Grandstream
Innovative IP Voice & Video

Grandstream Networks, Inc.

GXV3140

IP Multimedia Phone

GXV3140 User Manual

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WELCOME

Thank you for purchasing the Grandstream GXV3140 IP Multimedia Phone. The GXV3140 is designed for the high-end enterprise market and is easy to use and configure. It supports a broad range of audio codecs and H.264 , H.263/H.263+ video codecs. Based on the SIP standard, it is interoperable with 3rd party SIP platforms. The GXV3140 takes full advantage of VoIP technology to allow plug and play communication anywhere in the world.

This user manual will help you to understand how to configure and manage your GXV3140 IP Multimedia phone. It will also show you how to fully utilize features such as quick installation, conference calling, and Direct IP calling.

GXV3140 Overview

The GXV3140 is a next generation SIP-based IP Multimedia phone that supports a selection of high quality audio codecs and is compatible with the H.263/H.263+/H.264 video codecs. The GXV3140 supports high quality real-time video transmission on a 4.3" TFT color LCD even when under low bandwidth conditions (32kbps-1Mbps). The VGA camera's lens is adjustable to allow high quality video conferencing.

The GXV3140 embodies a sleek and elegant industrial design. The advanced telephony and video features, interoperability with third party SIP products and ease of use makes it an ideal IP Multimedia product for both the enterprise and consumer markets alike.

Caution: *Changes or modifications to this product not expressly approved by Grandstream, or operation of this product in any way other than as detailed by this User Manual, could void your manufacturer warranty.*

- This document is subject to change without notice. The latest electronic version of this user manual is available for download @ http://www.grandstream.com/user_manuals/GXV3140_User_Manual.pdf

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INSTALLATION

EQUIPMENT PACKAGING

The GXV3140 package should include:

1. One GXV3140 Phone Main Case
2. One Handset
3. One Phone Cord
4. One Universal Power Supply
5. One Ethernet Cable
6. One Phone Stand
7. One Headset Dongle
8. One Quick Start Guide

SAFETY COMPLIANCES

The GXV3140 phone complies with FCC/CE and various safety standards. The GXV power adapter is compliant with the UL standard. Only use the universal power adapter provided with the GXV package.
The manufacturer's warranty does not cover damages to the phone caused by unsupported power adapters.

WARRANTY

If you purchased your GXV from a reseller, please contact the company where you purchased your phone for replacement, repair or refund.
If you purchased the product directly from Grandstream, contact your Grandstream Sales and Service Representative for a RMA (Return Materials Authorization) number before you return the product. Grandstream reserves the right to remedy warranty policy without prior notification.

Warning: Please do not use a different power adapter as this may damage your phone. This type of damage is not covered by the warranty.

CONNECTING THE GXV3140 IP MULTIMEDIA PHONE

Figure 1: Connecting GXV3140

Table 1:**GXV3140 Connectors**

1	SD Card Slot	SD Card Slot
2	USB Port	USB devices may be connected via the USB port. For example, you can connect a USB flash drive to save captured pictures or use a USB keyboard or mouse for the built-in web browser.
3	Headset Jack	3.5mm headset connector port
4	RCA Video/Audio Jacks	Voice/video output port which can be connected to external peripherals (e.g. TV).
5	RJ11 Jack	Phone handset connector port
6	PC Ethernet Port	10/100Mbps RJ-45 port connecting to PC
7	Network Ethernet Port	10/100Mbps RJ-45 port connecting to Ethernet
8	Power Jack	12V DC Power connector port

WALL MOUNT

The GXV3140 can be mounted on the wall; there are two slots on the back of the phone for wall mounting. See **Figure 2** on the next page.

Figure 2: Wall Mount for GXV3140

The phone can be mounted on the wall via the two slots on the back of the phone.

PHONE STAND

The GXV3140 can also be placed on the table via the phone stand.   The GXV3140 has two positions for the stand on the back of the phone; each position supports a different angle.

Figure 3: Phone Stand for GXV3140
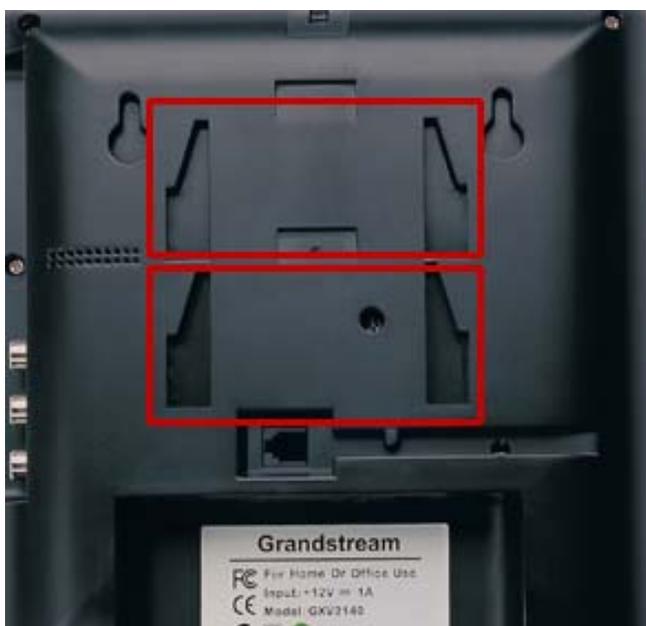
PRODUCT OVERVIEW

Figure 4: Front, Side and Back View of GXV3140

Front View   Side View   Back View

Table 2: GXV Key features at a glance

Open Standards Compatible	SIP 2.0, TCP/IP/UDP, RTP/RTCP, HTTP/HTTPS, ARP/RARP, ICMP, DNS (A record and SRV), DHCP, PPPoE, TFTP, NTP
Interfaces	2 10/100Mbps Ethernet Ports，1 USB（2.0）port，3.5mm headset port.
Extraordinary Audio Quality	Advanced DSP for audio，Silence Suppression，VAD,CNG,AEC,AGC
Extraordinary Video Quality	Supports real-time video H.263/H.263+ and H.264 codec under low bandwidth (32kbps-1Mbps).
Advanced Video Features	4.3" digital TFT color LCD with 480x272 resolution, 45 degree rotating lens (perpendicular), Advanced VGA lens, auto focus, auto exposure, zoom (2x optical 2x digital), Camera Block, PIP(Picture-in-Picture) and still picture capture/store.
Feature Rich	Traditional audio features: Caller ID, Call Waiting, Call Holding, Call Transfer, Do-Not-Disturb, Mute, Automatic dial. Built-in web browser, RSS news, Stock market update, Weather forecast, Internet Radio, Media Player, Picture browser, Games, Calculator, Alarm clock, IM chat, Document Manager etc…

Advanced Functionality	Support for multiple lines, conferencing, headset, Intercom, AES encryption.

Table 3 : GXV3140 Hardware Specification

Ethernet Port	Dual switched 10M/100M auto-sensing Ethernet ports
LCD	4.3" digital TFT color LCD
Camera	Tilt Capable 1.3M pixel CMOS camera with privacy shutter(VGA)
Auxiliary Ports	RCA Type Stereo & Media output port，3.5m headset port，1 USB port，1 SD card reader
Exterior	Black ABS plastic，30 buttons
Universal Power Supply	Input：100-240V AC Output：12V DC，1.2A US/Euro/UK/Australian style plug available.
Dimension	7.87x7.32x1.57in/200x286x40mm
Weight	1.87lb /0.85Kg
Operating Temperature	32-104° F/0°–40°C
Humidity	10-90% Non-Condensing
Compliance	FCC/CE/C-Tick

Table 4 : GXV3140 Technical Specifications

Lines	Three individual SIP accounts
Protocol Support	SIP 2.0, UDP/IP, PPPoE, RTP/RTCP, SRTP by SDES, HTTP, ARP/RARP, ICMP, DNS, DHCP, NTP/SNTP, TFTP.
Display	4.3" digital TFT color LCD with 480x272 resolution
Function Keys	4 programmable soft keys: F1，F2，F3，F4. Line, mailbox, phonebook, mirror, call transfer, hold, conference, dial/send, speakerphone and five navigation keys.
Network Interfaces	Dual switched 10M/100M auto-sensing Ethernet ports, USB 2.0 port, 1 audio/video output port (to synchronously output video to TV), headset jack.
Device Management	Layer 2 QoS (IEEE 802.1p/Q tagging-VLAN and Layer 3 QoS (DiffServ); Web interface or via secure (AES encrypted) central configuration file for mass deployment, keypad & adjustable 4.3 inch digital TFT Color LCD, Auto/manual

	provisioning system, GUI interface, phone book, remote software (TFTP/HTTP) upgrade for deployed devices including those behind a NAT/firewall.
Provisioning	Support for automatic NAT/firewall traversal & remote automatic software upgrade and security, providing end-users with "zero configuration" and true "plug-and-play" functionality. Support for remote configuration monitoring and syslog. Configuration through LCD, web browser or an external configuration file. Support for IETF STUN NAT traversal and symmetric RTP; Static IP or DHCP.
Audio Features	Full duplex speaker , advanced DSP ; Support G.723.1 , G.729A/B,G.711µ/A (PCMU/PCMA), G.726- DTMF (In-audio, RFC2833 , SIP Info) ; Silence suppression , VAD , CNG , AGC , masking for packet loss/delay ; AEC , AGC for Speaker ; jitter buffer protocol
Video Features	Support for Jitter Buffer delay and packet loss concealment to enhance audio and video quality. Support for H.263/H.263+ and H.264 real-time video codecs (CIF or QVG) up to 30frames/sec, which ensures high quality video transmission even under low bandwidth conditions (32kbps-1Mbps) ; 4.3" digital TFT color LCD with 480x272 resolution, 45 degree rotating lens (perpendicular), advanced VGA CMOS camera and sensor ; anti-flickering of images , auto focus , auto exposure , zoom (2x optical 2x digital), PIP(Picture-in-Picture) , audio mute, camera block , call log , video phone book ; screensaver , still picture capture/store (VGA) , visual voice message indicator
Call Handling Features	Caller ID, call waiting ID, call waiting/flash, call transfer, call holding, call forwarding, Do-Not-Disturb, three-way conference, redial, automatic dialing on off-hook, automatic answering, call records, volume control, voice message

	waiting indicator, downloadable custom ring tone.
Caller ID（Privacy）	Private header support for anonymous calls.
Firmware Upgrade	Configuration file authentication (before accepting changes); TFTP/HTTP upgrade support, allows users to specify different URLs for the server to download from.
Advanced Server Features	DNS SRV support, SIP server failure transfer, message waiting indicator and custom screensaver.
Security	MD5 and MD5-sess DIGEST encoding and authentication； Security protection: SIP over TLS and SRTP.

USING THE GXV3140 IP MULTIMEDIA PHONE

LCD

When the phone is idle, the LCD screen will look similar to the figure below (The extension number may be different from case to case, depending on the network environment and the settings):

Figure 5：GXV3140 LCD Idle Screen

Press the F2 button underneath "Switch Screen" to switch to another display screen. (Shown in figure below):

Figure 6: LCD IDLE screen displaying RSS News feed and Stock

Press F2 again to switch to a display screen that displays the calendar and weather forecast.

Figure 7: LCD IDLE screen displaying Calendar and Weather forecast
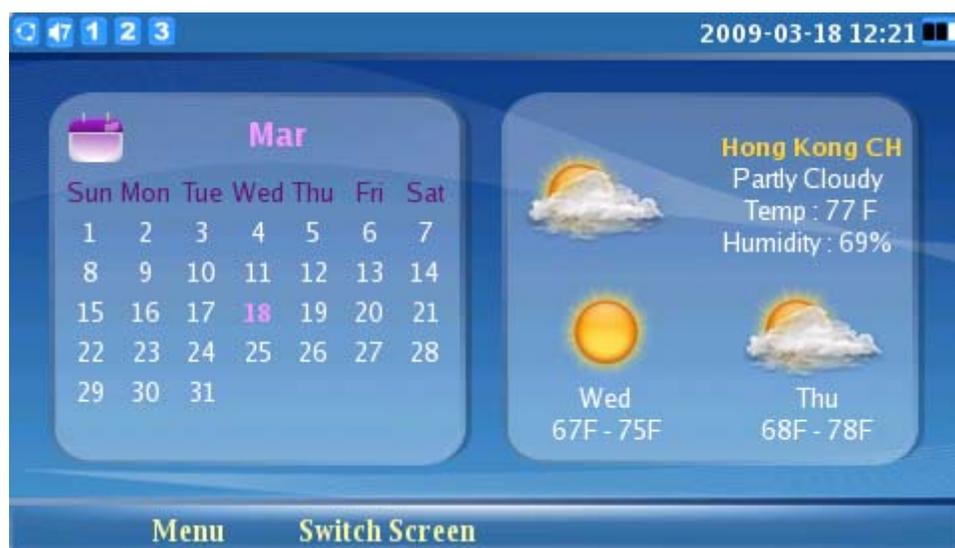
Table 5 : LCD Icon Definition

Type	Icon	Definition	Note
Network		Connected to the network	
		Failed to connect to the network, the icon will flicker between yellow and gray.	
Line 1 Status		Line 1 is registered	

	1	Line 1 is not registered	The Account and line status are separate. Line status will only show busy or idle.
	1	Line 1 is busy	If Line 1 is in a call
Line 2 Status	2	Line 2 is registered	
	2	Line 2 is not registered	
	2	Line 2 is busy	If Line 2 is in a call
Line 3 Status	3	Line 3 is registered	
	3	Line 3 is not registered	
	3	Line 3 is busy	If Line 3 is in a call
Call related		Account 1 Auto Answer	
		Account 2 Auto Answer	
		Account 3 Auto Answer	
	1	Account 1 Call Forward	If configured to forward calls: unconditional forward, forward when busy or forward on no answer
	2	Account 2 Call Forward	
	3	Account 3 Call Forward	
Call Volume	0	Volume setting, ranges from 0-9. The nine icons represent different volume levels.	
	1		
	…		
	9		
Ring Volume	0	Ring volume, ranges from 0-9	
	1		
	….		
	9		

Phone Status		Camera disabled.	
		Do-Not-Disturb (DND)	
		Missed Call. If there is a new missed call, the icon will flicker.	
		Mute	
Screen Layout Icon		First Desktop (Small Layout)	The Small layout can be selected in the Personalize/Screen Layout menu.
		Second Desktop (Small Layout)	
		First Desktop (Big Layout)	
		Second Desktop (Big Layout)	The Big layout can be selected in the Personalize/Screen Layout menu.
		Third Desktop (Big Layout)	
Audio Output		The headset is in use and is off hook.	
		The headset is plugged in.	
		The phone is on speaker.	
		The handset is off hook.	
IM		IM is not logged in	The icon is displayed at the right hand-side of the status bar.
		IM is logging in; the icon will flicker between blue and gray.	
		There is a new message on IM. The icon will flicker between blue and yellow.	
Applications		Text message. The icon will flicker if there is a new unread text message.	

		Alarm clock	
		Media（music/video）Player	The icon is displayed at the right hand-side of the status bar.
		Internet radio	The icon is displayed at the right hand-side of the status bar.
		Web browser	The icon is displayed at the right hand-side of the status bar.
External devices		SD card	
		USB flash drive.	
		USB keyboard	
		USB mouse	

Figure 8：GXV3140 Keypad

Table 6：GXV3140 Keypad definition

Key	Definition

F1 F2 F3 F4	4 function/soft keys that correspond to the functions displayed on the LCD.
ꔷꔷꔷ	Line/Account selection. Three independent SIP accounts may be configured, and the Line button can be used to choose the line/account to be used.
✉	Retrieve video/voicemail message or other messages.
📖	Phonebook
1 . , @ 2 ABC 3 DEF 4 GHI 5 JKL 6 MNO 7 PQRS 8 TUV 9 WXYZ * _ 0	Standard telephone keypad. The # key can act as a send key. In the input mode, if an English alphabet needs to be entered, press the corresponding numerical key multiple times. For example, if the user wishes to enter B, press 2 three times; if the user wishes to enter Y, press 9 four times.

[#]	
[camera icon]	Camera Loopback button. This button Enables or Disables the camera display on the local LCD.
[call transfer icon]	Call Transfer: Allows the user to transfer a call to another extension or number.
[hold icon]	Places the call on hold
[conference icon]	Conference button - connects the caller/callee to the conference
[send icon]	Sends a new number or redials the last number dialed.
[speaker icon]	Turns the Speaker ON or OFF.
[navigation buttons]	Navigation Buttons: These arrows keys serve as up/down/left/right button when used in the GXV3140's menus. The middle button is used as the submit/select button. When the phone is idle, the up and down arrow can be used to increase/decrease the volume.

MULTIPLE SIP ACCOUNTS AND LINES

The GXV3140 supports up to 3 independent SIP accounts. Each account may have separate SIP servers, usernames and NAT configurations. Press the LINE button to view the status of the 3 lines and press the corresponding FUNCTION button to select the account to use for dialing out. When the phone is off-hook, press the LINE button to switch between different SIP accounts.

For example, let's say that you configure 3 SIP accounts: Account1, Account2, and Account3. The registration status of each account is displayed on the desktop. If the account is registered, the icon next to the account will be in yellow and purple. If the account is not registered, the icon next to the account will be gray with a red cross on it. When all the accounts are registered, press F1 to select Line 1, the user should hear a dial tone and the LCD will display Account1. Furthermore you can press F2 to select Line 2, or press F3 to select Account3. When the user presses the FUNCTION button, they will hear a dial tone and can start entering the number that they wish to call.

Incoming calls through the three accounts will try to use the corresponding line. If this line is busy, the icon for the line (top-left hand corner) will be green. When a call comes in and the line is busy, the next idle line will be used while the icon for that line will flicker between blue and green.

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HANDSET, SPEAKER AND HEADSET MODE

The GXV3140 allows users to switch from the handset to speaker or headset by pressing the Hook Flash, the Headset FUNCTION button or the SPEAKER Button.

MAKING A CALL

There are several ways to make a call:

1. **Enter the number** :

   - Take the handset off hook or use the speaker/headset , press the LINE button and select the desired account/line by pressing the corresponding FUNCTION button.
   - A dial tone is given, adjust account if necessary.
   - Enter the number
   - Press SEND

2. **Redial** :

   When redialing, the phone will use the account that was used to call the last number dialed. Therefore, if the last number dialed uses the third account, the phone will also use the third account when redialing.
   - When the phone is idle, press the # or the SEND button.
   - When using the speaker/headset/handset, press the SEND button.

3. **By Call History** :

   Enter the Menu by pressing the F1 button, and then select "Call history". The LCD monitor will display all call history types: "Dialed calls", "Received calls", and "Missed calls". Select the call history that you wish to view by using the up and down arrow keys and then select the corresponding FUNCTION button to dial the number or delete the record.

4. **By Phone Book** :

   Enter the Menu by pressing F1, and then select "Phone Book". The LCD screen will display the saved records in the phone book. Navigate to the phone book record with the arrow buttons, and call the number by selecting the FUNCTION button. At the same time, users may browse through or delete the phone book records.

5. By Messages:
Enter the Menu by pressing F1, and then select "Messages". The LCD screen will display the Message Inbox, Sent messages and Draft messages. Select the message and press F3 for "Options", and then select "Dial" to dial out to the number.

6. On-hook Dialing:
Without lifting the handset off the hook, simply dial the number and press F3 to SEND. This phone will dial the number and the audio will be output via speakerphone. The phone will use the primary account to dial out.

DURING CALLS

ANSWERING CALLS

1. **Single Incoming call** : When the phone rings, you can use the headset, handset or speaker to answer the call. The user may also press the SPEAKER button or the corresponding FUNCTION button for "Accept" on the LCD screen.

2. **Multiple Incoming Calls** : Users will hear a call waiting tone while the LCD displays the number of the caller. At this moment, press the corresponding FUNCTION button for "Accept" to establish a connection with the new caller. This will put the previous call on hold, and users may press LINE button to switch between the lines

3. **Paging/Intercom**: After the phone "beeps", the call is automatically established through the speaker. (PBX / IP-PBX required)

CALL HOLD/WAITING

1. **Call Hold** : Press the HOLD button ( ) to place the call on hold.

2. **Call recover** : Press the HOLD button again to return to the call, or press the "Resume" FUNCTION button.

3. **Multiple Calls** : Put the current call on hold, press the LINE button to select another line or accept another call. When the line is busy the user hears a call waiting tone, notifying the user that a call is waiting.

CALL TRANSFER

1. **Blind Transfer**: Press the "CALL TRANSFER" button to place the other party on hold. The phone will display the following message: "Dial Number (Blind) OR Select Line (Attended)". Dial the extension number and press F3 for "SEND". This will transfer the call to the other party immediately.

2. **Attended Transfer** : Press the "LINE" button to select an idle line to use for attended transfer; this will

place the other party on hold immediately. Dial the number that you wish to transfer to and after confirmation from the party, press the "CALL TRANSFER" button. The phone will display the following message: "Dial Number (Blind) OR Select Line (Attended)". Press the "LINE" button and select the line on hold.

NOTE:

• To transfer calls across SIP domains, SIP service providers must support transfer across SIP domains.

Blind transfer will usually use the primary SIP profile.

• If the user enters the wrong number and wishes to cancel the transfer, just press the "CALL TRANSFER"

button again to cancel the transfer. Or press "HOLD" key to hold the line and redo again.

3-WAY CONFERENCE

The GXV-3140 supports 3-way conferencing.

1. **Initiate a Conference Call**: Place the first call on hold by pressing the "LINE" button to call the second party. Once you establish the call, press the "CONFERENCE" button then select the line on hold to bring three parties together.

3. **Cancel Conference:** If after pressing the "CONFERENCE" button, a user decides not to conference anyone; press the corresponding FUNCTION key for "Cancel" to cancel the conference.

4. **End Conference:** There are two ways to end a conference. The first way is to press "HOLD", this breaks the conference and places both parties on hold, and the user can now speak to individual party by selecting the corresponding LINE. The second way is to simply hang up and terminate the call.

VOICEMAIL (MESSAGE WAITING INDICATION)

If the blue MWI LED icon is flickering on the upper right hand corner, it means that a new message is

waiting. Press MSG [✉] to retrieve the message (the button needs to be configured). By default, pressing the MSG button will transfer to the voicemail box of Line1; if the user wishes to enter the voicemail box of Line 2 or Line 3, the Line should be selected prior to pressing the MSG button. The IVR prompts the user through the message retrieval process. Select a particular line to see the messages for that account.

Note: Each of the 3 lines has its own voicemail; the Voicemail number for each number may be set up in the "Voicemail ID" configuration.

MUTE

1. During a call, the LCD screen will display "Mute". Press the corresponding FUNCTION button to mute.
2. After the "Mute" button is pressed, the LCD screen will display "Unmute", when this button is pressed, the mute feature is cancelled.

CALL FEATURES

These are the feature codes for call features. To use the code, select the line you wish to use by pressing the LINE button and enter these feature codes.

Table 7: Call Features

Code	Feature
*30	Block Caller ID (for all subsequent calls)
*31	Send Caller ID (for all subsequent calls)
*50	Disable Call waiting (for all subsequent calls)
*51	Enable Call Waiting (for all subsequent calls)
*67	Block Caller ID (per call): Dial *67 + Phone/Ext. Number (no dial-tone in between).
*82	Send Caller ID (per call): Dial *82 + Phone/Ext. Number (no dial-tone in between).
*70	Disable Call Waiting (per call): Dial *70 + Phone/Ext. Number (no dial-tone in between).
*71	Enable Call Waiting (per call): Dial *71 + Phone/Ext. Number (no dial-tone in between).
*72	Unconditional Call Forward: Dial *72 + Phone/Ext. Number followed by the # key. Wait for a dial-tone and then hang up (dial-tone means input is successful).
*73	Cancel Unconditional Call Forward: Dial *73 and wait for a dial-tone before hanging up.
*90	Busy Call Forward: Dial *90 + Phone/Ext. Number followed by the # key. Wait for a dial- tone and then hang up.
*91	Cancel Busy Call Forward: dial *91 and wait for a dial-tone before hanging up.
*92	Delayed Call Forward: Dial *92 + Phone/Ext. Number followed by the # key. Wait for a dial-tone and then hang up.
*93	Cancel Delayed Call Forward: Dial *93 and wait for a dial-tone before hanging up.

GXV3140 WEB CONFIGURATION INTERFACE

The GXV-3140's embedded Web server responds to HTTP/HTTPS GET/POST requests. Embedded HTML pages allows users to configure the IP Multimedia Phone through a Web browser such as Microsoft's IE or Mozilla Firefox (Java Script must be enabled).

Figure 9: Web Browser Interface for GXV3140
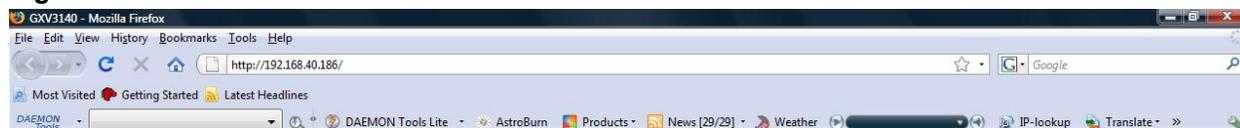
ACCESSING THE WEB CONFIGURATION INTERFACE

The GXV3140 Web Configuration Interface URL is *http://Phone-IP-Address,* where the *Phone-IP Address* is the IP address displayed on the phone's LCD screen.

To access the phone's Web Configuration Menu:

- Connect the computer to the same network as the phone.
- Make sure the phone is turned on and shows its IP-address on the LCD display.

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- Open a Web-browser on your computer.
- Enter the phone's IP-address in the address bar of the browser.
- Enter the administrator's login and password to access the Web Configuration Menu.

1. The Web-enabled computer has to be connected to the same sub-network as the phone. This can easily be done by connecting the computer to the same hub or switch as the phone is connected to. In absence of a hub/switch (or free ports on the hub/switch), please connect the computer directly to the phone using the PC-port on the phone.
2. If the phone is properly connected to a working Internet connection, the phone will display its IP address.
   This address has the format: xxx.xxx.xxx.xxx, where xxx stands for a number from 0-255. You will need this number to access the Web Configuration Menu. **e.g**. if the phone shows 192.168.0.60, please enter "*http://192.168.0.60*" in the address bar of your browser.
3. The default login name for the administrator is "admin", the default administrator password is set to "admin." The default login name for end-users is "user" while the default user password is set to "123."
   NOTE: When changing any settings, always SUBMIT them by pressing the SAVE button on the bottom of the page. You must reboot the phone for the changes to take effect.

DEFINITIONS

This section describes the options in the Web configuration user interface.   As mentioned, you can log in as an administrator or an end-user.

- **Status:** Displays the System info, Network status and Account status of the phone
- **Account (1~3):** To configure each of the SIP accounts.
- **Advanced Settings:** To set Generic settings, Call Features, Ring Tones, Time Settings, Video Settings, Network Resources and Browser Settings.
- **Maintenance**: To Set Network Settings, Web Access, Upgrade and Provisioning, SysLog, Language and Capture Packets
- **Device Manager**: Device configuration for LCD, Headset, Camera and TV Ports.

STATUS PAGE DEFINTIONS

Status/System Info

Product Model	Defines the product model: GXV3140.
Hardware Revision	Hardware version number: Main Board, Interface Board
PN Code (Part Number)	This field contains the product part number
Software Version	• Program: This is the main firmware release number, which is always used for identifying the software (or firmware) system of the phone.

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	• Boot: Booting code version number
	• DSP: DSP code version number
	• Base: Base code version number
	• Core: Core code version number
	• GUI-A, GUI-B: GUI interface version number
System Up Time	This field shows system up time since the last reboot.

Status/Network Status

MAC Address	The device ID, in HEX format. This is a very important ID for ISP troubleshooting.
Address Type	This field shows the type of address configured: DHCP, Static IP or PPPoE.
IP Address	This field shows the IP address of the GXV-3140.
Subnet Mask	This field shows the subnet mask of the GXV-3140.
Gateway	This field shows the Gateway of the GXV-3140.
DNS Server	This field shows the DNS Server of the GXV-3140.
NAT Type	This field shows the type of NAT configured.

Status/Account Status

Account	Shows the status of the 3 accounts
Number	Shows the extension number of the SIP account.
SIP Server	Shows the URL/IP address and port of the SIP server
Status	Shows the status of the account.

ADVANCED SETTINGS PAGE DEFINITIONS

Advanced Settings/Generic Settings

Lock Keypad for Update	The default value is NO. If set to YES, the keypad will be disabled from making any updates.
Local RTP Port	This parameter defines the local RTP-RTCP port pair used to listen and transmit. It is the base RTP port for channel 0. When configured, for audio, channel 0 will use this port _value for RTP and the port_value+1 for its RTCP; channel 1 will use port_value+4 for RTP and port_value+5 for its RTCP. For video, channel 0 will use port_value+2 for RTP and port_value+3 for its RTCP; channel 1 will use port_value+6 for RTP and port_value+7 for RTCP. The default value is 5004

Use Random Port	When set to YES, this parameter will force random generation of both the local SIP and RTP ports. This is usually necessary when multiple GXV-3140s are behind the same full cone NAT. The Default setting is YES. (This parameter must be set to NO before Direct IP Calling will work)
Keep-alive Intervals (s)	This parameter specifies how often the GXV-3140 sends a blank UDP packet to the SIP server in order to keep the "pin hole" on the NAT router to open. The Default setting is 20 seconds.
STUN Server	The IP address or Domain name of the STUN server. STUN resolution results are displayed in the STATUS page of the Web UI. Only non-symmetric NAT routers work with STUN. Default STUN server: stun.ipvideotalk.com
Use NAT IP	The NAT IP address used in SIP/SDP messages. This field is blank at the Default settings. This should ONLY be used if your ITSP requires it.
SSL Certificate	This defines the SSL certificate needed to access certain websites.
SSL Private Key	This defines the SSL Private key.
SSL Private key Password	This defines the SSL private key password.

Advanced Settings/Call Features

Disable Call-Waiting	The Default setting is No. If set to Yes, the call waiting feature will be disabled.
Disable Call-Waiting Tone	The Default setting is No. If set to Yes, the call waiting tone will be disabled.
Disable Direct IP Call	The Default setting is No. If set to Yes, Direct IP calling will be disabled.

Advanced Settings/Ring Tone

Distinctive Ring Tone	This feature lets you select up to 3 Distinctive Ring Tones that will be played for a specific Caller ID. The GXV will ONLY use selected ring tones for particular Caller IDs. For all other calls, the default system ring tone will be used. If the server supports the Alert-Info header and standard ring tone set (like Bellcore) is specified, then the Caller ID field must be left "blank" and the ring tone will be used based on the info header from the server
Call Progress Tones	Using these settings, users can configure ring or tone frequencies based on parameters from the local telecom provider. By default, they are set to the North American standard. Frequencies should be configured with known values to avoid uncomfortable

	high pitch sounds.
	Syntax: f1=val,f2=val[,c=on1/off1[-on2/off2[-on3/off3]]];
	(Frequencies are in Hz and cadence on and off are in 10ms)
	ON is the period of ringing ("On time" in 'ms') while OFF is the period of silence. In order to set a continuous ring, OFF should be zero. Otherwise it will ring ON ms and a pause of OFF ms and then repeat the pattern. Up to three cadences are supported.
Ring Cadence	This defines the ring cadence for the phone. The default setting is: c=2000/4000;

Advanced Settings/Time Settings

NTP Server	This parameter defines the URL or IP address of the NTP (Network Time Protocol) server. The GXV3140 phone may obtain the date and time from the server. The default setting is ntp.ipvideotalk.com .
DHCP Option 42 override NTP server	Select Yes for the user to allow DHCP Option 2 to override the NTP server if there is one on the LAN. The default setting is NO.
Time Zone	This parameter controls the date/time display according to the specified time zone.
Self-Defined Time Zone	This parameter allows the users to define their own time zone.

Advanced Settings/Video Settings

Video frame rate	The Default value is 15 frames/second. The video frame rate is adjustable based on network conditions. Increasing the frame rate will increase the amount of data significantly therefore consuming more bandwidth. Lack of bandwidth will impair the video due to packet loss.
Video bit rate	The Default value is 128 kbps. The video bit rate is adjustable based on network conditions. Increasing the video bit rate may improve video quality if the bandwidth permits. Otherwise the video quality will be impaired due to packet loss
Video Packet Size	The Default value is 1400, range from 100 to 1400. It is recommended to use 600~800 if you have an Outbound Proxy or Media Gateway.
Video Rate Control	Frame or TMN8. The Default setting is Frame. TMN8 is good for bandwidths larger than 384kbps

Video Frame Skipping	Skips bad video frames as they are received
	The Default setting is NO.

Advanced Settings/Network Resources

Weather Update	This allows the user to set their preferred location for the weather forecast.
	City (Zip Code): Enter the zip code of the city the user wishes to receive weather updates.
	Refresh Interval (m): Set the interval for weather updates.
	Degree Units: Lets you specify the temperature to be measured in Fahrenheit or Celsius.
RSS News	Refresh Interval (s): The interval for information refreshing.
	Update Interval (m): The interval for information updating.
	RSS Feed (1~3): Enter the URL/IP address of 1-3 websites that the user subscribes to.
Photo Album	This allows users to configure their account login for Flickr, the online photo album service.
	Click on "ADD" and the user will be brought to another webpage for username, password and authorization. The user can choose to delete the account later if he/she desires.
Last FM	The user must register for a Last FM account or have an existing Last FM account. This setting allows users to configure their account login for Last FM.
	User Name: Enter the username for Last FM account.
	Password: Enter the password for Last FM account.
Browser Settings	Start Browser on Boot: Start the embedded mini browser in the LCD once the phone boots up. The default setting is NO.
	Browser Homepage: Sets the mini browser homepage.

MAINTENANCE PAGE DEFINITIONS

Maintenance/Network Settings

Address Type	This selects the type of IP address assigned: DHCP, PPPoE or Static IP.
PPPoE	When PPPoE is selected, the user needs to enter the following: PPPoE Account ID, PPPoE Password, PPPoE Service Name.
Static IP	When Static IP is selected, the user needs to enter the following: IP address, Subnet Mask, Default Gateway, Preferred DNS Server and Alternate DNS

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	Server.
Preferred DNS Server	This field sets the preferred DNS server for the user.
Layer 3 Qos	This field defines the layer 3 QoS parameter. It is the value used for IP Precedence, Diff-Serv or MPLS. The Default value is 0.
Layer 2 QoS 802.1Q/VLAN Tag	This field contains the value used for layer 2 VLAN tagging. The Default value is 0.
Layer 2 Qos 802.1p Priority Value	This assigns the priority value of the Layer2 QoS packets. The Default value is 0.

Maintenance/Web Access

Access Method	This defines the access method for web access: HTTP or secure HTTPS protocol.
Port	This defines the port for web access. By default, HTTP uses port 80 and HTTPS uses port 443. This field is for customizable web ports.
Admin Password	This defines the administrator password for web interface access. Only the administrator can configure the "Advanced Settings" and "Account x" pages. The password is case sensitive and the maximum password length is 25 characters.
User Password	This defines the user password for web interface access.

Maintenance/Upgrade and Provisioning

Upgrade Via	This field allows the user to choose the firmware upgrade method: TFTP, HTTP or HTTPS.
Firmware Server Path	Defines the server path for the firmware server. It can be different from the Configuration server which is used for provisioning.
Config Server Path	This is the server path for provisioning; it can be different from the firmware server.
Firmware File Prefix	This field enables your ITSP to lock firmware updates. If configured, only the firmware with the matching encrypted prefix will be downloaded and flashed into the phone.
Firmware File Postfix	This field enables your ITSP to lock firmware updates. If configured, only the firmware with the matching encrypted postfix will be downloaded and flashed into the phone.
Config File Prefix	This field enables your ITSP to lock configuration updates. If configured, only the configuration file with the matching encrypted prefix will be downloaded and flashed into the phone.

Config File Postfix	This field enables your ITSP to lock configuration updates. If configured, only the configuration file with the matching encrypted postfix will be downloaded and flashed into the phone.
DHCP Option 66 override Server	The Default setting is YES. If DHCP option 66 is enabled on the LAN side, the TFTP server can be redirected. Please be very careful when configuring this as the redirection could break the phone if this happens during the firmware upgrade.
Automatic Upgrade	The default value is NO. Choose "YES" to enable automatic HTTP upgrade and provisioning.
Automatic Upgrade Interval	Defines the interval (in minutes) to check the HTTP/TFTP server for firmware upgrades or configuration files changes.
Automatic Upgrade Rule	Defines the rules for automatic upgrade: Always Check, when F/W suffix/prefix changes, Skip the Firmware Check.
Authenticate Conf File	Authenticate configuration file before acceptance. The Default setting is NO.
Factory Reset	Press the RESET button to factory reset the phone.

Maintenance/Syslog

Syslog Server	The URL/IP address for the syslog server.
Syslog Level	Select the level of logging for syslog. The default setting is NONE. There are 4 levels: INFO, DEBUG, ERROR and WARNING.

Maintenance/Capture Packet

Capture Trace	Press START to start capturing a trace. Press STOP to abort the capture process.
View Trace	Press LIST to view the list of captured traces. It will show the time the trace was captured. Click on the name to download and view the trace.
Enable Application Debug	When set to YES, the trace captured will contain debug messages. The default setting is NO.

Maintenance/Language

Language	Selects the language setting for the phone.

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SIP ACCOUNT CONFIGURATION PAGE DEFINITIONS

The GXV3140 has three lines that can configure independent SIP accounts. Every SIP account has an individual configuration page.

Account/Generic Settings

Account Active	Select YES to enable and use the Line.
Account Name	The Account name for the user that is displayed on the LCD screen.
SIP Server	The IP address of the SIP server or the given domain name of the VoIP service provider.
SIP User ID	User account information provided by the VoIP service provider; normally similar to a telephone number or an actual telephone number.
Authenticate ID	The authenticate ID for the SIP user. It can differ or be the same as the SIP user ID.
Authenticate password	The password that the GXV uses to authenticate with the ITSP (SIP) server. After it is saved, this will appear as blank for security reasons. The maximum length is 25 characters.
Voice Mail UserID	When this is configured, the user can dial to the voicemail server using the MESSAGE button. This ID is normally the feature code for Voice Mail.
Name	The Caller ID that will be displayed for the account.
User ID is phone number:	If the Video phone has an assigned PSTN number, this field should be set to "YES". Otherwise, set it to "NO". If "YES" is set, a "user=phone" parameter will be attached to the "From header" in the SIP request to indicate the E.164 number.

Account/Network Settings

Outbound Proxy	IP address or Domain name of the Outbound Proxy, or Media Gateway, or Session Border Controller. Used by the GXV3140 for firewall or NAT penetration in different network environments. If a symmetric NAT is detected, STUN will not work and ONLY an Outbound Proxy will work.
DNS Mode	The default is set to A Record. If the user wishes to locate the server by DNS SRV, the user may select SRV or NATPTR/SRV.
NAT Traversal	This setting decides whether the NAT traversal mechanism is activated. If it is set to "Yes" and STUN server is configured, the GXV3140 will route according the STUN server.

	In this mode, the STUN client embedded in the phone will communicate with the appointed STUN server to examine which type of Firewall/NAT setting is employed. If the type of NAT detected is Full Cone, Restricted Cone or Port-Restricted cone, the phone will try to use public IP addresses and port in all the SIP and SDP messages. If the "NAT Traversal(STUN)" is configured to be "No, but keep-alive", the phone will send an empty SDP packet (without payload data) to the SIP server once in 20 seconds to keep the NAT port open. If an outbound proxy server is used, please configure this to be "NO".
Use RFC3581 Symmetric Routing	This configures whether RFC3581 symmetric routing is to be used or not.
Proxy Require	Notifies the SIP server that the unit is behind a NAT/Firewall.

Account/SIP Settings

SIP Registration	Selects whether or not the GXV3140 will send a SIP Register message to the proxy; The default setting is YES.
Unregister On Reboot	If set to YES, the SIP user registration messages will be cleared on reboot. The default setting is YES.
Register Expiration (m)	This defines the expiration time of the registration in minutes. The default value is 50 minutes; the maximum value is 65535 minutes (approximately 45 days) and the minimum value is 5 minutes.
Wait Time Retry Registration (s)	The wait time for registration retry if registration fails. The default is set to 20 Seconds.
Local SIP Port	The local SIP port for sending and receiving data. The default settings for Account 1/2/3 are 5060/5062/5064.
Subscribe for MWI	Default is set to No. When selected, a SUBSCRIBE for Message Waiting Indication will be sent out periodically.
Session Expiration (s)	Session Expiration is the time (in seconds) at which the session is considered timed out if no successful session refresh transaction occurs beforehand. The default value is 180 seconds.
MIN-SE (s)	The minimum session expiration (in seconds). The default value is 90 seconds.
UAC Specify Refresher	As a Caller, select UAC to use the phone as the refresher, or select UAS to use the Callee or proxy server as the refresher.
UAS Specify Refresher	As a Callee, select UAC to use the caller or proxy server as the refresher, or select UAS to use the phone as the refresher.
Force INVITE	The Session Timer can be refreshed using the INVITE or UPDATE methods. Select "Yes" to use the INVITE method to refresh the session timer

Enable 100rel	Obtains a SIP temporary response (1xx) using PRACK method in order to support the PSTN network. Request for a reliable temporary response with 100rel tag added to the first message request header.
Caller Request Timer	The default setting is Yes. If Yes is selected, the phone will use the session timer when it makes outbound calls if remote party supports session timer.
Callee Request Timer	If Yes is selected, the phone will use the session timer when it receives inbound calls with session timer request.
Force Timer	If Yes is selected, the timer will be activated even if the other party does not support session timers. If No is selected, the timer will be activated only if the other party supports the timer. To disable the timer, Caller Request timer, Callee request timer and Force Timer should all be set to No.
SIP Transport	Selects the SIP transport method. There are three types: TCP, UDP and TLS.
Symmetric RTP	Selects whether or not RTP is supported.
Support SIP Instance ID	Selects whether or not SIP Instance ID is supported.
Validate Incoming Messages	This configuration selects whether or not the incoming messages should be validated.
SIP T1 Timeout	This configures the timeout period for SIP T1. The default setting is 0.5 Seconds
SIP T2 Interval	This configures the time interval for SIP T2. The default setting is 4 seconds.
Remove OBP from route	The SIP Extension notifies the SIP server that it is behind a NAT/firewall.

Account/Codec Settings

Enable Video	--YES：Accepts all incoming video, this is the default setting； --NO：video is disabled.
DTMF	Assigns the mechanism to send DTMF. There are three supported modes: in audio (with DTMF as audio signals), through RTP and through SIP INFO.
DTMF Payload Type	Sends DTMF using RFC2833. The default is 101.
Preferred Vocoder	This products supports up to 5 different Vocoders: including G.711(a/µ)（PCMU/PCMA），GSM,G726-32k,G.723.1,G.729A/B and iLBC When this has been configured, the system will select the preferred vocoder from the list and the same order is sent with the SDP messages. The user can change the preferred vocoder priority order by toggling with the up and down buttons. It is recommended to use the default setting "PCMU"; if other

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	vocoders are chosen, there could be an audio transmission error.
Preferred Video Coder	Selects the preferred video codec between H.264 , H.263 or H.263+. It is recommended to use H.264
H.264Payload type	Selects the dynamic H.264 codec payload type (ranges from 96-127). The default setting is 99
H.263+ Payload type	Selects the H.263+ codec payload type (ranges from 96-127). The default setting is 103
SRTP Mode	Select to Enable SRTP mode. The default is set to Disable.
Silence Suppression	This controls the G723/G729 silence suppression/VAD. If set to YES, when no audio is detected, the phone will send a small number of VAD packets (instead of audio packets). If Set to NO, this feature is disabled. The default setting is NO.
Voice Frame per TX	This configures the number of voice frames transmitted per packet. (It is recommended to set this based on the Ethernet IS packet limitation – 1500 Byte or 120kb/s) When configuring this, it should be noted that the "ptime" value for the SDP will change with different configurations here. This value is related to the codec used and the actual frames transmitted during the in payload call. For example: if the codec is configured to be G.723 and "Voice Frames per TX" is set to 2. Then in the INVITE request, the "ptime" value for SDP will be 60 ms. This is because the G723 voice frame is 30 ms. Similarly, if the setting is 2 and the codec is G729 or G711 or G726, the "ptime" value for SDP in the INVITE request will be 20 ms. If the voice frames per TX configuration exceeds the maximum value allowed, the phone will choose the preferred codec and use the maximum value allowed. The maximum values: For PCM is 0 frames (x10ms) ; for G76 is 20 frames (x10 ms); for G723 is 32 frames (x30 ms); for G728/G728 is 64 frames (x10ms) and 64 frames (x2.5 ms) respectively. Adjusting these values will also change the jitter buffer. The phone has an algorithm for setting the jitter buffer and the jitter buffer rate is around 20-200ms. For end-users, it is recommended to use the default setting, as incorrect settings may influence the quality of audio.
G723 Rate	This defines the encoding rate for G723 vocoder, and can be 6.3Kb/s or 5.3Kb/s. Please confirm with your service provider.
Jitter Buffer Type	Users can select either Fixed or Adaptive based on network conditions. The default is Adaptive.

Jitter Buffer Length	User can select Low, Medium, or High based on network conditions. The default is Medium.
Account/Call Settings	
Dialing Prefix	Sets the prefix added to each dialed number.

Dialing Plan	Dial Plan Rules:
	1. Accepted Digits: 1,2,3,4,5,6,7,8,9,0 , *, #, A,a,B,b,C,c,D,d
	2. Grammar: x - any digit from 0-9;
	    a) xx+ - at least 2 digit numbers
	    b) xx. - only 2 digit numbers
	    c) ^ - exclude
	    d) [3-5] - any digit of 3, 4, or 5
	    e) [147] - any digit of 1, 4, or 7
	    f) <2=011> - replace digit 2 with 011 when dialing
	    g) | - the OR operand
	
	• Example 1: {[369]11 | 1617xxxxxxx}
	Allow 311, 611, and 911 or any 10 digit numbers with leading digits 1617
	• Example 2: {^1900x+ | <=1617>xxxxxxx}
	Block any number of leading digits 1900 or add prefix 1617 for any dialed 7 digit numbers
	• Example 3: {1xxx[2-9]xxxxxx | <2=011>x+}
	Allows any number with leading digit 1 followed by a 3 digit number, followed by any number between 2 and 9, followed by any 7 digit number OR Allows any length of numbers with leading digit 2, replacing the 2 with 011 when dialed.
	
	3. Default: Outgoing – {x+}
	Allow any length of numbers.
	
	Example of a simple dial plan used in a Home/Office in the US:
	{ ^1900x. | <=1617>[2-9]xxxxxx | 1[2-9]xx[2-9]xxxxxx | 011[2-9]x. | [3469]11 }
	Explanation of example rule (reading from left to right):
	• ^1900x. - prevents dialing any number started with 1900
	• <=1617>[2-9]xxxxxx - allows dialing to local area code (617) numbers by dialing
	7 numbers and 1617 area code will be added automatically
	• 1[2-9]xx[2-9]xxxxxx |- allows dialing to any US/Canada Number with 11 digits length
	• 011[2-9]x. - allows international calls starting with 011
	• [3469]11 - allow dialing special and emergency numbers 311, 411, 611 and 911
	Note: In some cases where the user wishes to dial strings such as *123 to

	activate voice mail or other applications provided by their service provider, the * should be predefined inside the dial plan feature. An example dial plan will be: { *x+ } which allows the user to dial * followed by any length of numbers.
Early Dial	The default setting is NO. Only use this if the proxy supports the 484 response.
Refer to Use Target Contact	The default is NO. If set to YES, then for Attended Transfer, the "Refer-To" header uses the transferred target's contact header information.
Auto Answer	The default setting is NO. If it is set to YES, the GXV3140 will play a "beep" sound and answer the phone automatically on the speaker.
Send Anonymous	If set to YES, the "From" header in the outgoing SIP messages will be set to anonymous to block the caller ID from displaying. The default setting is NO.
Anonymous Call Rejection	The default setting is NO ;If set to YES ,any anonymous call will be rejected(with 486Busy message)
Account Ring Tone	There are four ring tones to choose from: 1 system ring tone: After selecting this, all calls will have the same ring tone. 3 custom ring tones: The phone will have different ring tones according to the caller.
Special Feature	The default setting is Standard; different features can be selected depending on the user needs.
Enable Call features	The default is set to YES. If set to NO, the call features are disabled.
Call Forward Unconditional	Sets the number to forward to unconditionally.
Call Forward When Busy	Sets the number to forward to when busy.
Call Forward When No Answer	Sets the number to forward to when no answer.
Delayed Call Forward Wait Time (s)	The wait time before transferring the call to another extension or to voicemail; the default setting is 20 seconds.
No Key Entry Timeout (s)	Defines the time out duration on no key entry. Default setting is 4 seconds.
Use # as Dial Key	Selects whether or not # is used as Send.

DEVICE MANAGER PAGE DEFINITIONS

Device Manager/ LCD

Screen Saver Timeout (m)	This sets the lapsed idle time needed for the screen saver to appear. The default setting is 5 minutes.
Screen Saver Interval (s)	The screen saver is a picture slide show. This defines the frequency to change the picture on the screen for the screen saver. The default setting is 10 seconds.
LCD Auto Power Off Time (m)	This defines the lapsed idle time needed for the LCD to power off automatically in order to save power. The default setting is 15 minutes.

Device Manager/HeadSet

Headset TX Gain (dB)	Transmission gain. It's a headset setting to control the voice intensity
Headset RX Gain (dB)	Receive gain. It's a headset setting to control the voice intensity.

Device Manager/Camera

Zoom mode	Select the desired camera zoom mode (Tele, optical, digital). Can adjust local video zoom either in mirror mode or during the call (on the fly) by pressing the Left or Right Arrow Key
Exposure	Select the desired Camera Exposure mode based on surroundings. The default setting is set to Auto
Color Mode	Select the desired Camera Color Mode (Color or Monochromatic). The default setting is set to Color
White Balance	Select the desired Camera White Balance to be automatic or Fixed. The default setting is set to Auto
Lens Correction	Correct Camera Lens noise. Default is set to YES. It is recommended to set this parameter to YES to reduce camera lens noise and improve video quality.

Device Manager/TV Output

TV Output	Select the desired TV Output type (PAL or NTSC).

SAVING THE CONFIGURATION CHANGES

After users makes changes to the configuration, press the "Save" button in the Configuration Menu. The web browser will then display a message window to confirm the saved changes. Reboot the phone for the new settings to take effect.

REMOTE REBOOT

Press the "Reboot" button at the top right-hand corner of the configuration menu to reboot the phone remotely. The web browser will then display a message window to confirm with the user if they wish to reboot the phone or not. Click on "Yes" and the phone will reboot. Wait 30 seconds to log in again.

CONFIGURATION THROUGH A CENTRAL SERVER

The Grandstream GXV3140 can be automatically configured from a central provisioning system.

When the GXV3140 boots up, it will send TFTP or HTTP request to download a configuration file, "cfg000b82xxxxxx", where "000b82xxxxxx" is the MAC address of the GXV3140.

The configuration data can be downloaded from the central server via TFTP or HTTP/HTTPS. A service provider or an enterprise with larger deployments of Grandstream devices can easily manage the configuration and service provisioning of individual devices remotely from a central server.

Grandstream has a central provisioning system called GAPS (Grandstream Automated Provisioning System). GAPS supports automatic configuration of Grandstream devices. GAPS uses enhanced (NAT friendly) TFTP or HTTP (thus no NAT issues) and other communication protocols to communicate with each individual Grandstream device.

Grandstream provides GAPS service to VoIP service providers. GAPS can be used for either simple redirection or with certain special provisioning settings. At boot-up, Grandstream devices by default point to the Grandstream provisioning server (GAPS). Based on the unique MAC address of each device, GAPS will provision the devices with redirection settings so that they will be redirected to customer's TFTP or HTTP server for further provisioning. Grandstream also provides the GAPSLITE software package which contains our NAT friendly TFTP server and a configuration tool to facilitate the task of generating device configuration files.

The GAPSLITE configuration tool is now free to end users. The tool and configuration templates are available for download from http://www.grandstream.com/configurationtool.html

LCD MENU AND FEATURES

The GXV3140 has a user-friendly LCD Menu and multiple features that provide the users with convenient tools/applications for both work and personal entertainment. In other words, the GXV3140 acts as your personal assistant in many different ways. The LCD MENU and Features will be explored in more detail below.

PHONE BOOK FEATURES

Users can manage their contacts through the phone book. The phone book supports features such as adding, deleting, modifying contacts as well as downloadable phone book from the TFTP/HTTP server. To access the phonebook, the user can select the OK button or F1 (soft key corresponding to MENU) to access MENU and select Phonebook. The user may also access the phonebook with the Phonebook button on the phone.

Select the Phone book to display the figure below:

As shown in the figure above, every contact contains an Extension number, Phone number, Mobile number, Fax number and the group it belongs to. On the lower right hand corner, it shows that the total capacity of the phone book is 500 contacts, as well as the number of used contacts. The user may dial the contact by pressing F1, and can search for a contact by pressing F2. When searching, the user needs to enter the user name to search and press OK to confirm. Press F3 to access "Options", shown in the figure below:
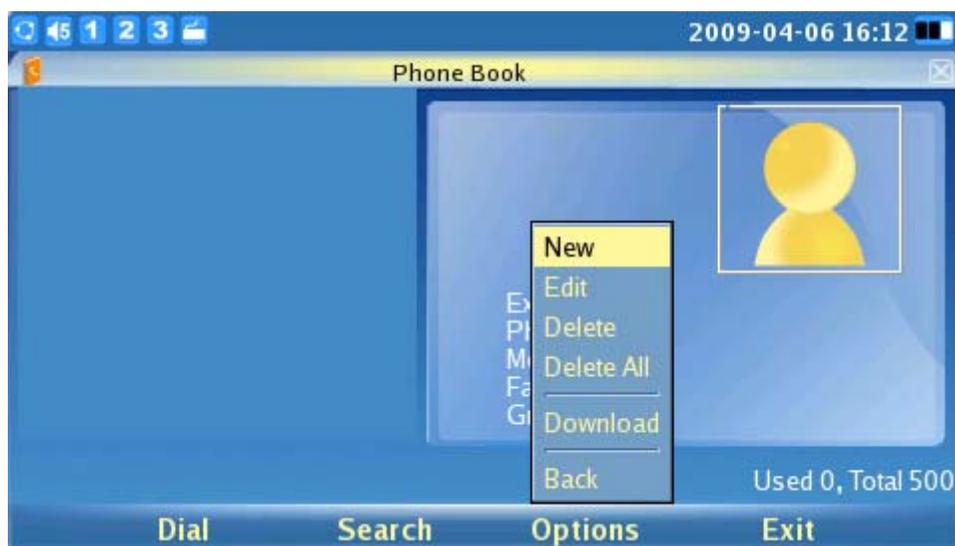
As shown in the figure above, Select "New" to add a new contact; Select "Edit" to modify an existing entry. The screen will display the figure below. Users can add the entry to the phonebook and associate a picture taken by the screenshot feature as a thumbnail image for the contact.
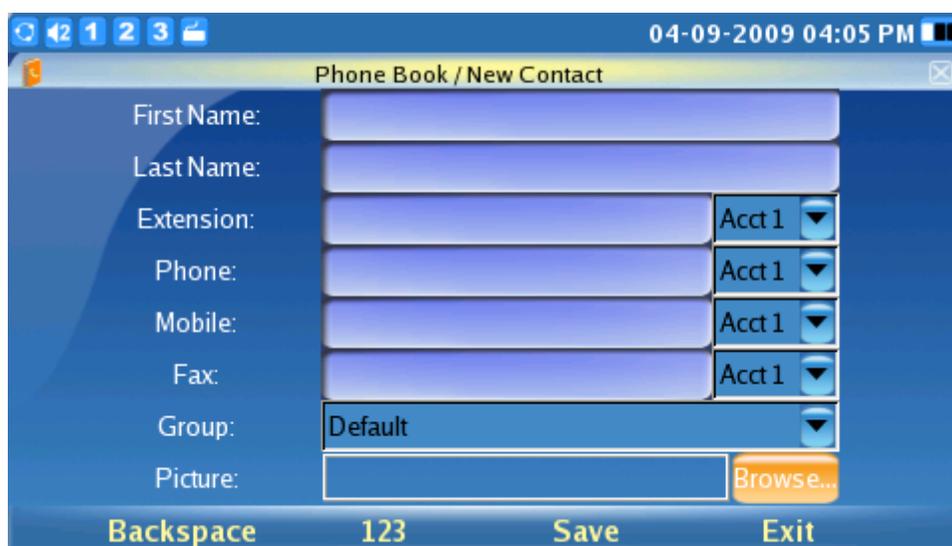
In "Options", select "Delete" to delete the contact, select "Delete All" to delete all of the contacts in the phone book; Select "Download" and the screen will display the following:
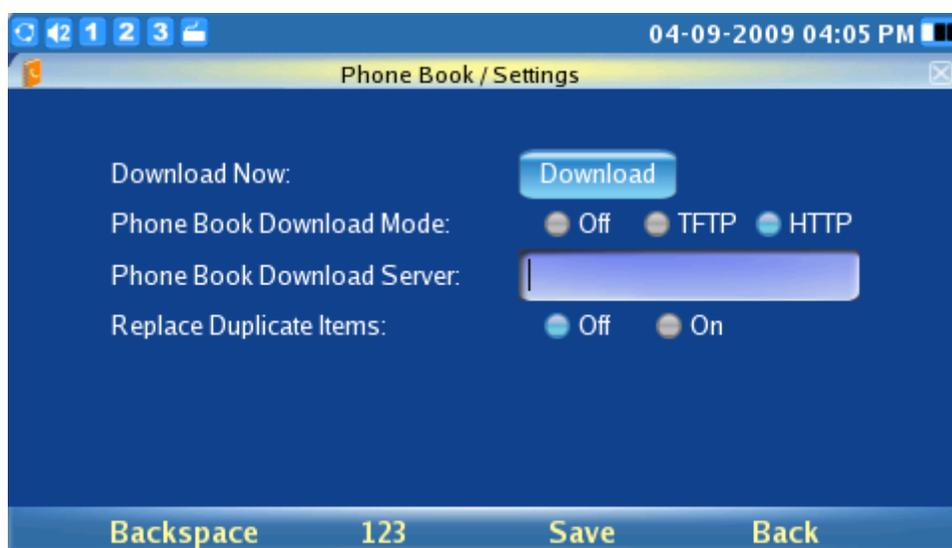
In order to complete the download of a phonebook from a server, users should configure the Download mode and the URL/IP address of the Download server. After it is configured, select the "Download" button next to "Download now" to start downloading.

Note: If the user is downloading from a local server, please ensure that the TFTP/HTTP settings are correct.

CALL HISTORY

Users may access the call records of the phone through the Call History. The Call History allows the user

to view and manage all calls (Dialed, Received, and Missed). Access the MENU by selecting F1 and select Call History, as shown in the figure below:

Press F1 to Select the Call History, and you will enter a screen similar to the one below:
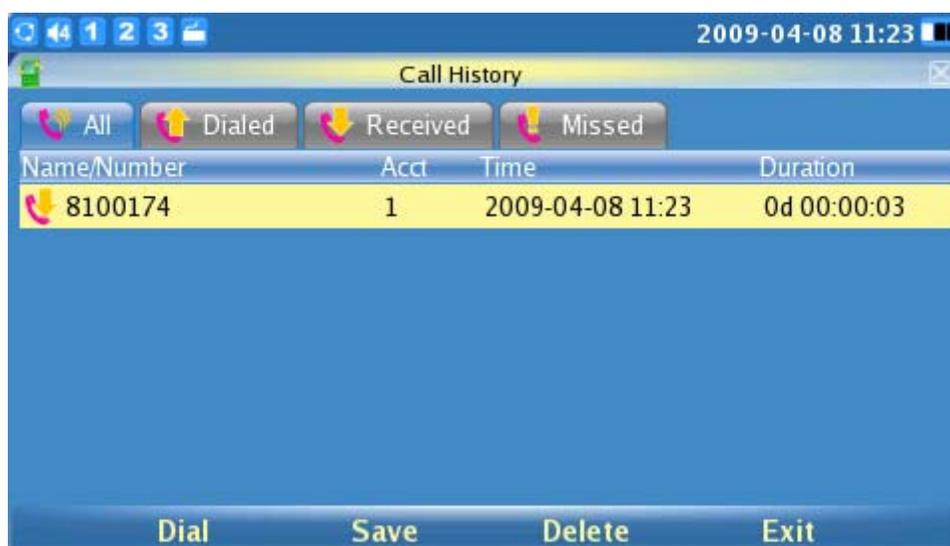
As shown in the figure above, each user can choose to Dial, Save or Delete a Call Record. The Dial option will allow you to perform a re-dial or dial out to the number. The Save option will save the number to the phone book.

MESSAGES

The message feature is a text message feature (only English is supported at the moment). If two GXV3140s are registered on the same SIP server, text messages can be sent/received between the two parties. Similarly, if other IP products support this feature, the text message feature can also be used to send/receive messages between the device and the GXV3140. To access this feature, press F1 to select

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Menu and then select Messages (as shown in the figure below):
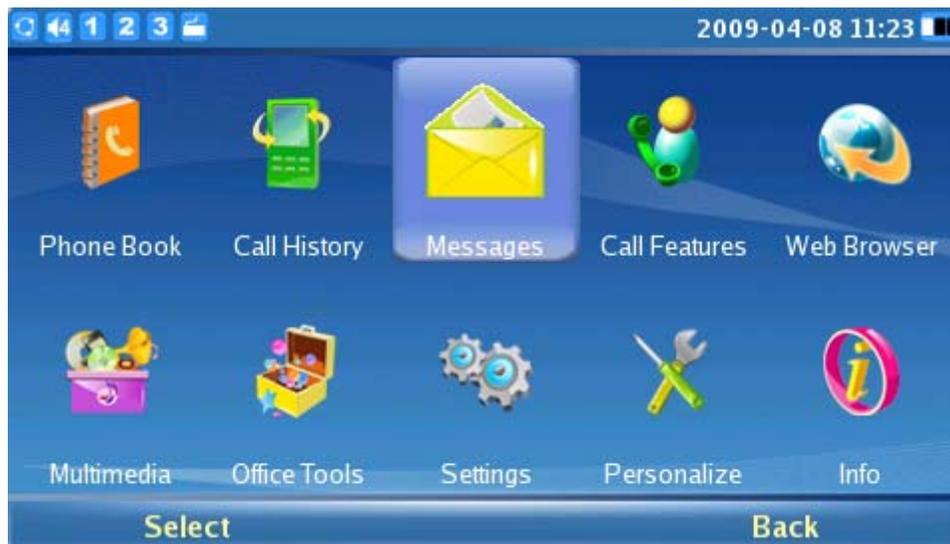
Press F1 to Select Messages. The screen should look similar to the one below:
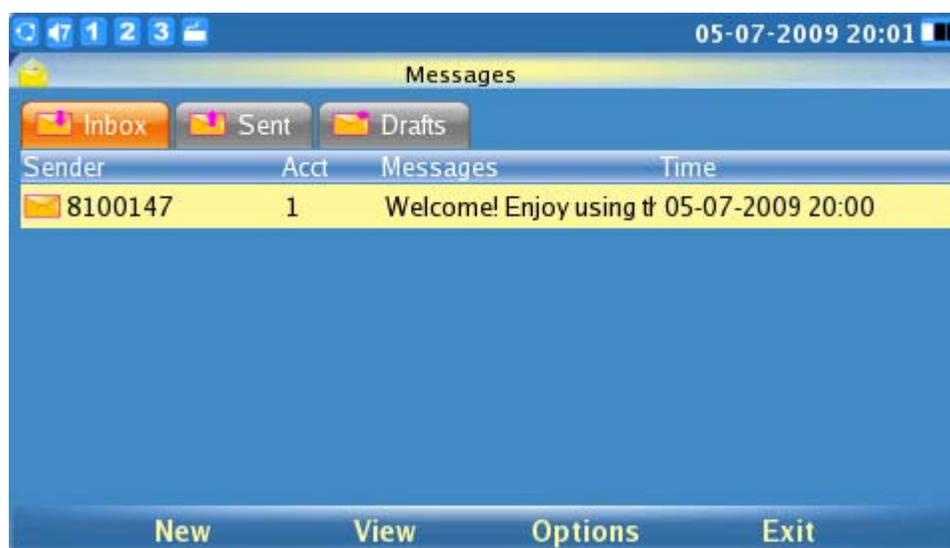
As shown in the figure above, users can create, view and manage their messages. When the user presses F3 to select "Options", the user can dial the number of the sender, save the number of the sender, or delete the message(s).

When the user receives a message, the following notification will show up on the LCD screen:

Press F3 to Select OK. This will open the message for the user to view.

As shown in the figure above, the users can choose to "Reply", "Forward" or "Delete" the message.

CALL FEATURES

The Call Features menu allows the user to configure Call Forwarding methods (Forward unconditionally, Forward when busy, Forward on no answer) and other features such as Auto-Answer, Call Waiting and DND. Users can configure the three accounts to different call forwarding schemes. To access call features, select F1 for MENU and select Call Features (as shown in the figure below):

Press F1 to Select Call Features and the following screen will be displayed:
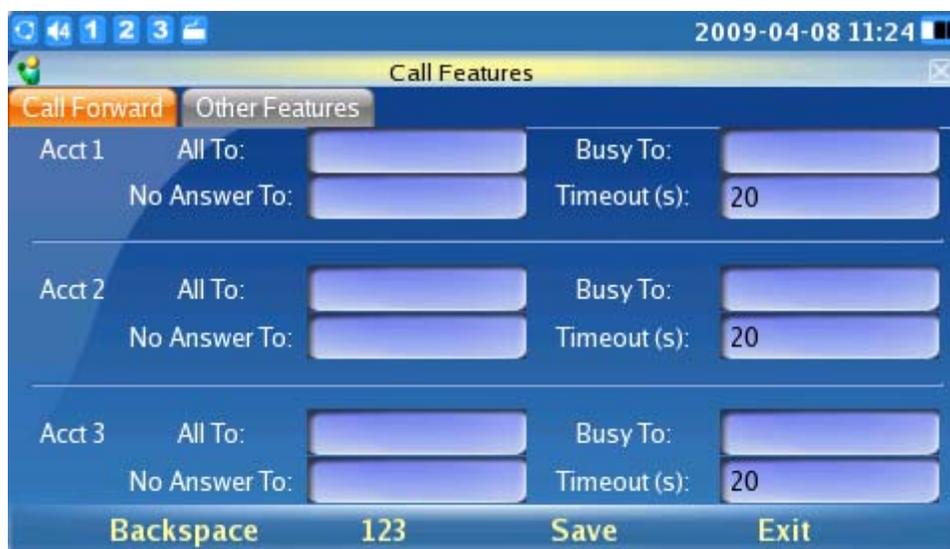
Other features include configuration for Auto Answer, Do Not Disturb, Call Waiting, Call Waiting Tone, and Direct IP Call (as shown in the figure below):
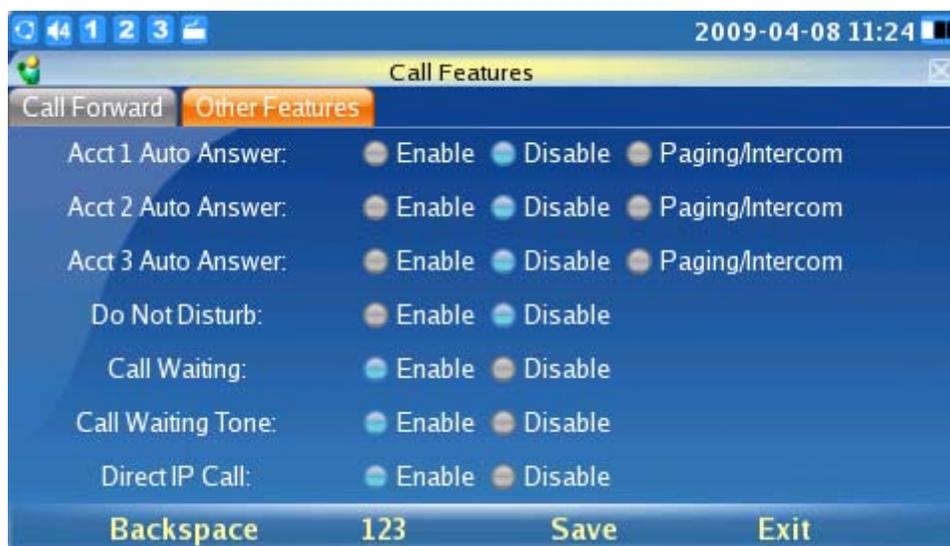
After the settings are configured, select "Save" to save and activate the settings.

WEB BROWSER

The GXV3140 provides users with a full HTML Web Browser for internet browsing. This is accessible by pressing the F1 button to load the MENU, and then select Web Browser (as shown in the figure below):

After selecting OK, it may take several seconds to load the web browser. The LCD screen should look like the figure below when the web browser is loading:
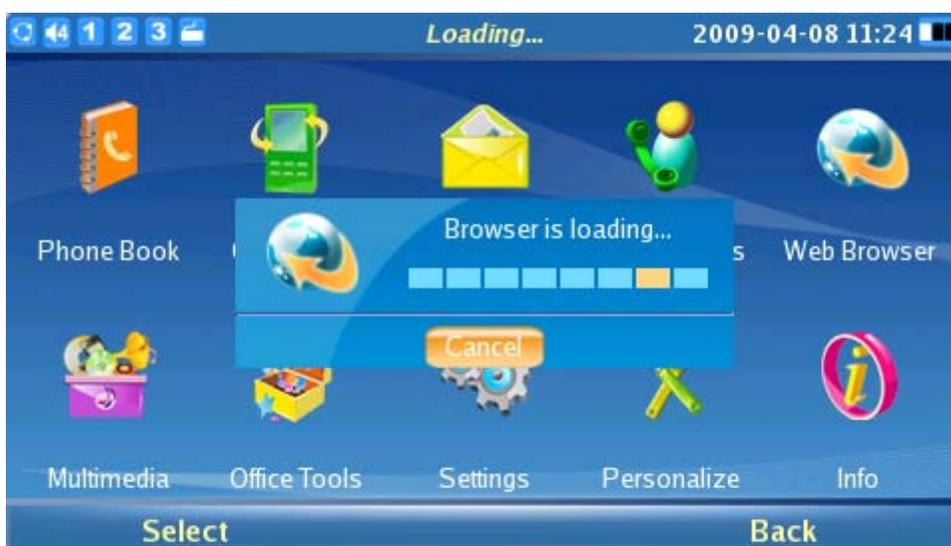
When the web browser has finished loading, a default page displaying "Hello, welcome to GXV3140" shows up on the screen.

Users can then press F4, corresponding to the "Options", to move "Forward" and "Backward" on web pages. By selecting "URL" under "Options", the user can enter the URL of a website. The user can press the F3 button which corresponds to the Tab option to toggle the curser. Similarly, users can choose "Zoom" under "Options" to zoom in and zoom out of a webpage. Select "Exit" to exit the web browser. The figure below shows the screen of the web browser while visiting a website:

MULTIMEDIA

The GXV3140 provides Multimedia applications such as Internet Radio, Media player, Photo viewer, Photo album, Gstris and Online Music.

Press F1 to select the MENU and scroll to Multimedia (as shown in the figure below):

Select Multimedia by pressing the OK button or "Select". The multimedia features are shown in the figure below:

● **INTERNET RADIO**

As shown in the figure above, select F1 or OK to load the Internet Radio application. The channels are divided into the following categories: My Favorites, Talk Channels, Music Channels, Sports Channels, Ethnic Channels and Local Radio. The users may select the channels according to their preferences. The screen will look like the figure below:

As shown in the figure above, users can then press the F1 button to adjust the volume.
From the "Options" button (F3), users can "Open an URL" or "Open URL list" for other Internet Radio stations. The user may also Play/Stop, Mute and Minimize the Internet radio.
The user can press F4 to Exit the Internet Radio application.

In addition, users may configure "My Favorites" by pressing F2 button for "Control". This would bring out a toolbar, where users can add/delete/modify and navigate through the "My Favorites" playlist (As shown in the figure below).

● **MEDIA PLAYER**

The GXV3140 Media Player allows users to play music files through the GXV3140. To access the Media Player, select MENU->Multimedia-> Media Player. (As shown in the figure below):

Press the OK button or F1 to select the Media Player.

As shown in the figure above, press F1 to adjust the volume of the media player (Navigate by using the Up and Down buttons). Press F2 to enable the "Tab" option, this allows the user to move the cursor between the four buttons: "Previous", "Play", "Stop" and "Next".

Press F3 for "Options".　Users can perform the following operations on the playlist: Add, Remove, Up, Down, Delete and Save. Users can also select the channel for output: Headset, Speaker and Stereo. Configurations such as Loop Play, Full Screen, Mute and Minimize can also be found here. Press F4 to exit.

● **PHOTO VIEWER**

The GXV3140 features a Photo Viewer which allows users to conveniently view their photos. This is accessible through Menu->Multimedia->Photo Viewer (as shown in the figure below).

Press the OK button or F1 to Select the Photo Viewer. After the application loads, the user may select to view pictures from different folders:
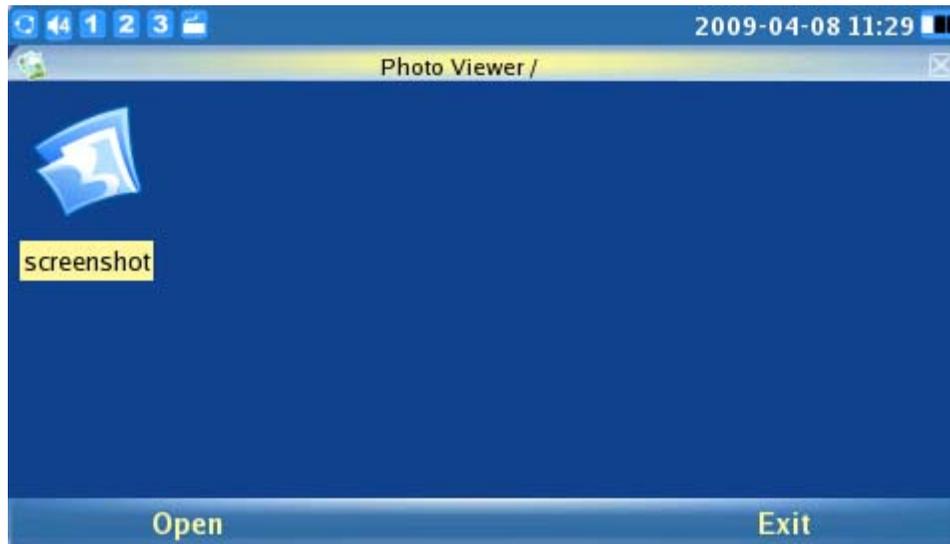
The screen will look similar to the figure below when the user loads any picture from a folder (For example, open the first picture from the "screenshot" folder).
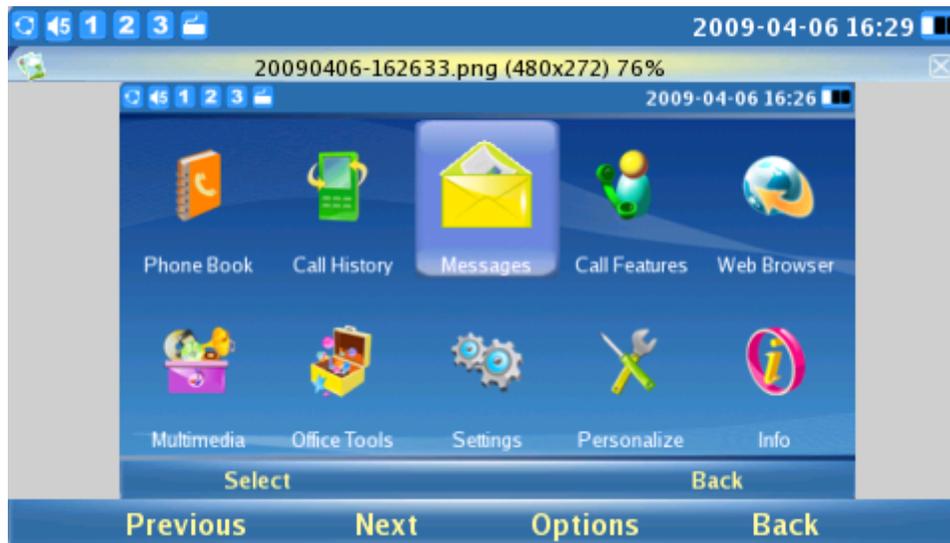
Users can choose F1 or F2 to select the "Previous" or the "Next" picture. Press F3 for "Options", Users can also Zoom, Rotate (Clockwise, Counter Clockwise), Flip (Vertical Flip, Horizontal Flip) the picture as well as display the pictures in a slideshow.

● **PHOTO ALBUM**

Users can upload, view, or search for photos from online photo albums. The photo album can be

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accessed by selecting MENU->Multimedia->Photo Album (as shown in the figure below):

Press F1 to "Select" Photo Album. After the Photo Album is loaded, the following screen will appear; the user can choose which online photo album to use and press Start to begin activating it.

Users must register for an account with a photo album service provider (i.e. Photobucket, Flickr, Phanfare) or use an existing account. For example, when Flickr is selected, users will need to "Add" an Account before they can upload local photos, view online photos and search for photos on Flickr.

● **GSTRIS**

The GXV3140 provides interactive games for your entertainment. Under Menu->Multimedia, choose Gstris (As shown in the figure below).

Access the Gstris application by pressing F1 (corresponding to Select) or the OK button. Press the F1 and F2 to start/stop or pause the game (as shown in the figure below).
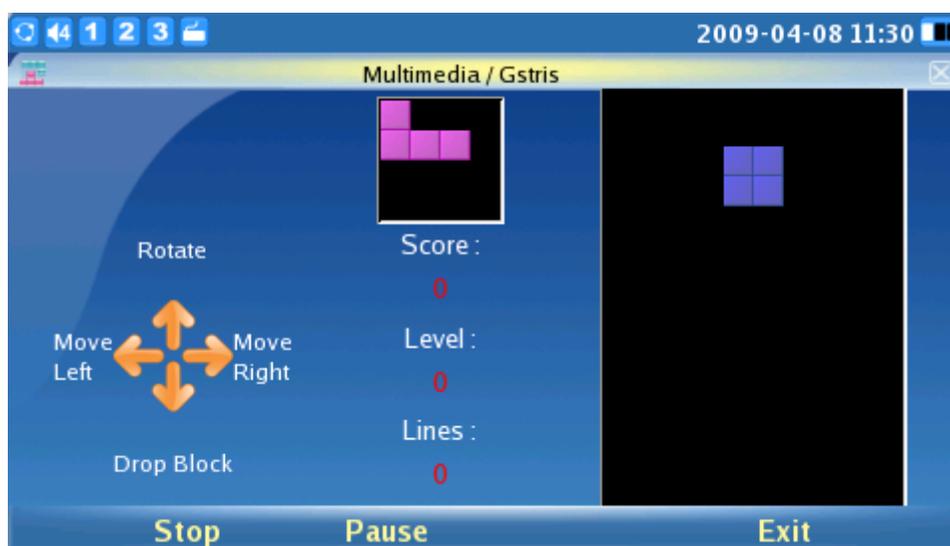
● **ONLINE MUSIC**

The GXV3140 also provides an Online Music streaming application. Users must have a pre-existing account with LastFm before listening to online music through the GXV3140. Users can also select their preferred music genre and listen to it online. To access the Online Music, select MENU->Multimedia-> Online Music (as shown in the figure below):

Press F1 to "Select" Online Music. After the application loads, the user must first set up their account by accessing Options-> Settings, where the username and password for LastFM will be prompted. The user can then select the musical style that they prefer from the list of available musical styles.
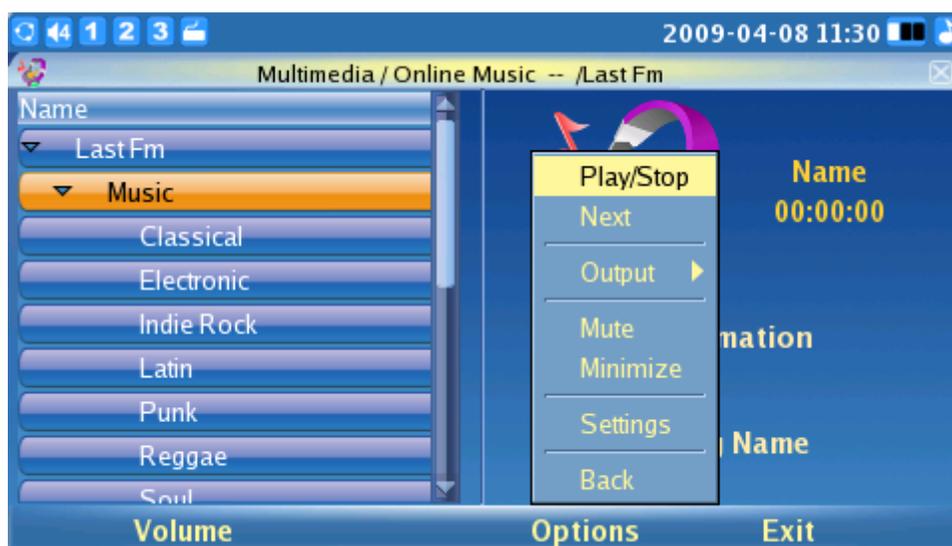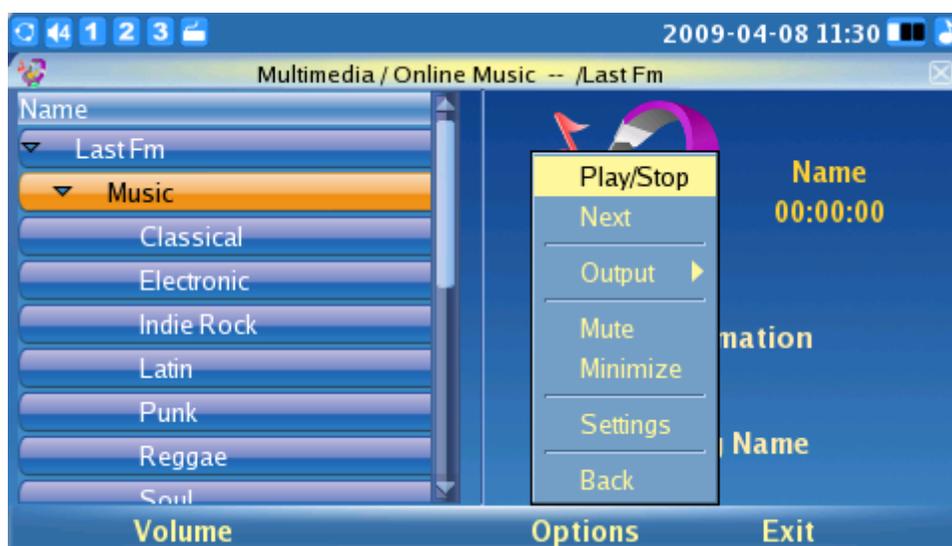
Press F1 to adjust the volume (see the figure above) and press F3 for "Options". In "Options", there are several settings: the Play/Stop option will control the music, the Next option will skip the current song and play the next one, the Output option allows you to choose the output channel (Headset, Speaker, Stereo), Mute and Minimize.

OFFICE TOOLS

The GXV3140 provides a collection of useful office tools for users and can be accessed via MENU. These include the following features: Calendar, Alarm Clock, Weather Update, RSS News and Stock update.

These features will be introduced in more detail below:

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● **CALENDAR**

This feature includes adding an event to the calendar, and can be accessed by pressing the F1 button corresponding to the "Add an event" option on the LCD (as shown in the figure below).
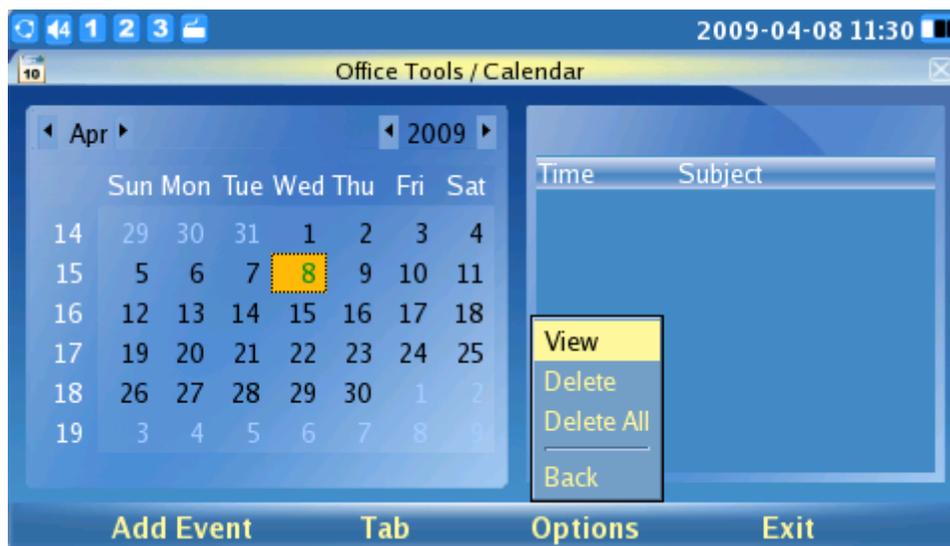
As seen in the figure above, users can press F1 to "Add New Event", where events such as birthdays may be added to the calendar. Press F2 for "Tab", this allows the curser to move from year/month/date on the calendar, so that the date can be adjusted accordingly. Press F3 for "Options", where users may view, delete or delete all events. Press F4 to exit the calendar.

● **ALARM CLOCK**

The GXV3140 provides users with a flexible alarm clock application. This application allows users to configure a custom alarm tone and configure the alarm time in detail to suit their needs (as shown in the figure below):
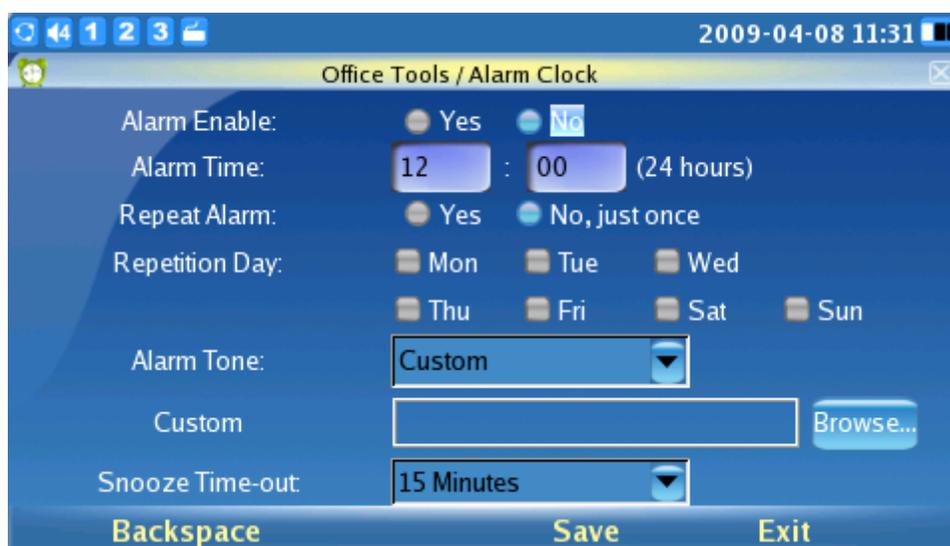
● CALCULATOR

The GXV3140 also includes a Calculator application. To operate the calculator, press the corresponding number on the keypad. The arithmetic operations (e.g. add, subtract, multiply, divide) are defined by the corresponding arrow buttons.
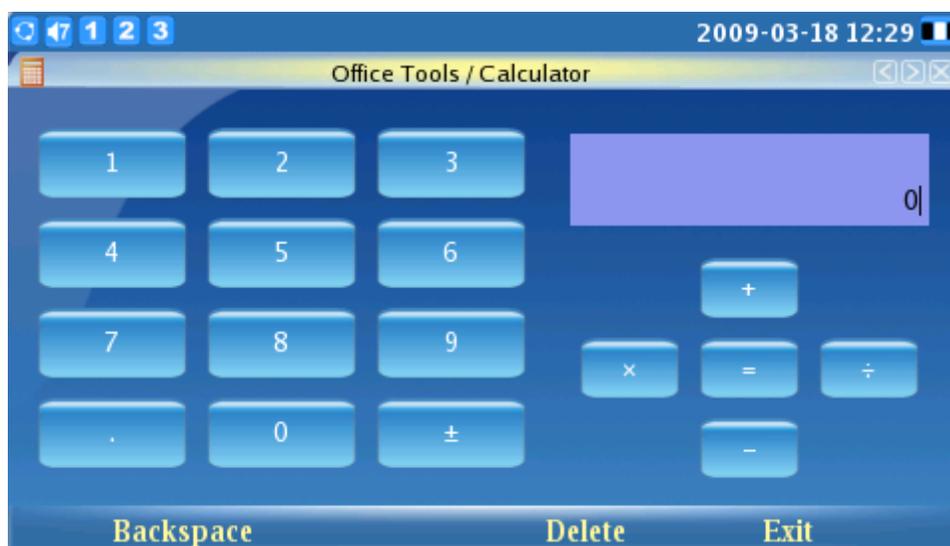
● WEATHER UPDATE

The GXV3140 also includes a weather updates application that provides users with the most up to date information on the weather forecast. Users may set the City (Zip code) to display the weather update for that particular city. In addition, users may also define the refresh interval time

(in minutes) and the preferred temperature units.
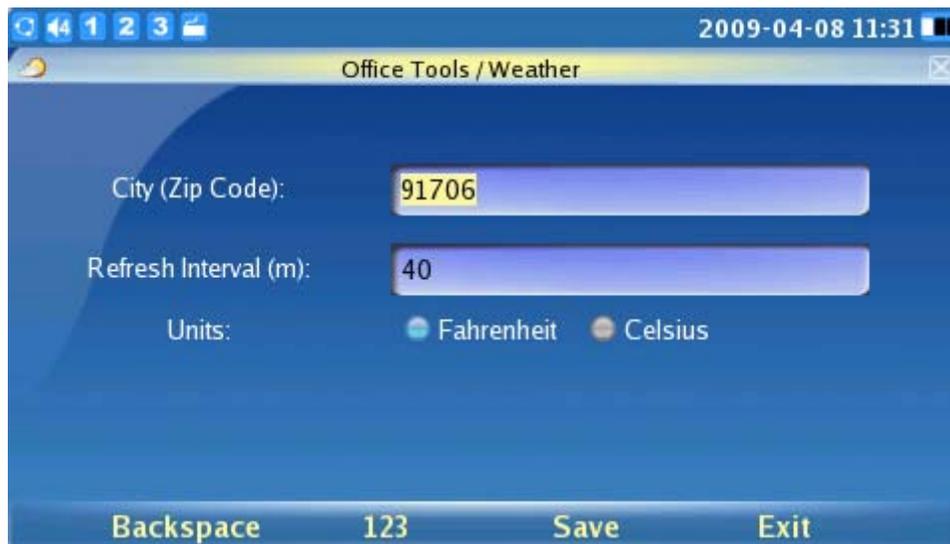
- **RSS NEWS**

The GXV3140 allows users to subscribe to different RSS feeds. The GXV3140 supports up to 3 customized feeds (as shown in the figure below). The user is able to subscribe to news that is relevant to the topic of interest. You can also configure the refresh time of the RSS feeds:

- **DIRECT IP CALL**

Another key feature supported on the GXV3140 is Direct IP Calling. In the IP address field, enter the IP address of the other party and press the F3 key which corresponds to the "SEND" option on

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the LCD as shown in the next figure:
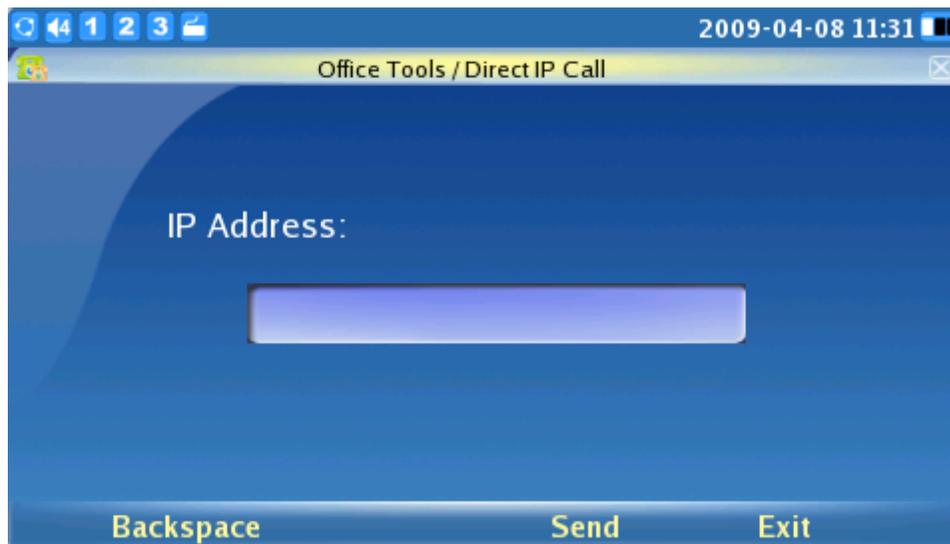
- **IM**

The GXV3140 provides support for the following Instant Messaging services: Google Talk, MSN, QQ and Yahoo. Users must have a pre-existing account in order to start using the Instant Messaging feature. Users may manage their accounts by going to Options->Accounts->Manage Accounts (as shown in the figure below).

Users will be prompted for login information for the Instant Messaging service of their choice as seen in the figure below. After the user logs in, they can begin to use the instant messenger to chat to their contacts online.
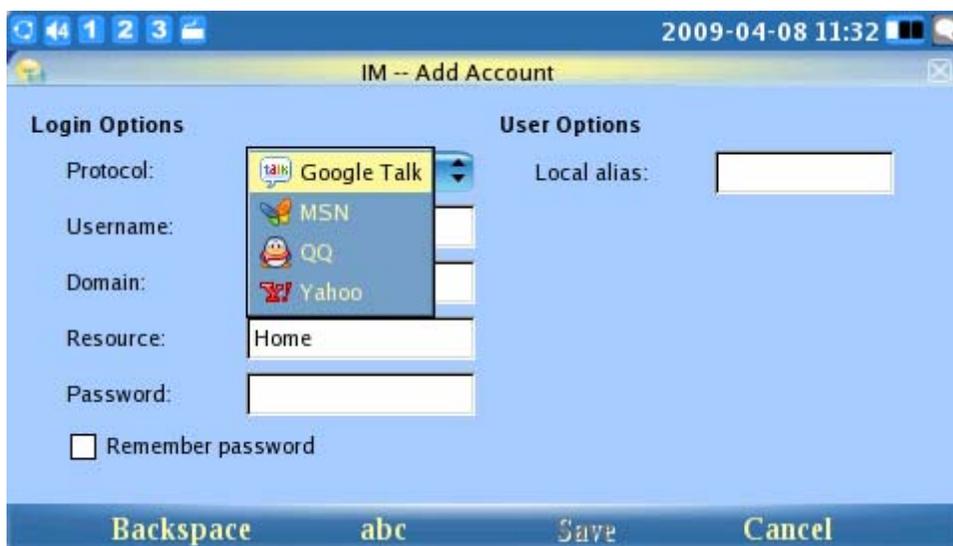
● FILE MANAGER

The GXV3140 provides a file manager as a tool to manage files such as music, pictures and documents. Users can manage their documents efficiently through the File Manager. As shown in the figure below, users can access different folders to manage their files. Ringtones and screenshots are stored in separate folders. If a USB device is connected, its contents will also be displayed in the File Manager.
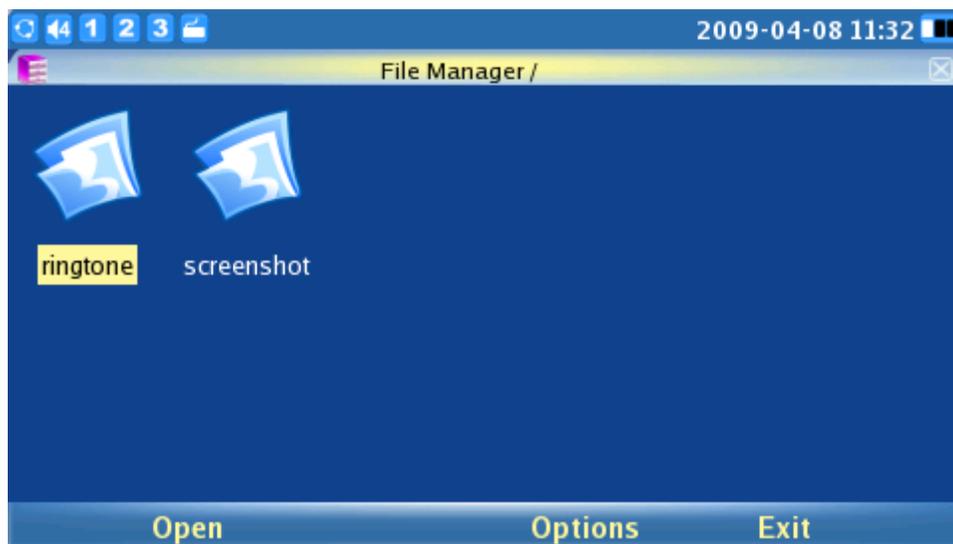
Users can copy files by pressing Options-> Copy, and after copying they can choose to paste the files to the desired directory by selecting Options-> Paste.

● STOCKS

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The GXV3140 includes a Stock Market monitoring application that conveniently retrieves current information regarding the stock market.

As shown in the figure above, the users can use the "Add Stock" option by pressing F1. This adds a new stock to the list after you enter the stock symbol.

Users can refresh the contents by pressing F2 for 'Refresh" and press F3 for "Options" to delete or delete all stocks. Also, in Options->Settings, users can define the refresh interval, update interval, color option and enable/disable images.

● **CURRENCIES**

Users can use this feature to perform currency conversions. Users must enter the currency to convert from as well as the currency to convert to. Pressing F3 selects "OK" and starts the conversion process (as shown in the figure below):
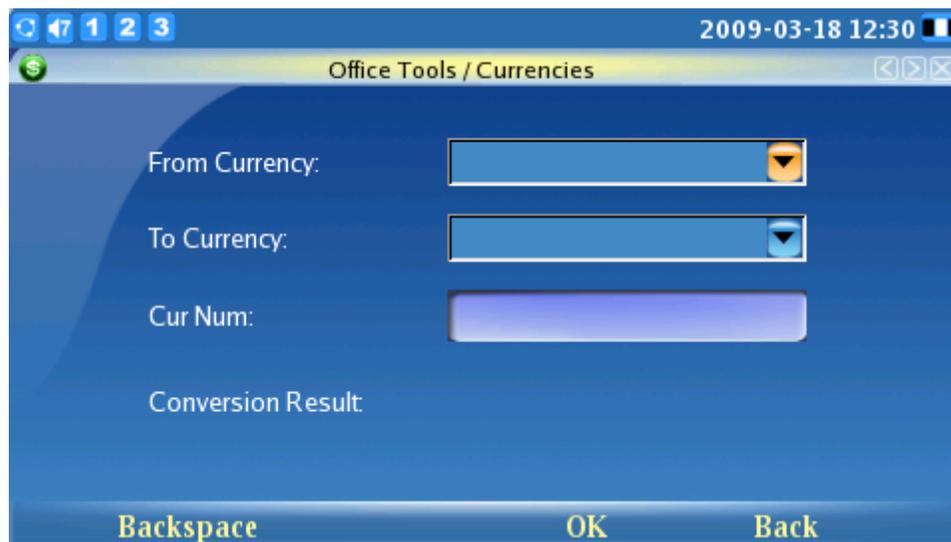
SETTINGS

The System Settings allow users to configure settings for Accounts, Network, Time, Display, Maintenance and the Camera. To access the system settings, press F1 to open the MENU and select Settings.

- ● **ACCOUNTS SETTINGS**

This menu lets users configure the three SIP accounts; the same configurations may be completed by accessing the web configuration interface. The LCD account setting page is shown in the figure below:

- ● **NETWORK SETTINGS**

    This screen allows users to configure the various network connection settings as well as the VLAN settings.

    Users may choose to use DHCP, PPPoE or Static IP (as shown in the figure below):
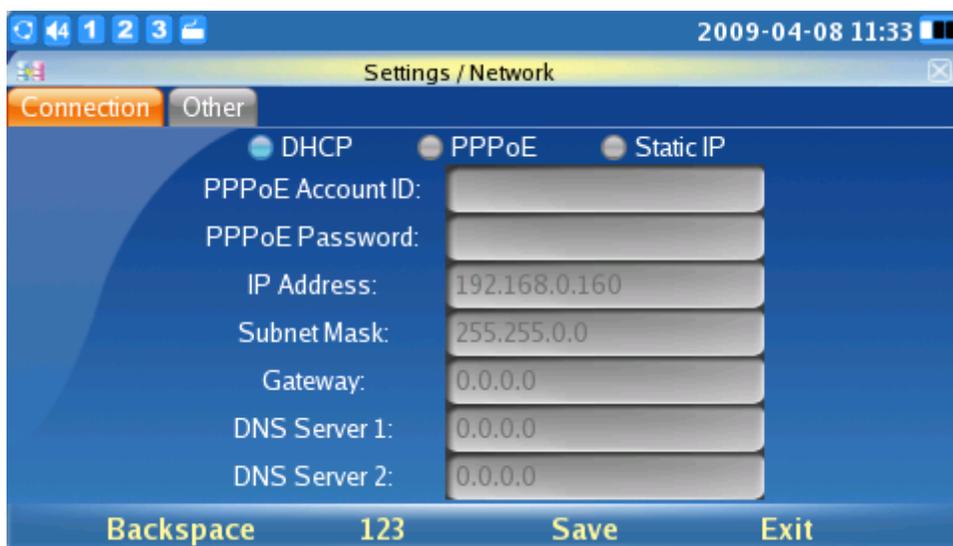
In the "Other" page, users may choose to set the Preferred DNS server, Layer 3 QoS, Layer 2 QoS 802.1Q/VLAN tag and Layer 2 QoS 802.1 priority value.

- **TIME SETTINGS**

  The GXV3140 allows the time to be updated automatically through an NTP Server. Users must define the Time Zone or use a Self-defined Time Zone. You can also specify the display format for the time and date.
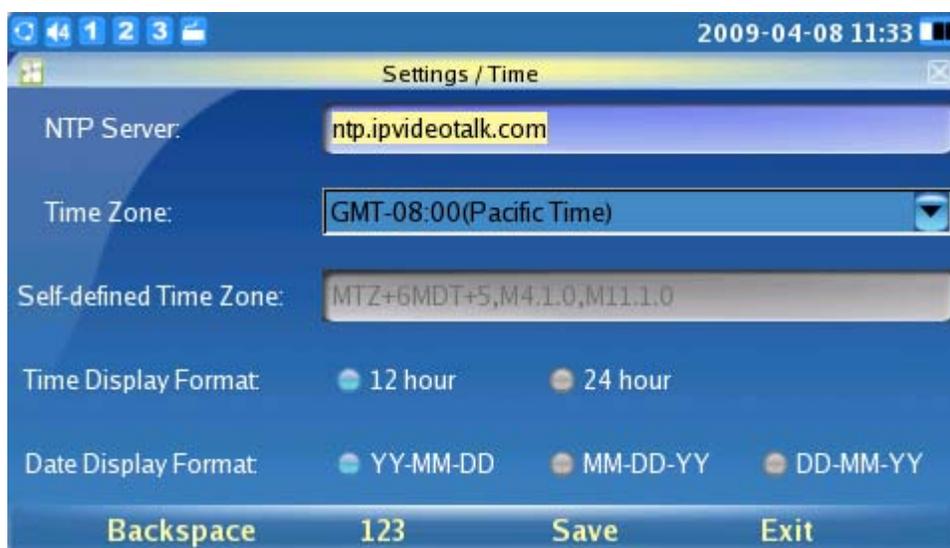
- **DISPLAY SETTINGS**

This screen allows the user to adjust the LCD Backlight brightness, LCD Contrast, and LCD Saturation. In addition, users may configure the TV OUT mode (NTSC or PAL) here.
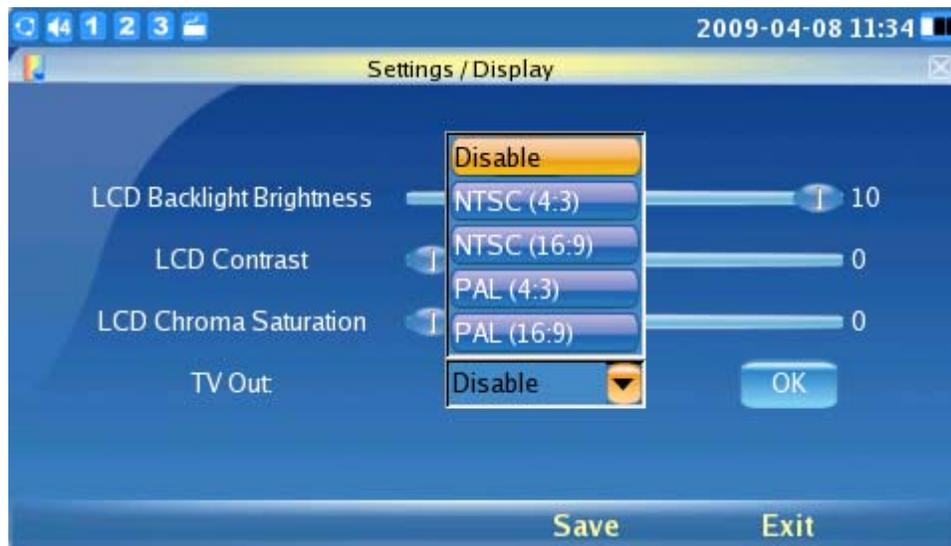
Note: After setting TV out to an external source, the phone LCD screen will black out. Please make sure that you have plugged in the external output source before selecting this option. To return the display to the LCD menu, log into the web browser interface and disable TV Out in "Device Manager" -> "TV Output". Otherwise, you will need to reboot the phone to enable the LCD screen.

● **MAINTENANCE**
There are three tabs on the Maintenance setting screen: Upgrade, Factory Functions and Debug. Users can configure the upgrade mode and firmware server IP address/URL on the upgrade tab. Once this is saved, users can choose to reboot the phone to upgrade the firmware. Similarly, a factory reset can be performed on the Factory Functions tab. A more detailed step-by-step guide will be given in the "Restore to Factory Default Settings" section that follows.

The Factory Functions page provides some testing diagnostics for the LCD, camera and audio on the GXV3140. (As shown in the figure below)
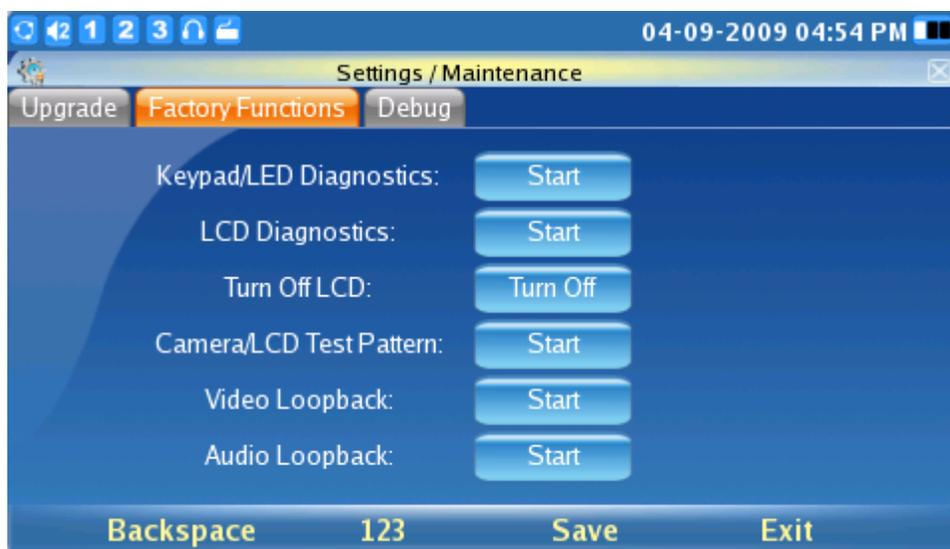

The Debug page (as shown in the figure below) contains the built-in debug tools for the GXV3140. The debug tools make it more convenient to obtain corresponding information and traces when the system encounters problems. To start capturing traces, users need to Enable Application Debug and press the Start button next to the Capture Packets option. The captured traces are available for download through the web configuration interface and can be sent to Grandstream support for troubleshooting.

● **CAMERA**

This screen allows the user to modify the camera settings for the GXV3140. Settings such as Color Mode, White Balance, Flicker Control and Lens Correction can be configured. (As shown in the figure below)
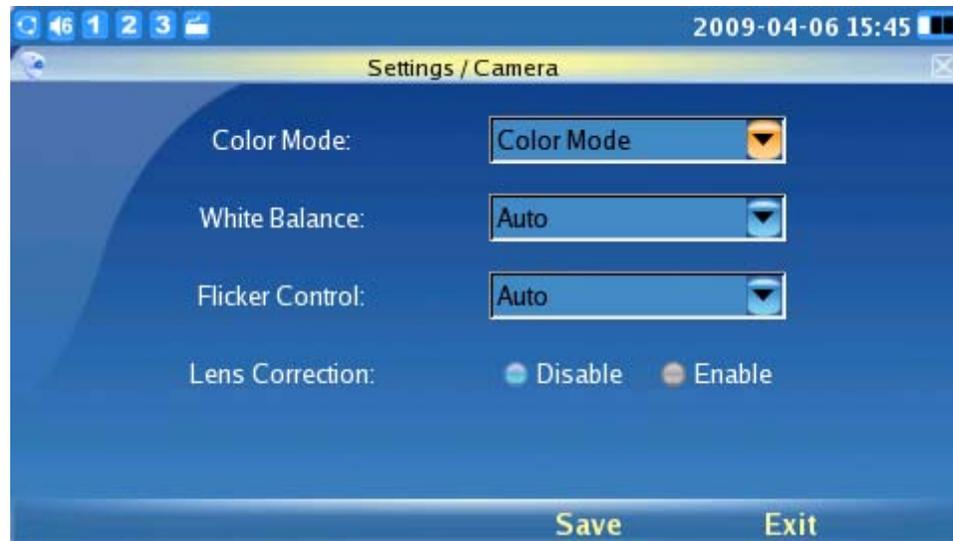
PERSONALIZE

Users may personalize the phone by selecting their preferred screen layout, soft key function, screen display and language settings. To access Personalize, press F1 for MENU, toggle to Personalize and press the OK button to select it.

● **SCREEN LAYOUT**

Users can choose between Small Layout, Big Layout, or Custom Layout (by uploading an XML file) by toggling between the Left and Right buttons.

● **SOFTKEY**

Users can define the soft/function key functions of the Main Screen and Call Screen. There are several soft key functions that the user can select for the 4 function keys.


Note: Selecting the "Snapshot" option for one of the softkey functions for the Call Screen lets you capture a snapshot of the remote party during the call.   This picture will be saved in the "screenshot" folder and can be used as a picture icon for the contact in the Phone Book.

● **SCREEN SAVER**

Users can personalize the phone by selecting the screensaver and the desktop background.

The interval and the timeout period can also be specified here.
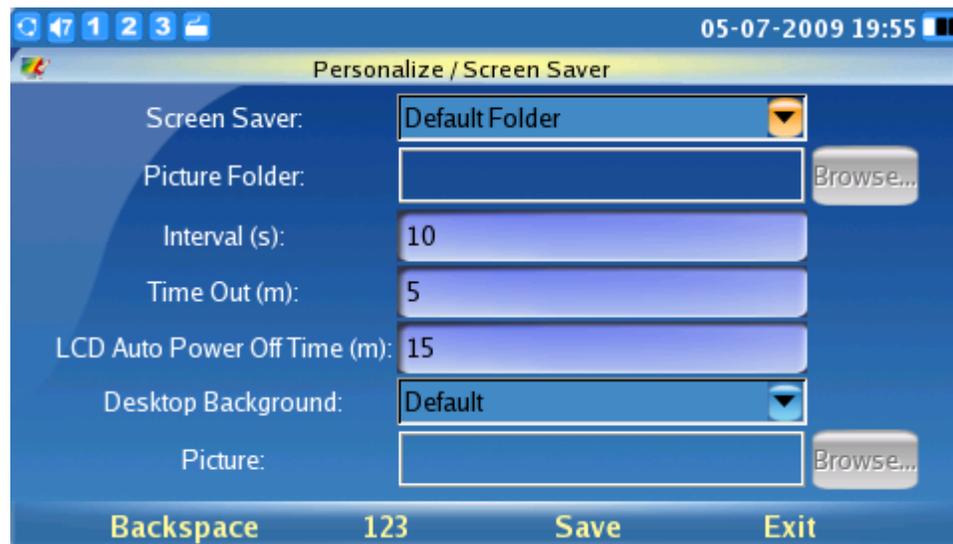
● **LANGUAGE**

This screen allows users to select the preferred language. Users can download the corresponding Language File from the TFTP/HTTP server to expand to the language selection menu.
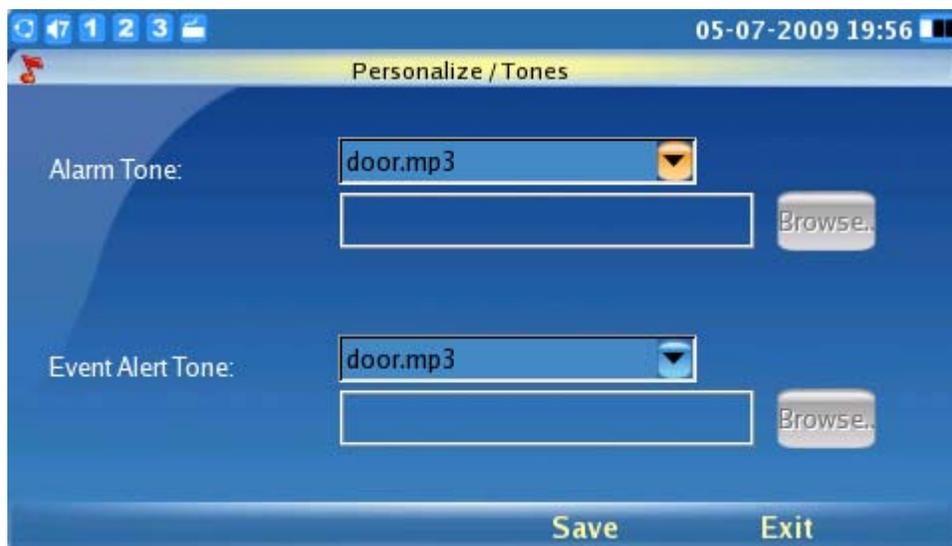

● **MY PROFILE**

This screen allows users to configure the login username and password for the phone.

- **TONES**

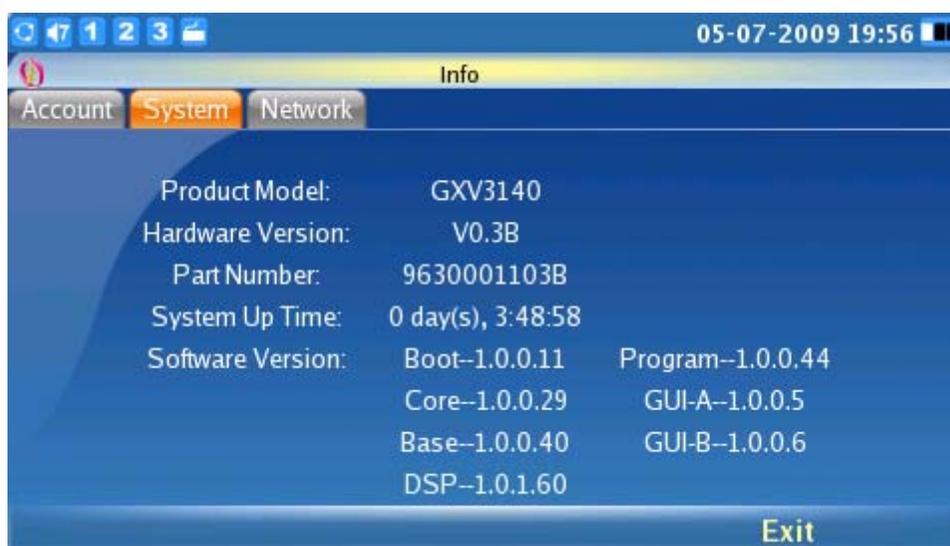 This screen allows users to configure the alarm tone and the event alert tone for the GXV3140.
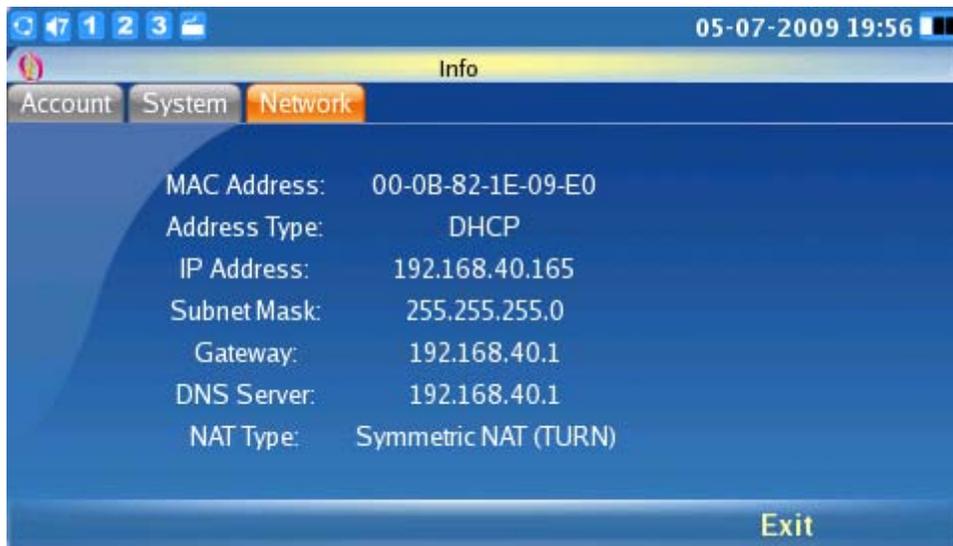

INFO

This screen displays the System, Network and Account information.

System information such as Product Model, Hardware Version, Part Number, System Up Time and Software Version are displayed here.

As shown in the figure above, users can view the Network Information: MAC address, Address Type, IP address, Subnet Mask, Gateway, DNS Server and NAT Type.

The number and the status of the three SIP accounts can be viewed here.

SOFTWARE VERSION UPGRADE

The GXV3140 can be upgraded via TFTP/HTTP/HTTPS by configuring the URL/IP Address for the TFTP/HTTP/HTTPS server and selecting a download method.
Configure a valid URL for TFTP or HTTP, the server name can be the FQDN or IP address format.

Examples of valid URLs：

1. firmware.mycompany.com:6688/Grandstream/
2. 168.75.215.189

There are two ways to setup a software upgrade server: The Keypad Menu or the Web Configuration Interface.

UPGRADE VIA KEYPAD MENU

To configure the software upgrade server through the keypad menu; select "Menu"->"Settings"->"Maintenance". In the "Upgrade" subpage, users may then select the upgrade mode and enter the IP address or FQDN of the Firmware server and the System Config server. After making the changes, use the F3 softkey to save the new settings.

UPGRADE VIA WEB BROWSER CONFIGURATION PAGE

Open a web browser and enter the IP address for the GXV3140. Next, log in with the administrator username and password. Under Maintenance, select "Upgrade and provisioning", enter the IP address or the FQDN (URL) of the upgrade server and choose to upgrade via TFTP or HTTP. Save the changes and reboot the unit.

At this moment, the LCD will display the progress of the software download/upgrade. Please do not disrupt or power down the unit.

Note: The software upgrade will last up to 5 minutes (through the LAN side) and may take longer when upgrading through the Internet (limited by the network bandwidth). Grandstream recommends downloading and upgrading the software in a controlled LAN environment.

NO LOCAL TFTP SERVERS

For users without a local TFTP server, Grandstream offers a NAT-friendly TFTP server. This enables users to download the latest software upgrades for their phone via this server. Please refer to the webpage: http://www.grandstream.com/firmware.htm. Each product has its own TFTP server address.

Alternatively, users can download a free TFTP or HTTP server and conduct a local firmware upgrade. A free windows version TFTP server is available for download from
http://support.solarwinds.net/updates/New-customerFree.cfm or http://tftpd32.jounin.net/.

Instructions for downloading and using a free TFTP Server:

1. Unzip the firmware files and put all of them in the root directory of the TFTP server.

2. Connect the PC running the TFTP server and the GXV3140 device to the same LAN segment.

3. Launch the TFTP server and go to the File menu -> Configure -> Security to change the TFTP server's default setting from "Receive Only" to "Transmit Only" for the firmware upgrade.

4. Start the TFTP server and configure the TFTP server in the phone's web configuration interface.

5. Configure the Firmware Server Path to the IP address of the PC.

6. Update the changes and reboot the GXV3140.

End users can also choose to download a free HTTP server from http://httpd.apache.org/ or use Microsoft IIS web server.

Note: When the GXV3140 boots up, it will send a TFTP or HTTP request to download the configuration file cfgxxxxxxxxxxxx"("xxxxxxxxxxxx" is the MAC address of the phone). If it is a normal TFTP or HTTP upgrade, the following messages "*TFTP Error from [IP ADRESS] requesting cfg000b82023dd4 : File does not exist. Configuration File Download*" can be ignored in the TFTP/HTTP server log.

CONFIGURATION FILE DOWNLOAD

Grandstream SIP Devices can be configured via the Web Interface as well as via a Configuration File through TFTP or HTTP/HTTPS. The "Config Server Path" is the TFTP or HTTP/HTTPS server path for the configuration file. It needs to be set to a valid URL, either in FQDN or IP address format. The "Config Server Path" can be the same or different from the "Firmware Server Path".

A configuration parameter is associated with each particular field in the web configuration page. A parameter consists of a Capital letter P and 2 to 3 (Could be extended to 4 in the future) digit numeric numbers. i.e., P2 is associated with the "Admin Password" in the ADVANCED SETTINGS page. For a detailed parameter list, please refer to the corresponding firmware release configuration template.

When a Grandstream Devices boots up or reboots, it will issue a request for a configuration file named "cfgxxxxxxxxxxxx", where "xxxxxxxxxxxx" is the LAN side MAC address of the device, i.e., "cfg000b820102ab". The configuration file name should be in lower case letters.

RESTORE FACTORY DEFAULT SETTINGS

WARNING: *Restoring the Factory Default Settings will* **delete** *all configuration information on the phone. Please* **backup** *or* **print** *all the settings before you restore to the factory default settings. Grandstream is not responsible for restoring lost parameters and cannot connect your device to your VoIP service provider.*

There are two methods to restore the GXV3140 to the factory default settings.

RESTORE TO FACTORY DEFAULT SETTINGS VIA LCD MENU

The steps to restore the phone to factory default settings through the LCD menu are as follows:
Step 1: Select "MENU" (F1 or the OK button) to enter into the phone menu and select Settings. (Shown in the figure below)
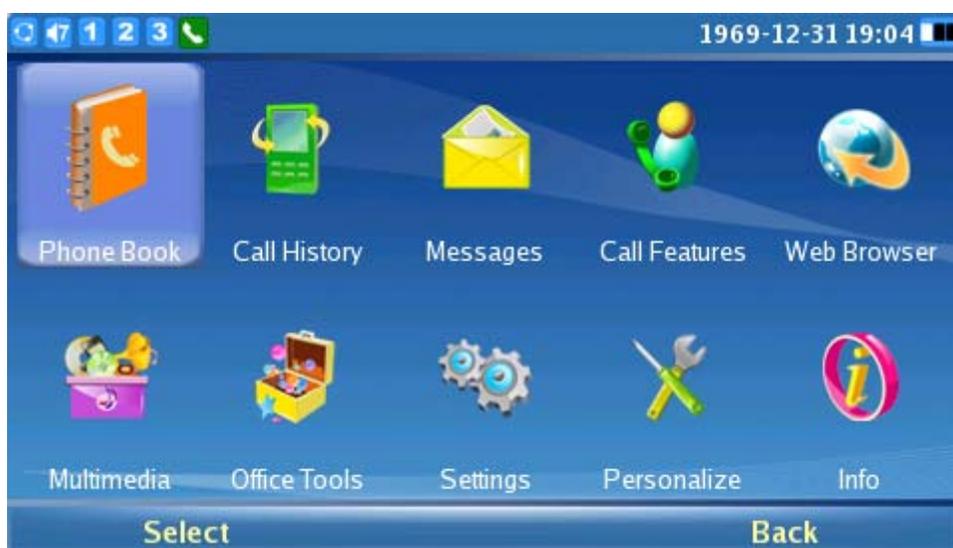

Step 2: Press "Select" (F1 or the OK button) to enter into the phone Settings menu and select Maintenance. (Shown in the figure below):

Step 3: Press "Select" (F1 or the OK button) to access the Maintenance page. In the Upgrade tab, press the Down arrow twice to select the Factory Reset option. (Shown in the figure below)


Step 4: Press the OK button, the phone will display a warning message. (Shown in the figure below)
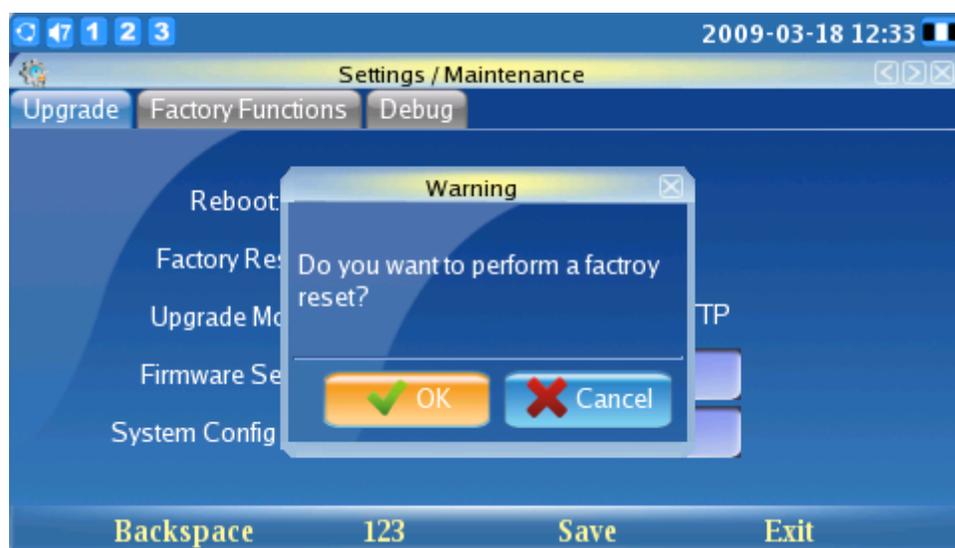
Step 5: Press the OK button again to select "OK". The phone will reboot and perform a factory reset.

RESTORE TO FACTORY DEFAULT SETTINGS VIA THE WEB INTERFACE

Step 1: Login to the system configuration page through a web browser and select "Maintenance". From the menu on the left, select "Upgrade and Provisioning". This will bring up the upgrade and provisioning page as shown in the figure below.
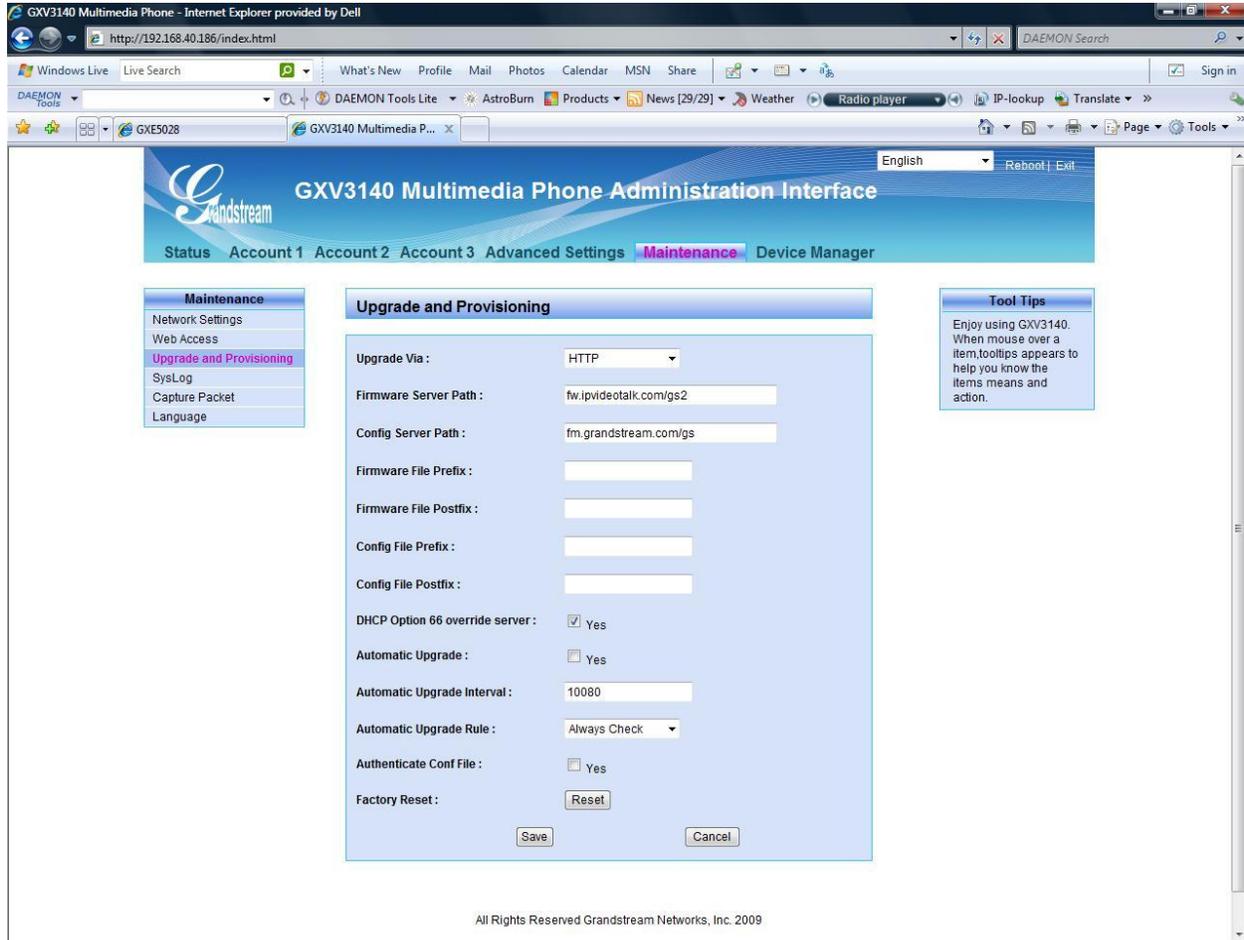
Step 2: At the bottom of the page, click on the "Reset" button for Factory reset. A dialog box will pop up (as shown in figure below)
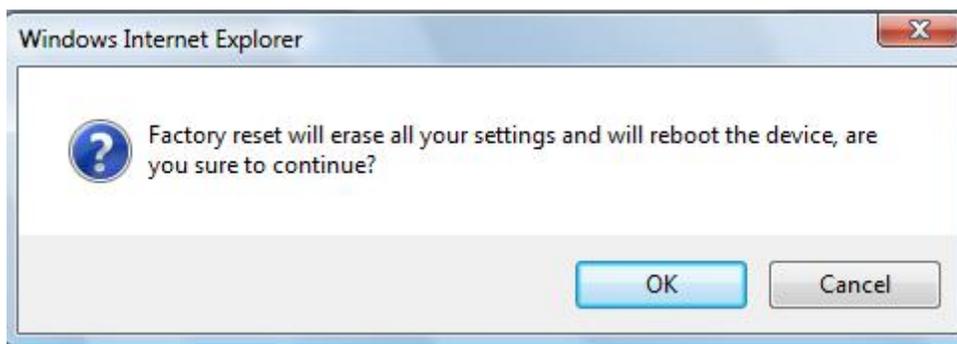
Click on OK to restore the phone to factory settings.

EXPERIENCING THE GXV3140 MULTIMEDIA PHONE

When the user boots the phone for the first time, Account 1 will be registered to the IP Video Talk server with a provisioned extension of 810xxxx. If the user has purchased two or more GXV3140 IP Multimedia phone, the phones are able to establish video calls between each other and the user can immediately experience the plug and play nature of the GXV3140. If the user has only one multimedia phone, the user can choose to experience the multimedia features by dialing 0 to establish a video call with the preset extension on the server.
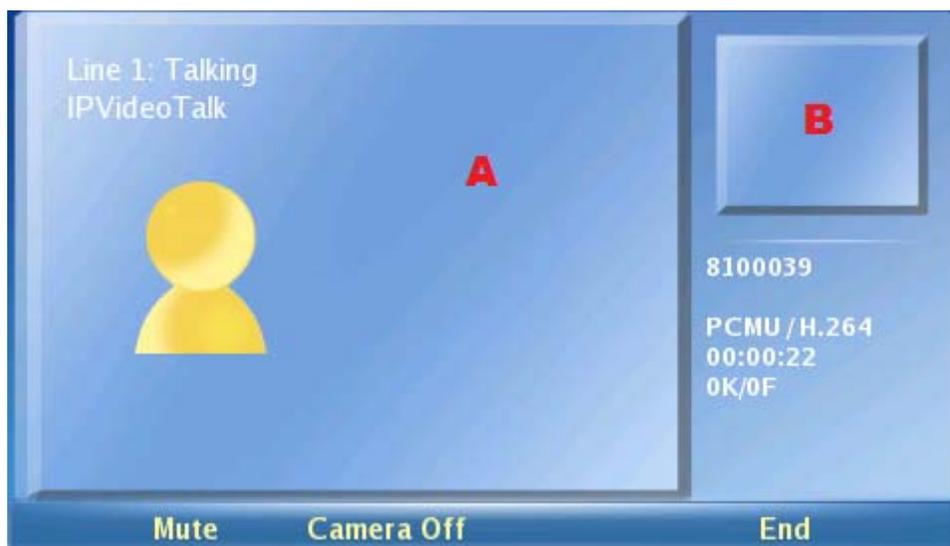
As shown in the figure above, area A shows the remote video and area B shows the local video.
When the system boots up for the first time, the phone will establish a video call with the server preset extension 0. Users can experience a playback of video on the phone.

Thank you again for purchasing Grandstream IP Multimedia phone, it is sure to bring convenience and color to both your business and personal life.