



ELECTRONIC DESIGN AND MANUFACTURING

Power Timer User Manual



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1 INTRODUCTION

Product description

Disclaimer and warranty

Getting started

Included in the package

2 QUICK START

Hardware

Software

Connection

Programming

3 SPECIFICATIONS

Input Voltage	220V AC – 240V AC
Frequency	50Hz/60Hz
Max Switching Current	20A
Preset Timer Modes	See Below
Time Memory	10 Years

4 DEVICE OPERATION

Operation

The Power Timer has one button and 5 LED lights. The 5 LED lights are to show in which program the device is in.

If the LED is flashing it shows the 230V AC is connected. If the LED is not flashing the device has disconnected the power.

Program 1

This is a factory preset program and the Power Timer will be on for the following times:

- 5-6 AM & 5-6 PM

This is 2 hours a day.

Program 2

This is a factory preset program and the Power Timer will be on for the following times:

- 4-6 AM & 4-6 PM

This is 4 hours a day.

Program 3

This is a factory preset program and the Power Timer will be on for the following times:

- 4-7 AM & 4-7 PM

This is 6 hours a day.

Program 4

This is a factory preset program and the Power Timer will be on for the following times:

- 5-8 AM & 5-8 PM

This is 6 hours a day.

Program 5 (user adjustable)

This is a factory preset program and the Power Timer will be on for the following times:

- 4-5 AM

This is 1 hour a day.

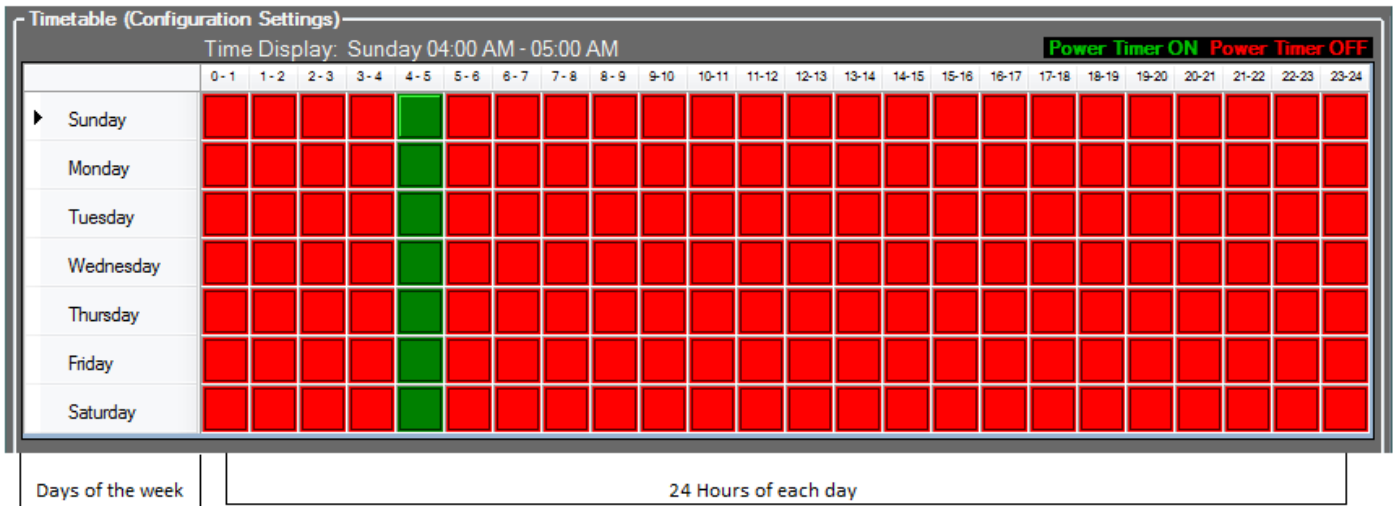
Program 6 (Bypass)

If this program is selected the device bypasses the timer functionality and will permanently connect the power. This is used when the user wants to bypass the power timer.

Please Note: The device will only switch the relay approximately **10 seconds** after a program has been chosen. The program will be saved into the memory only **30 seconds** after the program has been selected.

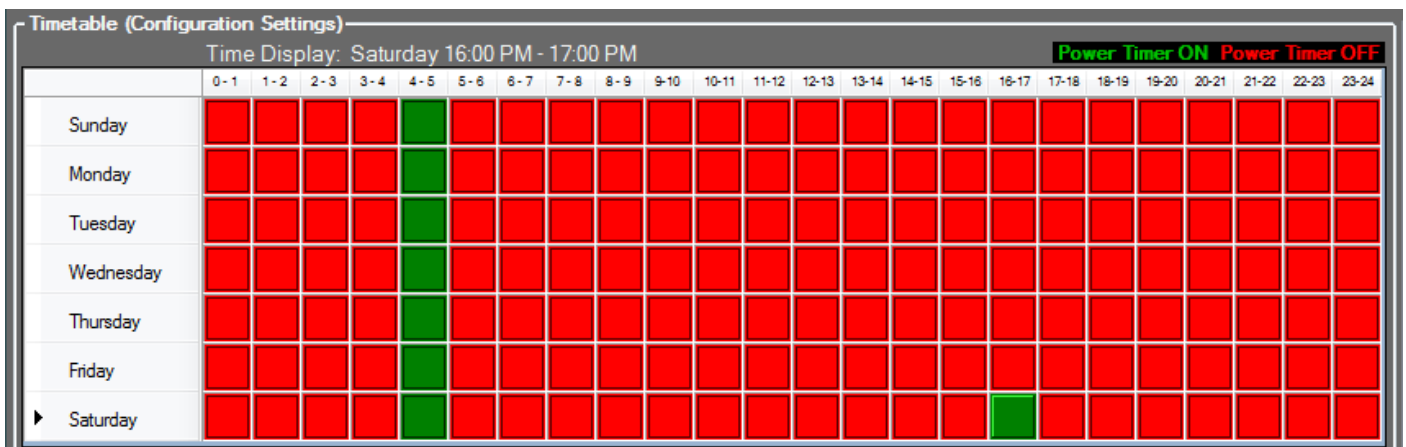
Program 5 (User Defined)

This program is the user defined program which is loaded into the device via a USB cable. The PC application software which is installed onto the user's computer allows for a fully customisable timetable (Configuration Settings). The timetable is displayed below:

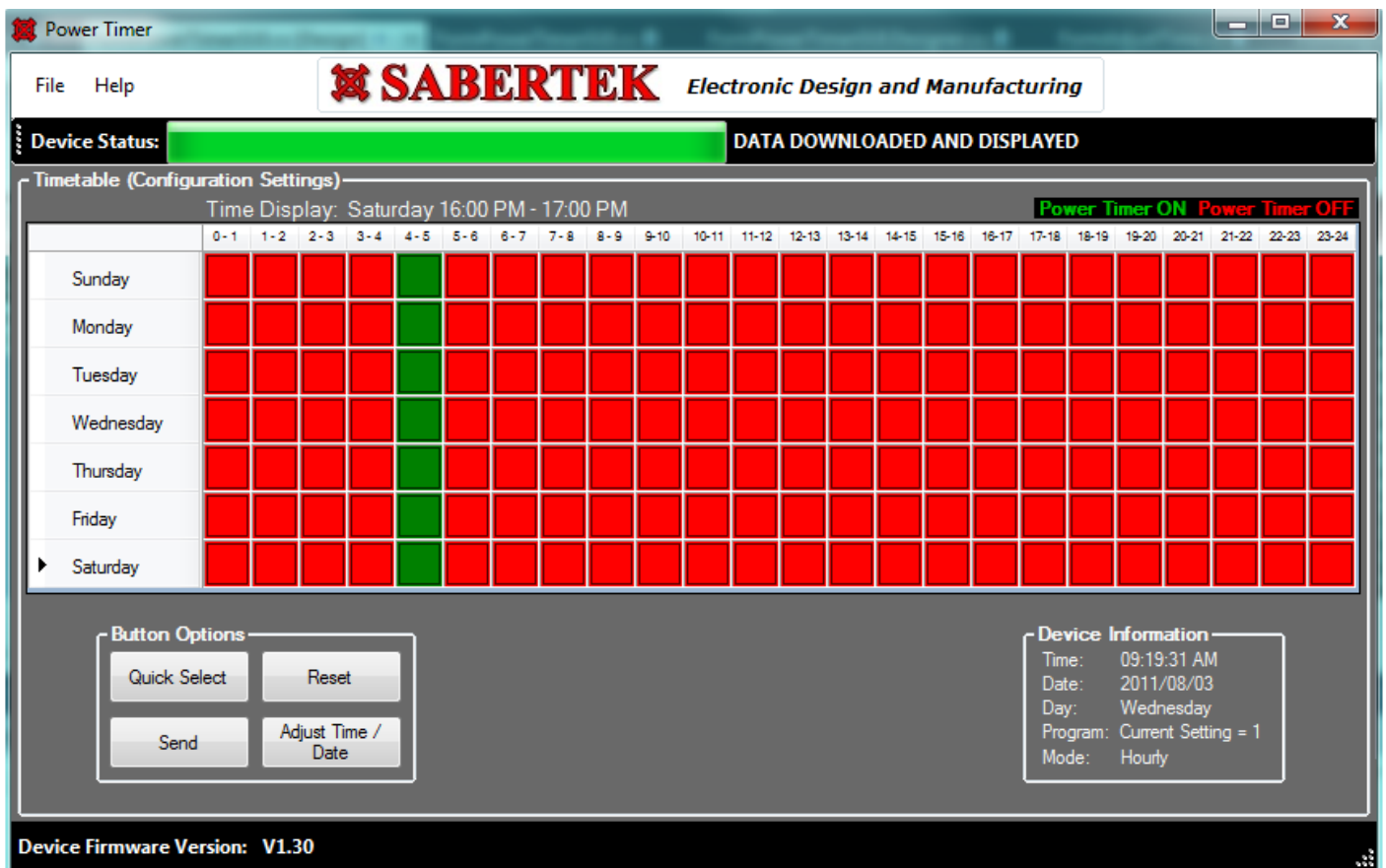


The current selection means that the Power Timer will be connected between 4:00 AM and 5:00 AM every morning.

To adjust the device to turn on between 16:00 PM and 17:00 PM on Saturdays the user will left click his mouse over the button (square) as shown below. To make sure you have selected the correct button, you may check the label in the top left hand corner to see the day and time selected (e.g. Time Display: Saturday 16:00 PM – 17:00 PM).



5 USER INTERFACE



The user interface is a simple program which programs the user on/off times for the Power Timer.

The user interface consists of the following functionality:

- “File” and “Help” main menus
- “Device Status” toolbar
- “Timetable (Configuration Settings)” group box
- “Button Options” group box
- “Device Information” group box
- “Time and Date Adjust Selections” group box (not shown on application start up)
- “Quick Select checklist” (not shown on application start up)
- “Device Firmware Version” status bar
- User interface tooltips

File and Help main menus



File

The **File** → **Exit** will exit the software application. Make sure the data has been sent to the device once you have made changes.

Help



Help → **Check for Updates**: to update the firmware of your device (**NOTE: refer to section: 7 BOOTLOADING**).

Help → **About**: opens the window below to provide PC application software information, device firmware information, and a Sabertek web site link.



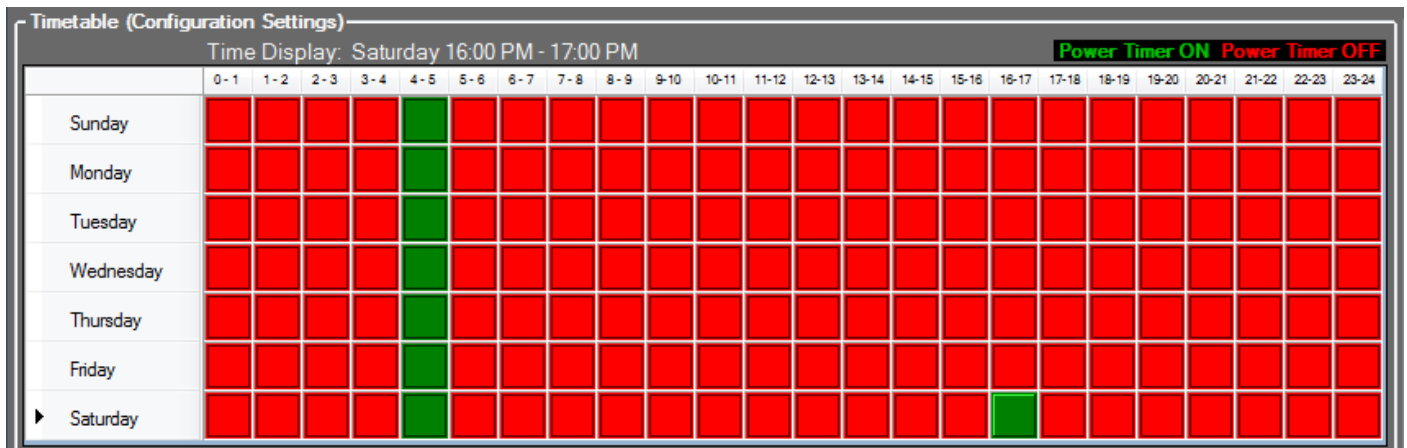
Help → **User Manual**: This will launch the help file in PDF format (this document).

Device Status toolbar



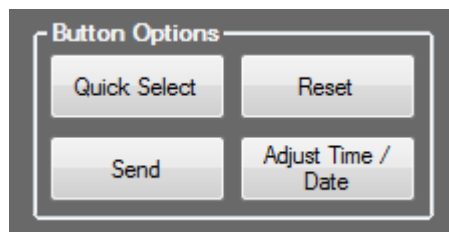
This toolbar provides real time device status feedback (Device connected, reset, etc) and task progress (amount of tasks performed during data sending, etc).

Timetable (Configuration Settings) group box



This is used to select the on (green) and off (red) times for the Power Timer.

Buttons Options group box



Quick Select

This button opens the Quick Select Checklist to speed up the selection time. This enables the user to select an hourly column group (1 – 24 hours) from Sunday to Saturday.

Reset

This will reset the selection table to all off. The data must still be sent to the device once it has been reset.

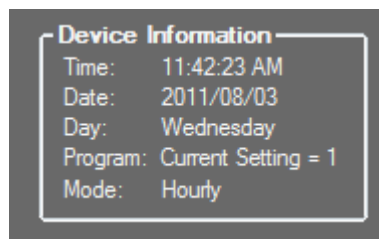
Send

This button will send the current selection table configuration to the device.

Adjust Time and Date

This button opens the Time and Date Selections group box for the user to define the current date and time.

Device Information group box

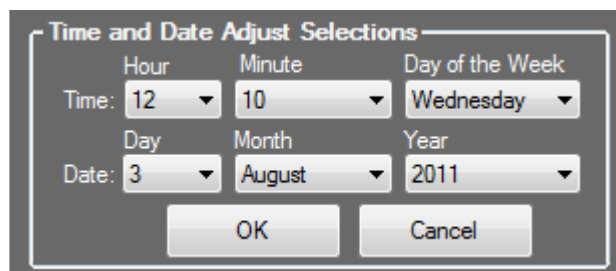


Device Information

Time: 11:42:23 AM
Date: 2011/08/03
Day: Wednesday
Program: Current Setting = 1
Mode: Hourly

This group box displays the device's time and date information as well as the current settings on the device.

Time and Date Selections group box

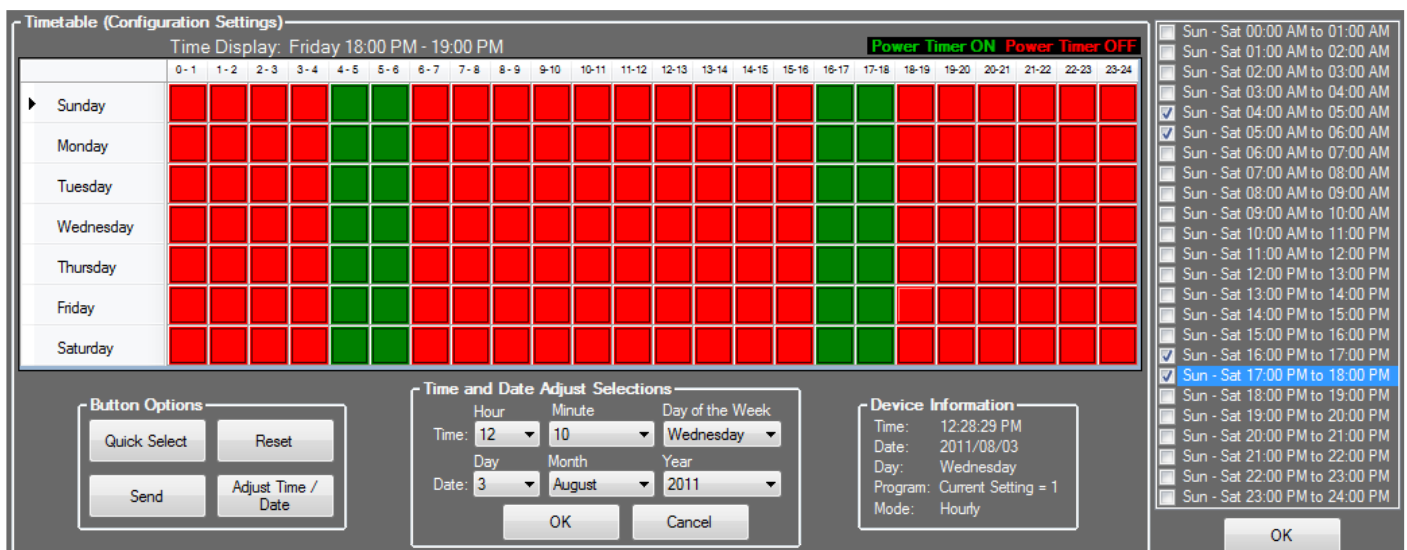


Time and Date Adjust Selections

Hour Minute Day of the Week
Time: 12 10 Wednesday
Day Month Year
Date: 3 August 2011
OK Cancel

The Time and Date Selections group box is used for the user to define the current date and time. The **Adjust Time and Date** button opens this group box.

Quick Select Checklist



Timetable (Configuration Settings)

Time Display: Friday 18:00 PM - 19:00 PM Power Timer ON Power Timer OFF

	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
Sunday																								
Monday																								
Tuesday																								
Wednesday																								
Thursday																								
Friday																								
Saturday																								

Button Options

Quick Select Reset
Send Adjust Time / Date

Time and Date Adjust Selections

Hour Minute Day of the Week
Time: 12 10 Wednesday
Day Month Year
Date: 3 August 2011
OK Cancel

Device Information

Time: 12:28:29 PM
Date: 2011/08/03
Day: Wednesday
Program: Current Setting = 1
Mode: Hourly

Checklist

- ☐ Sun - Sat 00:00 AM to 01:00 AM
- ☐ Sun - Sat 01:00 AM to 02:00 AM
- ☐ Sun - Sat 02:00 AM to 03:00 AM
- ☐ Sun - Sat 03:00 AM to 04:00 AM
- ☒ Sun - Sat 04:00 AM to 05:00 AM
- ☒ Sun - Sat 05:00 AM to 06:00 AM
- ☐ Sun - Sat 06:00 AM to 07:00 AM
- ☐ Sun - Sat 07:00 AM to 08:00 AM
- ☐ Sun - Sat 08:00 AM to 09:00 AM
- ☐ Sun - Sat 09:00 AM to 10:00 AM
- ☐ Sun - Sat 10:00 AM to 11:00 PM
- ☐ Sun - Sat 11:00 AM to 12:00 PM
- ☐ Sun - Sat 12:00 PM to 13:00 PM
- ☐ Sun - Sat 13:00 PM to 14:00 PM
- ☐ Sun - Sat 14:00 PM to 15:00 PM
- ☐ Sun - Sat 15:00 PM to 16:00 PM
- ☒ Sun - Sat 16:00 PM to 17:00 PM
- ☒ Sun - Sat 17:00 PM to 18:00 PM
- ☐ Sun - Sat 18:00 PM to 19:00 PM
- ☐ Sun - Sat 19:00 PM to 20:00 PM
- ☐ Sun - Sat 20:00 PM to 21:00 PM
- ☐ Sun - Sat 21:00 PM to 22:00 PM
- ☐ Sun - Sat 22:00 PM to 23:00 PM
- ☐ Sun - Sat 23:00 PM to 24:00 PM

OK

The **Quick Select** button opens the Quick Select Checklist to speed up the selection time. This enables the user to select an hourly column group (1 – 24 hours) from Sunday to Saturday. The relevant check box can be cleared to unselect the relevant column checklist box as well as the selected column group.

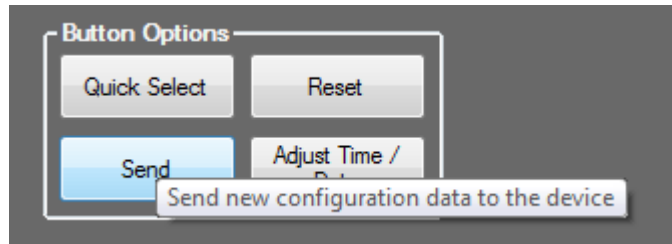
Device Firmware Version status bar

Device Firmware Version: V1.30

This status bar displays the software version number that is currently running on the Power Timer.

User Interface tooltips

Tooltips are included for each user interface component to explain to the user the exact functionality of each component e.g. buttons etc. These tooltips will appear when the user hovers over the relevant component, for example, the **Send** button will display the following tooltip message:



Tooltip List:

Exit: Exit Power Timer application.

Check for Updates: Unlock code selection for bootloading software.

About: PC application software, device firmware, and Sabertek web site information.

Device Status: Device task progress and status feedback.

Timetable: Left click the button to select or clear.

Button Quick Select: Display Sunday to Saturday hourly time frame select or clear options.

Button Reset: Reset all selected values.

Button Send: Send new configuration data to the device.

Button Adjust Time / Date: Adjust the current time and date.

Button OK (Time and Date Adjust Selections): Send the modified time and date to the device and hide the "Time and Date Adjust Selections".

Button Cancel (Time and Date Adjust Selections): Hide the "Time and Date Adjust Selections".

Quick Select Check List box: Quick-select: left click to select or clear a Sunday to Saturday hourly time frame.

Button OK (Quick Select Section): Hide the quick select options.

Device Firmware Version Status bar: Display the current device embedded firmware version.

Device Information group box: Display device's current unique properties and information.

6 USB DRIVER INSTALLATION

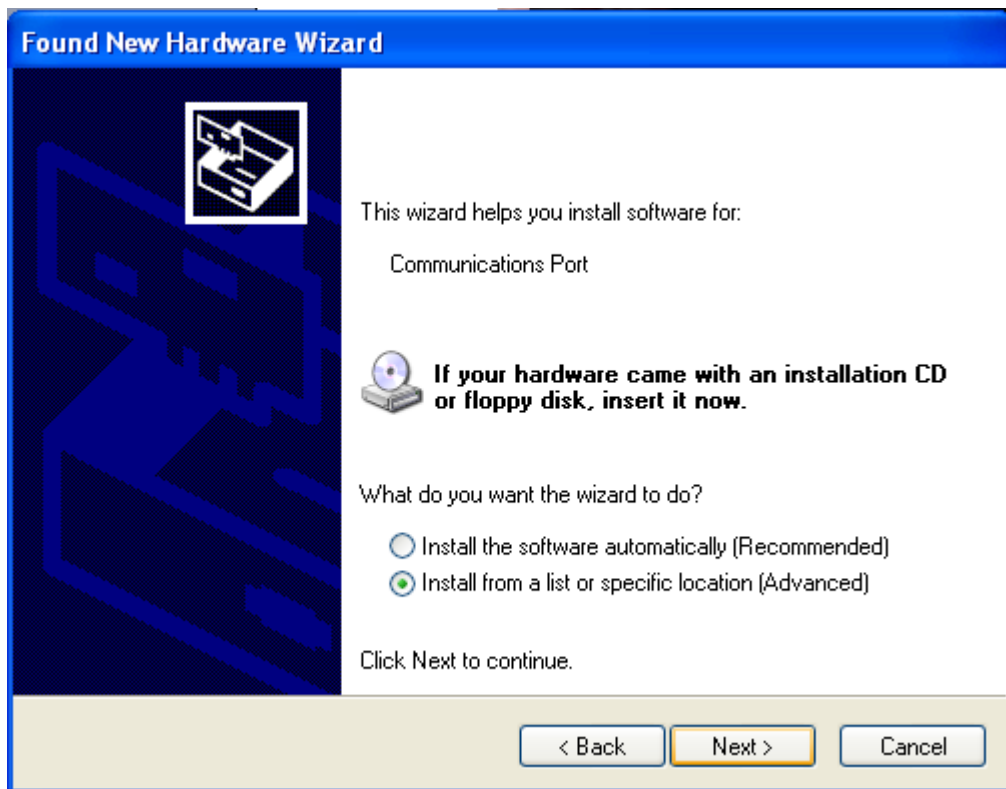
The USB device needs a specific driver to communicate to the Computer. The following instructions will guide you through the installation process:

Plug the USB cable in to the Power Timer and then into the Computer:

The found new hardware dialog will be shown on the bottom right hand side of the task bar:



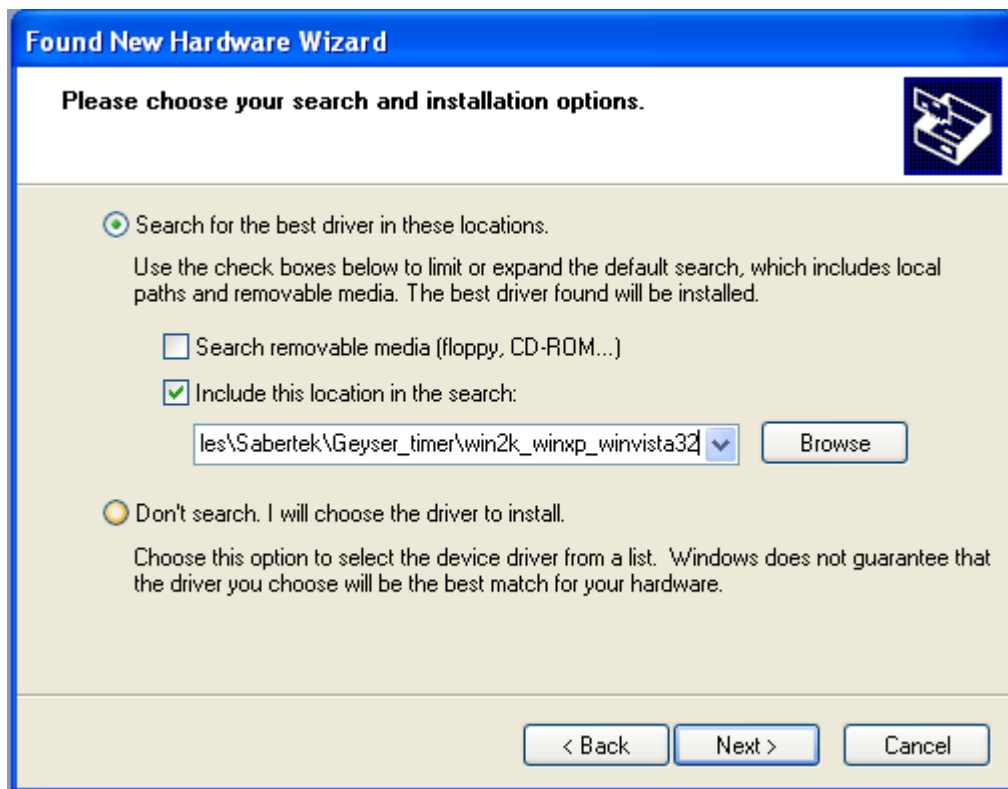
A Dialog box will appear asking to connect to the internet to find the correct drivers, Click on "No not this time" and then Click Next:



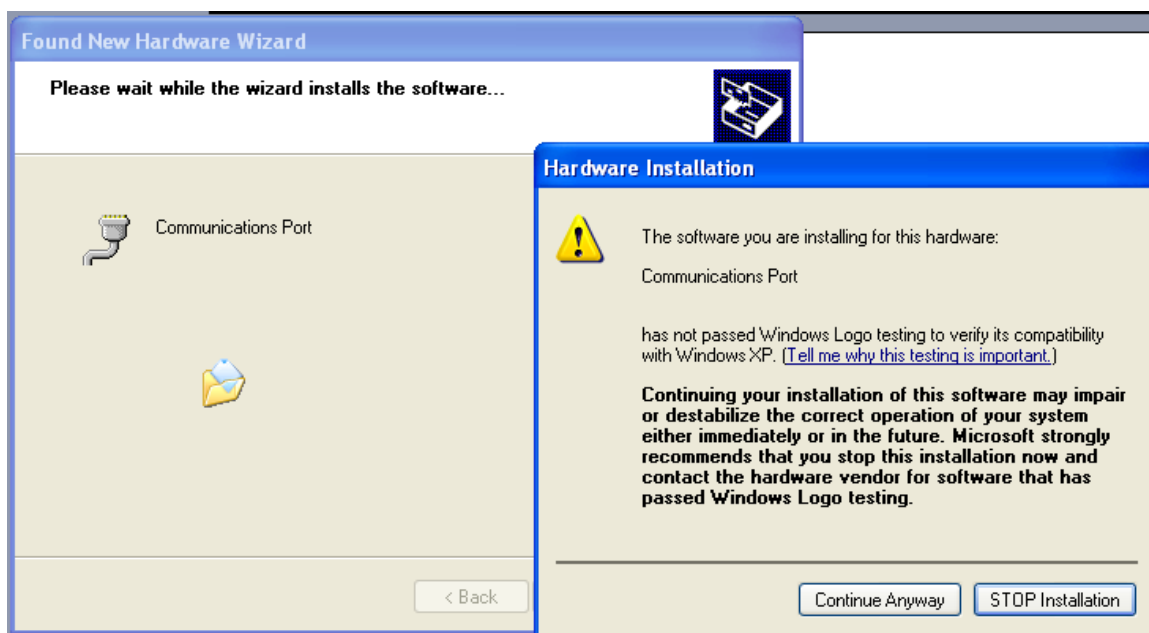
The Found new Hardware wizard will ask you what location to install from, "Install from a list or specific location" and then click Next:

The Dialog box will require the location where the driver is installed into. The address is as follows and may be copied and placed directly into the "Include this location in the search" text box as below:

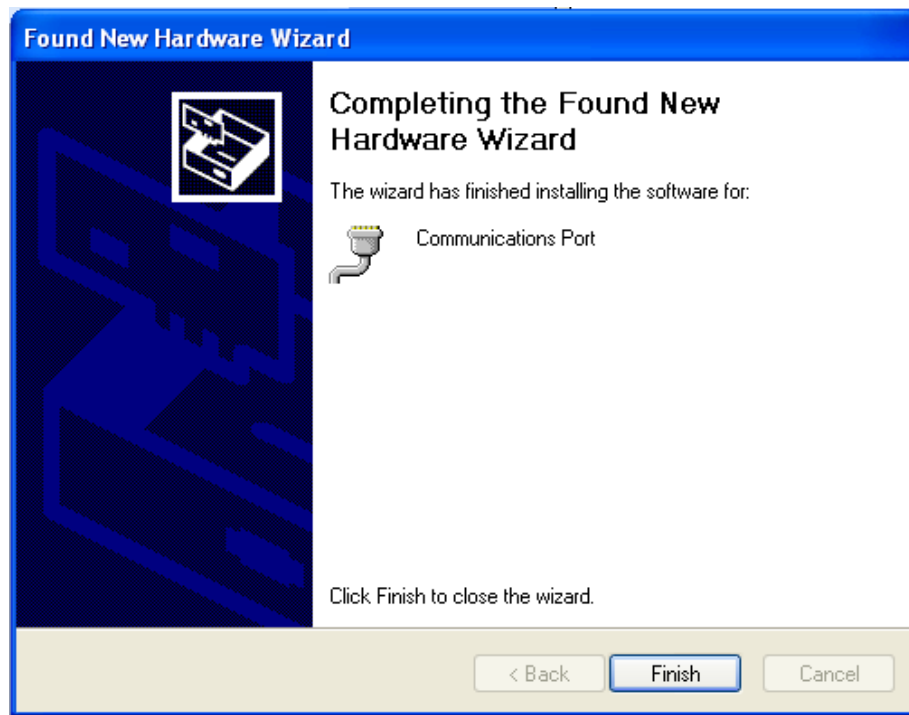
Address: "C:\Program Files\Sabertek\Geyser_timer\win2k_winxp_winvista32"



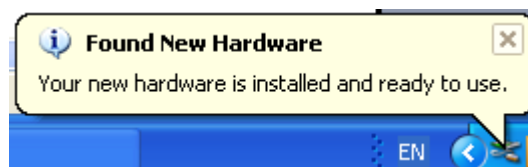
Click Next:
The following dialog box will appear:



Click Continue Anyway to complete the installation of the driver for your machine:



Click Finish to close the dialog box.



The Power Timer Driver is installed correctly and the software is ready to be used.

7 BOOTLOADING

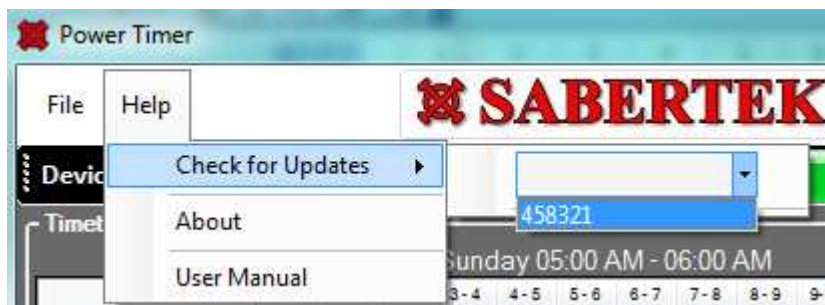
NOTE: this is not applicable to most users and only experienced users should proceed with caution.

Bootloading is used when you may have to update the firmware of your device. This is done by holding down the button on the unit for at least 5 seconds while the unit is powered up. The unit must be plugged into the pc via the USB port and the bootloading software must be running.

Bootloading Procedure

Run the Power Timer PC software application.

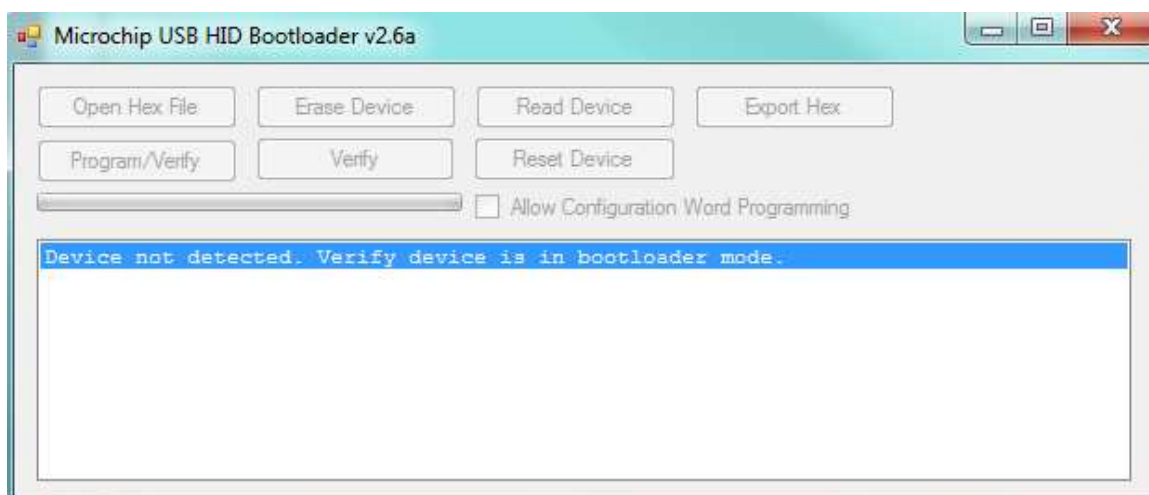
Select **Help → Check for Updates → 458321:**



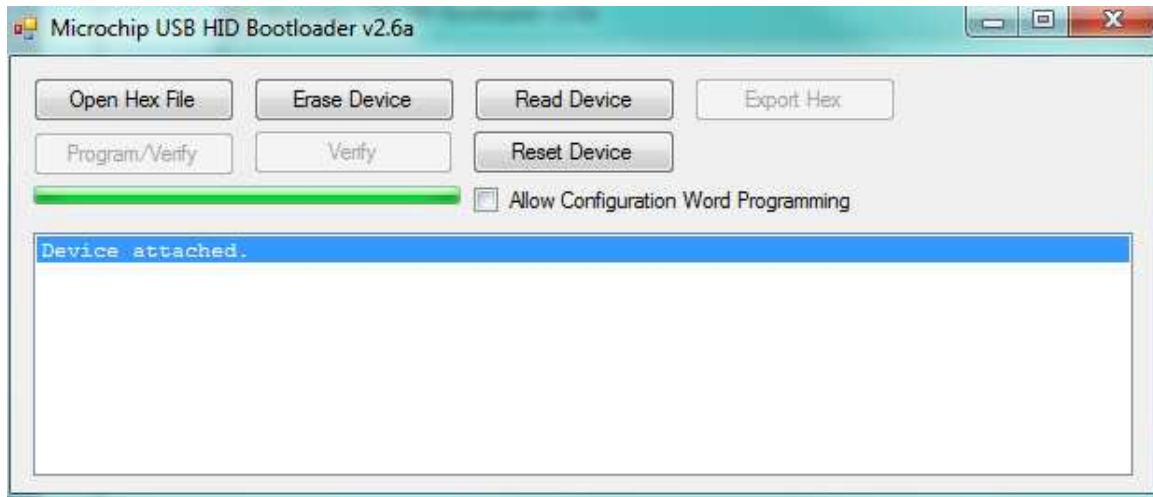
This code will close the software application and unlock the bootloading application. The following message will display:



Press "OK". The bootloading application will now appear:



Press and hold the device **MODE** button (5 - 10 seconds) until LEDs 4 and 5 illuminate. This indicates that the device entered bootloading mode successfully. The bootloading application software will now be enabled:



1. Press the "Open Hex File" button to select the hex file to be reprogrammed onto the device.
2. Push the "Erase Device" button.
3. Push the "Program/Verify" button.
4. Push the "Reset Device" button.
5. Close the bootloading application.
6. It is recommended that the Power Timer USB connection is disconnected from the PC and reconnected again to establish a new communication port connection.
7. Open the PC software application.

The device will now be reprogrammed with the new software and should start up normally. Once the device has started the times must be reprogrammed into the device if Setting 5 is to be used.