

2 Installation

Before you can use the VolksMeter, it must be “Installed”. Installation of the VolksMeter consists of the following steps:

1. Unpack
2. Setup for initial test; configure Interface Board.
3. Install WinSDR and WinQUAKE software on support computer. Connect VolksMeter to support computer.
4. Check and adjust alignment if necessary.
5. Configure WinSDR
6. Rough level the VolksMeter and verify operation.
7. Select Permanent Site.
8. Move the VolksMeter to the permanent site, connect and level.
9. Configure software for long-term data recording. (This step is discussed in Chapter 3, Software Setup for Operation.)

2.1 Unpack The VolksMeter

Upon opening the shipping carton, you should remove the following items from the box:

- This User’s Manual
- The Communications Cable (USB or RS232-C)
- The AC Power Adapter
- The Tool Kit
- The GPS Receiver and Cable (Optional item)



When all items have been removed from the top-level cavities of the shipping box, carefully pull the upper styrene block out of the box to expose the



VolksMeter instrument itself.

Lift the instrument from the box and place it, with the flat Base Plate down, on a sturdy, hard surface.



For initial alignment checking and adjustment, the instrument should be placed in a well-lit, accessible location, close to the support computer. After initial testing, the VolksMeter can be moved to its’ permanent location.

Save the shipping box and inserts in case you have to re-ship the VolksMeter.

Note that the Leveling Screws protruding below the Base Plate have sharp points on the ends, so choose or protect the surface accordingly.

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Unpack the Tool Kit. There will be a 6-in-1 Multi-tool, a 3/32" Hex Driver and a 3/32" Hex L-Key. Unwrap the multi-tool, pull out the shaft, reverse it



to expose the #2 Phillips screw driver and reinsert the shaft into the handle.

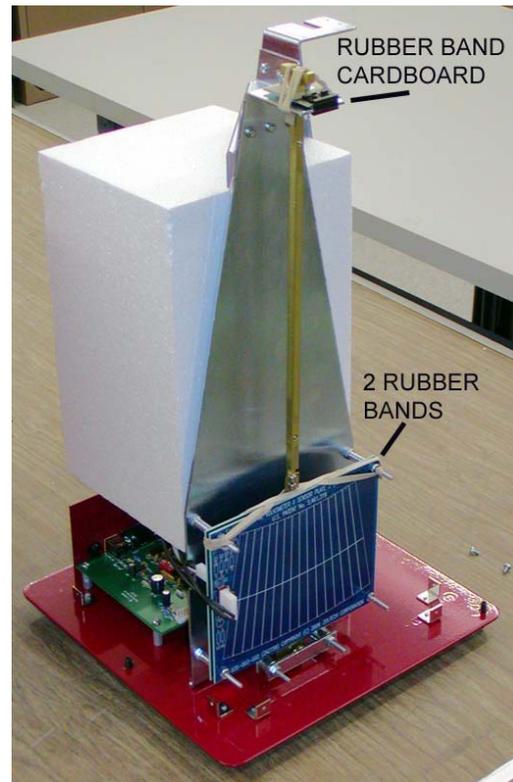


Use the Multi-tool to remove the screws that hold the VolksMeter Cover to the Base Plate. There are seven such screws located along the lower edge of the Cover. There are two screws on each side of the Cover except for the side with the I/O Panel, which has a single screw. Remove and save all seven screws.

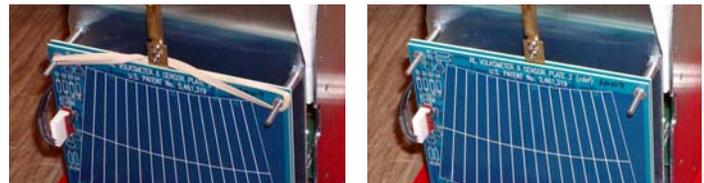
Note that there are Torx-head screws along the vertical and top edges of the Cover. These screws are used to hold the two parts of the Cover together and normally should never be removed.

Lift the Cover straight up from the Base Plate until the Cover is clear of the internal components of the VolksMeter. Set the Cover aside for now.

Remove the shipping restraints on the Pendulum Assembly.

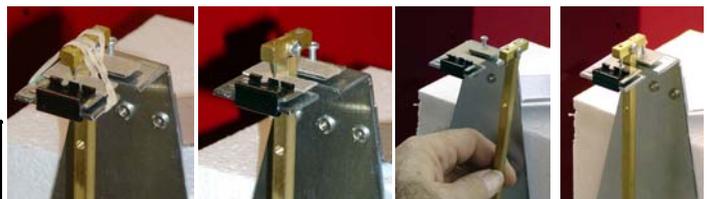


First remove the two rubber bands from the bottom of the Pendulum Bar / Sensor Assembly:



One Rubber Band Removed Both Rubber Bands Removed

Next, remove the rubber band and the cardboard part from the top of the Pendulum Bar / Pivot Point Assembly:



Rubber Band and Cardboard in place

Rubber Band removed

Lift the Pendulum Assembly to remove the Cardboard

Place the Pivot Points in the cups on the Pivot Plate

Save the Cardboard in case you re-ship the unit.

Repeat the removal of shipping restraints on the second channel Pendulum Assembly, if present.

This completes the Unpacking step.

2.2 Setup for Initial Test

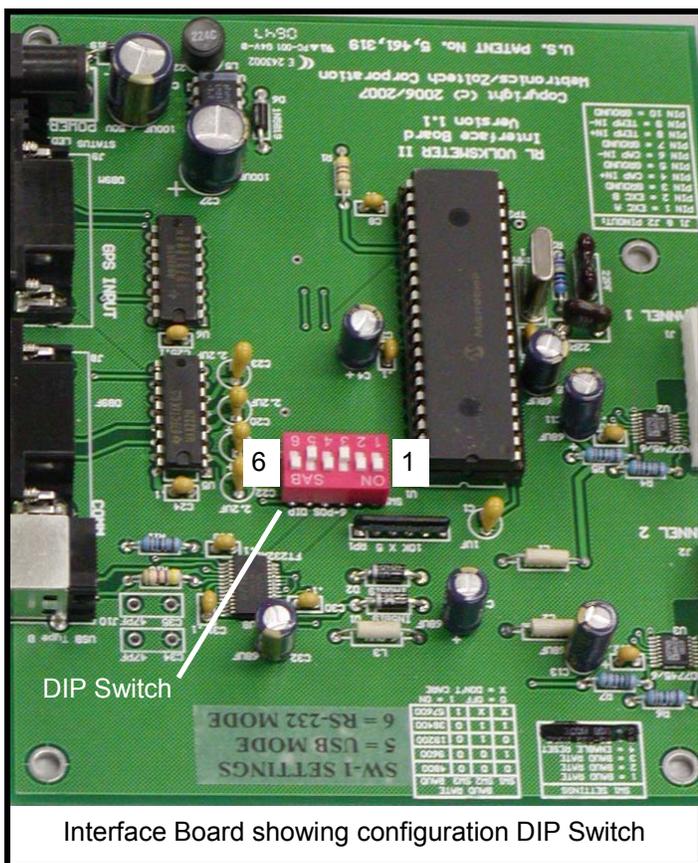
Your VolksMeter was tested for proper operation prior to shipment. However, because unexpected things may happen during shipment, we recommend that you confirm the operation of the instrument prior to placing it in its' permanent location and placing it in operation.

As suggested in the prior section, the VolksMeter should be placed on a sturdy table, relatively level ($\pm 1^\circ$), well lit, hard surface, near a suitable support computer (you will need to be able to see the screen and operate the keyboard/pointing device during testing).

otherwise specified), otherwise it will have a 10ft RS232-C cable. The Interface Board mounted on the Base of the VolksMeter, below the styrene Thermal Insulating Block, must be configured for the desired communication interface, USB or RS232. The board was configured to use the interface corresponding to the supplied cable at the factory. The communications interface of the VolksMeter is configured by setting a DIP Switch on the Interface Board. Check the Interface Board DIP Switch for the correct configuration for your installation. The DIP Switch has six individual switches numbered from 1 to 6. When a switch is positioned toward the edge marked ON, then it is ON (or 1). If positioned toward the edge opposite of ON, then the switch is OFF (or 0).

If you are using the USB interface between the VolksMeter and the support computer, then switch 5 must be ON and switch 6 must be OFF. The positions of switches 1-3 do not matter if using the USB interface.

If you are using the RS232-C interface, then switch 6 must be ON and switch 5 must be OFF. Switches 1-3 control the data rate for the RS232-C interface according to table:



Interface Board showing configuration DIP Switch

Data Rate	SW1	SW2	SW3
4800	0	0	0
9600	1	0	0
19200	0	1	0
38400	1	1	0
57600	X	X	1
RS232C Data Rates			

38400 baud is the default setting. Unless you have a reason to change this, leave it alone.

When used with the provided WinSDR software, switch 4, ENABLE RESET must be ON. This is the default setting.

If your VolksMeter includes the USB interface, it will be shipped with a 10ft USB cable (unless

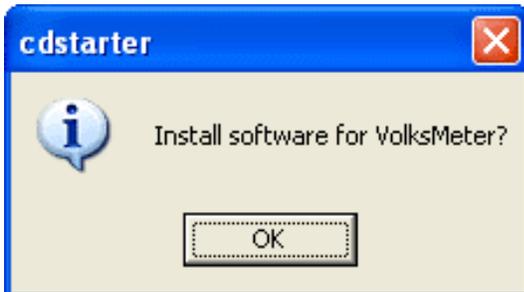
2.3 Install Software

The VolksMeter requires a support computer and dedicated software in order to be used. The required software includes WinSDR, WinQuake and, possibly, USB/serial communication drivers. As mentioned in the Introduction, the support computer must run a version of MS Windows that supports a CD-ROM and a USB or RS232 port.

The installation procedure described below assumes the support computer is running Windows XP. Other supported operating systems will be similar.

The support computer should be displaying the Desktop with no other applications running. Install the provided software by performing the following steps:

1. Load the VolksMeter II Software CD-ROM disk into the CD-ROM drive. The message “Install Software for VolksMeter?” should appear.



Click OK to continue.

2. A window with the message, “Install WinSDR or WinQuake using one of the buttons below” will appear.

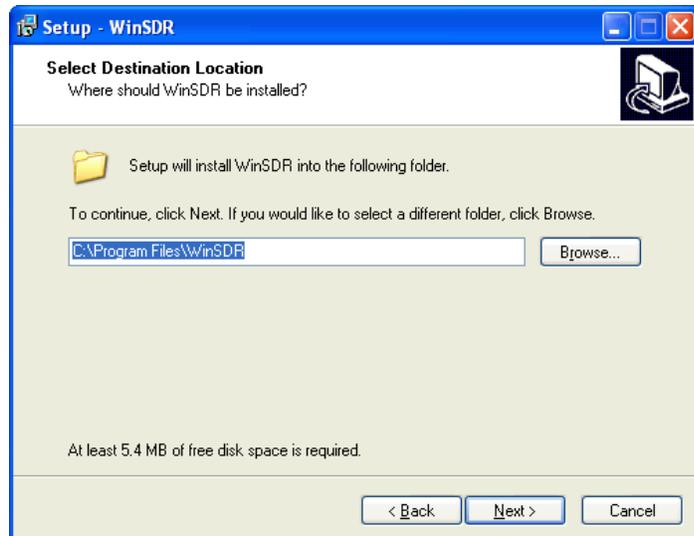
Click the WinSDR button to continue.



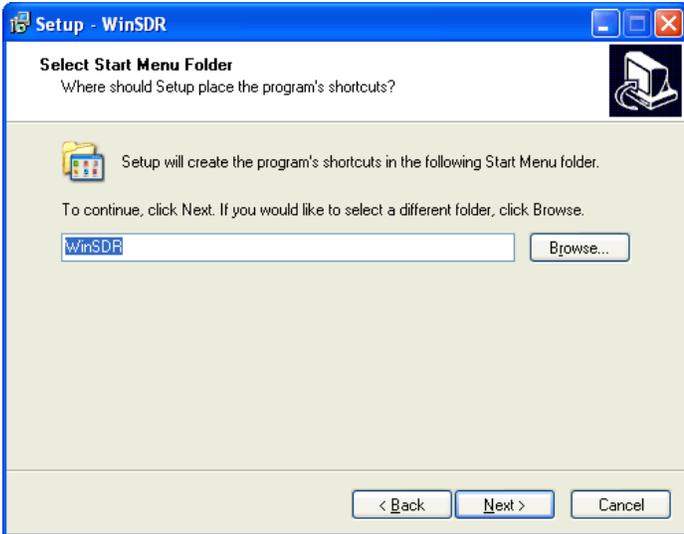
3. The WinSDR Setup Wizard will appear.



Click NEXT to continue. Follow the instructions displayed by the Setup Wizard.



Specify the folder where the WinSDR program will be installed. We suggest that you accept the default location: C:\Program Files\WinSDR. Click NEXT to continue.

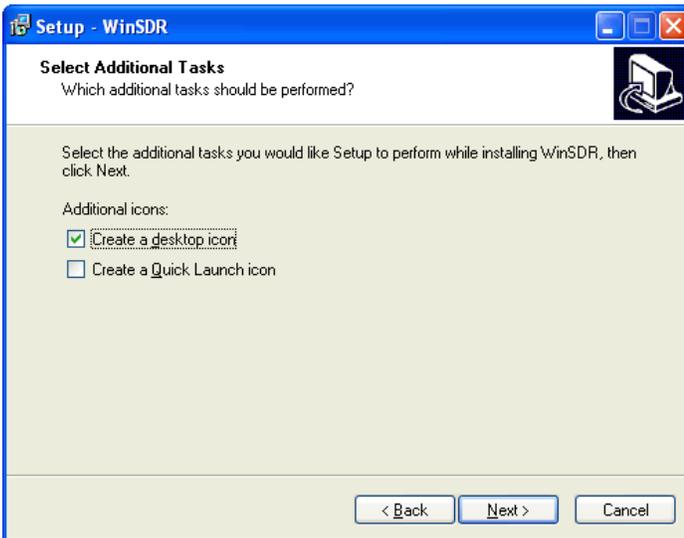


Specify the Start Menu folder. We suggest that you accept the default: WinSDR. Click NEXT to continue.

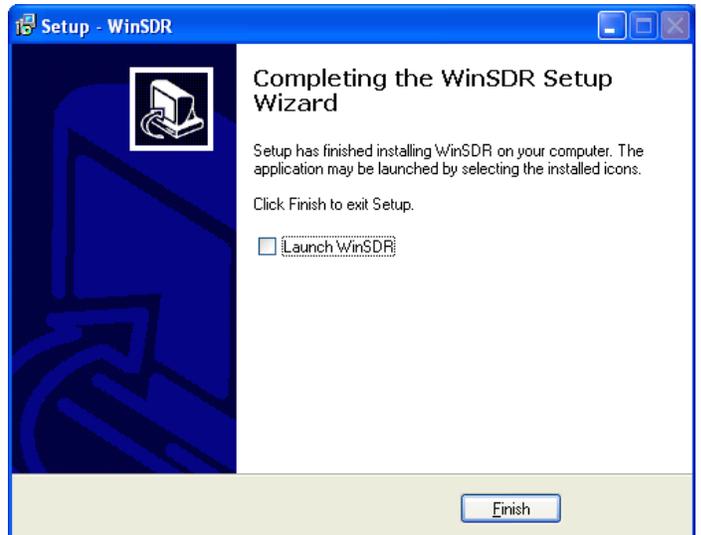


Ready to Install. Confirm your installation selections. Click INSTALL to proceed.

You will see a progress window while WinSDR is being installed. When the installation is complete, the Finish window will be displayed.



Select Additional Tasks. We suggest that you check the “Create a desktop icon” box to place a WinSDR icon on your desktop. Click NEXT to continue.



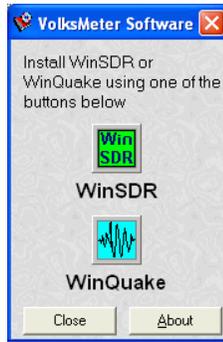
Uncheck the Launch WinSDR box. DO NOT launch WinSDR upon completion of the installation. Click FINISH to return to the Windows Desktop.

Installation

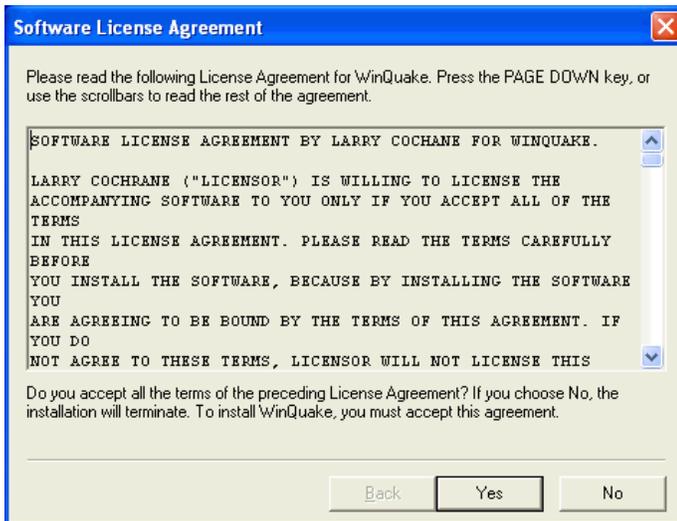
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You will now install WinQuake by performing the following steps:

1. At the VolksMeter Software window, click the WinQuake button.

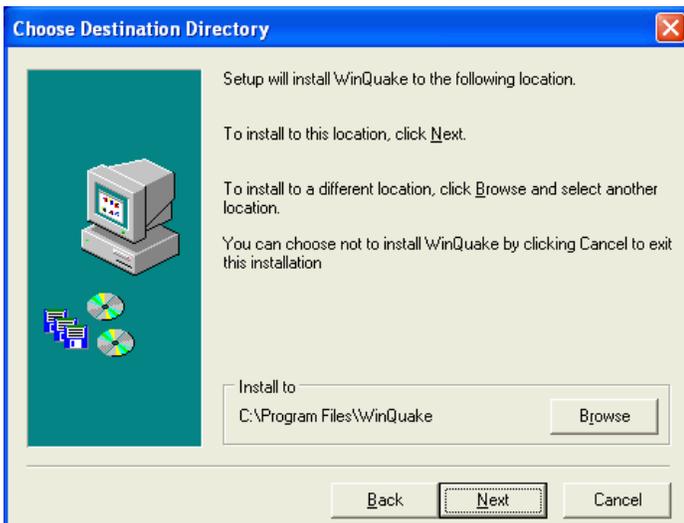


2. The WinQuake Software License Agreement will appear.



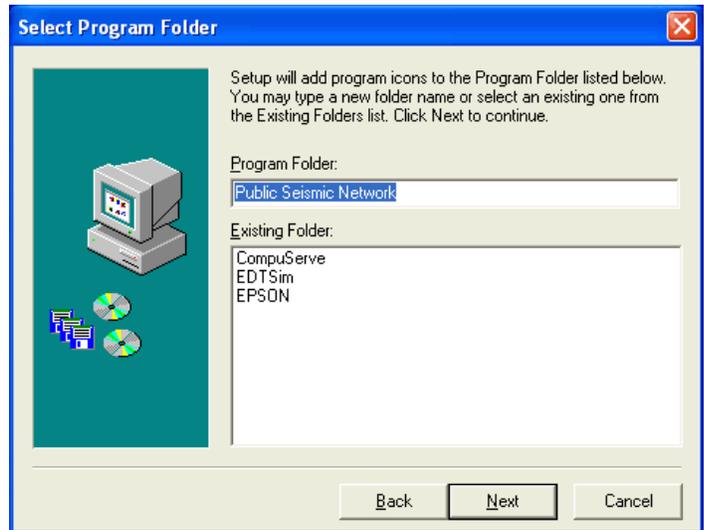
Click YES to accept the software license agreement.

3. The Software Installation Wizard will appear.



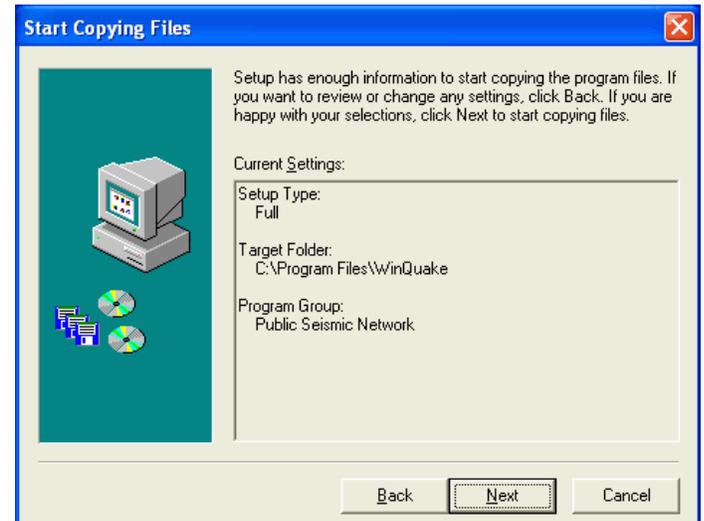
Click NEXT to accept the default and continue.

4. The Select Program Folder window will appear.



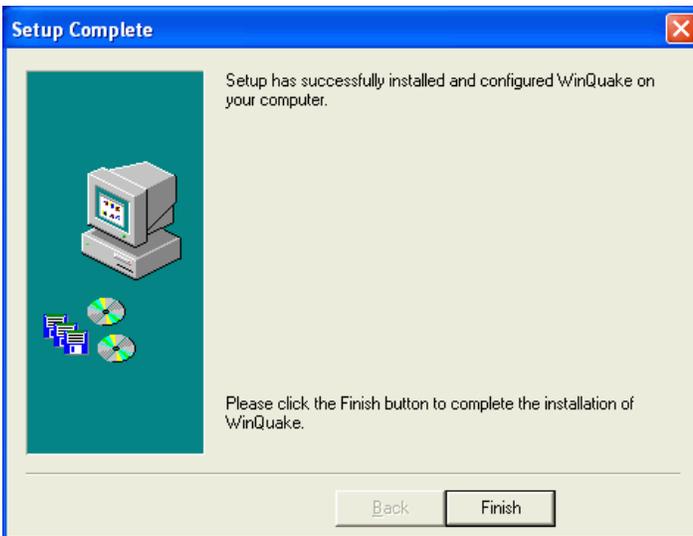
Accept the default, “Public Seismic Network” and click NEXT to continue.

5. The Start Copying Files window will appear.



Confirm your choices and click NEXT to continue.

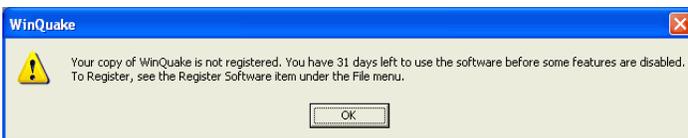
6. The Setup Complete window will appear.



Click FINISH to complete the installation.

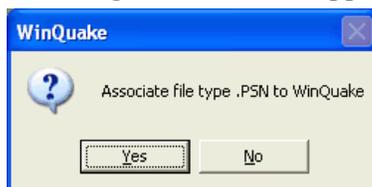
7. Click CLOSE to close the VolksMeter Software window.

8. Register WinQuake by clicking: START | ALL PROGRAMS. From the applications list, select the folder that you specified for WinQuake (PUBLIC SEISMIC NETWORK is the default). Since this support computer is presumably dedicated to the VolksMeter, copy the WinQuake shortcut to the Desk Top. On the Desk Top, click on the WinQuake icon to start WinQuake. WinQuake will open and a message window notifying you that WinQuake is not registered will appear.



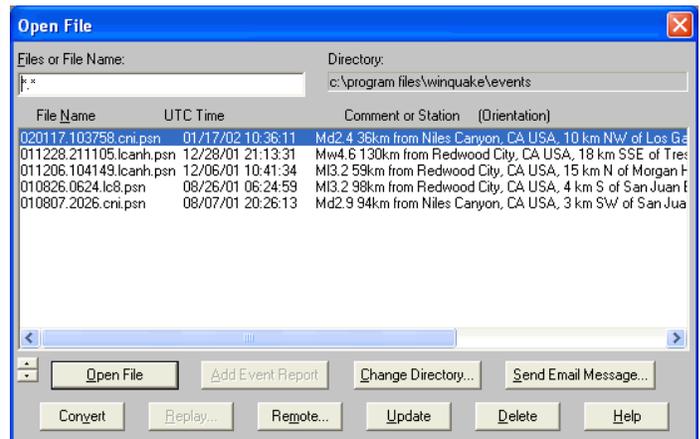
Click OK to continue.

9. Another message window will appear.

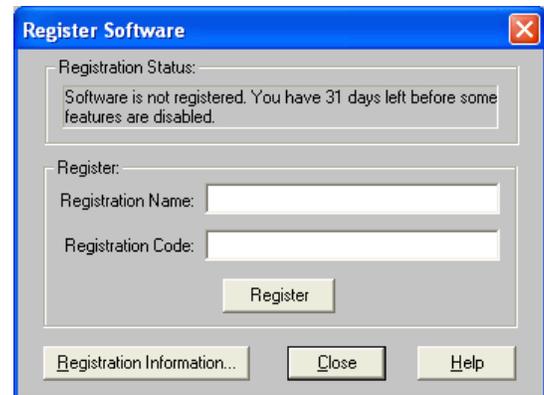


Click YES to continue. Then click OK to

acknowledge the file association. An OPEN FILE window will appear.



10. Ignore the OPEN FILE window and, on the menu bar, click FILE | REGISTER SOFTWARE... to open the Register Software window.



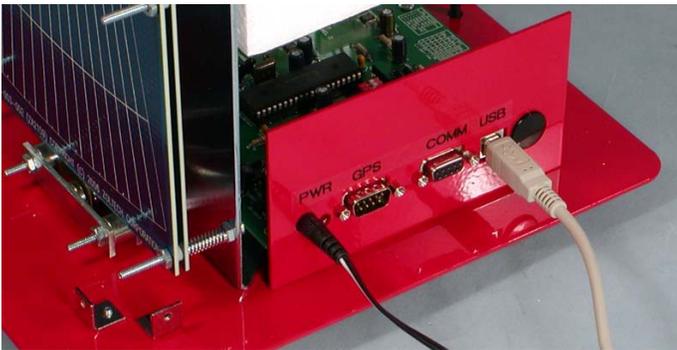
Enter the Registration Name and Registration Code (exactly as supplied) that are printed on the sticker on the back of your VolksMeter CD-ROM container. Click REGISTER. Click CLOSE. Click FILE | EXIT to shut down WinQuake and return to the Windows Desktop.

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Next the USB drivers will be installed, if you are using a USB communications link. (Specific driver installation is not normally required if you are using an RS232-C communications link. In this case, proceed to section 2.4 Check and Adjust Alignment.)

1. Apply power to the VolksMeter by plugging the supplied AC Adapter into an AC outlet. (The standard AC Adapter is limited to 120VAC/60Hz power. A Universal AC Adapter is available as an option.) Plug the DC connector from the Adapter into the PWR connector on the I/O Panel of the VolksMeter. After a few seconds, the LED indicator next to the PWR connector will begin to blink rapidly (~5 times per second), confirming that the Interface Board is powered and initialized.

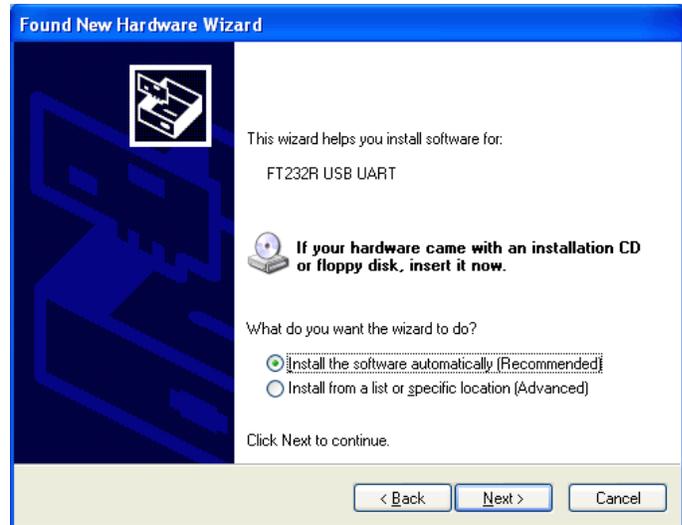


2. Connect the USB cable between the VolksMeter USB connector and a USB port on the support computer. The Windows “Found New Hardware” wizard should start.



Select “No, not at this time.” and click NEXT to continue.

2. The Wizard should display “FT232R USB UART” as the hardware found.



Accept the default “Install Software Automatically” and click NEXT to continue.

3. The Wizard will display a couple of progress messages followed by: “The Wizard has finished installing software for USB Serial Converter”.



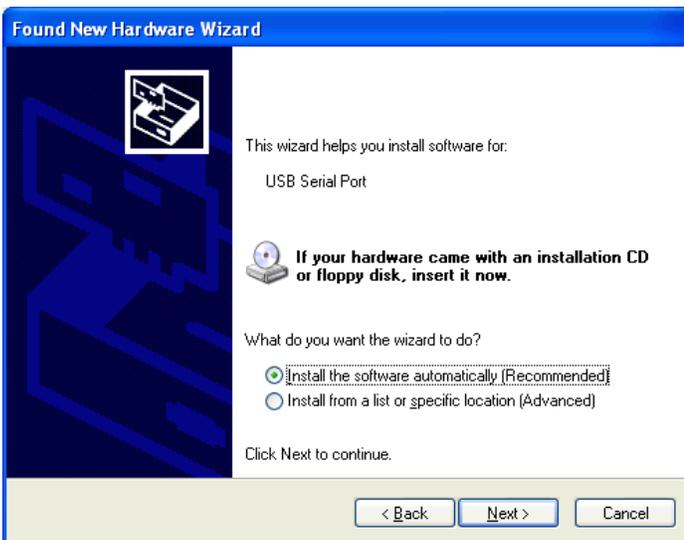
Click FINISH to continue.

- The Found New Hardware Wizard will start again.



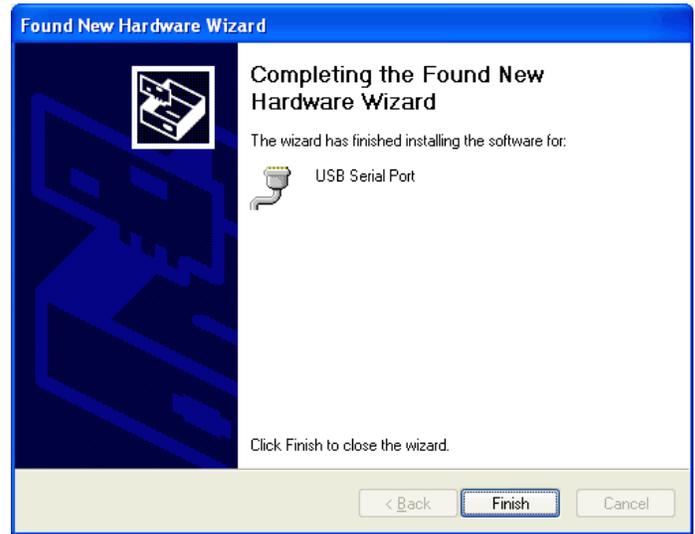
Select “No, not at this time” and click NEXT to continue.

- The Wizard will display “USB Serial Port” (or, depending on your Windows XP update level, “%VID_403&PID_6001.DeviceDesc%”) as the hardware found.



Accept the default “Install Software Automatically” and click NEXT to continue.

- The Wizard should display “The Wizard has finished installing software for USB Serial



Port”. Click FINISH to continue.

- Windows should display “New Hardware is installed and ready to use.”

The WinSDR and WinQuake software and USB drivers (if required) are now installed. Proceed to section 2.4 Check and Adjust Alignment.