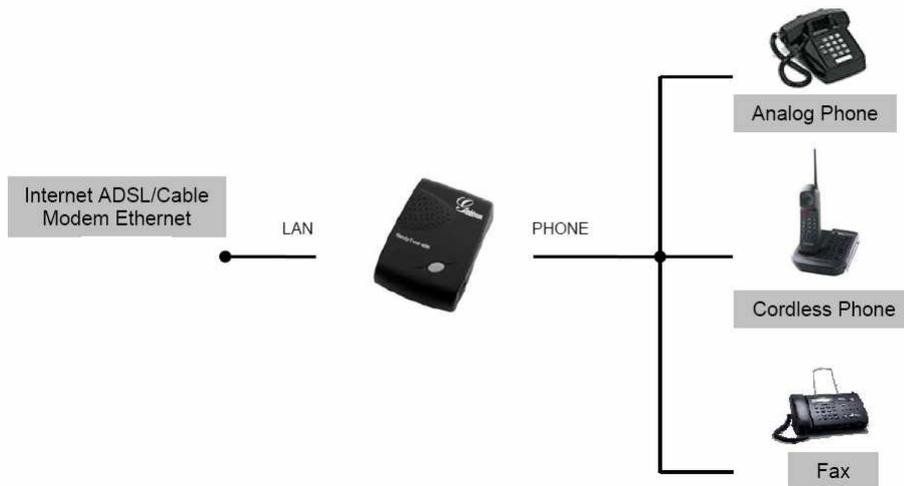


## GrandStream HandyTone-286 Configuration Instructions



### Step 1: Connect your HandyTone-286

1. Connect the ATA to your network as shown below. For more information on how to connect the HandyTone, please see your User Manual.



## **Step 2: Reset the HandyTone to Factory Defaults**

Note that this will clear all custom settings from the phone; if you wish to retain these for later reference, please make a note of them (for example, by printing the configuration page, or saving a copy of it to disk). See sections 2 and 3 for instructions on logging in to the configuration page.

To reset the phone, you will need the phone's 12-digit hardware address, also known as a MAC address. This should be printed on a sticker on the bottom of the phone; alternatively, it may be retrieved from the phone's Web configuration page. Note down the MAC address, as it will need to be entered into the phone.

The MAC address may contain the letters A-F as well as digits 0-9. To enter these letters into the phone, a special encoding is used, as follows:

0	press the 0 button once
1	press the 1 button once
2	press the 2 button once
3	press the 3 button once
4	press the 4 button once
5	press the 5 button once
6	press the 6 button once
7	press the 7 button once
8	press the 8 button once
9	press the 9 button once
A	press the 2 button two times
B	press the 2 button three times
C	press the 2 button four times
D	press the 3 button two times
E	press the 3 button three times
F	press the 3 button four times

To actually perform the reset, connect a telephone handset to the ATA, dial "\*\*\*\*" followed by "99" and the MAC address as described, then wait for 15 seconds and hang up. During this time, a short buzzing sound may be heard, indicating that settings are being reset. Once the phone is hung up, the ATA will restart with factory defaults.

### **Step 3: Confirm the ATA has been set to DHCP mode, or assign a Static IP Address to the HandyTone.**

1. To set the ATA to DHCP mode, connect a telephone handset to the ATA, dial "\*\*\*\*", then "01". The voice prompt will say either "Static IP Mode", or "Dynamic IP Mode" – press "9" on the telephone keypad to toggle between these two options.
2. If you select Static IP mode, you will also need to configure the Subnet, Gateway and DNS Server IP Addresses. These can be set through Options 02 (IP Address), 03 (Subnet IP Address), 04 (Gateway IP Address) and 05 (DNS Server IP Address). These are set as follows:
  - a. Dial "\*\*\*\*" from the handset connected to the ATA
  - b. At the voice prompt, dial the Option number (for example, 02)
  - c. The current IP Address for this option will be read out.
  - d. To enter a new IP, dial the new 12-digit IP Address (example: to enter 192.168.10.10, dial "1 9 2 1 6 8 0 1 0 0 1 0")
  - e. Once all 12 digits have been entered, the ATA will save them automatically.

### **Step 4: Log into the HandyTone web interface**

1. Enter the IP Address of the ATA into your web browser (Example: <http://192.168.10.10>)
  - a. If you do not know the IP Address of the ATA:
  - b. Connect a telephone handset to the ATA, dial "\*\*\*\*", then "02". Note down the IP address spoken out and enter it into the address bar of a Web browser, disregarding leading zeroes. Eg, if the address displayed is "010.034.238.006", enter this as "http://10.24.238.6/".
  - c. If the IP Address is read out as "0.0.0.0", and the ATA is set to DHCP mode, then this means that the device was unable to acquire an IP Address via DHCP. Unplug the ATA and wait 2 minutes before trying again. If the IP Address is still not assigned, you may need to contact your network administrator before proceeding.
2. Log in to the "Welcome to Grandstream HandyTone 286" page. The default password is "admin".

## Step 5: Configure the ATA

### 1. Change the following settings:

SIP Server: sip.freshtel.net  
 SIP User ID: <your Firefly number>  
 Authenticate ID: <your Firefly number>  
 Authenticate Password: <your Firefly password>  
 Name: <your name>

<b>Admin Password:</b>	*****	(Admin user password to configure this IP phone)
<b>End User Password:</b>	***	(end user password to configure this IP phone)
<b>IP Address:</b>	<input checked="" type="radio"/> dynamically assigned via DHCP (default) or PPPoE (will attempt PPPoE if DHCP fails and following is non-blank)	
	PPPoE account ID:	<input type="text"/>
	PPPoE password:	<input type="text"/>
	Use this DNS server (if specified):	<input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/>
	<input type="radio"/> statically configured as:	
	IP Address:	<input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/>
	Subnet Mask:	<input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/>
	Default Router:	<input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/>
	DNS Server 1:	<input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/>
	DNS Server 2:	<input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/>
<b>SIP Server:</b>	sip.freshtel.net	(e.g., sip.mycompany.com, or IP address)
<b>Outbound Proxy:</b>		(e.g., proxy.myprovider.com, or IP address, if any)
<b>SIP User ID:</b>	80001234	(the user part of an SIP address)
<b>Authenticate ID:</b>	80001234	(can be identical to or different from SIP User ID)
<b>Authenticate Password:</b>	*****	
<b>Name:</b>	John Smith	(optional, e.g., John Doe)

2. Change the following settings:

Preferred Vocoder: choice 1: G.729A/B  
 choice 2: iLBC  
 choice 3: PCMU  
 choice 4: PCMA  
 choice 5: G.726-32  
 choice 6: G.728  
 choice 7: G.723.1

iLBC frame size: 30ms  
 User ID is phone number: Yes  
 Register Expiration: 3  
 No Key Entry Timeout: 4

**Advanced Options:**

Preferred Vocoder: choice 1:   
 (in listed order) choice 2:   
 choice 3:   
 choice 4:   
 choice 5:   
 choice 6:   
 choice 7:

G723 rate:  6.3kbps encoding rate  5.3kbps encoding rate

iLBC frame size:  20ms  30ms

iLBC payload type:  (between 96 and 127, default is 98)

Silence Suppression:  No  Yes

Voice Frames per TX:  (up to 10/20/32/64 for G711/G726/G723/other codecs respectively)

Layer 3 QoS:  (Diff-Serv or Precedence value)

Layer 2 QoS: 802.1Q/VLAN Tag  802.1p priority value  (0-7)

Use DNS SRV:  No  Yes

User ID is phone number:  No  Yes

SIP Registration:  Yes  No

Unregister On Reboot:  Yes  No

Register Expiration:  (in minutes, default 1 hour, max 45 days)

Early Dial:  No  Yes (use "Yes" only if proxy supports 484 response)

Dial Plan Prefix:  (this prefix string is added to each dialed number)

No Key Entry Timeout:  (in seconds, default is 4 seconds)

Use # as Dial Key:  No  Yes (if set to Yes, "#" will function as the "(Re-)Dial" key)

3. Change the following settings:

NAT Traversal: Yes, STUN server is: `stun.freshtel.net`  
 Send DTMF: via RTP (RFC2833)  
 FXS Impedance: 600 Ohm <in North America>  
 CTR21 <for most of Europe>  
 New Zealand #2 <for the UK>  
 Australia/New Zealand <for AU and NZ>  
 <or another setting, as required>  
 NTP Server: `time.nist.gov`  
 Time Zone: GMT+10 <or as appropriate>  
 Daylight Savings Time: <set as appropriate>

local SIP port:	<input type="text" value="5060"/>	(default 5060)
local RTP port:	<input type="text" value="5004"/>	(1024-65535, default 5004)
Use random port:	<input checked="" type="radio"/> No <input type="radio"/> Yes	
NAT Traversal:	<input type="radio"/> No	
	<input checked="" type="radio"/> Yes, STUN server is: <input type="text" value="stun.freshtel.net"/> (URI or IP:port)	
keep-alive interval:	<input type="text" value="20"/>	(in seconds, default 20 seconds)
Use NAT IP	<input type="text"/> (if specified, this IP address is used in SIP/SDP message)	
Proxy-Require:	<input type="text"/> (if specified, the content will appear in Proxy-Require header)	
TFTP Upgrade Server:	<input type="text" value="168.75.215.188"/> (for remote software upgrade and configuration)	
HTTP Upgrade Server:	<input type="text"/> (IP address or URL)	
Auto Upgrade:	<input type="radio"/> No <input checked="" type="radio"/> Yes, check for new firmware every <input type="text" value="0"/> days (default 7 days)	
SUBSCRIBE for MWI:	<input checked="" type="radio"/> No, do not send SUBSCRIBE for Message Waiting Indication	
	<input type="radio"/> Yes, send periodical SUBSCRIBE for Message Waiting Indication	
Offhook Auto-Dial:	<input type="text"/> (User ID/extension to dial automatically when offhook)	
Enable Call Features:	<input type="radio"/> No <input checked="" type="radio"/> Yes (if Yes, Call Forwarding & Do-Not-Disturb are supported locally)	
Disable Call-Waiting:	<input type="radio"/> No <input checked="" type="radio"/> Yes	
Send DTMF:	<input checked="" type="radio"/> in-audio <input type="radio"/> via RTP (RFC2833) <input type="radio"/> via SIP INFO	
DTMF Payload Type:	<input type="text" value="101"/>	
Send Flash Event:	<input type="radio"/> No <input checked="" type="radio"/> Yes (Flash will be sent as a DTMF event if set to Yes)	
FXS Impedance:	<input type="text" value="Australia/New Zealand #1 (220 Ohm + 820 Ohm 120nF)"/>	
NTP Server:	<input type="text" value="time.nist.gov"/> (URI or IP address)	
Time Zone:	<input type="text" value="GMT+10:00 (Brisbane, Sydney, Melbourne, Canberra, Guam, Hobart)"/>	
Daylight Savings Time:	<input type="radio"/> No <input checked="" type="radio"/> Yes (if set to Yes, display time will be 1 hour ahead of normal time)	
Send Anonymous:	<input type="radio"/> No <input checked="" type="radio"/> Yes (caller ID will be blocked if set to Yes)	
Lock keypad update:	<input type="radio"/> No <input checked="" type="radio"/> Yes (configuration update via keypad is disabled if set to Yes)	
<input type="button" value="Update"/> <input type="button" value="Cancel"/> <input type="button" value="Reboot"/>		

4. Click the Update button, then click on the "Click to view your changes" link, then click the Reboot button. Once your ATA reboots, you should be ready to place and receive calls with Freshtel.

**Dialing:**

To dial a PSTN number, dial like you would with a normal phone. Eg 6139000000

To dial a Firefly number or voicemail, prefix a star to the number. Eg \*80001234, \*123