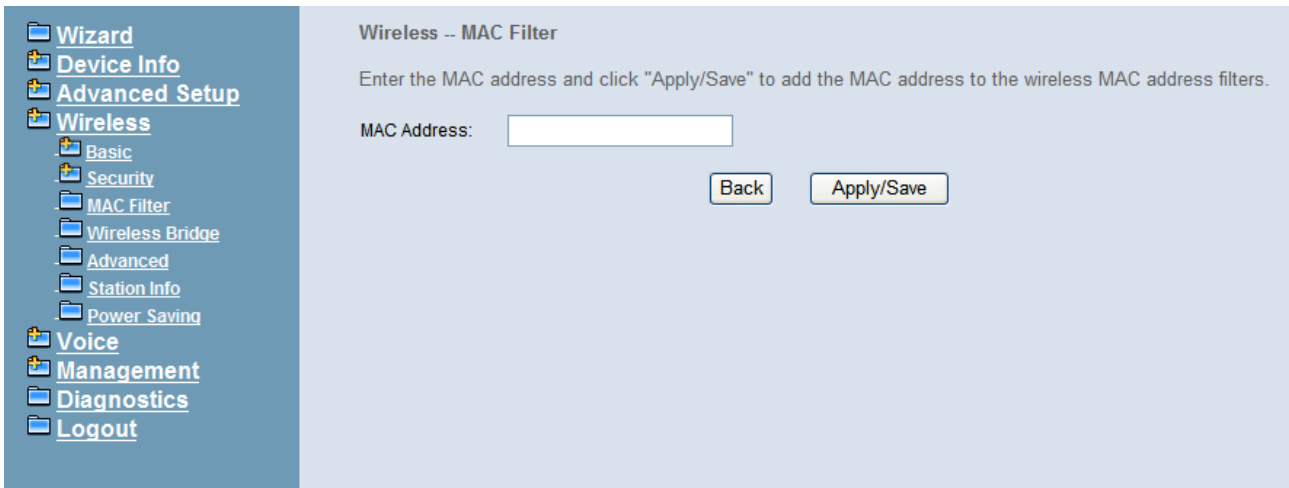


Figure 6-40. Wireless – MAC Filter – Allow/Deny

### 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)

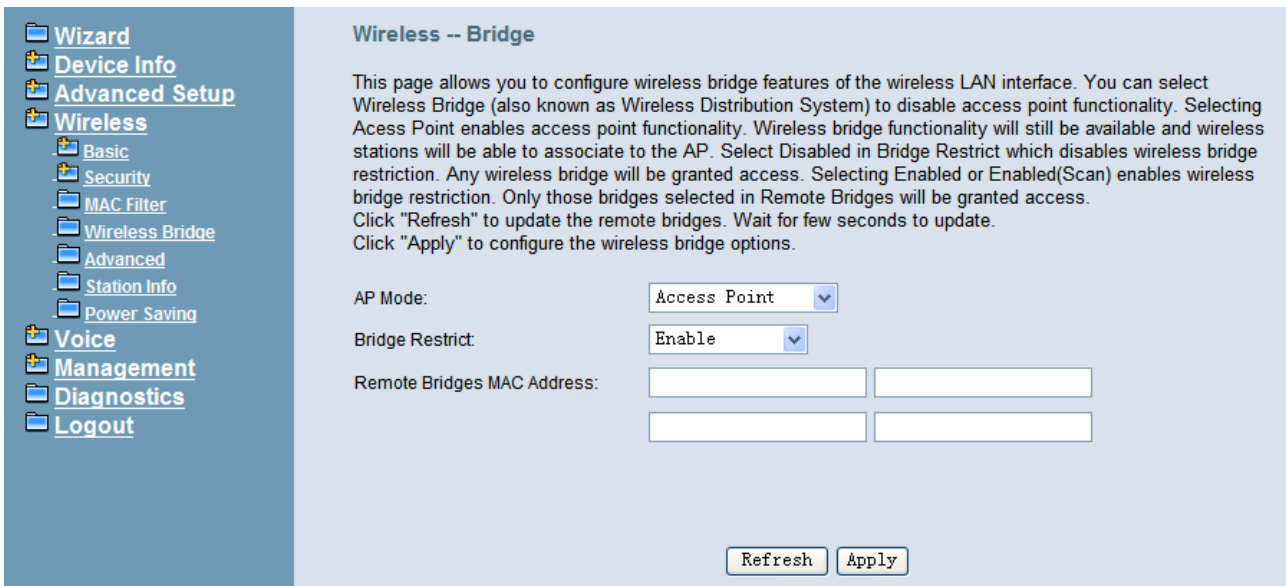


Figure 6-41. Wireless – Wireless Bridge

### 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.

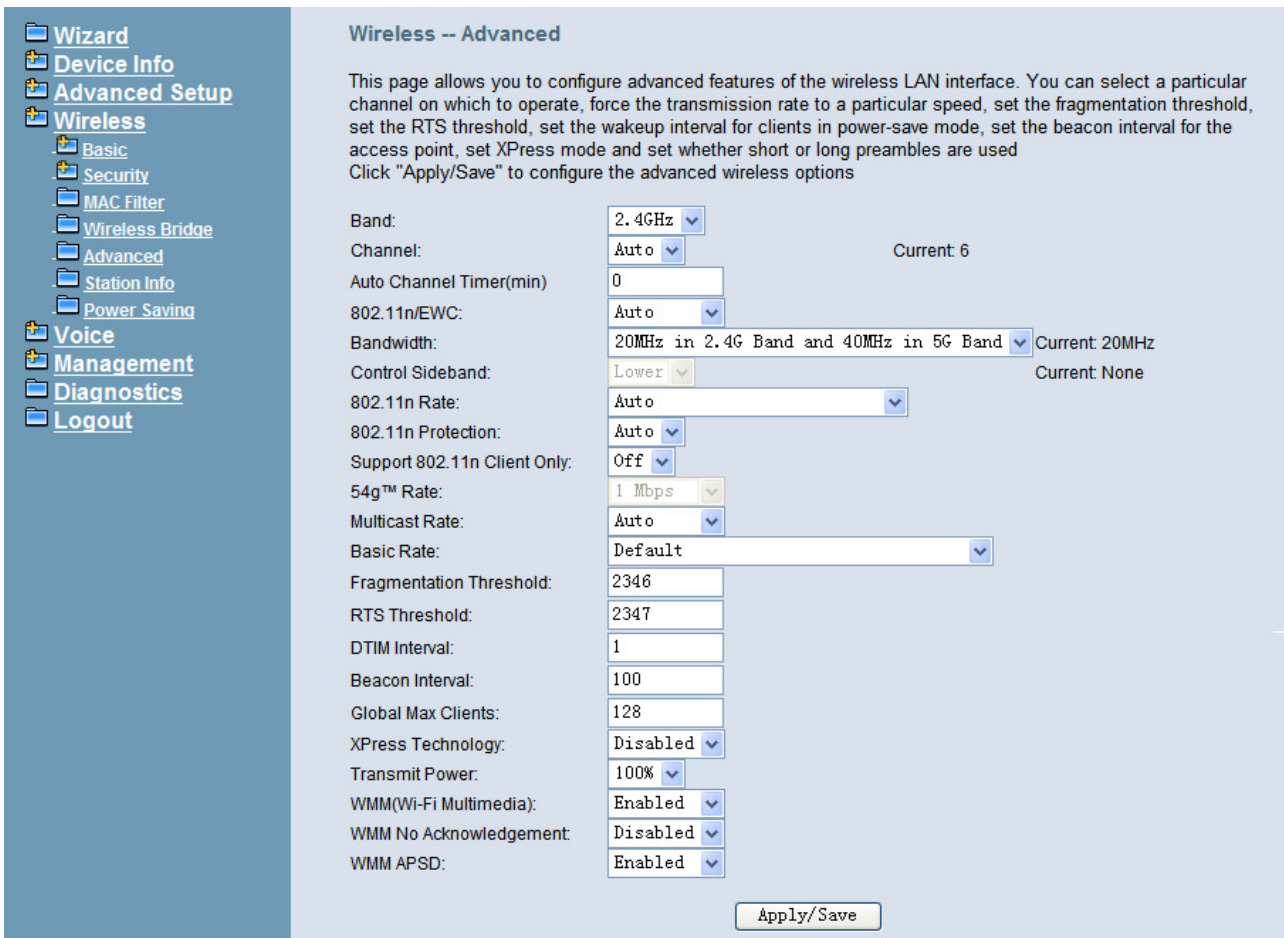
**Support 802.11n Client Only:** “On” enables support for 802.11n clients only. Off will enable support for clients that are not 802.11n.

**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.



**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 framebursting 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)

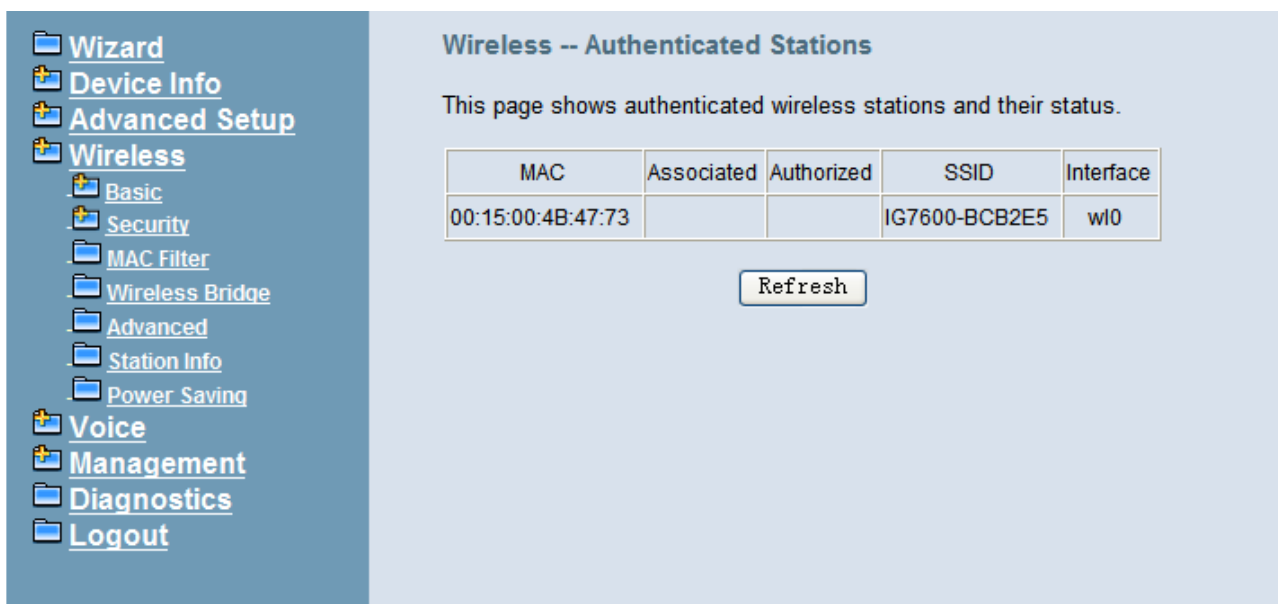


Figure 6-43. Wireless – Station Info

### 6.5.7 Power Saving

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

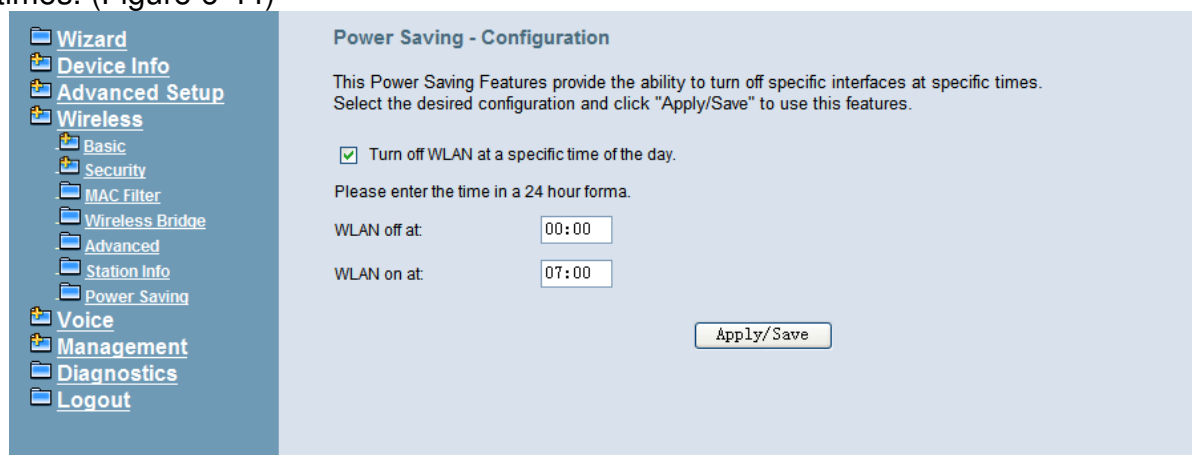


Figure 6-44. Wireless – Power Saving

## 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
  - MVPN Extension
  - Programmable Linekey
- 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 linekey 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	Mac Binding	Day COS	Night COS	PickUp Group
1	201	••••••••	123555	04:18:0f:07:77:75	0	0	1
2	202	••••••••	123	98:4b:4a:3d:09:8d	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

FXS Phone  Display Name  Day COS  Night COS  PickUp Group

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

**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 16 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.

**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 can not 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 MVPN Extension**

For a trunk incoming call, if the caller is an "MVPN Extension", it will be matched with Trunk DID table, or else the call will be routed to Answering Position directly.

Normally this feature is combined-used with Trunk DID and AA Mode.

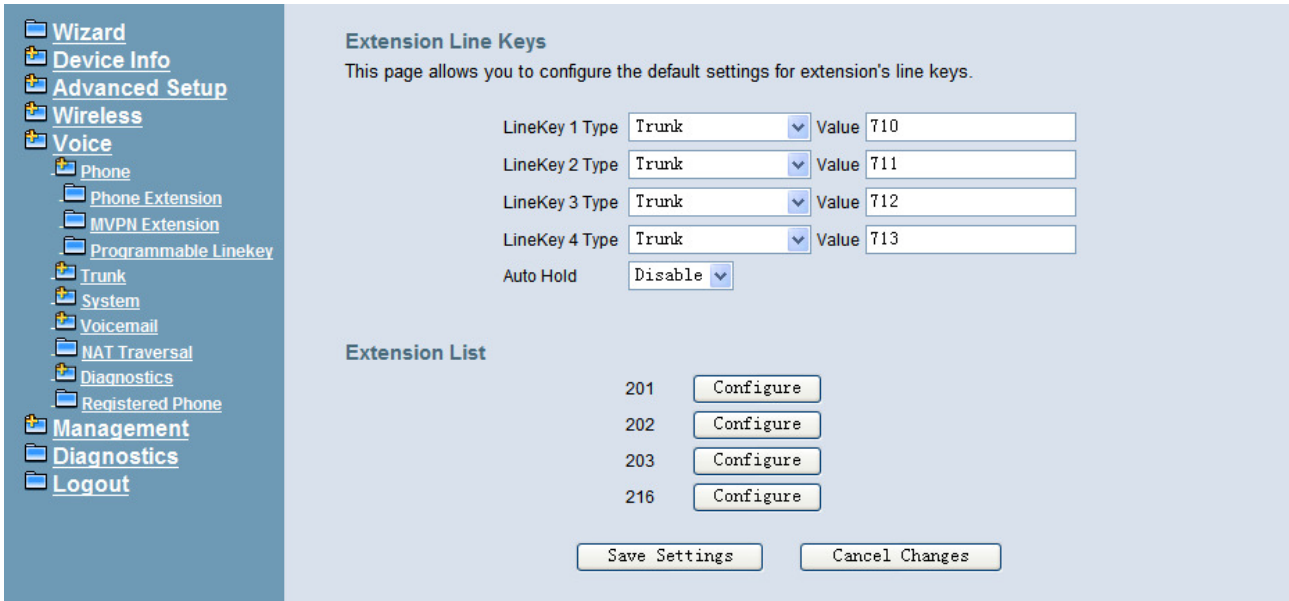
For example, you can set an outside device's number to MVPN Extension table, then set a Trunk DID entry's destination as Trunk Mode AA, then when this device calls into this DID number, it will hear Dial Tone, if it dials an extension number or outside number then, the call can be made out.

#### **6.6.1.3 Programmable Linekey**

This page allows you to configure the default settings for IP phone's linekeys. 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 linekey. (Figure 6-47)

It has 28 Line Keys to be configured. The Line Keys 5-28 can be applied to IP2061's EDM.

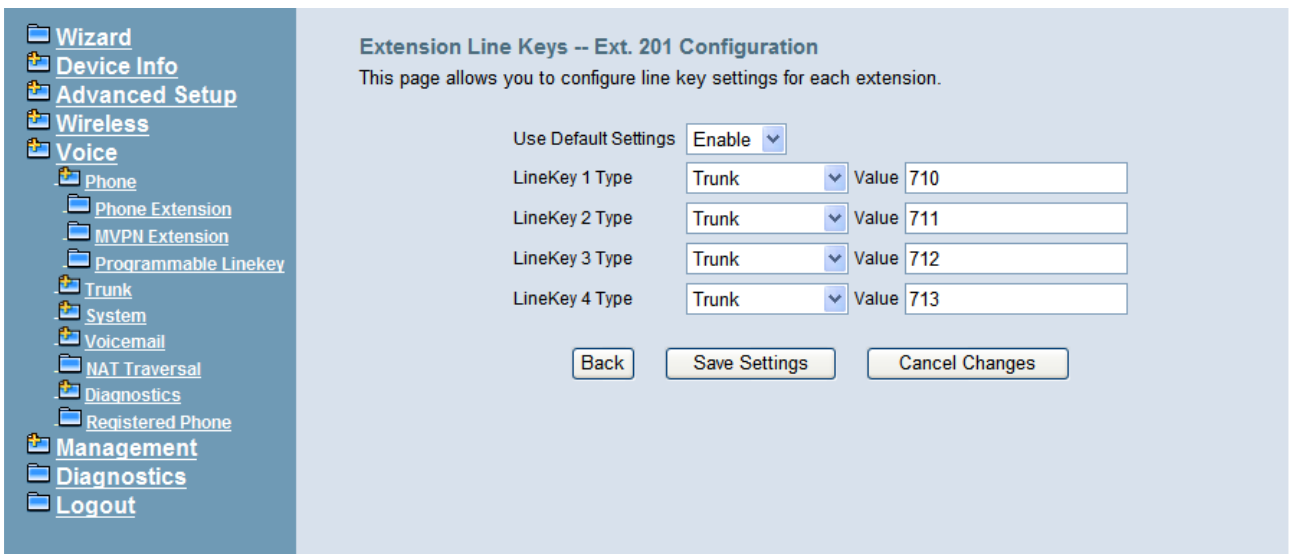
**Auto Hold:** When you are using a line and press the other linekey, IG7600 can hold the original line. Select "Enable" to open this function.



**Figure 6-47. Voice – Phone – Extension Linekey**

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

**Use Default Settings:** Use default IG7600 linekey setting for the IP phone.



**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 6 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 4 lines of IP Trunk are supported. (Figure 6-49, Figure 6-50)

**Subscriber Information**

This page allows you to configure the proxy and registration of IP Trunk, up to 8 lines of IP Trunk are supported.

IP Trunk 1			
Phone Number	<input type="text"/>		
Auth ID	<input type="text"/>	Auth Password	<input type="text"/>
SIP Proxy	<input type="text"/>	Port	5060
Outbound Proxy	<input type="text"/>	Port	5060
Register Server	<input type="text"/>	Port	5060
Outbound Registrar	<input type="text"/>	Port	5060
Register Expires	180	Outgoing Caller ID	<input type="text"/>
Registration	No	Support E.164	No
Support DID	8	Server Type	Normal

IP Trunk 2			
Phone Number	<input type="text"/>		
Auth ID	<input type="text"/>	Auth Password	<input type="text"/>
SIP Proxy	<input type="text"/>	Port	5060

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

**Local Port**

Local SIP Port for IP Trunk  (1024 - 65535)

Local RTP Port for IP Trunk

**End Dial**

Support End Dial on #

**Interdigit Timeout**

Interdigit Timeout  sec

**Pause Time**

Pause Time  sec

**Session Timeout**

Session Timeout  min (0, 90~3600)

**RPort**

Enable RPort

**Transmission Timer**

Transmission Timeout  sec

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 can not 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.

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

### 6.6.2.2 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 six PSTN lines and eight IP lines you can choose from Group1 to Group 4.

#### 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 IP20xx phone only.

#### Trunk Group Priority:

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

#### Access Priority:

This Item allows you to define 4 Trunk Group's interior priority. For four 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.

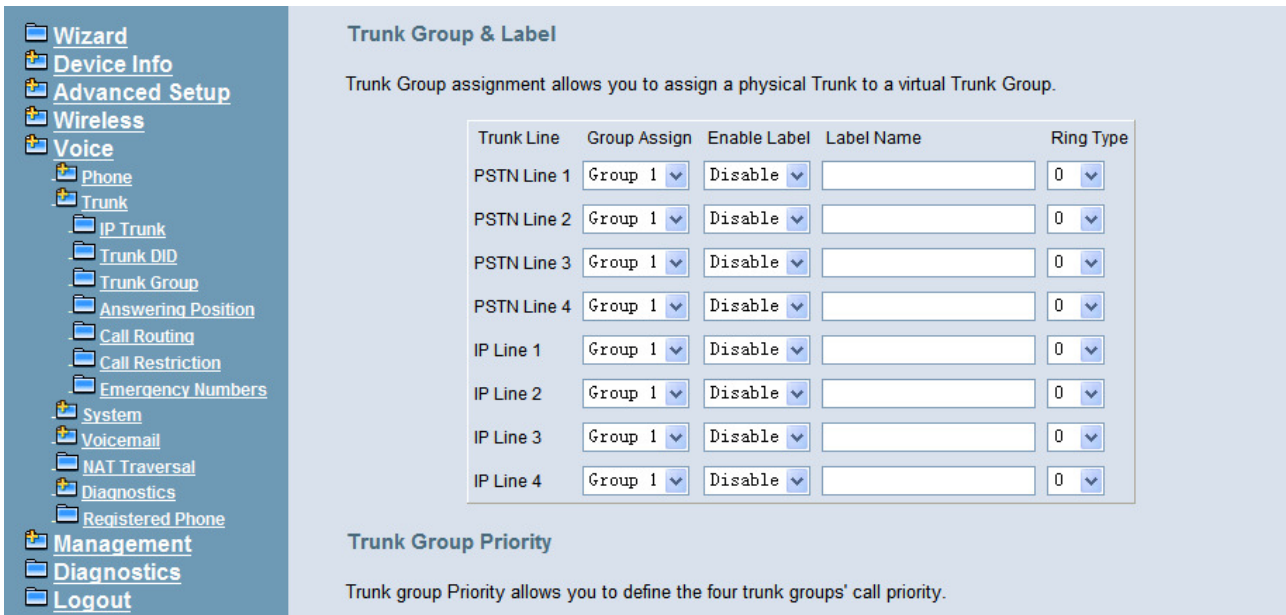


Figure 6-52. Voice – Trunk – Trunk Group – 1

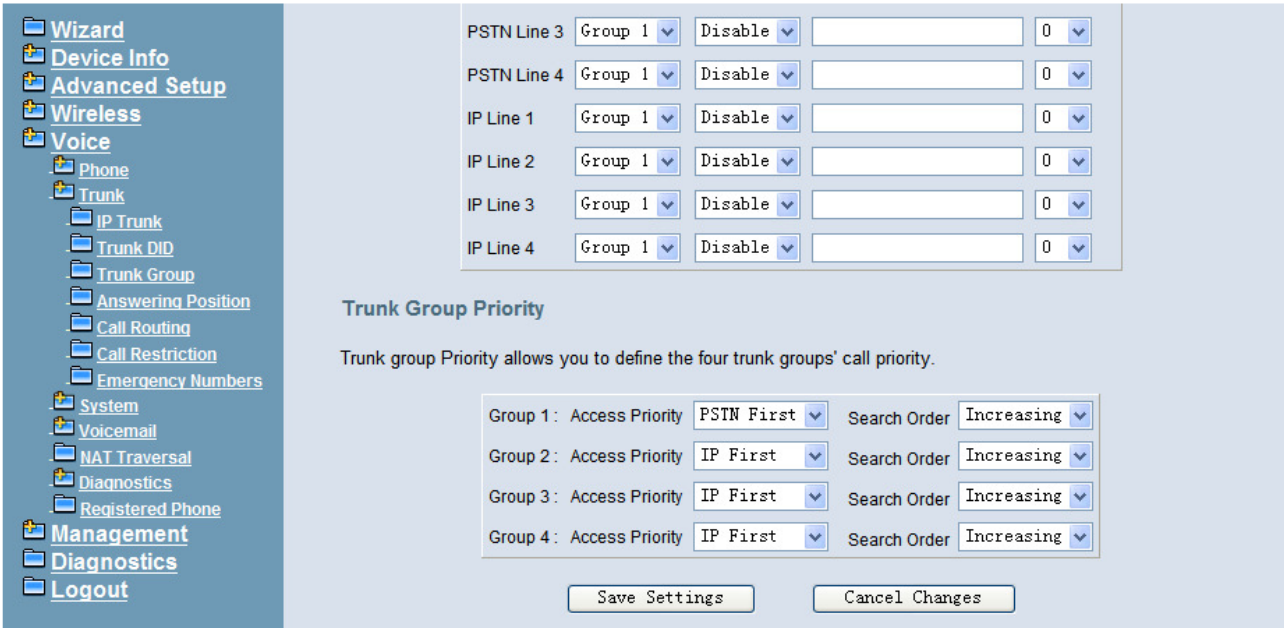


Figure 6-53. Voice – Trunk – Trunk Group – 2

### 6.6.2.3 Answering Position

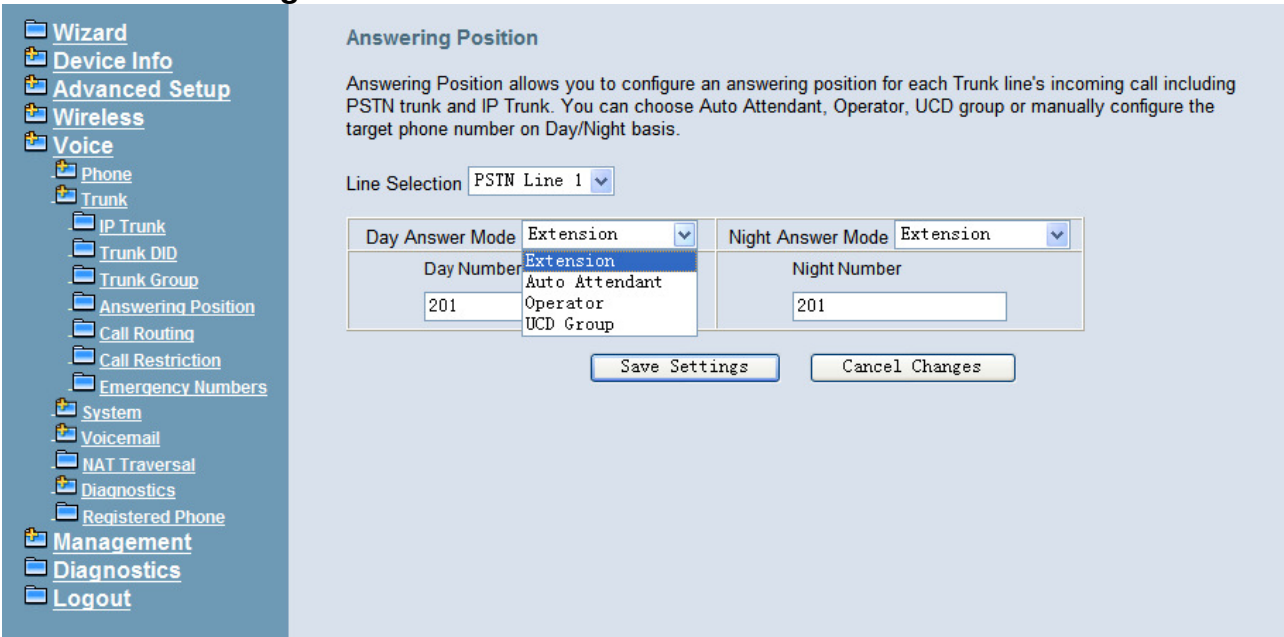


Figure 6-54. Voice – Trunk – Answering Positions

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 17.



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

### 6.6.2.4 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:

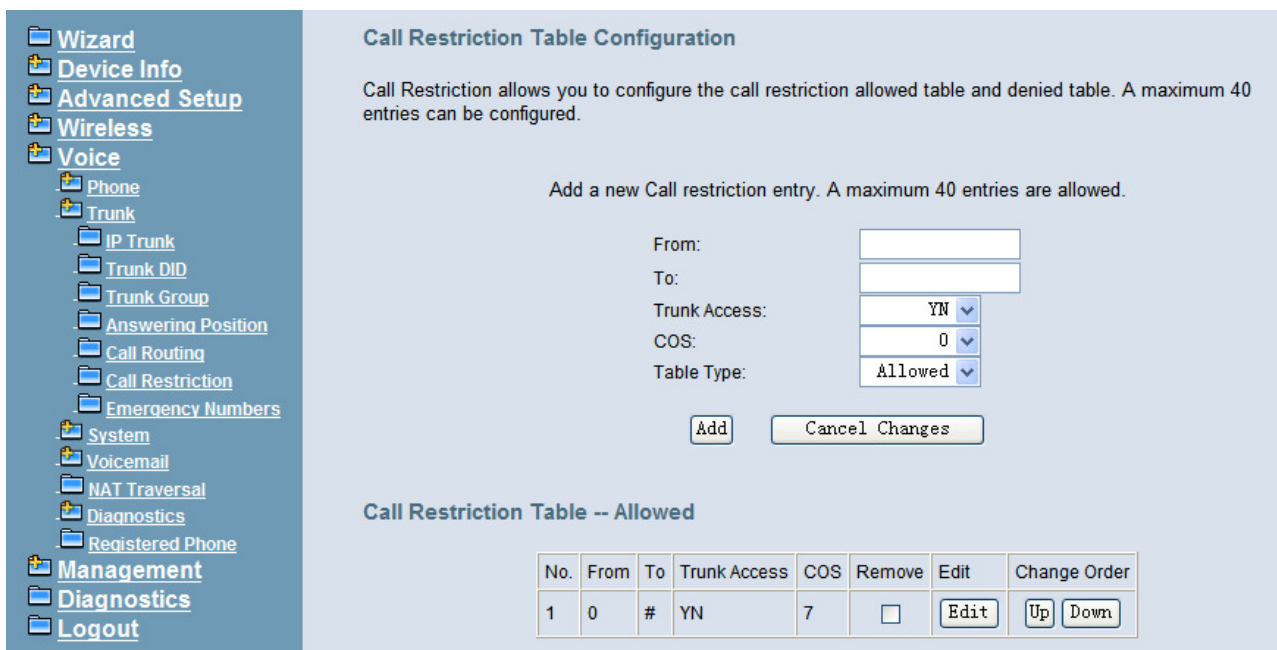
No.	From	To	Min	Max	Del	Insert	Destination	Remove	Edit	Change Order
1	0	#	1	99	0		Group 1	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Up"/> <input type="button" value="Down"/>

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

### 6.6.2.5 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.



**Figure 6-56. Voice – Trunk – Call Restriction**

If the TrunkAccess value is set to Y, the call will follow the restriction setting only when seizing line and make a call. If the TrunkAccess value is set to N, the call will follow the restriction only when dialing a number directly. If the TrunkAccess 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.

### 6.6.2.6 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)

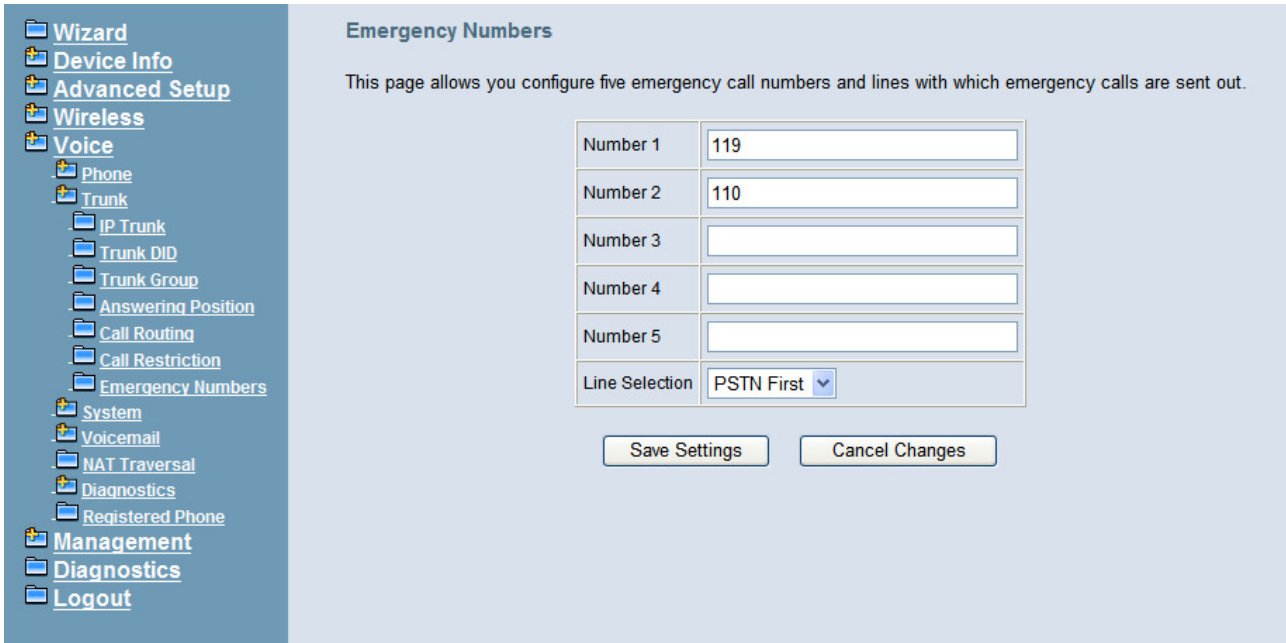


Figure 6-57. Voice – Trunk – Emergency Dial

### 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	<input type="text" value="201"/>	
End Extension	<input type="text" value="299"/>	
FXS Phone Number	<input type="text" value="299"/>	
Operator code	<input type="text" value="0"/>	<input type="button" value="Configuration"/>
Start AA & VM Service Number	<input type="text" value="500"/>	
Start Virtual Extension Number	<input type="text" value="830"/>	
Start PSTN Line number	<input type="text" value="700"/>	
Start IP Trunk number	<input type="text" value="710"/>	
Start Trunk Group number	<input type="text" value="80"/>	
All Paging number	<input type="text" value="400"/>	
All Paging Range	<input type="button" value="Both"/>	
Start Paging Group number	<input type="text" value="401"/>	<input type="button" value="Configuration"/>
Start UCD Group number	<input type="text" value="430"/>	<input type="button" value="Configuration"/>
Start Pick Up Group number	<input type="text" value="440"/>	
System Speed Dial	<input type="text" value="600"/>	<input type="button" value="Configuration"/>
Start Call Park number	<input type="text" value="731"/>	

**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 IP20xx'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)

**Operator Configuration**  
This page allows you to configure the operator-related settings

Operator day

Operator night

Alternate Operator day

Alternate Operator night

Reroute Time  (0, 15~180)

**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 6 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 8 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 IP20xx will be paged.

**All Paging range:** You can select the range of the paged extensions. If it's LAN, it pages the IP20xx on IG7600's LAN side. If it's WAN, it pages the IP200xx on IG7600 WAN side, but under the same Router with IG7600. If it's Both, it pages the all IP20xx on LAN and WAN.