

ST20xxs SIP Software Upgrade Instruction Guide From x.66 to vx.67.x (With Security Enhancement)

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1 Introduction

In this paper, you will know the software upgrade procedures from **normal version** to **new version** with security enhanced of St20xx in different methods, including APS provisioning, web interface, telnet.

Currently, no. 1, 3 are devoted to APP version of ST20xx respectively. See below:

Normal version

ST2030s SG **1.6x**, **1** devotes to the APP for ST2030s.

ST2022s SG **3.6x**, **3** devotes to the APP for ST2022s.

New version, Security enhanced

Now, two more no. 2 and 4 are added to devote to the new APP version of ST20xx to distinguish the difference with normal version.

ST2030s SG **2.6x**, **2** → for new APP version of ST2030s

ST2022s SG **4.6x**, **4** → for new APP version of ST2022s

In the software package, you can find the core files below:

Core files for ST2030s SG v2.67 :

Application image filename: v2030SG.R11.1.<release date>.<version>.zz

DSP filename: v2030_dsp_<version>.zz

Common Configuration: ComConf2030SG.R11.1_<version>.txt

Telephone configuration: TelConf2030SG.R11.1_<version>.txt

Core files for ST2022s SG v4.67 :

Application image filename: v2022SG.R11.1. <release date>.<version>.zz

DSP filename: v2022_dsp_<version>.zz

Common Configuration: ComConf2022SG.R11.1_<version>.txt

Telephone configuration: TelConf2022SG.R11.1_<version>.txt

Note:

This document takes the ST2030s upgrade procedure as an example. For ST2022s software upgrade, it is the same, except software version.

2 Reset to Default (Recommended)

Before software upgrade, you are recommended to perform the **Reset to default** on the phone.

There are different ways to do the reset to default process on the phone:

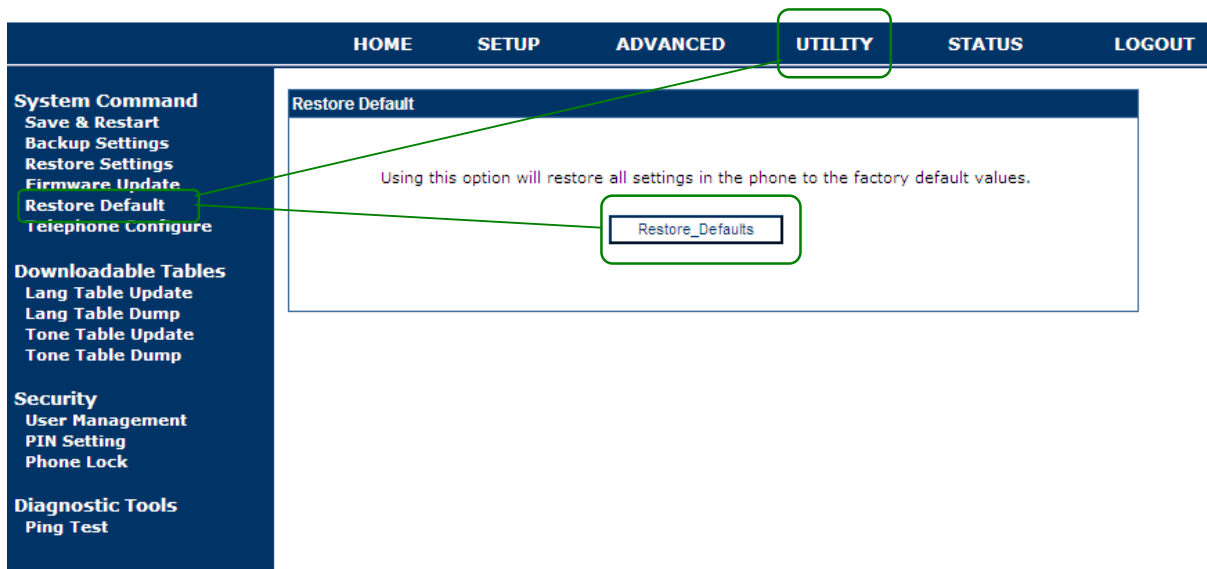
Via MMI:

Press [Menu] -> [Admin] -> Enter password (default: 784518)
-> Select Reset Default, **OR**

Via WebGui:

Visit UTILITY -> Restore Default -> Restore_Defaults, **OR**

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Via Telnet:

To configure, open a command line console, and telnet the phone:

Commands	Description	Example
Reboot reset	Reset to default	[administrator]# reboot reset (only available starting from vx.66.2)

3 Upgrade Via APS (DHCP + TFTP)

AutoProvisioning is available to upgrade the full set of configuration files into the phone.

A brief description will be provided for APS methods (**DHCP + TFTP**) in this document, but not go into detail. For the settings in DHCP and TFTP servers, please refer to the *ST2030-ST2022 AutoProvisioning-V00xx.pdf*, in the release package (../APS&FW upgrade folder)

Example:

In software release package, ST2030_SG_vx.xx_Release_package\APS TFTP sample files, you will have:

Provisioning Information file:	ST2030s.inf
Application image filename:	v2030SG.R11.1.xxxxxx.x.xx.zz
DSP filename:	v2030_dsp_xxxx.zz
Common config filename :	ComConf2030SG.R11.1.x.xx.txt
Mac config filename:	ST2030S_xxxxMACxxx.txt
Telephone configuration:	TelConf2030SG.R11.1.x.xx.txt
Melody file filename:	Tone-Melodies.txt
System melody file filename:	Tone-RG.txt
call_waiting_tone name:	Tone-CW.txt
tone_table name:	ToneTbl_x.xx.x.zz
language_table name:	LangTbl_x.xx.x.zz

3.1- Before doing APS, DHCP and TFTP servers must be setup and ready.

- DHCP server:
Option **66** and **67** should be configured correctly
 - **Option 66:** The TFTP server IP address for upgrading
 - **Option 67:** The configuration file name in TFTP server for upgrading
- TFTP server:
The root directory should be selected for downloading the set of configuration files for APS in TFTP server.

- 3.2- The APS procedure is more or less the same as normal version. Modify the ST2030s.inf file, for example:

```
[application]
fw_filename= v2030SG.R11.1.xxxxxx.x.xx.zz
dsp_filename= v2030_dsp_xxxx.zz

[config]
telcfg= TelConf2030SG.R11.1.x.xx.txt
common_config= ComConf2030SG.R11.1.x.xx.txt

melodies= Tone-Melodies.txt
system_melodies= Tone-RG.txt
call_waiting_tone= Tone-CW.txt

tone_table= ToneTbl_x.xx.x.zz
language_table= LangTbl_x.xx.x.zz
```

- 3.3- Power up the phone. APS will start automatically.

Configuration Checking

- 3.4- After APS, you are highly recommend to check the APS log to make sure all the configuration files are correctly downloaded to phone.

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The screenshot shows the Thomson web interface with a navigation menu on the left and a main content area. The 'ADVANCED' tab is selected in the top navigation bar. In the left menu, 'Auto Provisioning' is expanded, and 'APS Log' is highlighted. The main content area displays the 'Auto Provision Log' with the following text:

```
Autoprovision Process start
Begin General file download...
Error: ST2030S_000E504E6395.inf file not found!
Downloading file ST2030S_000E504E6395.inf fail!
Retry after 30 seconds ...
General file: st2030s.inf download successfully!
Begin Firmware download...
Firmware: v2030SG.R11.1.090213.2.67.1.zz download successfully!
Begin DSP download...
DSP: v2030_dsp_v310.zz download successfully!
Begin Boot Code download...
BOOT: v2030_boot_v111.zz download successfully!
Reboot.....
Begin General file download...
Error: ST2030S_000E504E6395.inf file not found!
Downloading file ST2030S_000E504E6395.inf fail!
Retry after 30 seconds ...
General file: st2030s.inf download successfully!
Begin Firmware download...
Firmware filename is the same!
Begin DSP download...
DSP filename is the same!
Begin Boot Code download...
BOOT code filename is the same!
```

- 3.5- Alternatively, visit **Home** page to check the configuration of the phone.

4 Upgrade Via Telnet

Apart from autoprovisioning, Telnet is also available for downloading configuration files, but part of them only. This section will list out some of the commands and procedures for the software upgrade via Telnet.

Things to know:

Software upgrade via Telnet can only support part of the configuration files written into the phone, such as

- APP Firmware via HTTP
- Telephone configuration file
- DSP fw upgrade
- Melodies

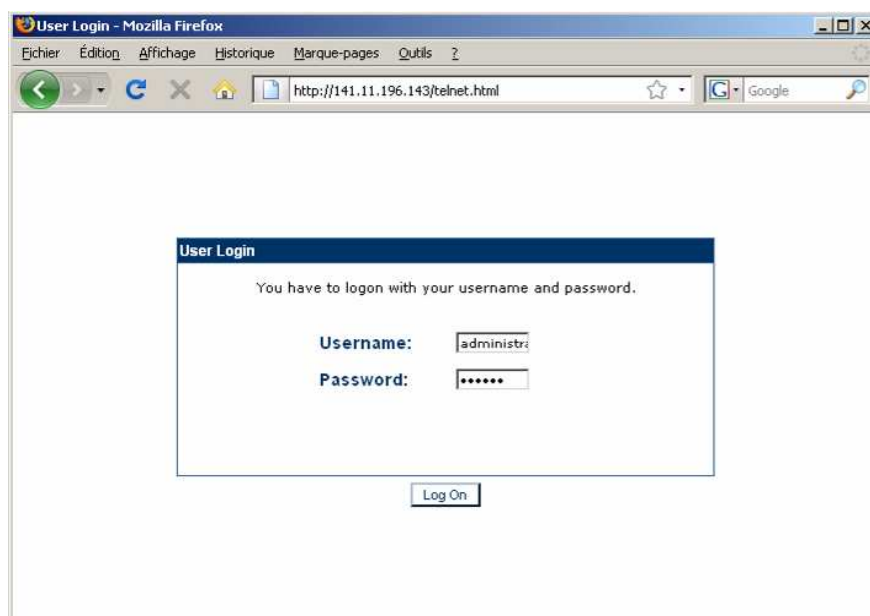
Enable Telnet service

By default, the telnet service is disabled for security reasons. So the Telnet service must be enabled before trying to open a telnet session on the phone.

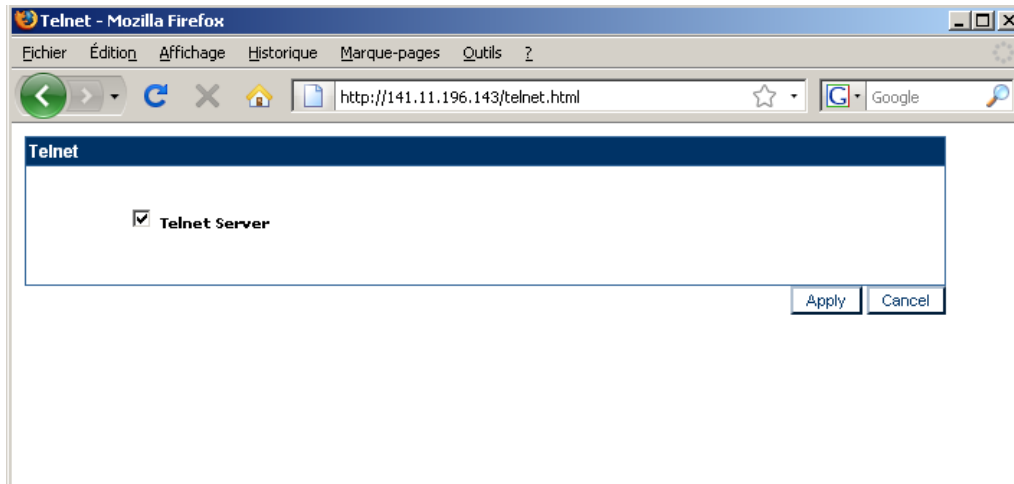
4.1- Enter the following URL on you web browser:
`http://ip_address_of_the_phone/telnet.html`

4.2- Then enter the username and password (same as the web interface):

- Username (default): administrator
- Password (default): 784518

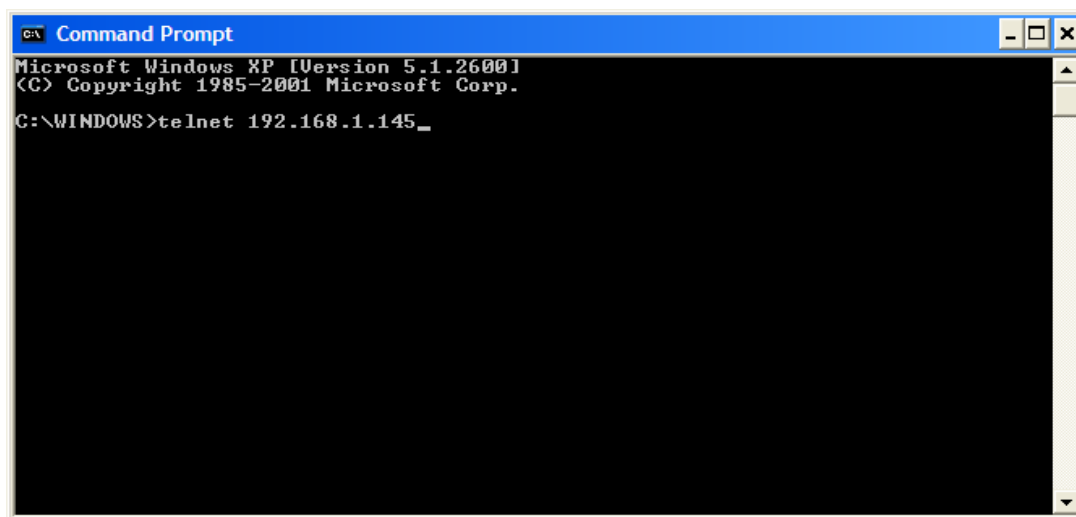


4.3- Then check off the Telnet Server to activate it.



Open a Telnet session

- 4.4- In Windows OS: Click on "Start" , select "Execute", type "cmd" then press "Enter"
- 4.5- In the CMD window, type "telnet <ip address>"



- 4.6- Enter the username and password:
 - Login (default): administrator
 - Password (default): 789234

```

CA Telnet 192.168.1.145
*****
** IP Phone firmware          U1.62          **
**   compiled on      Jun 19 2008 at      11:57:36      **
**                                     **
**       IP Phone UPD1020-D49(S)      **
**                                     **
*****

Login: administrator
Password: *****

[administrator]#
  
```

4.7- Before download, TFTP servers must be setup and ready.

- TFTP server:
The root directory should be selected for downloading the set of files in TFTP server.

For example:

TFTP server address: **192.168.1.200**

4.8- Below is the table, showing the number of telnet commands required for telnet sw upgrade in sequence.

	Descriptions	Telnet Commands
1	Telnet to IP Phone	
2	Logon to the phone. Enter username and password	
3	APP image upgrade	[administrator]# tftp 192.168.1.200 v2030SG.R11.1.xxxxxx.x.xx.zz
4	DSP fw upgrade	[administrator]#tftp 192.168.1.200 v2030_dsp_xxx.zz
5	Clean telcfg	[administrator]#flash clean nmm
6	Reboot - Trigger phone reboot	[administrator]#reboot now
7	Telephone configuration file	[administrator]#tftp2 telcfg 192.168.1.200 TelConf2030SG.R11.1.x.xx.x.txt
8	Melodies	[administrator]#tftp2 melody 192.168.1.200 Tone-Melodies.txt

9	System melodies	[administrator]#tftp2 sys_melody 192.168.1.200 Tone-RG.txt
10	Call waiting melodies	[administrator]#tftp2 cwt_melody 192.168.1.200 Tone-CW.txt
11	Activate- Enable services	[administrator]#Activate
12	Commit - Save settings	[administrator]#commit
13	Commit - Save settings	[administrator]#commit
14	Reboot - Trigger phone reboot	[administrator]#reboot now

Configuration Checking (via telnet)

1	Version - show boot, dsp and FW version	[administrator]#version
2	Info - Show phone info	[administrator]# info

5 Upgrade Via WebGui

Same as the previous one, WebGui is also available for downloading configuration files, but part of them only.

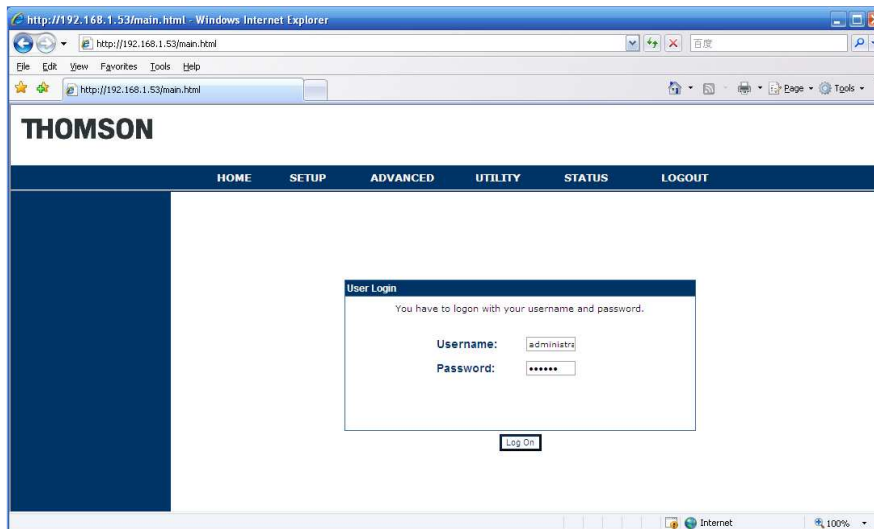
Things to know:

Software upgrade via WebGui can only support part of the configuration files written into the phone, such as

- APP Firmware via HTTP
- Telephone configuration file
- DSP fw upgrade
- Melodies

Logon to the ST20xx's WebGui

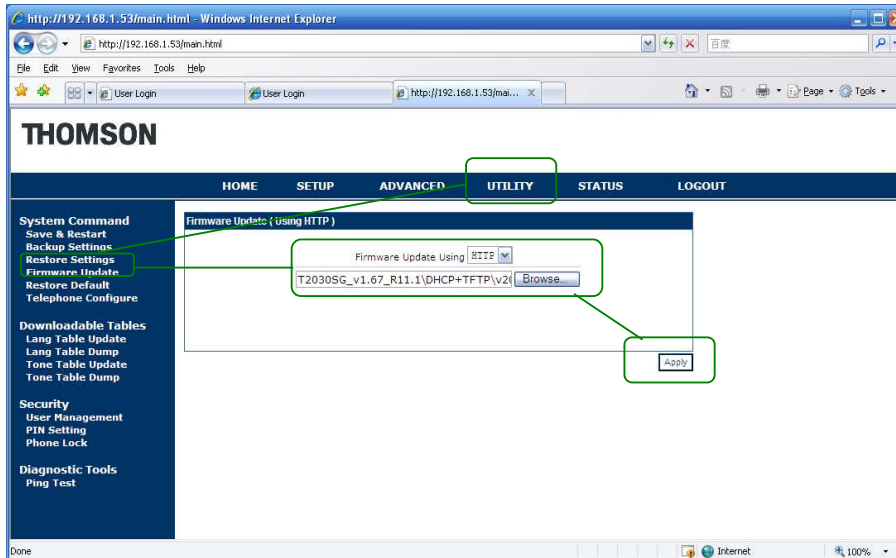
- 3.1- Enter the IP address of phone in web browser
- 3.2- Enter the **Username** and **Password**
 - Username: administrator (default)
 - Password: 784518 (default)



Firmware Image Upgrade

- 3.3- Visit UTILITY → Firmware Update page.
Select “**HTTP**” in pull-down menu. Then, click the **Browse** button to select the Application image file from a directory.

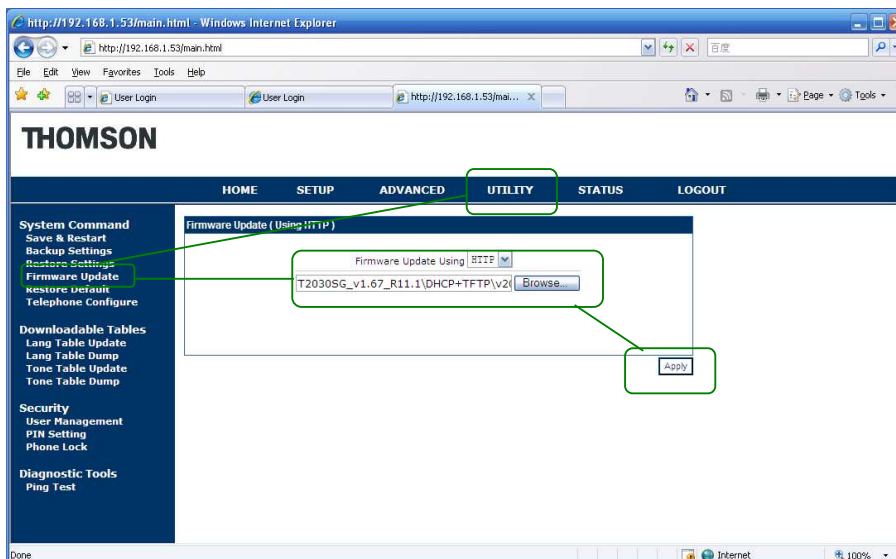
Then, press “**Apply**” → Phone reboot



DSP fw upgrade

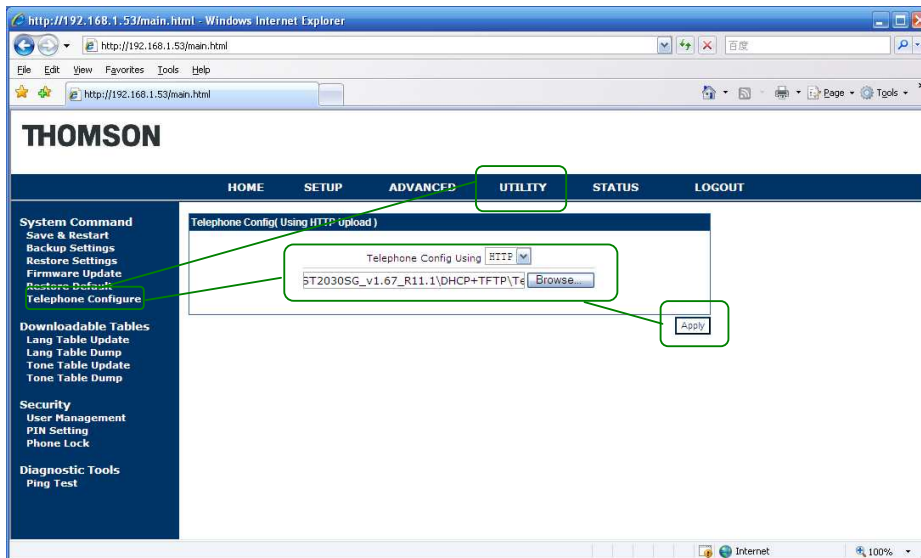
- 3.4- Same as before. Visit the UTILITY → Firmware Update. Select “**HTTP**” in pull-down menu. Then, click the **Browse** button to select the dsp fw file from a directory.

Then, press “**Apply**” → Phone reboot



Telephone configuration upgrade

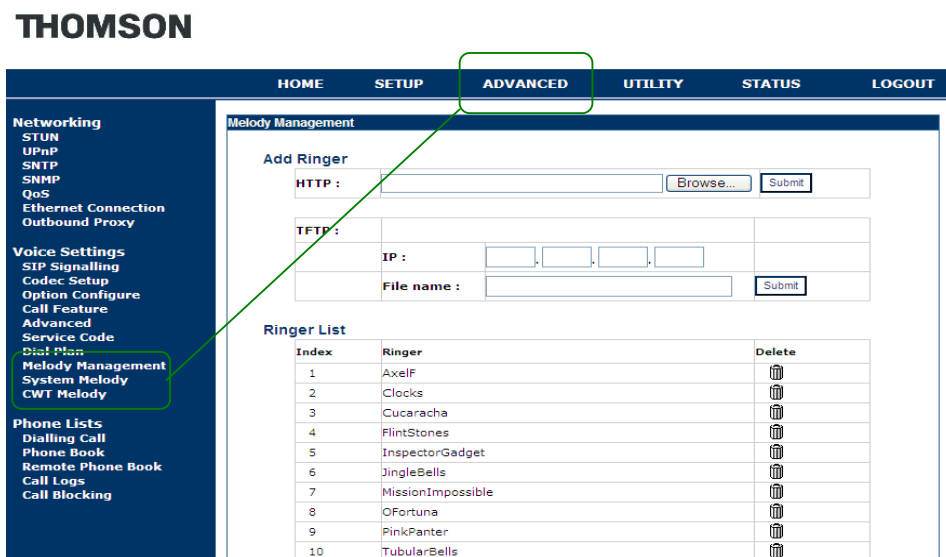
- 3.5- Visit the **UTILITY** → Telephone Configure. Select "**HTTP**" in pull-down menu. Then, click the **Browse** button to select the Application image file in a directory.
- 3.6- Then, press "**Apply**" → Phone reboot



Melodies

- 3.7- Visit the **ADVANCED** → Melody Management, System Melody, CWT Melody. Select "**HTTP**" and click the **Browse** button to submit the Melody file from a directory.

Press **Submit** to upload the melody file.



Configuration Checking

- 3.8- Finally, you are recommended to visit **HOME** page to check the configuration of the phone.

End of document