PowerMonic PM40
Firmware Loader Installation and Operation Manual

PM40FWLoader Software Version 1.10

Revision 1.1

02 April 2007

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PM40 Firmware Upgrade Manual, Version 1.0

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Printed in Australia

AUSTRALIA / NEW ZEALAND

N3207

PowerMonic is a Class B product. In a domestic environment this product may cause radio interference, which the user may need to take steps to prevent.

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Introduction

This manual will allow new users of the *PM40FWLoader* program to become familiar with the operation of the software. Please read the following instructions which are intended as a general guide to the installation and operation of the software.

It is assumed that the users know how to operate the *PowerMonic PM40*. Please refer to

PM40 Software Installation Manual Rev 4.pdf

PowerMonic M40 User Manual Rev4.0.pdf or

PM30 and PM40 User Manual Rev1.91.pdf for North America

It is also assumed that the user has installed the *PowerView 4* software and can operate the software to communicate with the *PowerMonic PM40*.

Minimum system requirements

1. Personal Computer Pentium 3 or higher
2. Microsoft Windows 2000 or XP
3. USB Port
4. Memory RAM 128 MB (256 MB or higher is recommended)
5. 100 MB hard disk space (plus space for log files)

Installing the PM40 Firmware Loader 1.10 software

1. Place the accompanying CD in the CD drive of your PC
2. From the CD run *PM40FirmwareLoader_1_10.EXE*
3. Follow the on-screen instructions and save the program to the default folder.
4. After the installation has finished, an icon named *PM40FWLoader* will be visible on the Desktop

Notes

- You may need System Administrator rights to install new software to your computer
- The default destination folder is *C:\Program Files\GridSense\PowerMonic\PM40 Firmware Loader*
- Alternatively the program can be executed selecting from the Windows XP *Start* menu:

  Start, All Programs, GridSense, PowerMonic, PM40 Firmware Loader

- The new firmware is stored in the directory *C:\Program Files\GridSense\PowerMonic\PM40 Firmware Loader\PHX Files*
- The new firmware name is *PM40_Vmnn_HWx.phx*. Here, *m* is the major firmware version, *nn* is the minor firmware version, *x* is the hardware revision. For example:

  PM40_V171_HW2.phx means the new firmware version is 1.71 for hardware revision 2.

Trouble-shooting the USB interface connection

1. Always <u>power up</u> the *PowerMonic PM40*, using the proper voltage cable, <u>before</u> connecting to the computer's USB port
2. Click <u>once</u> on the USB icon on the Windows Toolbar to see all active USB devices. If there is a working *PowerMonic PM40* connected to the computer's USB port and the software was properly installed, the following message will be displayed:

Safely remove PowerMonic-PM40, Version 02/15/2004, 0.1.8.0

3. If Windows fails to recognise the powered up and connected **PowerMonic PM40** just disconnect the USB cable and then connect it again

4. If the problem persists you may have to uninstall the **PowerMonic PM40** USB software driver from your system and then reinstall the USB software driver. Please contact GridSense support team for assistance.

Run PM40 Firmware Loader 1.10

1. Power on the **PowerMonic PM40**

2. Connect the **PM40** to the computer USB port

3. Check if the **PM40** is properly connected to the USB port double clicking on the USB icon on Windows toolbar. Look for the text "*PowerMonic-PM40, Version 02/15/2004, 0.1.8.0*". If you can see this text the **PM40** is connected to the USB
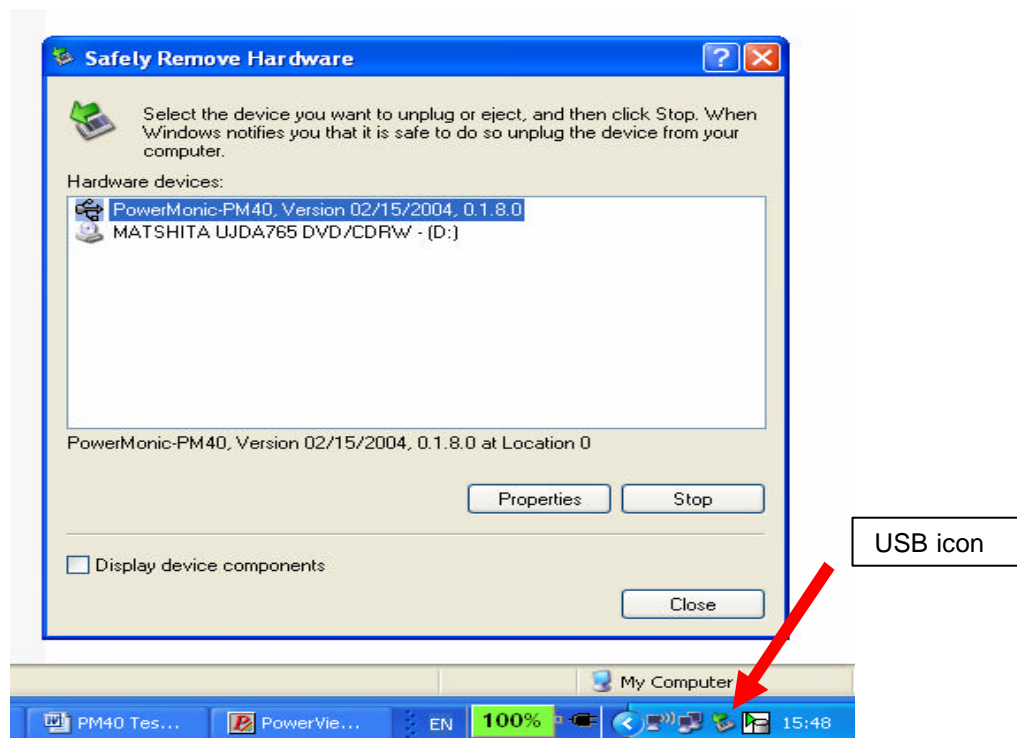

4. Please **CLOSE** all other PM40 software, e.g., **PowerView 4**. If **PowerView 4** and **PM40 Firmware Loader** both operate at the same time whilst use the same USB port for communication, then **PM40 Firmware Loader** is likely to fail.

5. Start **PM40 Firmware Loader 1.10** by double clicking on the **PMFWLoader** icon visible on the Desktop or alternatively selecting from the Windows XP **Start** menu:

   Start, All Programs, GridSense, PowerMonic, PM40 Firmware Loader

6. Once **PMFWLoader** has started, will pop up the following message. If the other PM40 software has been closed, then you can click OK button to continue. If not, use Alt + TAB to allocate the other PM40 software and close it and then come back to this message, click OK button.

7. On the next screen, click **Open** to connect the software to **PowerMonic PM40**
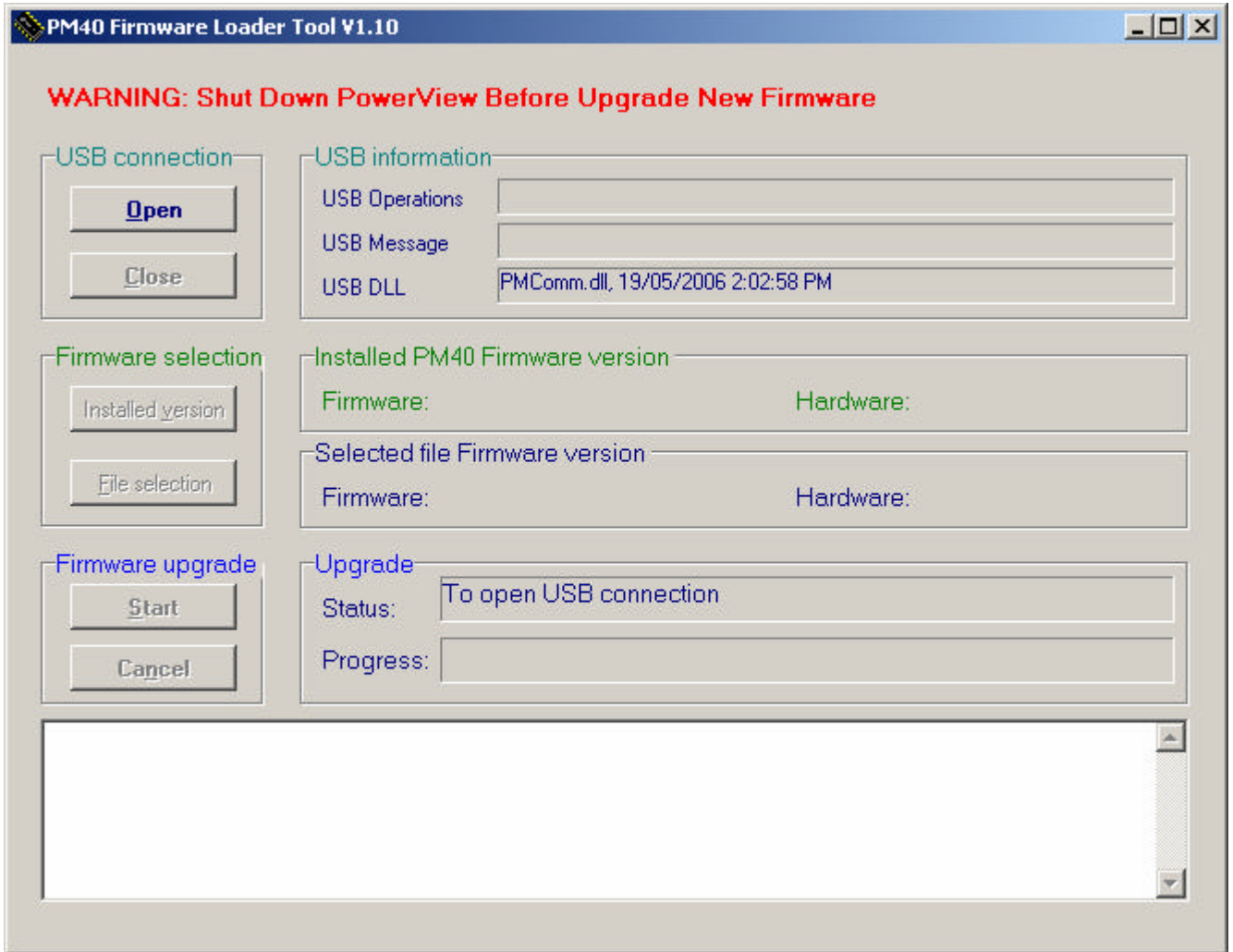
If the connection is OK, then it shows the message: *PC/PM40 connected successfully*.
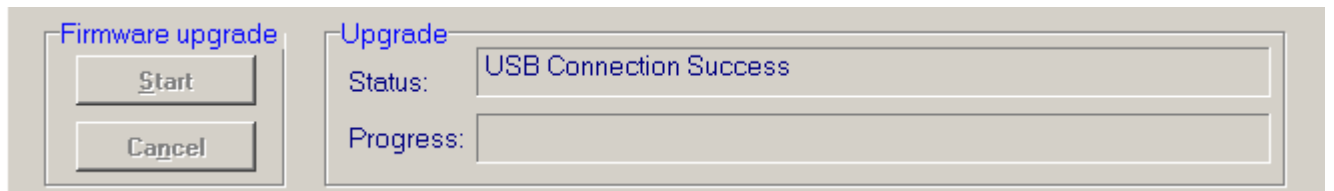
If the connection fails, then it shows the message: *PC/PM40 connected Not successfully* and a window pops up to show *USB Link Failed*. Please check the USB connection.

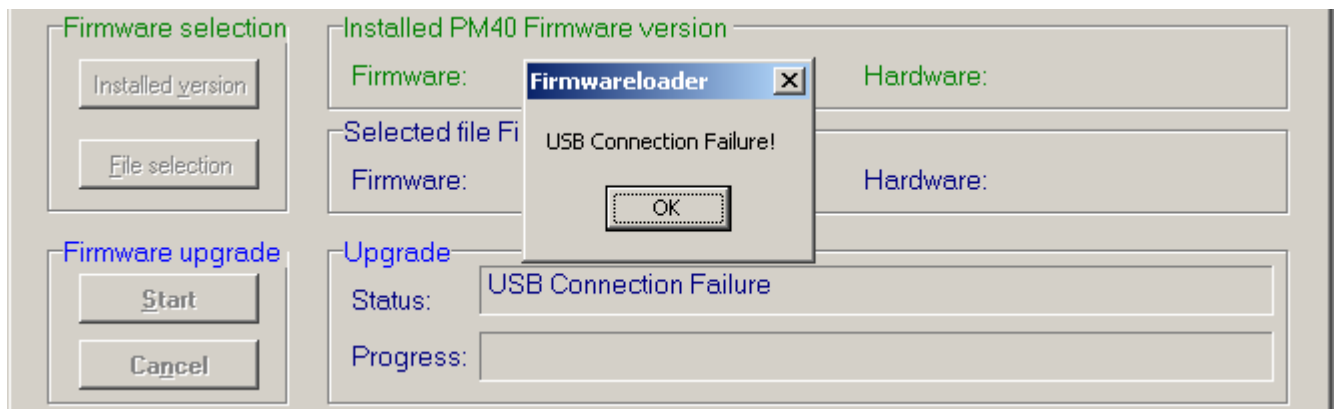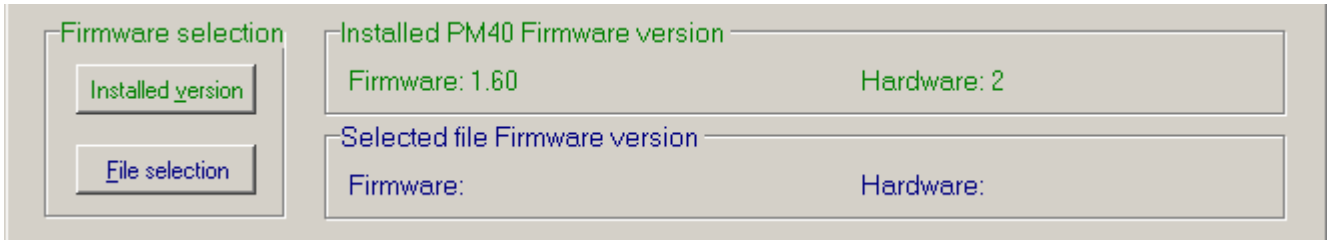8. Click **Installed version**, it will show the firmware and hardware version of the *PowerMonic PM40*

9. Click **File Selection**, it will show all the available firmware files in the directory *C:\Program Files\ GridSense\PowerMonic\PM40 Firmware Loader\PHX Files*. Pick up the firmware you want to install, here it is *PM40_V161_HW2.phx*. If you save the .phx file in other directory, you can browse the directory to find the file.
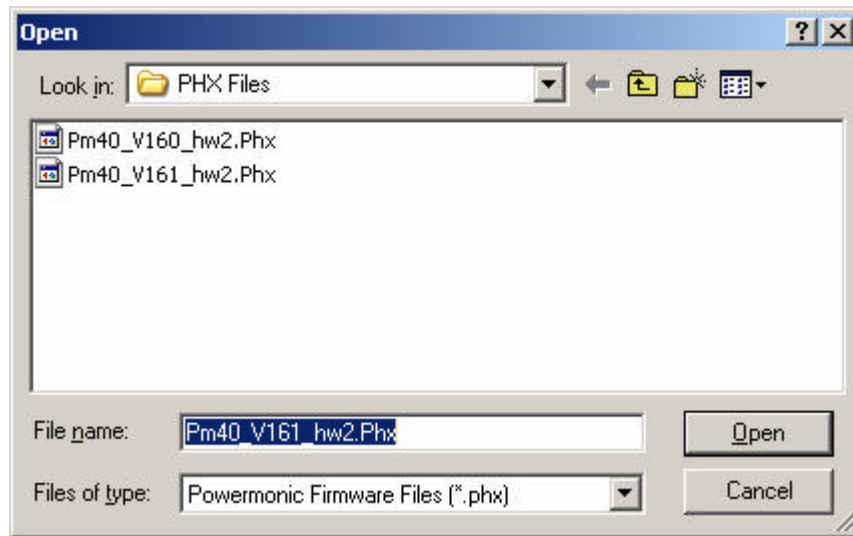
Click Open, it will show the firmware and hardware version of the selected firmware file.
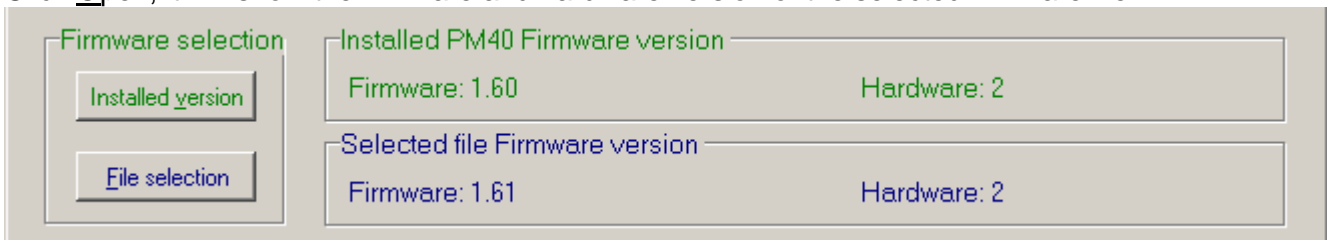
10. Click **Start**, it pops up a warning message if the firmware version is the same as or lower than that of the PM40. If you select **No**, the process will stop here. If you select **Yes**, then it will continue the firmware upgrade.

11. The firmware upgrade progress will be shown as below.

If somehow the firmware is corrupted, it will pop up a message *"CRC error: firmware file not valid!"*;
If the hardware version of the .phx file does not match that of the **PowerMonic PM40**, it will pop up a message *"Hardware version does not match!"*

When any one of above occurs, the firmware upgrade will terminate.

If you want to cancel the firmware upgrade, you can click **Cancel**, it will ask you for confirmation to stop, if you select **Yes**, the process stops here; if you select **No**, the process resumes from where it was interrupted.

During the firmware upgrade, the LCD still scrolls as normal but all logging is switched OFF. For firmware versions greater than V1.60, a **blinking &** is displayed on the right-hand corner of the LCD to indicate that the firmware upgrade is in progress.

12. After PC has loaded all the new firmware to DSP, the **PowerMonic PM40** will stop scrolling for 3 seconds and the restart, LCD will display the message:

> *Upgrade in Progress…*
>
> *Erasing Page 0…*
>
> *Erasing Page 1…*
>
> *Erasing Page 2…*
>
> *Copying Page 3 to 0…*
>
> *Copying Page 4 to 1…*
>
> *Copying Page 5 to 2…*
>
> *Restoring Last Page…*
>
> *Upgrade Success!*
>
> *Wait for restart…*
>
> *(max 6s)*

12. After the PM40 restarts, the welcome page will show the new firmware version. Also, the **PM40 Firmware Loader** pops up a message to guide you how to verify the firmware upgrade:

Uninstall the PM40 Firmware Loader 1.10 software

There are two ways to uninstall the *PM40 Firmware Loader 1.10* software:

- Double click *Unwise.exe* in the folder *C:\Program Files\GridSense*PowerMonic*\PM40 Firmware Loader*

- Use **Start, Control Panel, Add or Remove Programs, PM40 Firmware Loader Software**