

## PMIScan Software User's Manual

**Power Monitors Inc.**  
1661 Virginia Avenue  
Harrisonburg, VA 22802 USA  
<http://www.powermonitors.com>

**1-800-296-4120**  
**540-434-4120**  
**Fax: 540-432-9430**

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## Introduction:

The "Palm Pilot™ with PalmScan Software" is an option to accompany any PMI scanner that is currently shipped. Modeled after the long-tested WinScan software developed by PMI™, this program enables the Technician to perform Initialization, Download, Real-time Display, and Firmware Upload while PMI plans further enhancements. Essentially the Palm functions as a highly portable means of conveying the data from the semi-permanently installed scanner at the meter back to the office PC.

The popular and widely-used Palm personal digital assistant (PDA) lends itself to this application as a small, light, easily handled input-output device. The touchpad interface has proven itself as a compact yet capable means of communication. A few minutes of experimenting should allow the Technician to be up-and-running, especially if familiar with the WinScan program.

## Software Installation:

- Install Palm software on your PC according to the instructions listed in the "Getting Started" brochure that accompanies the Palm.
- Find on the WinScan CD and Install PMI's PalmScan™ program by double-clicking on Setup.exe.
- Install Tool will startup and allows you to chose the username you wish to install PalmScan to. Follow the remaining on-screen instructions.
- Copy PalmScan™ from your PC to the Palm by performing a HotSync™.

## Starting PalmScan:

In order to communicate with the Palm, the scanner must have power, either from the line if the scanner is installed or from a 12-volt power adapter wall transformer. The PDA must be able to communicate with the scanner, either through a serial cable, Infrared (IR), or bluetooth connection. The Serial Cable is a retrofitted Palm Cable that connects to any PMI cable (Note that PMI 25 Pin cables need a DB-25 to DB-9 adapter). The Male DB-9 end of the cable plugs into the PMI cable provided with the scanner while the other end connects to the serial port of the Palm. Most scanners employed the serial cable, while older VS-2S scanners employ IR and a serial cable and the Eagle Series scanners employ serial and Blue Tooth wireless connections. Consequently the Palm will communicate with most PMI scanner currently shipping.

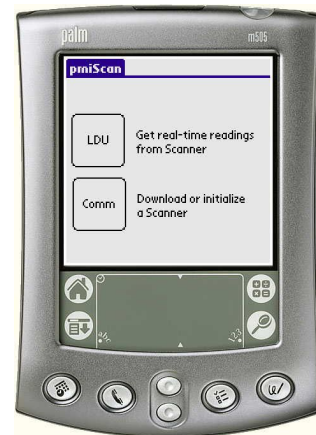


Figure 1: Initial Menu

An IR transmitter must have a line-of-sight view of the receiver at a range of 12 inches or less. The PDA emits a beep while downloading files, uploading firmware, or other processes to indicate to the user that communication is taking place.

To implement a command in the Palm, touch or tap the screen surface with either a finger or the supplied pointer. The program is written with large buttons for the most part so that anyone can use it effectively. Tap **Done** at any point to return to the main menu. Once the scanner is powered and the PDA is "connected" to the scanner, tap the PalmScan™ icon to reach the **Main Form**, consisting of 2 commands: LDU and Comm. Once the Comm mode is selected, the user must identify the connection method by selecting one of the three options Serial, IR, or Bluetooth. If blue tooth is selected, the user must also choose the scanner serial number from the Blur Tooth devices listed on the connection screen.



**LDU: "Get real-time readings from scanner."**

"Local Display Unit" allows the user to scroll through a series of screens showing real-time display of the measurements that have been enabled: voltage, current, power, phase angle, power factor, displacement power factor, and harmonics are possible. The "1 Chan" display option shows the

measurements on fewer screens than the "4 Chan" option, but both sequences show the same information.

- Tap **More** to scroll through the measurements.
- Tap **Next** to view other channels.
- Tap **Done** to return to the **LDU Form** or the **Main Form**.

**A. Status**

Tap the Status button to select the current range (100, 1000, or 5000

A) of the Flexible CTs for the Eagle Class PQ Wireless Recorder.

You may also set the Circuit type in the Status Menu.

**B. 1 Chan**

Tap the 1 Chan button to select a display of 1 channel.

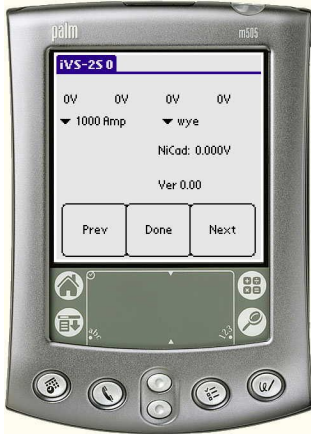
**C. 4 Chan**

Tap the 4 Chan button to select a display of 4 channels

**Figure 2: Selecting Comm Mode**



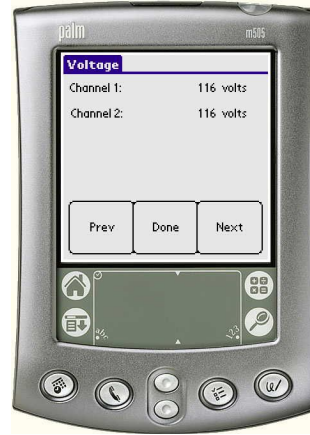
**Figure 3: LDU Main Menu**



**Figure 4: Status Menu Display**



**Figure 5: 1 Chan Display**



**Figure 6: 4 Chan**

**Comm: "Download or initialize a scanner."**

"Communication" allows the user to perform 6 primary functions, most importantly Download and Initialize, and 1 menu function:

**A. Download**

B. Identifies the scanner in the heading, allows editing of the identification, and leads to a download.

- Tap **Done** and **OK** to initiate the download. See "Downloading Data" below.
- If there are numerous files listed in the "Scanners:" box, they may be deleted by highlighting a specific scanner and selecting the Menu Icon and choosing Delete from the pull down menu.



**Figure 7: Comm Menu**



**Figure 8: Download Menu**



**Figure 9: Download Selection**



**Figure 10: Downloading Display**

### C. Identify

Lists information about the individual scanner.



Figure 11: Identify Scanner Display

### D. Date/Time

Allows the user to synchronize the scanner with the PDA.

- Tap Set Time to change the Date/Time of the Scanner to match the PDA.



Figure 12: Time/Date Menu

### E. Initialize

Allows the user to set parameters and choose options from a series of screens similar to those in WinScan. By default, "Scanner Settings" shows the recommended or usual quantities.

- Tap **Edit** to change the settings.
- Tap **Previous** or **Next** to scroll through the numbered screens.
- Tap **Done** and **OK** to accept the defaults or the user-selected settings.



Figure 13: Initialization Scanner Menu



Figure 14: Scanner Setup 1



Figure 15: Scanner Setup 2



Figure 16: Scanner Setup 3

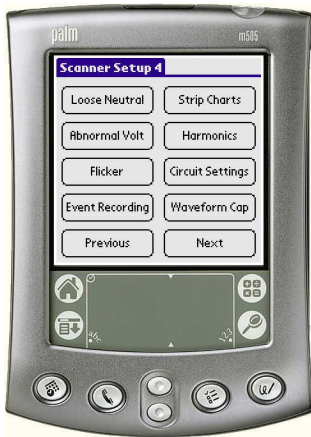


Figure 17: Scanner Setup 4



Figure 18: Loose Neutral



Figure 19: Abnormal Voltage

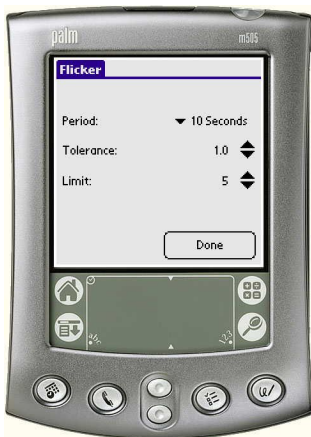


Figure 20: Flicker Menu

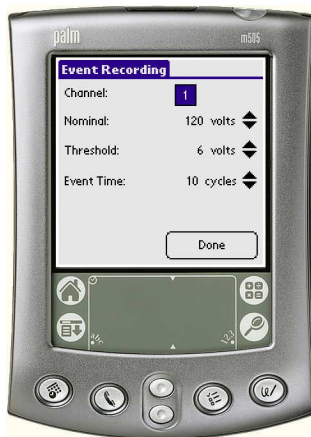


Figure 21: Event Recording



Figure 22: Strip Chart Menu

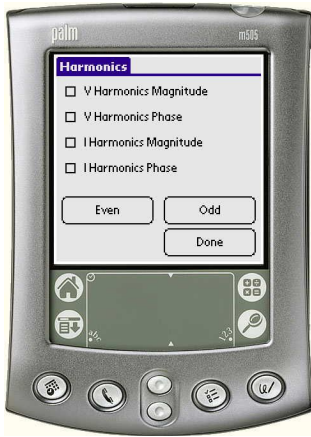


Figure 23: Harmonics Menu

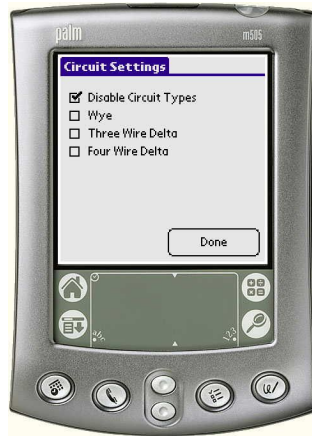


Figure 24: Circuit Settings



Figure 25: Waveform Capture

## F. Retrieve Set

Uploads the prior group of settings.

## Done

Leads back to the **Main Form** and accepts the chosen settings.

The Palm now supports Firmware Upgrades for most PMI products currently shipping. When in the **Comm Form**, select the **Menu Icon** to the bottom left of the graffiti area. A pull down menu will appear at the top of the screen called **Firmware Options**. Select **Firmware Upgrade**.

This selection will send the Palm to the **Firmware Upgrade Form**. Once the scanner has been identified, you may select upgrade. The Palm will beep for each count up to 256. Do not try to move (if in IR mode) or perform any other commands on the Palm while this process is working. After the Palm counts to 256 blocks, it will display and wait 30 seconds (If in IR mode, make sure the Palm remains unmoved). After a successful upload of firmware, the Palm shows an alert and then goes to the **Initialize Form** where you **SHOULD IMMEDIATELY INITIALIZE THE PMI SCANNER**. Then you can tap the **Identify Button** from the **Comm Form** and see the new Firmware version. **Note:** If the Palm returns an "Error Message: No firmware found for this model!" then the database file (extension .pdb) has not been installed for that particular Scanner Model. Please contact PMI to get the latest firmware upgrade .pdb file. To add a .pdb file (or a .prc file) to the Palm, simply double-click on the file wherever it may be on your

computer. This will bring up Palm's Install Tool. Then choose the username you wish to install this file to and the next HotSync will add this file to your Palm.

## Downloading Data:

When the Technician wishes to collect data from the scanners in the field, the PDA serves as a storage medium to convey the data to the office PC. Depending on what records are enabled, the memory of the PDA holds downloads from 2 or 3 scanners.

Connect the PDA to the scanner with the serial cable, select the Blue Tooth wireless function, or position the PDA for infrared connection. To implement the download:

➤ Tap **Comm**, **Download**, and **OK** to initiate the transfer.

Depending on the size of the file, the process could take several minutes. The download is complete when the Main Menu appears. Back at the office, the PDA may be connected to the PC through the HotSync® docking cradle:



- Connect the cradle to the PC according to the instructions for the Palm.
  - Place the Palm in the cradle.
  - Press the HotSync button, and the HotSync Progress screen appears. HotSync places the .isf file in the folder you specify during the installation program.
  - The directory usually tends to be C:\Palm\CustomP\PalmScan where CustomP is the username (PMI Customer is CustomerPMI because Customer is thought by Palm to be the last name of the user). Sometimes, the Palm directory is installed under C:\ProgramFiles\Palm\CustomP\PalmScan
- The .isf file can now be opened and viewed as usual with the WinScan software:
- Click on File, Open, and choose the file from the Open dialog box.

### **Remember, Safety is always our primary concern.**

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Power Monitors Inc.  
Phone number 1