The Scanner
Passive Infrared People Counter

JAMAR
Technologies, Inc.

User's Manual

LIMITED WARRANTY

JAMAR Technologies, Inc. warrants The Scanner against defects in material and workmanship for a period of one (1) year limited warranty on parts and labor from the date of purchase. For information on extended warranty call 1-800-776-0940.

JAMAR Technologies, Inc. warrants each new instrument manufactured by the company to be free from defective material and workmanship and agrees to remedy any such defect. At its option, it may furnish a new part in exchange for any part of any instrument of its manufacture which, under normal installation, use and service discloses such defect. The instrument must be returned to our factory or authorized service agent intact, for examination, with all transportation charges prepaid.

This warranty does not extend to any products which have been subject to misuse, neglect, accident, vandalism or incorrect wiring not our own. This warranty does not extend to water damage caused by improper installation in disregard of the instructions furnished by us. This warranty does not extend to products which have been repaired or altered outside our factory or authorized service agent.

In no event shall JAMAR Technologies, Inc. be liable for any damages arising from the use of this product including damages arising from the loss of information.

This warranty is in lieu of all other warranties expressed or implied and no representative or person is authorized to assume for us any other liability in connection with the sale or use of our products.

JAMAR Technologies, Inc. reserves the right to make improvements on the product and/or specifications at any time without notice.

Questions concerning this warranty or any JAMAR Technologies, Inc. product should be directed by mail or telephone to:

<div align="center">

JAMAR Technologies, Inc.
1500 Industry Road, Suite C
Hatfield, PA 19440
215-361-2244

</div>

If you have any questions about the use of The Scanner, please call the following number:

215-361-2244

Monday - Friday   8:00 AM to 5:00 PM Eastern time

You may also contact us by e-mail at:

sales@jamartech.com

Address any correspondence to:

JAMAR Technologies, Inc.
1500 Industry Road, Suite C
Hatfield, PA 19440

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Remove the faceplate of the Scanner and install the batteries. This will provide power.

Step 2

At this point, if you are only interested in recording overall totals, you can proceed to installing the Scanner in the field, as discussed in Step 4. Overall totals can be read directly off the display of the Scanner. If, however, you would like to use some of the other options the Scanner has, like storing GPS coordinates or starting a time-stamped study, go to Step 3.

Step 3

Familiarize yourself with the JPDA and JRead software, which is covered in Chapters 1& 2 of this manual. These programs can be used to configure the settings of the Scanner. These settings include the time and date, which you should set for your location if you will be doing time-stamped studies. JPDA can also be used to start & stop studies, and retrieve data from the Scanner.

Step 4

Install the Scanner in the field. Refer to Chapter 3 for information on how to pick and good location and how to physically install the Scanner.

Step 5

Start a new study using either the JPDA software or the programming guide listed on the next page.

Quick Setup Guide for The Scanner

To start the Scanner, install 4 D-Cell batteries and the Main Screen will appear. This screen shows the battery voltage and the count total.

| 5.8V   00000000 |

When powered on, the Scanner automatically begins counting.

TAB

| Reset?   00000000 | **DO**   Resets Count Total to zero.

TAB

Starts time-stamped study.

| Start?   00000000 | **DO** | Started!   00000000 |

OR

Stops time-stamped study.

| Stop?   00000000 | **DO** | Stopped!   00000000 |

TAB

Connect GPS receiver.

| GPS   00000000 | **DO** | Waiting |

TAB

Pressing DO will cancel clear.

| CLR MEM?00000000 | **DO** | CLR? N   00000000 |

TAB

| CLR? Y   00000000 |

Pressing DO will clear memory.

Chapter 1

Using
The Scanner

What is The Scanner?

The Scanner is an infrared data recorder that has been specifically designed to count pedestrians and/or bicyclists in a variety of places, such as trails, outdoor walkways, sidewalks and commercial areas. This unit will register at distances up to 35 feet and does not require a reflector or other external unit.

The Scanner can collect data in two modes: overall volume or individual time-stamped recording. These two modes allow you to use the same piece of equipment to go from a simple volume count, which can be read off the display, to comprehensive time-stamped data that can be transferred to a computer for generating professional reports.

How It Works

The average human emits infrared radiation due to body temperature. An infrared detector can recognize the specific signature of this and determine when a person is, or is not, present.

The Scanner contains an infrared detector, located near the bottom of the unit, as shown in the picture to the right. When aimed at a path or walkway, the Scanner will record a count whenever a pedestrian or bicyclist enters the detection zone.

Infrared Detector

Note that the Scanner also comes with an optional external sensor that connects to the bottom of the unit. Refer to the Appendix for more details on using the external sensor.

Setting Up The Scanner

To begin using the Scanner, unscrew the two screws from the front of the Scanner and lift off the front cover. Inside you will see the control panel for the unit, along with the battery compartment.

With Front Cover　　　**With Front Cover Removed**

Control Panel

The Scanner is powered by four D-Cell Alkaline batteries, which are included with the unit when it is shipped.

IMPORTANT: When you are ready to begin using the Scanner, install the batteries following the polarity guidelines on the battery bracket. The batteries should be removed if the unit is not going to be used for an extended period of time.

Once the batteries are fully connected in the unit, the Main Screen of the Scanner will appear.

Main Screen

A 16-character LCD display, located in the middle of the Scanner's control panel is used to display the current options and status. **NOTE:** The display of the Scanner has a power-saving feature that turns off the screen if the unit has not been disturbed for several minutes. To bring the display back up, simply hit either the TAB or DO key.

Once power is provided to the Scanner, the **Main Screen** appears.

```
5.9V          00000000
```

This screen shows the battery voltage on the left side of the display, which allows you to monitor the battery status. Generally, fresh batteries should register at 5.8 to 6.0 VDC. Batteries should be replaced when this voltage falls to around 4.5 to 5.0. The unit will stop recording data once the voltage falls to approximately 4.0 volts.

Depending upon use and temperature where the unit is installed, the batteries may last for more than six months before they need to be replaced. Refer to Chapter 4 *Battery Care* for more information on battery maintenance.

When the Scanner is powered on, it begins recording counts, which are displayed on the right side of the Main Screen. At this point, if you are only interested in recording overall totals, you can proceed to installing the Scanner in the field, as discussed in chapter 3. If, however, you would like to use some of the other options the Scanner has, like storing GPS coordinates or starting a time-stamped study, read on.

The remainder of this chapter covers, in a tutorial style, some of the additional options you have in setting up the Scanner using the control panel. Note that you can also perform these functions remotely using the JPDA software, which is discussed in Chapter 2.

Selecting Options

There are two buttons on the control panel of the Scanner that are used to navigate through the various screens and select options. The black TAB key is used for navigation, while the red DO key is used to select an option.

With the Main Screen visible (remember, if the display goes into power saving mode, press either key to bring it back up), go ahead and press the TAB key. Notice that the screen changes to show *Reset?* on the left side of the display rather than the battery voltage. Your current count total is still visible on the right side.

Press TAB again, and the screen changes to show *Start?*. Press TAB again and it shows *GPS*. Press TAB again and it shows *CLR MEM?*. Press TAB on more time, at it takes you back to the Main Screen, which shows the current battery voltage.

The four screens we just went through are the ones used to select various options in the Scanner. Press the TAB button repeatedly and notice that you loop through these four screens, always coming back to the Main Screen.

Now we'll take a look at what we can do with the four option screens.

Reset Screen

When at the Main Screen, press the TAB key once and the **Reset Screen** will appear.

```
Reset?      00000000
```

This screen is used to reset the current count total visible on the right side of the display. Press the DO key while on this screen and notice that the count total resets to zero and you are taken back to the Main Screen.

Note that if you are in the Reset Screen and decide that you do not want to reset the count total, simply wait a few second without doing anything and the Scanner will return to the Main Screen on its own. Alternatively, you can press the TAB key until you return to the Main Screen.

Note also that selecting the Reset option will also stop any current time-stamped study being done, and immediately start a new one. We will find out more about time-stamped studies in the next section.

Start Time-stamped Study Screen

When at the Main Screen, press the TAB key twice and the **Start Time-stamped Study Screen** will appear.

Start?   00000000

As we have learned, when you power on the Scanner it begins counting and shows the count on the right side of the display. This information is useful if you want an overall count of pedestrian volumes. However, what if you want more detailed information, such as specific information on when the volumes are occurring or what direction people are travelling? That's where the Time-stamped study comes in.

The Scanner has the ability to record and store a time stamp of *every* individual count it records. These time stamps are stored in memory and can later be downloaded into the JPDA or JRead software for analysis and reporting. (These programs are discussed a little later in this manual.) The Scanner's internal memory is 256 KB, which will hold approximately 80,000 time stamps before becoming full.

Note: When in Time-stamped mode, the Scanner not only records when a count occurs, but the direction of travel. Direction one is recorded as left to right movement, while direction two is recorded as right to left movement (from the Scanner's point of view).

Press the DO key while on the *Start?* screen and the display will change to the one shown below.

Started!   00000000

The overall count total shown on the display will reset to zero, and the unit will begin storing the time-stamped data internally. The Scanner will then return to the Main Screen.

Note: For your time-stamped study to be accurate, it is important that the Scanner have the correct time stored in its memory. Refer to the *Uploading Information to the Scanner* section on page 1-9 for more information on this.

From the Main Screen, hit the TAB key twice and notice that the *Start?* option has now been replaced by *Stop?*. This screen will appear if you currently have a time-stamped study in progress and it gives you the option to stop that study.

<div align="center">

Stop?   00000000

</div>

Hit the TAB key a few more times and notice that it will loop you through only two options: *Reset?* and *Stop?*. When a time-stamped study is in progress, these are the only two options of the original four that are available for selection. You must end the time-stamped study to access the additional options.

Tab back to *Stop?* showing on the display and press the DO key. The display will change to the one shown below.

<div align="center">

Stopped!   00000000

</div>

At this point, the time-stamped study is stopped and stored in memory. A little later on we will see how this study can be downloaded and how it can be cleared from memory. After a few seconds, the Scanner will reset itself to the Main Screen.

GPS Screen

When at the Main Screen, press the TAB key three times and the **GPS Screen** will appear.

<div align="center">

GPS   00000000

</div>

GPS coordinates can be loaded into the Scanner by connecting a handheld GPS receiver to the comm port on the Scanner's control panel.

Note: The GPS receiver must be set to transmit one of the following NMEA messages at 4800 baud: GPRMC, GPGLL or GPGGA.

Press the DO key and the display will change to the one shown below.

$$\boxed{\textbf{Waiting}}$$

Plug the GPS receiver into the Scanner's comm port and, if the receiver is configured properly, the Scanner will receive the coordinates and begin showing them on the display, alternating between showing latitude and longitude. Press the DO key to accept the coordinates and the Scanner will return to the Main Screen. Note that if you press the DO key on the *Waiting* screen when no GPS receiver is connected, the Scanner will cancel out to the Main Screen.

Clear Memory Screen
When at the Main Screen, press the TAB key four times and the **Clear Memory Screen** will appear.

$$\boxed{\textbf{CLR MEM?00000000}}$$

The Clear Memory option can be used to delete time-stamped studies that have been stored in memory. However, to prevent studies from being accidently deleted, you are required to confirm that you want to clear the memory. Press the DO key and the screen shown below will appear.

$$\boxed{\textbf{CLR? N \quad 00000000}}$$

On this screen, the 'N' means *No, do not clear memory*. If you press DO at this point, The Scanner will cancel out of the memory clear process and return to the Main Screen. Press TAB instead, and the screen shown below will appear.

$$\boxed{\textbf{CLR? Y \quad 00000000}}$$

On this screen, the 'Y' means *Yes, do clear memory*. If you press DO at this point, the Scanner will clear all stored time-stamp studies from memory and return to the Main Screen.

Uploading Information to the Scanner

When in Time-stamped study mode, it is important that the Scanner have the correct time stored in its memory. The time, along with several other pieces of information, can be uploaded into the Scanner using the free JRead software, which can be downloaded from the Software Downloads section of the JAMAR web site, **www.jamartech.com**.

> Note that the upload can also be done using a PDA running the free JPDA software. This can be done through either connecting to the Scanner's comm port or wirelessly using the Scanner's Bluetooth wireless connection. If you plan to use a PDA with your Scanner, skip to the next chapter now.

After downloading the installation file for JRead, double click on it and follow the on-screen instructions to install the program on your computer. Once the program is installed, it can be used to upload information into the Scanner using the comm (serial) port of the Scanner and a serial cable, such as the JAMAR universal cable. (It is not required that a JAMAR cable be used. Any compatible RS-232 serial cable will work.)

To prepare to upload your information to the Scanner, connect the serial cable to a serial port on your computer (or a USB port using a USB to Serial adapter). Most serial ports are a 9 pin plug, and there may be more than one on the computer. The ports may be labeled on the computer itself with COM 1 listed as 1 or A and COM 2 listed as 2 or B. Refer to chapter 5, *Troubleshooting*, for tips on avoiding problems when using a computer's serial port, or what to do if your computer does not have a serial port.

On the Scanner itself, you must have the display visible to upload information. If the unit is in power saving mode and the display is not visible, hit either the TAB or DO key to bring it back up. Once the display is visible, start the JRead software.

Once the program is open, use the *Comm Ports* box at the top left to select the comm port that the Scanner is connected to on your computer. The Baud Rate field below this can be used to select the download speed. For most computers, the top setting of 115200 can be used.

Once the comm port and baud rate are set, click on the *Upload Settings to Counter* tab and then click the *Read Settings* button. A list of the various settings that can be uploaded is then displayed, as shown here.
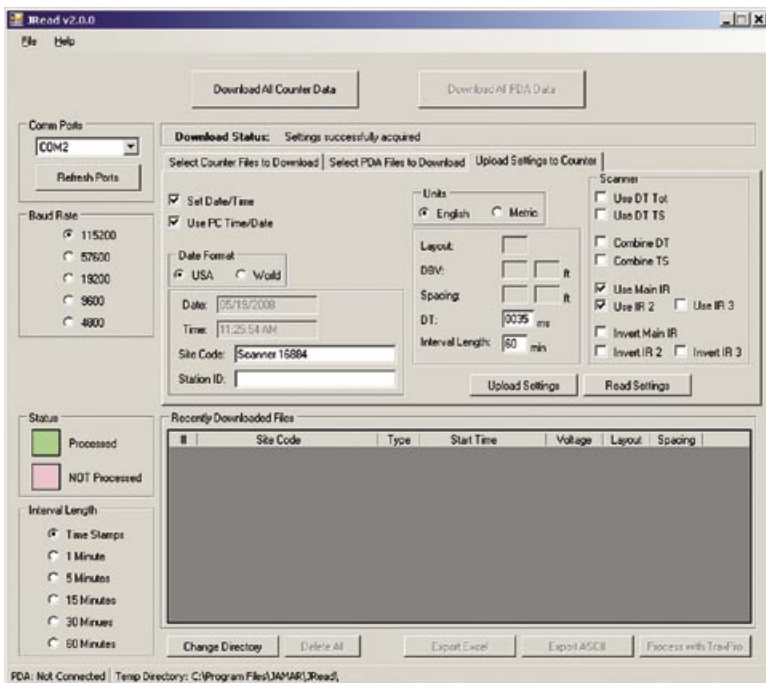
JRead can be used with several different types of JAMAR equipment, so only the options in the program that apply to the Scanner are enabled – settings that do not apply are disabled when connected to a Scanner. The settings we'll use are Time, Date, Site ID and Site Code.

The Time and Date listings in JRead can either be manually typed in or read from your computer's clock. To enter a time or date manually, be sure the *Use PC Time/Date* box is unchecked. If you place a check in this box, JRead will use the computer's clock for the time and date.

The Date Format field can be used to control how the date is listed in the Scanner. The options are USA (month/day/year) or World (day/month/year).

If you want to change the time, date or date format in the Scanner, be sure to check the *Set Time/Date* box. If this box is not checked, JRead will ignore the time, date and format settings when uploading to the Scanner.

The Site Code and Station ID fields are descriptions that can be saved with the Time-stamped study to help you identify the location of the data when processing it. You can enter any information in these fields that will help you identify the count. Note that you are not required to use these fields for your studies, they are provided for those users who would like to use them.

Once you have the Date and Time set the way you want, and have entered any Site information, you are ready to upload this information. First, make sure the display of the Scanner is visible, then click the *Upload Settings* button in JRead. The *Download Status* field located directly above the tab will show the status of the upload and let you know when it is complete.

Note that several other settings specific to the Scanner can be uploaded using the JRead program. These are in the field on the right side of the tab labelled Scanner and can control some of the more advanced options of the Scanner.

Use Main IR: This turns on the main IR sensor, known as sensor 1. In most units, this is the sensor installed internally in the scanner housing.
Use IR 2: Turns on the optional main external sensor, known as sensor 2.
Use IR 3: Turns on the secondary external sensor, known as sensor 3.
Invert Main IR: This swaps the direction information collected from the Main IR sensor.
Invert IR 2: Same as above for sensor 2.
Invert IR 3: Same as above for sensor 3.
(The Invert options allow you to change the recording direction of a sensor. It allows you to adjust for installation issues that could change the directions, such as moving the Scanner to the opposite side of the trail being monitored.)

Use DT Tot: This enables the Dead Time setting for the recording of the total shown on the Scanner's display.
Use DT TS: This enables the Dead Time setting for the recording of time-stamped data.
Combine DT: When multiple sensors are being used, this setting configures the Scanner to use a single DT for the recording of data, both for the unit's display and for time-stamped data.
(Under normal use, the Scanner does not require a Dead Time. However, when multiple sensors are being used with an overlapping detection zone, using a DT may be desirable.

Combine TS: When multiple sensors are being used, this setting configures the Scanner to have all enabled sensors report as a single sensor, sensor 1. This is useful for situations where a larger detection zone is desired. If the detection zones from the sensors overlap, it may be necessary to set the *Combine DT* option.

Downloading the Scanner with JRead

Time-stamped studies done with the Scanner can be downloaded and exported using the JRead software.

> Note that time-stamped data in the Scanner can also be retrieved using the free PDA-based JPDA software. This can be done through either connecting to the Scanner's comm port or wirelessly using the Scanner's Bluetooth wireless connection. If you plan to use a PDA to retrieve your data, skip to the next chapter now.
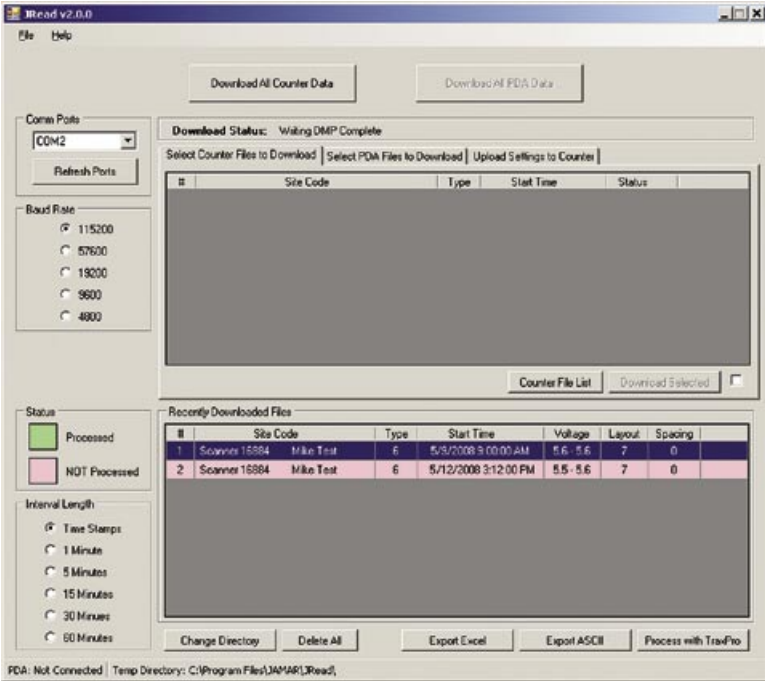
The download of data is done through the same comm port of the Scanner used to upload settings, as discussed in the previous section. For connection information, refer back to that section.

Note that you cannot download studies that are currently in progress. If you have a study in progress that you would like to download, you must end the study by pressing TAB until *Stop?* is visible, then pressing DO.

On the Scanner itself, you must have the display visible to download data. If the unit is in power saving mode and the display is not visible, hit either the TAB or DO key to bring it back up. Once the display is visible, the download will transfer all time-stamped studies currently stored in memory.

To start the download, start the JRead software then click on the *Download All Counter Data* button at the top. The *Download Status* field will then change to show you the status of the download. Once the download is complete, as list of the files that have been transferred will appear in the *Recently Downloaded Files* field.

The *Recently Downloaded Files* list has all the studies that have been downloaded from the Scanner, with the currently selected study highlighted in black. All other studies will be colored light red, indicating that they have not yet been processed. Note that once a study has been processed from the list, it will be colored green.
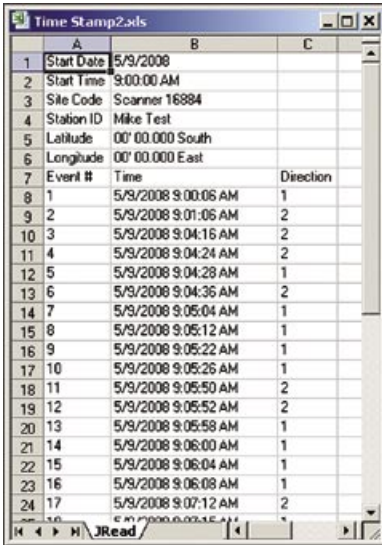
The buttons along the bottom of the screen list several options for how to process the studies, including *Export Excel*, *Export ASCII* and *Process with TRAXPro.* (Note that the Process with TRAXPro option is mainly for use with data from a TRAX traffic data recorder and not data from a Scanner.)
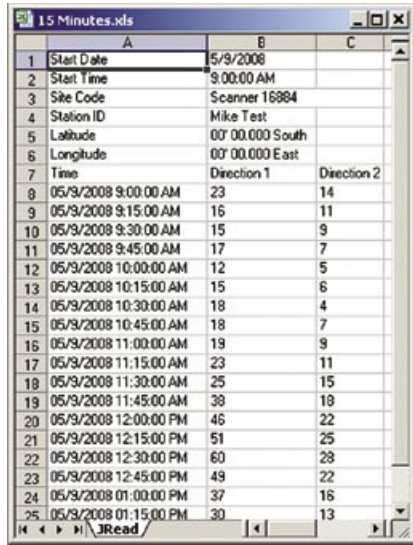
Export to Excel or ASCII
The *Export Excel* and *Export ASCII* selections both work in the same manner. The only difference is that one provides an Excel file while the other provides a comma delimited text file.

To export a file into either of these formats, the first thing you need to do is select the interval length for the data. This is done by using the *Interval Length* field on the left. The options are: Time Stamp, 1 Minute, 5 Minutes, 10 Minutes, 15 Minutes, 30 Minutes and 60 Minutes.

The Time Stamp option produces a file listing the individual time stamp (to the second) of every recording in the study. The other options will group the data into the interval time selected. Below are examples of the Excel exported time stamp and 15 minute interval formats.

Time Stamp2.xls

	A	B	C
1	Start Date	5/9/2008	
2	Start Time	9:00:00 AM	
3	Site Code	Scanner 16884	
4	Station ID	Mike Test	
5	Latitude	00' 00.000 South	
6	Longitude	00' 00.000 East	
7	Event #	Time	Direction
8	1	5/9/2008 9:00:06 AM	1
9	2	5/9/2008 9:01:06 AM	2
10	3	5/9/2008 9:04:16 AM	2
11	4	5/9/2008 9:04:24 AM	2
12	5	5/9/2008 9:04:28 AM	1
13	6	5/9/2008 9:04:36 AM	2
14	7	5/9/2008 9:05:04 AM	1
15	8	5/9/2008 9:05:12 AM	1
16	9	5/9/2008 9:05:22 AM	1
17	10	5/9/2008 9:05:26 AM	1
18	11	5/9/2008 9:05:50 AM	2
19	12	5/9/2008 9:05:52 AM	2
20	13	5/9/2008 9:05:58 AM	1
21	14	5/9/2008 9:06:00 AM	1
22	15	5/9/2008 9:06:04 AM	1
23	16	5/9/2008 9:06:08 AM	1
24	17	5/9/2008 9:07:12 AM	2

JRead

15 Minutes.xls

	A	B	C
1	Start Date	5/9/2008	
2	Start Time	9:00:00 AM	
3	Site Code	Scanner 16884	
4	Station ID	Mike Test	
5	Latitude	00' 00.000 South	
6	Longitude	00' 00.000 East	
7	Time	Direction 1	Direction 2
8	05/9/2008 9:00:00 AM	23	14
9	05/9/2008 9:15:00 AM	16	11
10	05/9/2008 9:30:00 AM	15	9
11	05/9/2008 9:45:00 AM	17	7
12	05/9/2008 10:00:00 AM	12	5
13	05/9/2008 10:15:00 AM	15	6
14	05/9/2008 10:30:00 AM	18	4
15	05/9/2008 10:45:00 AM	18	7
16	05/9/2008 11:00:00 AM	19	9
17	05/9/2008 11:15:00 AM	23	11
18	05/9/2008 11:30:00 AM	25	15
19	05/9/2008 11:45:00 AM	38	18
20	05/9/2008 12:00:00 PM	46	22
21	05/9/2008 12:15:00 PM	51	25
22	05/9/2008 12:30:00 PM	60	28
23	05/9/2008 12:45:00 PM	49	22
24	05/9/2008 01:00:00 PM	37	16
25	05/9/2008 01:15:00 PM	30	13

JRead

In the Time Stamp format, each recording in the study is listed with its time stamp and the direction in which it was recorded. For example, in the Time Stamp study shown above, the first recording occurred at 9:00:06 AM, traveling in the first direction.

Once you have selected the Interval Length you want, highlight the file you want to export by clicking on it, then click either the *Export Excel* or *Export ASCII* button. You will be prompted to assign the file a name and select a folder to save it in.

Once you click Save, a window will appear listing the path where the file was created. This window allows you to either directly open the newly created file with Excel or Notepad (depending on if Excel or ASCII export was used) or open the folder where the file was saved.

Note that downloaded studies will remain in the memory of the Scanner until they are cleared. Refer to page 1-8 for information on how to clear the memory. **Important:** Do not clear the memory of the Scanner until you are certain that the data has been successfully downloaded to you computer.

Selectively Downloading Data with JRead

While we just discussed the steps for retrieving all the data you have stored in your Scanner using JRead, another option that you have is to selectively choose which data in the Scanner's memory to download.

This is done using the *Select Counter Files to Download* tab near the top of the screen. Once your Scanner is connected, click the *Counter File List* button and a list of the files in the Scanner will appear in this tab. The checkboxes to the far right can be used to select the files you want to retrieve, then the *Download Selected* button can be used to transfer them to your computer. The files you selected will then appear in the Recently Downloaded Files box and can be exported.
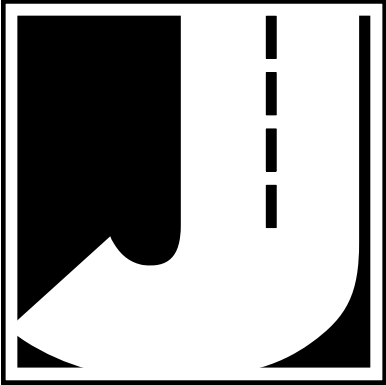
Chapter 2

Using the JPDA Software

Introduction to JPDA

JPDA is free interface software for the Scanner that runs on a Personal Digital Assistant (PDA). This program is designed to make setup of the Scanner, and retrieval of data from it, a more convenient process. Data that has been retrieved with JPDA can be transferred to a desktop computer using the free JRead software. JRead allows the data to be processed and output to a TRAXPro or Excel file, along with other formats.

Supported PDAs

JPDA currently runs on Pocket PC based PDAs. It does not currently support Palm PDAs. In general, almost any Pocket PC version PDA made in the last couple of years should work. There are several companies that sell Pocket PC PDAs, with the most popular being those made by Hewlett Packard (the Ipaq series). Regardless of brand, Pocket PC PDAs look very much the same since they run the same operating system.

Choosing which PDA is right for you can be complicated because there are many different features available. However, JPDA will be much more useful if the PDA you use has Bluetooth wireless capability. With JPDA software running on a PDA equipped with Bluetooth wireless capability, it is possible to setup and retrieve data from the Scanner without ever having to remove it from the field.

Software Updates and Support

Updated versions of JAMAR software are released periodically and are posted on the JAMAR web site. Users of JPDA may download updates to the program to make sure they always have the latest version of the software on their PDA. To download the latest version of JPDA, go to **www.jamartech.com** and then select Downloads from the list of options.

If you encounter any problems while using the program, or have any questions on specific operations, refer first to this manual. For up to the minute information on all known issues with the program, refer to the JPDA support web page at: **www.jamartech.com/JPDAsupport.html**.

Installing the Software

It is a simple process to install both the JPDA and JRead programs. If you have not already installed these programs, do so now using the instructions found in the Appendix.
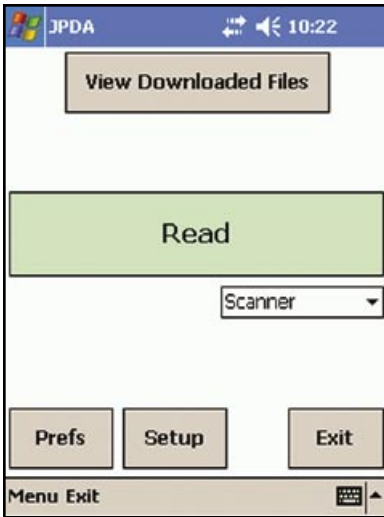
Getting Started with JPDA

Once you have installed JPDA and JRead you are ready to start using JPDA. Tap on the JPDA icon in the Programs menu. This loads the Main screen.

Main Screen

The Main Screen is arguably the most important screen in the software. Nearly all of the software's functions can be accessed from this screen. The main options on this screen are:

View Downloaded Files - View a list of downloaded files.
Read -Retrieve data from the Scanner.
*Prefs* - Set Preferences for JPDA.
Setup - Upload settings to the Scanner.

Once you initiate a task from the Main screen, you will be presented with another screen specific to that particular operation, such as reading the Scanner. When the task is completed, you will return to the Main screen.

If this is your first time using JPDA (if you're reading this, it probably is), then you will need to provide JPDA with the proper Preference Settings. Tap the **Prefs button** at the bottom of the screen. This opens the Preference screen.

Preferences Screen

The Preferences screen allows you to adjust the major parameters of JPDA. You can select the port number and baud rate that will be used to communicate with the data recorder by selecting the desired option from each drop-down box.
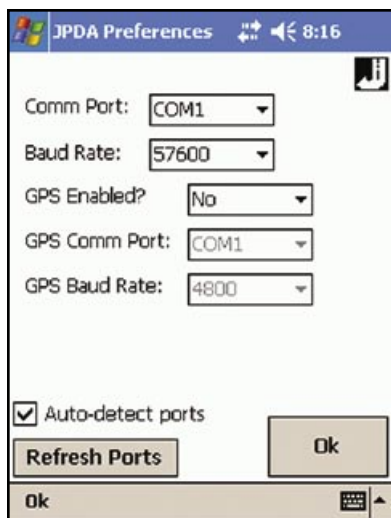
Set the **Comm Port** to **1** if you'll be connecting through your PDA's cradle port connector.

If you'll be connecting via wireless Bluetooth, select the *outbound* bluetooth port of the PDA. This is typically the second port listed with the (BT) suffix in the list of ports.

If you'll be connecting using an adapter plugged into the CF slot, select the port option listed with the (CF) suffix.

Set the **Baud Rate** as desired. This controls the speed of the data transfer. The higher the number, the faster the transfer. Some older PDA's may not be able to handle baud rates over 19200 baud. For now, select 57,600 as the baud rate.

JPDA allows you to use a GPS receiver to store the exact location of the study along with the data, if you have a GPS receiver plugged into your PDA. Enable this if you are using GPS, otherwise leave it set to 'No'.

Now JPDA's settings are tailored to your equipment and the program is ready to be put to work for you. Tap **Done** to return to the Main screen.

Setup Screen

JPDA can be used to configure a number of settings in the Scanner. First, select *Scanner* from the dropdown list below the big Read button on the Main screen. Next, tap the *Setup* button and the Setup screen will appear.

If you are planning to do a time-stamped study with the Scanner, this screen allows you to load information related to that study into the Scanner. To do this, you will need to connect to the Scanner using either a wireless Bluetooth connection or by plugging into the comm port on the Scanner. This tutorial covers using a wireless connection; however, the steps are essentially the same using a hard wire connection.

When the Setup screen comes up, it shows the time and date in the *Set Clock* field at the top. These are read in directly from the time and date set on the PDA. If they are not correct, close JPDA and reset the time and date on the PDA itself.

If the Set Clock checkbox is checked, then JPDA will set this time and date into the Scanner when you perform the upload.

Below the clock field are the Site Code and Station ID fields. Whatever you put in here will show up in the corresponding fields when the study is processed, and can be printed on reports with the data. You can fill in the fields however you wish.

Note that it takes a little bit of practice to enter text and numbers into a PDA. The easy way to do it is to use the popup keyboard and tap the letters and numbers to enter the information. You can also learn to enter letters and numbers using the handwriting recognition option that is part of all PDAs. With a little practice you can learn to enter the letters and numbers much faster than with the popup keyboard.
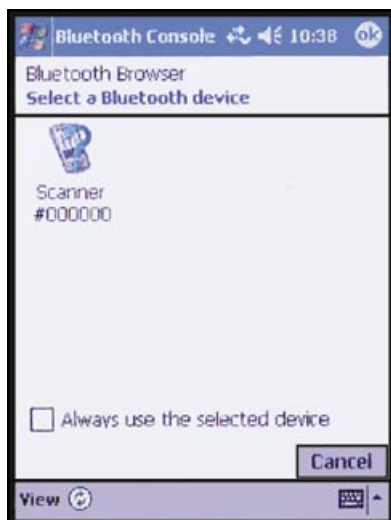
Once you have the information entered that you want, tap the *Upload Info* button to begin the transfer to the data recorder.

If you are using Bluetooth, and the PDA is able to find an available Bluetooth-equipped device nearby, you'll see a screen like the one shown to the left.

This screen allows you to select the Bluetooth device you want to connect to. Each Bluetooth-equipped data recorder is listed with its serial number, so if you have multiple devices you can choose a specific one.

Tap on the Scanner you want and the setup info will be transferred. You will then be returned to the Setup screen.

If you ever what to check what information is currently stored in your Scanner, the *Get Info* button basically does the reverse of the Upload Info button. Tap *Get Info* and JPDA will read in the Site Code, Station ID and GPS info that is currently stored in the Scanner.
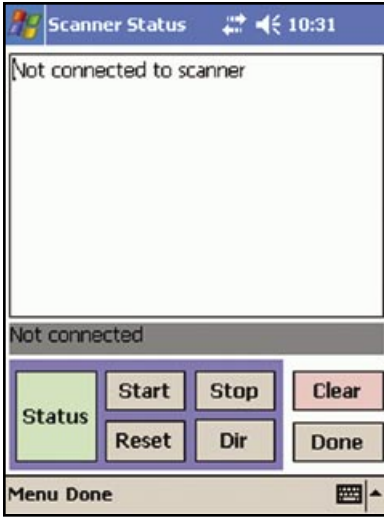
Status Screen

Another option on the Setup screen is Status. Tap this button and you'll be taken to the Status screen, as shown to the left.

The Status screen allows you to control a variety of commands for the Scanner, including starting and stopping a time-stamped study (*Start* and *Stop* buttons), resetting the total on the unit's display (*Reset* button), checking to see a list of time-stamped studies stored in memory (*Dir* button) and deleting all studies from the memory of the recorder (*Clear* button).

In addition, this screen can be used to check the current volume total from the Scanner's display.

Tap the green Status button at the lower left of the display to check the current status of the Scanner. If you are using Bluetooth, you have to select the device you want, as described in the previous section.
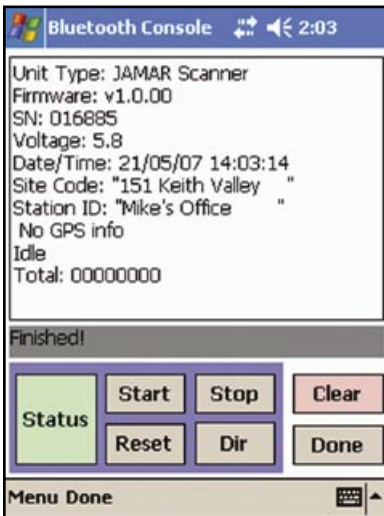
If JPDA is able to connect to the Scanner, it will display the unit's status, as shown to the left.

The top line displays the unit type. This is followed by the firmware version. The next line displays the Scanner's serial number, which is followed by the current battery voltage. The fifth line displays the Time and Date, which is followed by any Site ID and Station ID information that has been uploaded into the unit. The eighth and ninth lines list any GPS coordinates that have been stored. The next line lists whether the

Scanner is recording a time-stamped count or is idle. The final line list the current total on the Scanner's display.

Now that we've checked the status of the Scanner, we can have it start a new time-stamped study for later downloading. To do this, we tap the *Start* button to begin a new time-stamped count. A confirmation screen then tells us the count has started.
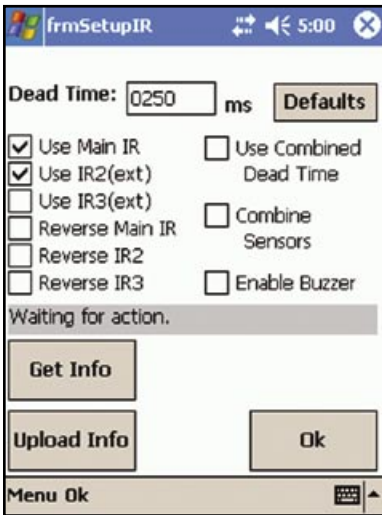
Ext. IR Screen

Another option on the Setup screen is Ext. IR. Tap this button and you'll be taken to the Setup IR screen, as shown to the left. Several other settings specific to the Scanner can be uploaded by using this screen.

The **Dead Time** setting allows you to enter a period of time, in milliseconds, that the Scanner will wait after it records a count before it will accept another one. This setting can help to prevent 'double-counting' of individual people. The default value is 250 ms. If the Scanner appears to be double counting, increase this value. If the Scanner appears to be missing people that are close together and undercounting, decrease this value.

Additional settings that can be turned on or off are:

Use Main IR: This turns on the main IR sensor, known as sensor 1. In most units, this is the sensor installed internally in the scanner housing.
Use IR 2: Turns on the optional main external sensor, known as sensor 2. Some models of Scanners are equipped with external sensors that plug into the bottom of the unit.
Use IR 3: Turns on the secondary external sensor, known as sensor 3.
Reverse Main IR: This swaps the direction information collected from the Main IR sensor.
Reverse IR 2: Same as above for sensor 2.
Reverse IR 3: Same as above for sensor 3.

(The Reverse options allow you to change the recording direction of a sensor. It allows you to adjust for installation issues that could change the directions, such as moving the Scanner to the opposite side of the trail being monitored.)

Use Combined Dead Time: When multiple sensors are being used, this setting configures the Scanner to use a single DT for the recording of data, both for the unit's display and for time-stamped data.

(Under normal use, the Scanner does not require a Dead Time. However, when multiple sensors are being used with an overlapping detection zone, using a DT may be desirable.

Combine Sensors: When multiple sensors are being used, this setting configures the Scanner to have all enabled sensors report as a single sensor, sensor 1. This is useful for situations where a larger detection zone is desired. If the detection zones from the sensors overlap, it may be necessary to set the *Use Combined Dead Time* option described above.

Enable Buzzer: This setting will turn on a buzzer when a sensor is activated.

Retrieving Data from the Scanner

The main purpose of JPDA is to allow you to retrieve data from a JAMAR data recorder, like the Scanner. There are many different types of JAMAR equipment that can be used with JPDA, so first use the dropdown menu just below the Read button to select the Scanner. Once this has been selected, tap the big *Read* button.
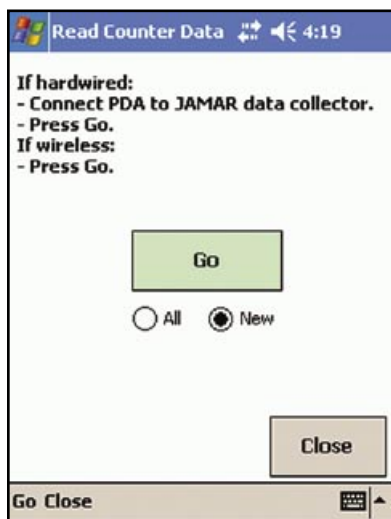
The **Read Counter Data** screen is fairly easy to use. There's just one option on the screen to deal with: whether you want to read *all* the studies in your Scanner, or just the *new* studies in the Scanner.

The Scanner can have multiple studies from different times stored in memory. JPDA is able to recognize which of these studies have already been downloaded and which are new. The All/New option lets you take advantage of this.

When you download your data, if you only want the new studies done since you last downloaded, you should select the *New* option. However, if, for whatever reason, you want to download all the studies stored in memory (both old and new), select the *All* option.

The default option is to download just New studies. We recommend leaving this selected unless you have a specific reason to change it to All.

Note: You cannot download studies that are currently in progress. If you have a study in progress that you would like to download, you must end the study before attempting to download.

Once you have the option you want, you are ready to read your data. If you are using a hardwired connection (a cable connected from the PDA to the Scanner), make sure the cable is properly connected, then press Go. If you are using a wireless Bluetooth connection (no cable connected to the data recorder), just press Go.

The rest of this tutorial covers using a wireless connection; however, the steps are essentially the same using a hard wire connection.

Reading Data with Wireless Bluetooth

If you are using a wireless Bluetooth connection to connect to the Scanner, when you tap the *Go* button JPDA will attempt to find all the nearby Bluetooth devices. You'll then see a screen similar to the one to the left.

This screen allows you to select the Bluetooth device you want to connect to. Each Scanner is listed with its serial number, so if you have multiple devices you can choose a specific one.

Tap the device you want to connect to and JPDA will attempt to connect.
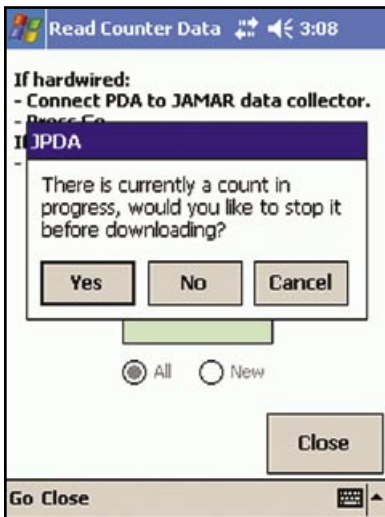
If JPDA is able to connect, it will check to see if the Scanner currently has a study in progress. If there is a study in progress, the screen shown to the left will appear, with JPDA asking if you want to stop it so it can be downloaded.

If you select *No*, the study currently running will continue to run and JPDA will attempt to download any previous studies stored in memory. If you select *Yes*, JPDA will then ask you if you want to start a new study once the currently running one is stopped.

Note: These options are very useful if you are continuously collecting data at a location and periodically retrieving the data from the Scanner.

Once JPDA begins retrieving data from the Scanner, the screen will change to show the message 'Downloading Block" followed by a number representing the block of data that is being read in. (Each block represents approximately 1000 characters.) JPDA doesn't know how many blocks the counter is going to send, it just processes each block until the counter is done.

Note that if JPDA is not able to connect, the screen will show an error that the download has timed out. In this case, see the troubleshooting chapter for issues to check.

Once the download is complete, the View Downloaded Files screen will appear.
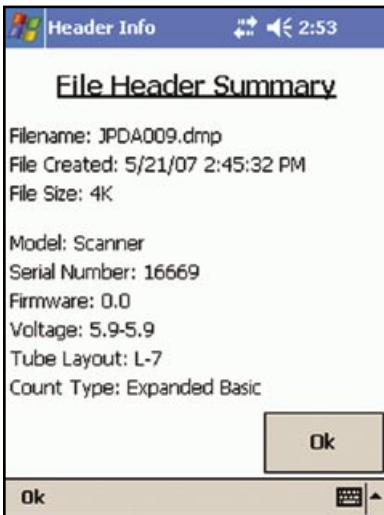
View Downloaded Files

#	Serial	Site Code	Station ID
001	16659	Mike's Test	

Downloaded Counts 9:30

Delete **Delete All** **Header Info** **Close**

Menu Close

When you have finished download-ing data from your Scanner, the View Downloaded Files screen appears, as shown to the left.

Note that you can also access this in-formation at any time from the Main screen by tapping the *View Downloaded Files* button.

This screen allows you to see what data files are currently stored in JPDA. The serial number of the data recorder from which the file was read is listed, followed by any Site Code and Station ID that were stored with the file.

Note that this screen can be used if you want to delete any of the data files stored in the JPDA. To delete an individual file, highlight it by tapping on it, then tap the *Delete* button. To delete all the files, tap the *Delete All* button.

If you want to see more details of a particular file, highlight the file by tap-ping on it, then tap the *Header Info* button.

Header Info 2:53

File Header Summary

Filename: JPDA009.dmp
File Created: 5/21/07 2:45:32 PM
File Size: 4K

Model: Scanner
Serial Number: 16669
Firmware: 0.0
Voltage: 5.9-5.9
Tube Layout: L-7
Count Type: Expanded Basic

Ok

Ok

This screen, shown to the left, provides additional information about the file you selected.

The information provided includes the date and time the file was read into JPDA, the type of data recorder it was from, the serial number of the data re-corder, and more.

Tap OK when you are done looking at the file details and you'll be returned to the list of downloaded files. Tap Close to return to the Main screen.

Transferring Data from JPDA with JRead

Once you have read the data from your Scanner into JPDA, you'll need to transfer that data to your laptop or desktop computer for data processing. This transfer is accomplished using the JRead program.

JRead was included with your JPDA CD. If you have not already installed the program, do so now.

Once JRead is installed, plug your PDA into your computer and let them connect via ActiveSync.

Below is the screen you see when you run the JRead software.
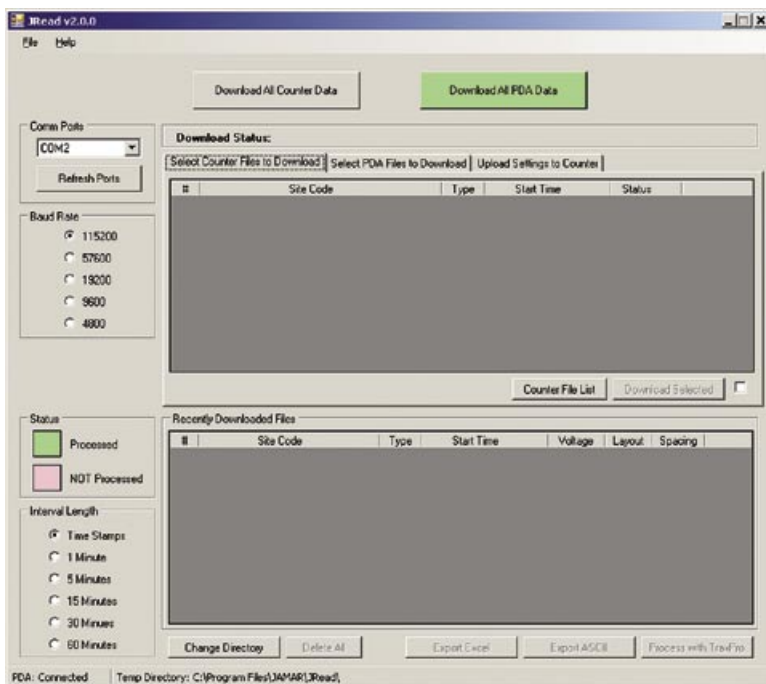
Near the top of the screen are two buttons that provide different ways of getting data into JRead. The *Download All Counter Data* button can be used if you want to download the Scanner directly into the program (refer to the page 1-12 for more details on this), while the *Download All PDA Data* button can be used to retrieve data your data from JPDA.

Note that the *Download All PDA Data* button will be colored green and enabled if the program sees an ActiveSync connection from your computer to a PDA. If JRead does not see this connection, the button will be greyed out and disabled. (The connection status of the PDA can also be seen in the box at the bottom left of the program.)

Click the *Download All PDA Data* button when you are ready. The software connects to the PDA using the Active Sync software and copies a temporary file, containing all the data in JPDA, from the PDA into a folder on your computer. The JRead screen will then update to show the list of files that you have transferred, as shown below.
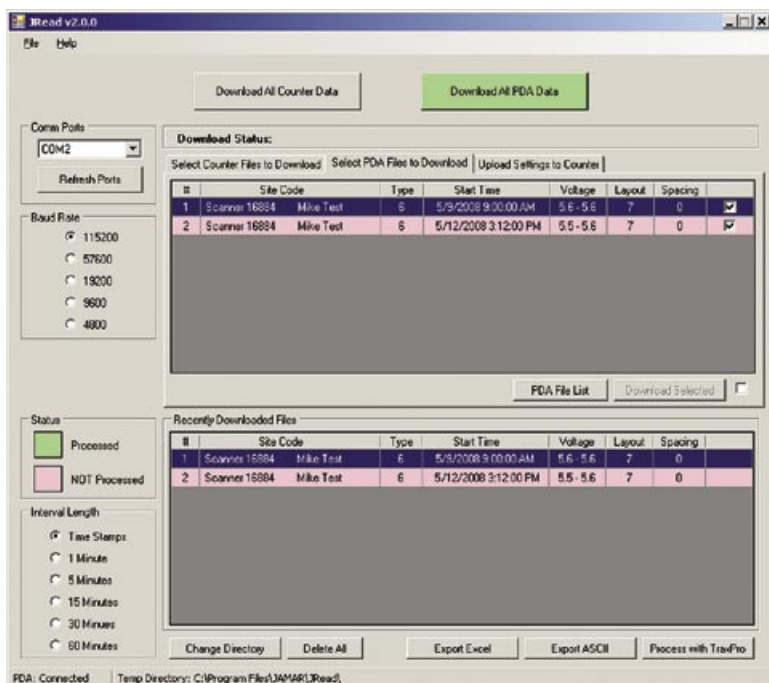
The list of files is shown is two places - the top box under the *Select PDA Files to Download* tab (we'll discuss this shortly) and the bottom box under *Recently Downloaded Files*.

The Recently Downloaded Files list has all the studies that have been transferred from JPDA, with the currently selected study highlighted in black. All other studies will be colored light red, indicating that they have not yet
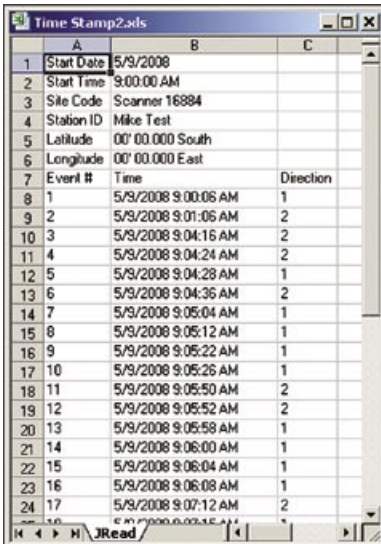
been processed. Note that once a study has been processed from the list, it will be colored green.

The buttons along the bottom of the screen list several options for how to process the studies, including *Export Excel*, *Export ASCII* and *Process with TRAXPro.* (Note that the Process with TRAXPro option is mainly for use with data from a TRAX traffic data recorder and not data from a Scanner.)
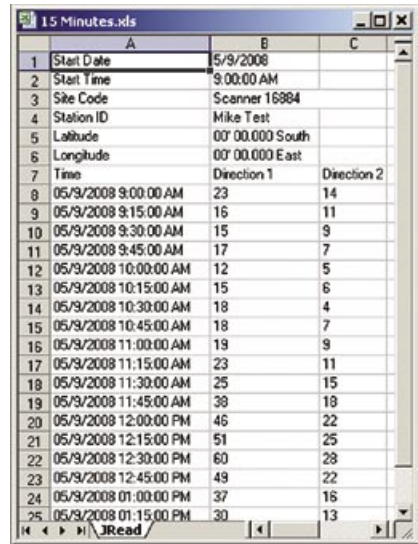
Export to Excel or ASCII
The *Export Excel* and *Export ASCII* selections both work in the same manner. The only difference is that one provides an Excel file while the other provides a comma delimited text file.

To export a file into either of these formats, the first thing you need to do is select the interval length for the data. This is done by using the *Interval Length* field on the left. The options are: Time Stamp, 1 Minute, 5 Minutes, 10 Minutes, 15 Minutes, 30 Minutes and 60 Minutes.

In the Time Stamp format, each recording in the study is listed with its time stamp and the direction in which it was recorded. For example, in the Time Stamp study shown above, the first recording occurred at 9:00:06 AM, traveling in the first direction.

Once you have selected the Interval Length you want, highlight the file you want to export by clicking on it, then click either the *Export Excel* or *Export ASCII* button. You will be prompted to assign the file a name and select a folder to save it in.

Once you click Save, a window will appear listing the path where the file was created. This window allows you to either directly open the newly created file with Excel or Notepad (depending on if Excel or ASCII export was used) or open the folder where the file was saved.

Note that downloaded studies will remain in the memory of the Scanner until they are cleared. Refer to page 1-8 for information on how to clear the memory. **Important:** Do not clear the memory of the Scanner until you are certain that the data has been successfully downloaded to you computer.

Selectively Retrieving Data from JPDA with JRead
While we just discussed the steps for retrieving all the data you have stored in JPDA using JRead, another option that you have is to selectively choose which JPDA data to retrieve and process.

This is done using the *Select PDA Files to Download* tab near the top of the screen. Once your PDA is connected, click the *PDA File List* button and a list of the files in the PDA will appear in this tab. The checkboxes to the far right can be used to select the files you want to retrieve, then the *Download Selected* button can be used to transfer them to your computer. The files you selected will then appear in the Recently Downloaded Files box and can be exported.
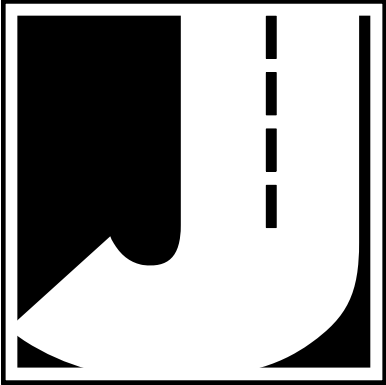
Chapter 3

Installing The Scanner

The Scanner is designed to be mounted to a tree or pole. For ease of installation, we recommend using the mounting bracket included with the Scanner's installation kit. This kit contains all the equipment needed to install the Scanner in the field.

Installing the Mounting Bracket

The mounting bracket included with the Scanner is designed to help make the installation of the unit as easy as possible. This bracket can be attached to the back of The Scanner using the steps described below.

Insert a long screw through one of the screw holes in the front of The Scanner. Using the screwdriver included with the kit, attached one of the L clamps to the back of the unit, facing inward.

Repeat the process to attach the second L clamp to the back of the unit.

Insert the long clamp between the L clamps and secure with four screws.
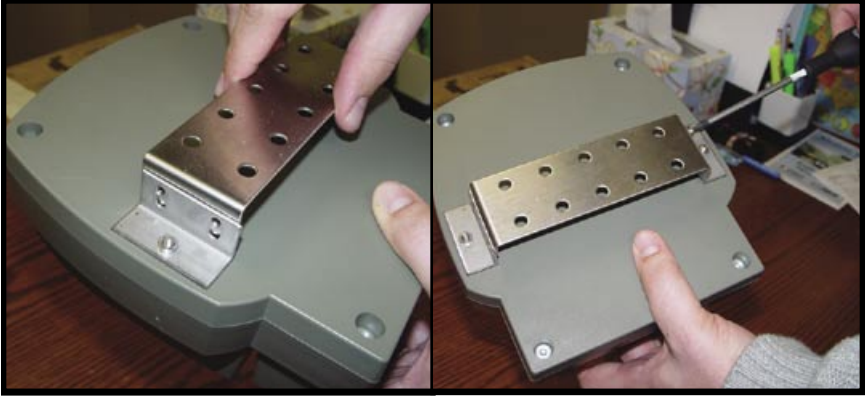
Run the installation cable through two of the holes on the mounting bracket.

The Scanner is now ready to be taken into the field for final installation.

Installing the Scanner in the Field

The Scanner is designed to be mounted to a tree or pole about 4 to 5 feet from the ground. It should be set about 10 feet back from the path being monitored, with the front of the Scanner facing the pathway. It should be parallel to the p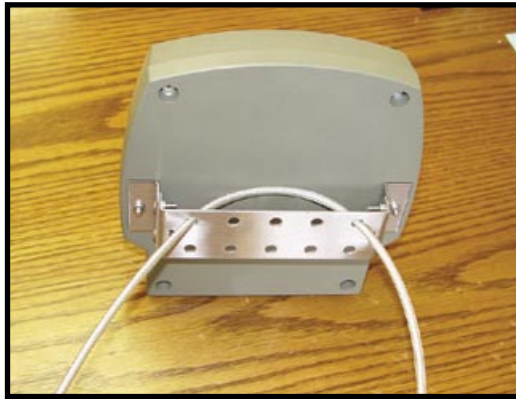ath so that the infrared sensor is aimed directly across the path. For best results, it should be aimed at a nearby tree or bush on the other side of the path to limit the detection range.

What makes for a good location?

There are a few question you should ask when choosing a location to install the Scanner.

1. Is there anything on the opposite side of the pathway to limit the detection range?

This is especially important in areas near roadways. If a passing vehicle has its windows down, the Scanner will readily detect passengers. Also, keep in mind that the detection area for the Scanner is a horizontal triangle and increases with distance. For this reason, it is best to aim The Scanner at a pine tree or a large bush.

2. Is there anything stable enough to mount the Scanner on?
To record the most accurate data, the Scanner needs to be mounted so that it will be stable in the wind. If the Scanner is swaying in the wind, it could possibly double count some pedestrians who pass by. For this reason, it is best to mount the Scanner on a tree with a large trunk, or on a pole or building.

3. Is there anything at the location that will help hide the Scanner?
The less visible the Scanner is, the less likely it is to be vandalized. If you are planning on mounting the Scanner to a tree, look for a tree with a large trunk. A larger trunk will help hide the outline of the Scanner, as well as be more stable in the wind. Mounting the Scanner where it will be concealed by a bush or tree branches will hide the Scanner very well, but may require that the foliage be trimmed periodically to keep it from blocking The Scanner. **If the sensors at the bottom of The Scanner are blocked, the unit will not work properly!**

4. How easy will it be to reach the Scanner?
To retrieve the data, if you are not using a wireless connection (see Chapter 2), you will need to be able to remove the front panel and either read the display or connect a serial cable. For convenience, you will want to be able to access the unit easily. However, to deter vandals, you may want to compromise in that area.

5. How easy will it be to locate the Scanner?
If you are going to check the Scanner periodically, you may have difficulty locating the spot it was installed. This could be especially true if you are returning in the early morning or evening while it is dark out. Make sure that there are good landmarks that will help you return to the unit. A useful tool for finding the Scanner again is a handheld GPS receiver. If you write down the coordinates where the Scanner was installed, the GPS receiver should help make sure you look in the right area.

6. How far does the Scanner need to record?
The Scanner will record data up to a maximum of 35 feet. We do not recommend that you attempt to record data beyond this distance.

Tip: Mounting the Scanner on a 45 degree angle to the trail will provide more accurate data from people walking next to each other.

Once you have selected the installation location, wrap the installation cable around the pole or tree you have selected, pointing the Scanner toward the spot to be counted. Thread each loose end of the installation cable through the cable clamp as shown in the picture below.

Pull the cable ends tight so that the Scanner is tight against the tree, then tighten the nuts on the cable clamp using the installation kit's nut driver, as shown in the figure below.

The Scanner is now installed and ready to begin recording data.

Chapter 4

Battery Care

Battery Care

The Scanner is powered by four D-Cell batteries. Use of low power electronics in the Scanner makes it possible for the batteries to last for several months, depending on use.

The main screen shows the current battery voltage. Fresh batteries should read from 5.8 to 6.0 volts. Batteries should be replaced when this voltage falls to around 4.5 to 5.0. The unit will stop recording data once the voltage falls to approximately 4.0 volts.

The front compartment of the Scanner contains the battery holder. The batteries can easily be popped out and replaced. You should use high quality alkaline batteries, which you can get at any convenience store.

The overall volume total shown on the main screen of the Scanner will reset if the batteries are removed. However, any data collected in Time-stamped mode will be retained in memory by an internal lithium battery even if the D-cell batteries are removed. Just to be safe, however, we suggest that you download the data in memory to your computer before you replace the batteries, then clear the memory after the new batteries are installed to reset everything properly.

********IMPORTANT********

Be very careful to observe the proper polarity when installing new batteries. Prolonged use of the Scanner with incorrectly installed batteries can cause batteries to burst, damaging the unit.

Do not mix old batteries with new batteries, or mix brands of batteries, when replacing the batteries. This can cause batteries to burst, damaging the unit.

We recommend that you keep track of when you have changed the batteries in the Scanner, and establish a regular routine for changing them. This should help to avoid having to change the batteries in the middle of a study.

Chapter 5

Trouble shooting

Troubleshooting

The following are some common questions/problems that can be encountered when using the Scanner. The possible answers that are stated with them are not necessarily the only answer, but should be checked first before contacting us. If you cannot find the answer to your problem/question, do not hesitate to contact us. Contact information is listed on the first page of this manual.

There is no display visible on the Scanner.
Check that the unit is not in its power-saving mode. The display automatically goes out when The Scanner has not been disturbed for several minutes. To bring the display back up, hit the DO or TAB key.

The display on the Scanner will not come on.
The battery voltage may have gone too low to power the display. Replace the batteries, then see if the display comes up. Note that this will reset the total to zero on the Scanner's display.

The data is not being collected in the format desired.
When turned on, the Scanner collects overall volume data, which is shown on the right side of the display. To start the time-stamped data collection format, where each activation is stored in memory with a time stamp, press the TAB key until *Start?* is displayed, then press the DO key.

The data produced is not accurate.
Check that the infrared port of the Scanner has not become blocked, which will prevent it from recording data. Also check the installation used in the field to be sure the Scanner is installed in such a way that it will not pick up extraneous counts. Refer to page 3-4 for more tips to selecting a good location.

GPS coordinates will not load from a GPS receiver.
Check that the GPS receiver has been configured to transmit in the format required by The Scanner. The GPS receiver must be set to transmit one of the following NMEA messages: GPRMC, GPGLL or GPGGA.

Cannot connect to the Scanner for upload or download.
First, check your connection between the Scanner and the computer. A JAMAR universal cable should be plugged firmly into the comm port of the Scanner and a serial port on the computer. The following tips should help you to avoid problems when download through a computer's serial port.

1) You must correctly identify what port you are plugging the cable into. The 9 pin connectors used for serial ports are also used for serial or parallel printers, mice, plotters, video cards and other devices. Just because your cable fits into a connector on your computer does not mean it is a serial port. Consult your computer instruction manual if you have any questions on which ports are serial ports on your computer.

2) Many computers have more than one serial port. You will need to know which serial port you are plugging the universal cable into. Serial ports are designated as COMx where x is a number from 1 to 16. You will need to know this number to download the unit.

3) Some devices that are plugged into a computer's serial port will not allow The Scanner to download its data properly. These are devices that require a program (called a device driver) to be running in the computer at all times. These device drivers are very self-centered, and think that all the data coming into the serial port is for them. Digital cameras, mice, digitizer boards, PDAs and light pens are all devices that require these device drivers to be running. If you have to unplug a device from the serial port to plug the Scanner in, or if you are using a switch box, be sure that the device does not have a driver running in memory.

4) If you have a conflict with another device on a serial port, or if your computer does not have a serial port, you can use a USB port by using a USB to Serial Converter. These devices allow serial peripherals, like JAMAR equipment, to interface with a USB port. There are several of these devices available on-line and at computer stores. Go to the hardware support section of our web site (www.jamartech.com) for a link to one of these devices that we have tested and found to work well.

Additional support information can also be found on our web site at www.jamartech.com. If you are unable to find a solution to your problem, contact us using the information located on the first page of this manual.
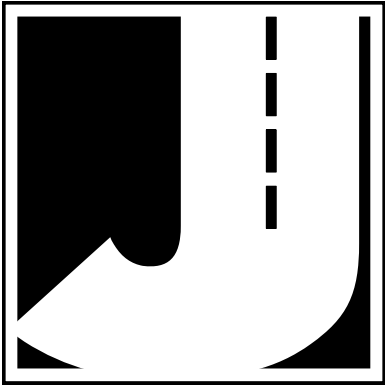
Appendix

Appendix #1 -
Optional External Sensor

The Scanner can be used with an external sensor in addition to the standard internal sensor. Since the external sensor is small in size, it can be used to record data at locations where the main unit cannot be installed, or to allow more covert data collection by hiding the main unit.

Installation

The external sensor screws into the bottom of the Scanner at the External Sensor Port. The sensor can then be routed to any location you

External Sensor Port

want to count. When aiming the sensor, note that there is a grooved notch on the sensor that should always be facing up. This makes sure that any directional data recorded will be record properly. When the notch is installed facing up, direction one is left to right, while direction two is right to left.

Mount Sensor with Grooved Notch facing up

External Sensor Attached

Mounting Options

While it is possible to install the external sensor by itself by simply laying it on a tree branch or other convenient spot, you may find times when the sensor needs to be more securely mounted. For this we provide a mounting block that can be screwed into a post or pole.

Slide the sensor into the mounting block as shown in the pictures below.

Note that, as mentioned earlier, the notched groove of the sensor should be facing up so that directional data is accurate. To do this, slip the sensor out far enough to see the groove and align it facing up. Then, slide the sensor back in and tighten the hex screw to secure the sensor in place, as shown below.

The screw holes on the left and right side of the mounting block can be used to screw the mounting block into place.

Screw holes for securing mounting block

**Hex screw for securing sensor in place**
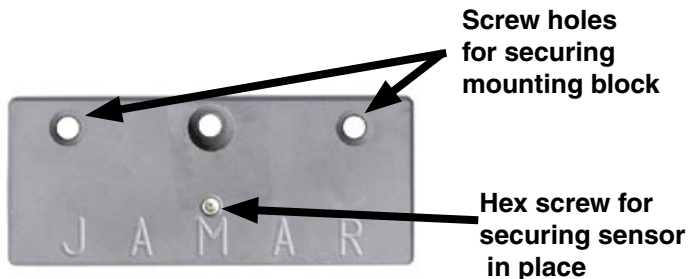
In addition to the mounting block, we also provide a mounting plate that can be used in conjunction with the block to aid installation.

To use the plate, first screw the mounting block to it using the middle screw holes of both the block and plate, as shown in the pictures below.

The plate can be screwed to a pole or post using the four corner screw holes. The mounting block can then be rotated up or down depending on the angle needed for data collection.
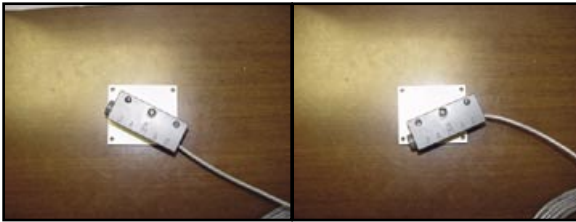
Lens Options

The standard lens of the external sensor will provide excellent results for a range of 1 to 15 feet. However, for applications that require greater distance, we provide additional lenses.

The lenses are color coded – the standard lens is grey and comes installed on the external sensor. The separate green lens covers from 1 to 35 feet while the black lens covers from 10 to 50 feet.

Grey	**Green**	**Black**
1-15 ft.	**1-35 ft.**	**10-50 ft.**

If you have the need to use one of the other lenses, it is an easy process to change the lens. Simply unscrew the standard grey lens from the front of the sensor and screw the replacement lens on, as shown in the pictures below.

Note that when you are screwing on a lens, be sure to include one of the o-rings in the lens, as this will help seal the lens in the sensor.
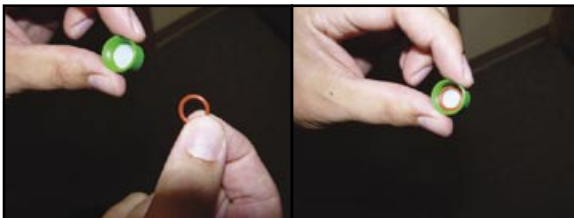
Appendix #2 - Installing the Software

It is a simple process to install JPDA on your PDA. It is required, though, that you have set up an ActiveSync partnership with your desktop computer. If you are unsure of how to do this, consult the instructions that came with your PDA.

It is recommended that you place your PDA into its cradle and allow ActiveSync to run prior to starting the installation procedure. The installation software will use ActiveSync to copy the files to your PDA.

Place the JPDA CD into the CD drive of your computer. The computer should recognize the new CD and show you the Installation Options, including one to **Install JPDA**. Select this option.

Installing .NET Framework

If this is a new installation, you must first install the .NET framework for your PDA's operating system. If you are unsure of what operating system is running on your PDA, on the PDA go to the Start menu, then select *Settings*, select the *System* tab and click on *About*. Note that JPDA only supports the Windows Mobile 5.0 or 2003 operating systems.

Click on the installation button for your PDA's operating system, and the installation of the .NET framework will begin. During installation you'll see a screen similar to the one shown to the left.

Once the installation is complete, you'll see a screen prompting you to check your PDA to see if any additional steps are needed. On the PDA itself, you may be prompted to restart.

Installing JPDA

Once the .NET framework is installed, you are ready to install JPDA. Click on the *Install JPDA* option on your computer. When the first installation screen appears, click *Next*.

Next you will see the License Agreement displayed on the screen. If you agree to the terms of the agreement, select the *I accept the terms in the licence agreement* option and click the **Finish** button.

Active Sync connects to the PDA and begins installing the program. When complete, you'll see a screen prompting you to check your PDA to see if any additional steps are needed.

Once you've installed your JPDA software, the icon for JPDA has been added to your list of applications on your Programs Screen of the PDA. You tap on the **JPDA** icon to run the software.

Installing JRead

JRead is a utility program who's purpose is to allow you to transfer the data in your PDA to your computer for processing.

The JPDA CD **Installation Options** should still be running on your computer. If not, re-insert the CD.

Select the **Install JRead** option and the installation for the program will begin. When the Welcome screen appears, click *Next*. The next screen details the license information for the program. To accept the license agreement and continue with the installation, click *Yes*.

The Read Me file for the program will then be displayed. Click *Next* to continue.

The Choose Destination Location screen then appears. You can use this screen to select where the program is installed. To use the default location, click *Next*.

The Select Program Folder screen allows you to select the program folder for the installation. To use the default location, click *Next*.

At this point you have provided all the information necessary to start installing the program. A summary of the information is provided. Click *Next* to begin copying files.

Once all the files have been copied, the InstallShield Wizard Complete screen will appear.

Specifications

Size: 6.5" x 4.7" x 3.2"
Weight: Approximately 3.5 pounds
Power: Four D-Cell alkaline batteries
Interface: RS-232 serial communications port, 9 pin DBS socket or Bluetooth wireless connection
Download Speed: Up to 115200 bps
Memory: 256 KB Internal Memory, capable of recording approximately 80,000 people in time-stamped mode.
Clock: Always active real-time clock
Data Collection Formats: Total Volume, Time-stamped raw data
Input: Passive Infrared Detector
Temperature Range: Minus 40F (-40C) to 165F (74C)
Display: Wide Temperature, 16-character LCD display
Output: Binary file capable of being read by JAMAR TRAXPro, JPDA or JRead software

We are pleased that you have chosen The Scanner for your data collection needs. We have strived to develop a unit that is easy to use, yet highly accurate. The Scanner has undergone extensive testing to verify the accuracy of its operations, and each unit is tested before it leaves our facility. However, just like other complex electronic devices, problems can occur. We always suggested that users verify the continuing accuracy of any device they use. Verification against manual counts should be performed on an annual basis to assure proper operations and results.

Should you detect any problems with any of our products, please notify JAMAR Technologies immediately and discontinue use of the unit until we have verified its operation.

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