

G-Ware version 4.6.0 and XAP/PSR firmware upgrade procedure

Description

G-Ware version 4.6.0 supports a new, telco enhanced, revision of the XAP 400 and XAP TH2. Other than compatibility with the new revisions of firmware for the XAP 400 and XAP TH2, there are no additional features or enhancements over the previous version of G-Ware, 4.5.0. The telco circuits of the XAP 400 and TH2 are designed to work with standard, dedicated, analog phone lines that comply with FCC standards on parameters such as level and impedance. Many times the XAP TH2 and XAP 400 is connected to proprietary telephone circuits that are not FCC regulated and that may deviate from these standards, such as PBX lines, resulting in less than optimal performance of the telephone hybrid. This may result in sidetone and other undesirable audio artifacts. XAP 400 version 1.6.0 and XAP TH2 version 2.6.2 features many improvements in the performance of the telephone hybrid. Note, firmware revisions for the XAP 800 and PSR 1212 have not changed for this release. XAP 400 and XAP TH2 telco improvements include:

- Improved full duplex performance over a wider variety of telephone line conditions, including varying line levels and impedances.
- Enhanced telephone hybrid nulling performance.
- Improved hybrid adaptation characteristics.
- Improved hybrid performance when using telephone lines that utilize line reversals for call initiation and call termination.

This document will step you through the process of upgrading your existing XAP and PSR units to a compatible firmware version. G-Ware 4.6.0 is only compatible with the following firmware versions:

- XAP 800 2.5.0 (Compatible with G-Ware version 4.5.0 and 4.6.0)
- XAP 400 1.6.0 (Requires G-Ware version 4.6.0)
- XAP TH2 2.6.2 (Requires G-Ware version 4.6.0)
- PSR1212..... 3.5.0 (Compatible with G-Ware version 4.5.0 and 4.6.0)

Note: PSR1212 units with firmware versions 1.0.0 or 1.0.2 require a hardware upgrade before the firmware can be upgraded to the current version. Please call technical support for more information.

G-Ware System Requirements

G-Ware must be installed to upgrade unit firmware. G-Ware requires the following minimum system configuration:

- RAM requirement is determined by operating system
Windows[®] 95 OSR2/98/ME/NT 64MB
Windows 2000 128MB
Windows XP 256MB
- PII 200MHz (or AMD equal) or higher processor
- 8MB video card
- 1024x768 (16 bit) high color monitor
- Internet Explorer 4 or later
- 20MB of free hard disk space
- RS-232 COM port
- CD-ROM drive

These are minimum requirements. If you are running multiple applications with G-Ware, you will need to increase the requirements accordingly.

Before you begin upgrading firmware

1. Upgrading firmware will reset the units to their default factory settings. Therefore, it is imperative that you use your current G-Ware version to extract the site file from the units and save a copy of them to your PC **before** upgrading the unit firmware. Otherwise you will lose all custom settings and will need to reprogram the unit from the default factory settings.
2. After you have saved your site files, install G-Ware version 4.6.0. It is no longer necessary to uninstall the previous version of G-Ware. The install utility will step you through the installation process. Follow all directions.

Note: If you have a previous G-Ware version installed, you must install G-Ware 4.6.0 in a different directory. See the G-Ware Switcher technical note for more information about using multiple G-Ware versions.

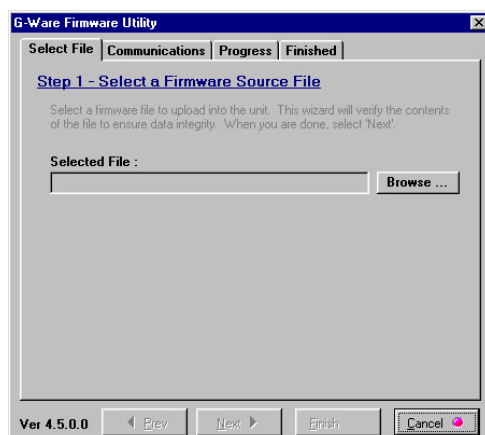
3. Disconnect any expansion bus cables and connect the unit to the PC using a straight-through 9-pin serial cable.
4. Verify that the flow control setting on the unit (RS-232 menu on front panel LCD) is enabled. Make sure the baud rate on the unit matches the baud rate set in G-Ware (Site Properties).
5. Follow the firmware upgrade procedure described below.

Firmware Upgrade Procedure

1. Open the G-Ware Firmware Utility by clicking on the G-Firm toolbar button located on the G-Ware toolbar.



Figure 1. G-Firm toolbar button



Note: If the G-Firm button is not on the G-Ware toolbar, you need to install G-Ware 4.6. You can download G-Ware from the ClearOne web site at www.clearone.com.

Figure 2. G-Ware Firmware Utility

2. Click **Browse** to access a list of available firmware updates. Select the file that matches the type of unit you are upgrading and click **Open** (Figure 3).

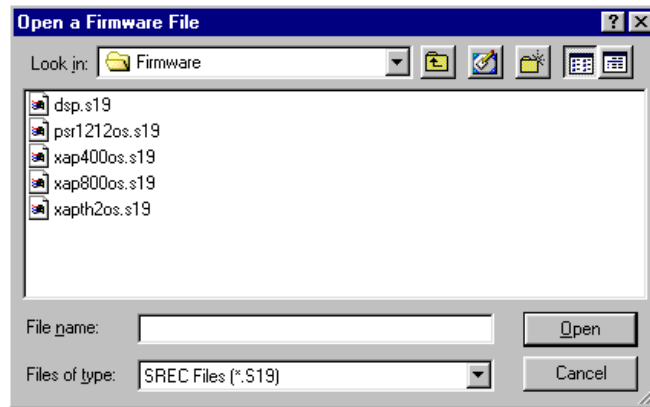
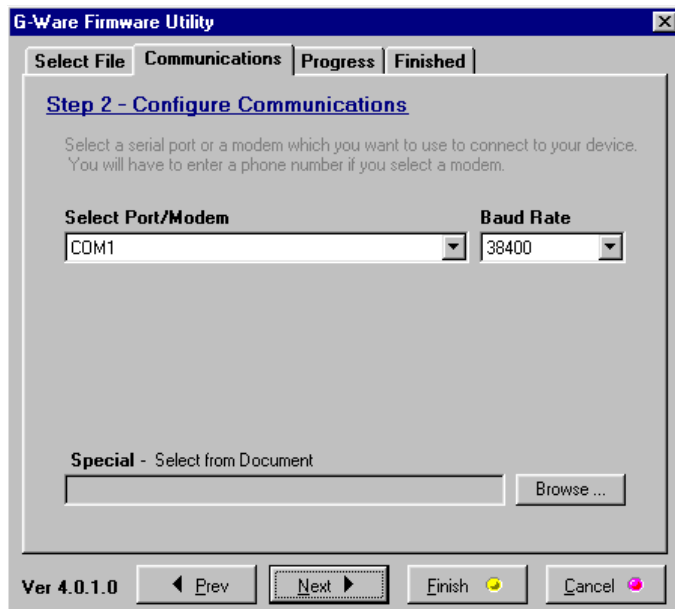


Figure 3. Selecting the new firmware file

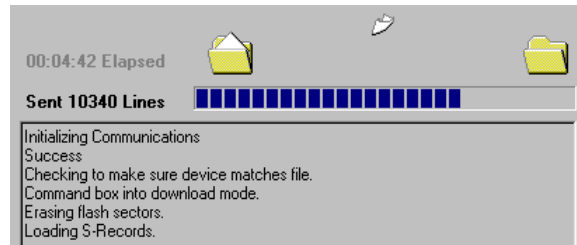
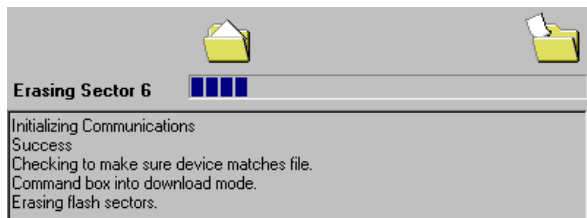
3. The selected firmware file will self verify (Figure 5) and display the message **Verified, OK**. If the file information matches your unit and the file is verified, click **Next** to advance to the Communications tab.
4. Select the PC **COM port** you are using for the upgrade. Confirm that the **Baud Rate** matches the baud rate of the selected unit.



Note: The upgrade will take approximately 5-15 minutes per unit depending on baud rate. During this time it is important not to interrupt the upgrade process or remove the cable.

Figure 4. Selecting the COM port and baud rate for the upgrade

5. Click **Next**. If the upgrade requires you to save your site files (see step 1 in the “Before you begin upgrading firmware” section), a warning message will display. If you have not saved, you will need to exit the G-Ware Firmware utility, sync to the units with your current G-Ware version (see G-Switcher Tech Note), and save the site file(s). Click **Yes, Continue** to begin firmware upload.



Figures 5 and 6. The process begins by erasing flash sectors and then uploading the firmware file

6. If the process fails, do **not** use the Start Over button. Close GFirm instead and verify you are using a 9-pin straight-through serial cable and that baud rate and flow control are configured properly (see the "Before you begin upgrading firmware" section). Restart GFirm and return to step one of this procedure.
7. When the upgrade is complete, the Finished tab appears. Check the front panel of unit and verify the proper firmware version for your unit is now displayed. If you have no more units to upgrade, you can now close the GFirm program. If updating multiple units, move the RS-232 connection to the next unit and click **Start Over** to continue.
8. After upgrading the firmware on all units, restore expansion bus connections. Using G-Ware 4.6.0, open your saved site file and choose the Sync to Document option when connecting to the site. This will load your custom settings into the unit.