

# PocketLOGGER™ ZT

For use exclusively with  
Zeitronix Zt-2 Wideband AFR Meter

## Instruction Guide

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## Getting Started

Below you will find basic step by step procedures for getting started. Please note that these procedures are very basic and are intended for the impatient people that don't like to read before they use a product. More detailed information for each procedure can be found following this section.

### Software Installation and Registration

1. Make sure you have the Palm Desktop software installed on you PC or Mac.
2. Make sure you can Hotsync your Palm to your computer.
3. Fill out the form at [www.pocketlogger.com/reg](http://www.pocketlogger.com/reg) to receive the PocketLOGGER software and registration code via email.
4. Unzip the file you receive into a folder using Winzip or WinRar and then navigate to that folder.
5. Install the PocketLOGGER program using the Palm Install Tool software that came with your Palm.
6. Run the PocketLOGGER software on your Palm by tapping the ZT icon from the application launcher.
7. From the main PocketLOGGER screen, tap the menu button, then "Register".
8. Register your PocketLOGGER software by entering the registration code sent to you on the line.
9. Tap OK. This will bring you back to the main screen.
10. Verify that it does not say "unregistered" under the Zeitronix logo.

### Datalogging

1. Connect your Palm to the Zeitronix Zt-2 data port via the Zeitronix Palm adapter and a hotsync cable.
2. Turn on the car.
3. Turn on your Palm and run the PocketLOGGER ZT program.
4. Verify that it does not say "unregistered" under the Zeitronix logo.
5. Tap "Datalog" from the main screen.
6. Tap the wrench icon, or press the Page Up hard button to bring you to the Param Select Screen.
7. Select the Parameters you wish to log and tap OK, or press the Page Up hard button again.
8. Verify that the icon in the upper right corner is a -[ ]- and not an X. If it is an X, check your connection and make sure the program is registered. If it is -[ ]- then data should be being displayed.
9. **PLEASE NOTE: A CONNECTION WILL NOT BE ESTABLISHED UNTIL THE Zt-2 UNIT IS POWERED (IGNITION ON) FOR AT LEAST 30 SECONDS.**
10. Use the Page Down hard button or icons to toggle between the Graph and Number view screens.
11. When ready to datalog, tap the Go button. It changes to "Stop" and flashes. Data is being stored.
12. If you datalog for at least 5 seconds, the data collected is automatically saved with a time and date stamp when you stop the log.

### Viewing Saved Logs

1. Viewing saved logs can be done at any time. The Palm does not need to be connected to the car.
2. From the main screen, tap "View Logs"
3. You will see a list of saved logs. Select the log you wish to view at tap the magnifying glass icon at the bottom right of the screen.
4. Use the arrows to navigate. Use the hard up/down buttons to zoom in and out.
5. Tap the screen or drag the stylus on the screen to see parameter values at that exact point.

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## Software

### Requirements

*If you can already Hotsync your Palm to your PC or Mac, you can skip this section*

Palm PDA's have the ability to "Hotsync" to a PC or Mac. This allows the user to do two things:

1. Backup data from your PDA onto your computer in case your batteries die.
2. Install new applications.

A Hotsync is accomplished by connecting your PDA to your PC via USB or a serial port and having the appropriate software installed on your computer. In order to get PocketLOGGER ZT going, the first thing you need to do is make sure you can hotsync your Palm to your computer. This requires you install the Palm Desktop software on your Computer. This software should have come with your Palm. If you need the latest Palm Desktop software, go to <http://www.palmone.com/us/support/downloads/> Follow the directions in the Palm Desktop documentation until you are able to Hotsync. We do not provide support for this step.

Once you have that going, perform a Hotsync and take note of the name in the upper right hand corner of the Palm screen once the Hotsync is done.

### Getting the Software and Registration Code



At this point you can register your PocketLOGGER so you can receive the software ZIP file and registration code via email. Go to <http://www.pocketlogger.com/reg> and follow the directions. You will need to enter the Hotsync name you took note of in the previous step. **THIS NAME IS CaSe SEnSitiVe, as well as space sensitive. Be sure you enter it exactly as it is displayed on your PDA.** (i.e. "Mike M" is different than "mike m" is different than "mikem")

### Software Installation

Once you get the registration email, PRINT IT OUT AND PUT IT IN A SAFE PLACE. Then unzip the zip file using WinZip, WinRAR, or some other unzipper program. Extract the files into a new directory. Make sure you know where you unzip them to. Once the file is unzipped, navigate to that directory.

Typically you can install the program on your Palm by double clicking the .prc file. If that does not automatically bring up the Palm install tool, then you have to open the Palm Install tool manually (Start -> Programs -> Palm Desktop -> Install Tool) then add that file manually. You could also drag and drop it to the install window. Be sure to install the program on the Palm and not on the expansion card.

**IMPORTANT: Make sure the proper user is selected at the top pull down of the Palm Install tool. It should match the name you noted in the upper right corner after the Hotsync.**

Click Done and then OK. Then Hotsync your Palm. If everything went OK, the program is now installed.

Next, turn on your Palm and run the application launcher on the Palm by pressing the silkscreen button with the house on it (left side next to the graffiti area). This is the application launcher. You should now see a list of all the applications installed on the Palm. Make sure the upper right corner says "ALL", if not, tap it and change it to ALL.

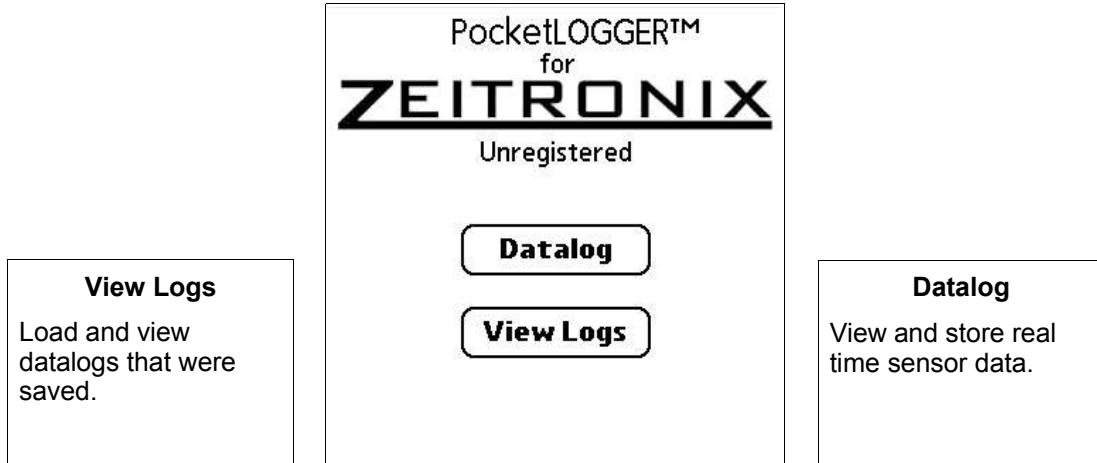
Scroll down until you see the "ZT Logger" icon and tap it. This will bring you to the main PocketLOGGER ZT screen.

# PocketLOGGER ZT Instruction Guide

## Software (cont.)

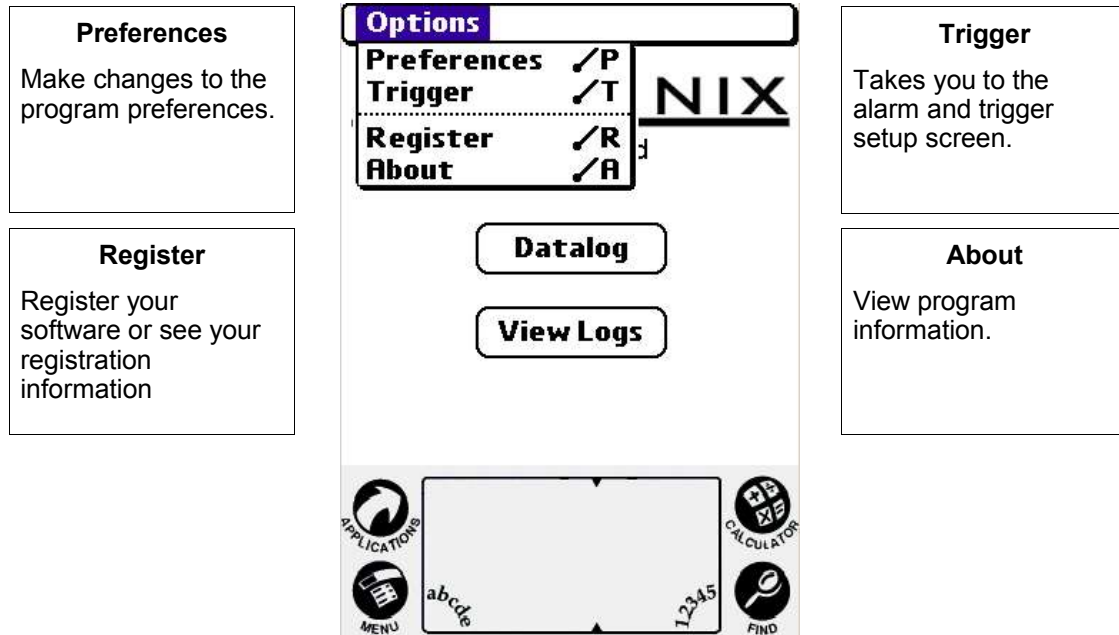
### Running for the First Time

When you first run the PocketLOGGER software you will see the following main screen.



### Registering your Software

If you tap the silkscreen menu button you will see the following menu pop up:



**Menu Button**  
The menu button is down here, bottom left. Or the third icon from the left on a T3. It looks just like the icon shown here.

# PocketLOGGER ZT Instruction Guide

## Software (cont.)

### Registering your Software (cont.)

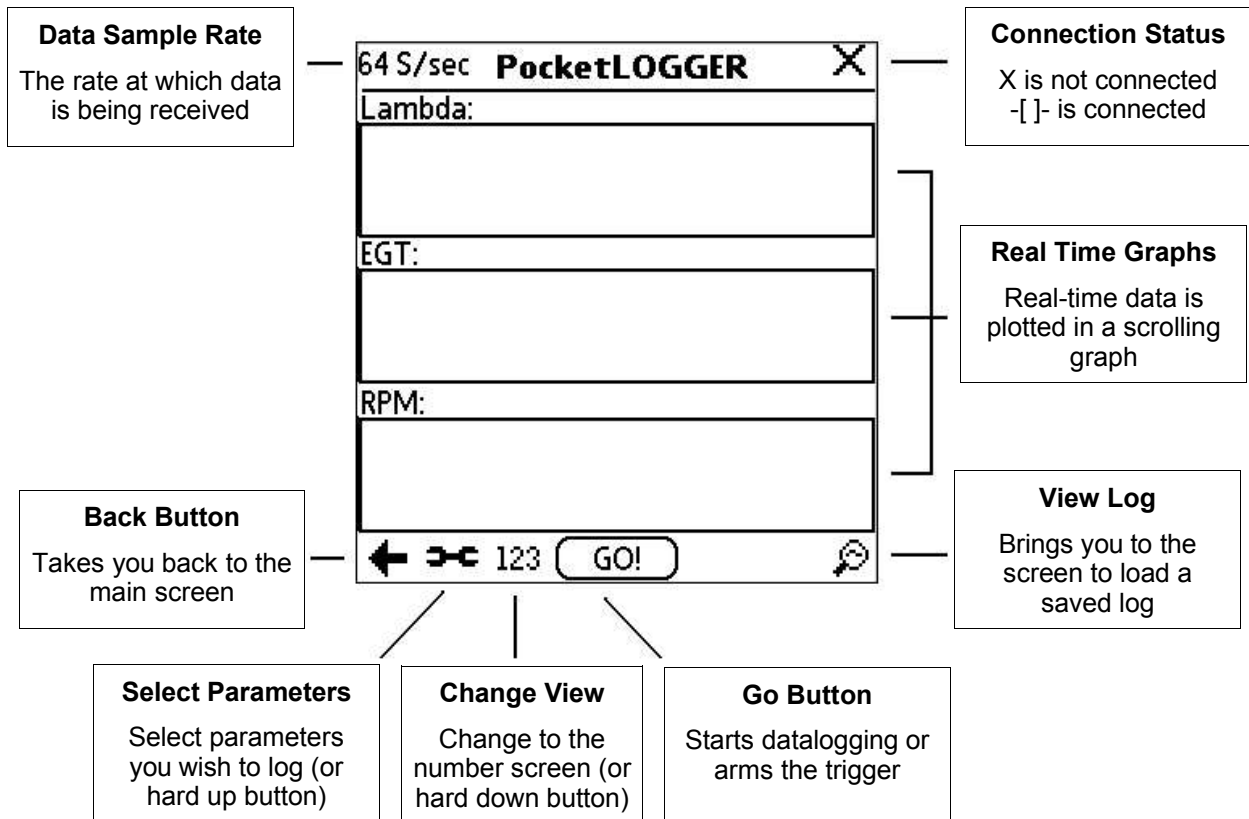
Tap the “Register” menu item, and you will see the screen on the right. Tap the line and a cursor will pop up. Enter the registration code you were emailed. See the instructions on obtaining your registration code prior to this section if you have not requested one yet.

Once you have entered the code on the line, click the OK button. This will bring you back to the main screen. If everything went well, you should now see that the “Unregistered” under the Zeitronix logo is gone. **If it still says “Unregistered”, then the program is not registered and will not connect to the Zt-2.**



## Datalogging Screens

Once the software is registered, you are ready to use it. From the main screen, tap “Log” and you will be taken to the datalog screen. This is one of two datalog screens in which you can store real-time data.

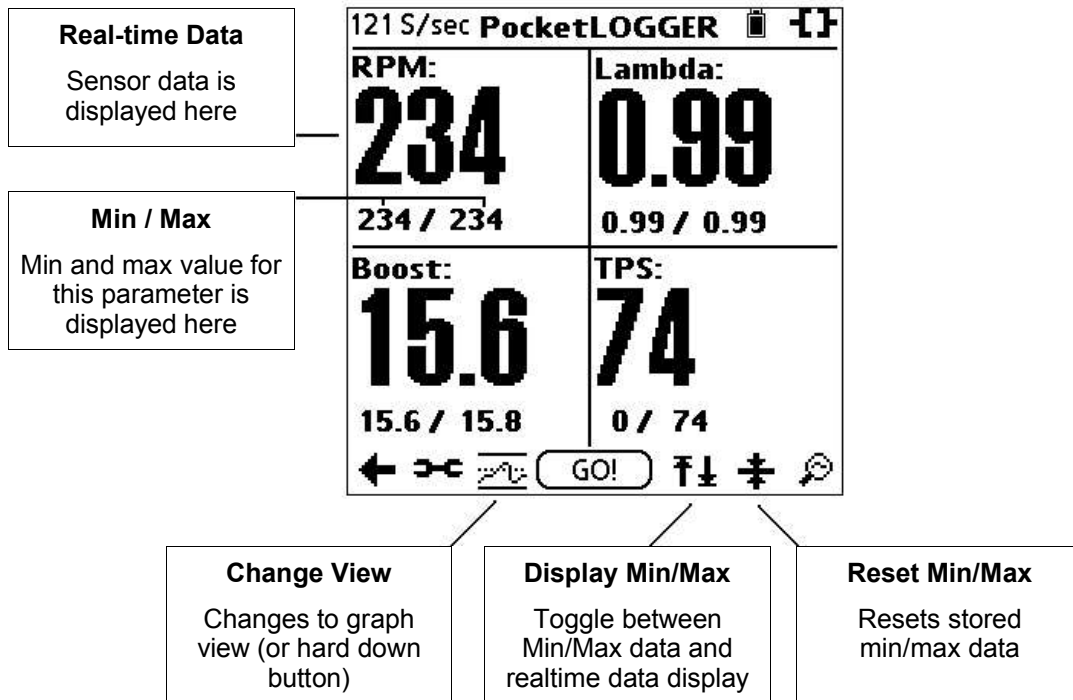


# PocketLOGGER ZT Instruction Guide

## Software (cont.)

### Datalogging Screens (cont.)

Tapping the “123” icon, or the page down hard button, will bring you to the “Number View” screen. If you have 4 or less parameters selected, you will see the screen below. It is very similar to the graph screen so only the differences have been noted.



### Capturing Data

When the logger is connected and communicating with the Zt-2, the icon in the upper right corner will change to a [-] and depending on the screen you are on, the graph will start to scroll real-time data or the numbers will update as data is received from the Zt-2. At this point, data is being received and displayed, but not being stored. When PocketLOGGER is in this state, it does not use up any of the Palm's memory.

If you tap the Go button, (or anywhere on the screen depending on the Preferences), the logger will either:

1. Change the Go button to “STOP” and the button will flash once a second. You are now storing data in the Palm's memory.
2. Change the Go button to “ARMED”. Data is NOT being stored yet. It is waiting for the trigger conditions to be met. (see Alarm and Trigger Section ). Once the condition is met, the button will change to “STOP”, will start flashing, and data will start being stored in memory.

While your are collecting data (flashing button), the data is written to the Palm's internal memory. Since the Palm's memory is limited, the length of time you can datalog is dependent on how much free memory you have on your Palm. Typically, though, memory is not a problem. Even on budget Palms with only 2 meg of memory, you can store several hours of logs.

If you allow the logger to remain logging for at least 5 seconds, the log is automatically saved with a time-date stamp as the name when you stop the log. If you stopped a log before 5 seconds have elapsed, the stored data will be discarded automatically.

# PocketLOGGER ZT Instruction Guide

## Software (cont.)

### Select Parameters Screen

Tapping the wrench icon, or the page up hard button, will bring you to the Select Parameters Screen. This is the screen that allows you to select the parameters that you want to view or datalog. Select a parameter simply by tapping the checkbox next to it. When all the parameters that you'd like to log have been selected, tap the OK button, or press the page up hard button again.

PocketLOGGER has the ability to store 4 Quick Selects. If you log the same parameters all the time, this feature allows you to select them quickly and easily. To select the parameters associated with a Quick Select, simply tap the appropriate button 1 through 4.

To program a Quick Select button, first select the parameters that you would like stored for that Quick Select. Next tap the Program button, then the Quick Select button you wish to program with the selected parameters. That button is now programmed with those parameters.

PocketLOGGER

- Lambda/AFR
- Exhaust Gas Temp
- RPM
- Boost
- TPS
- User 1

**Quick Selects:**

1 2 3 4

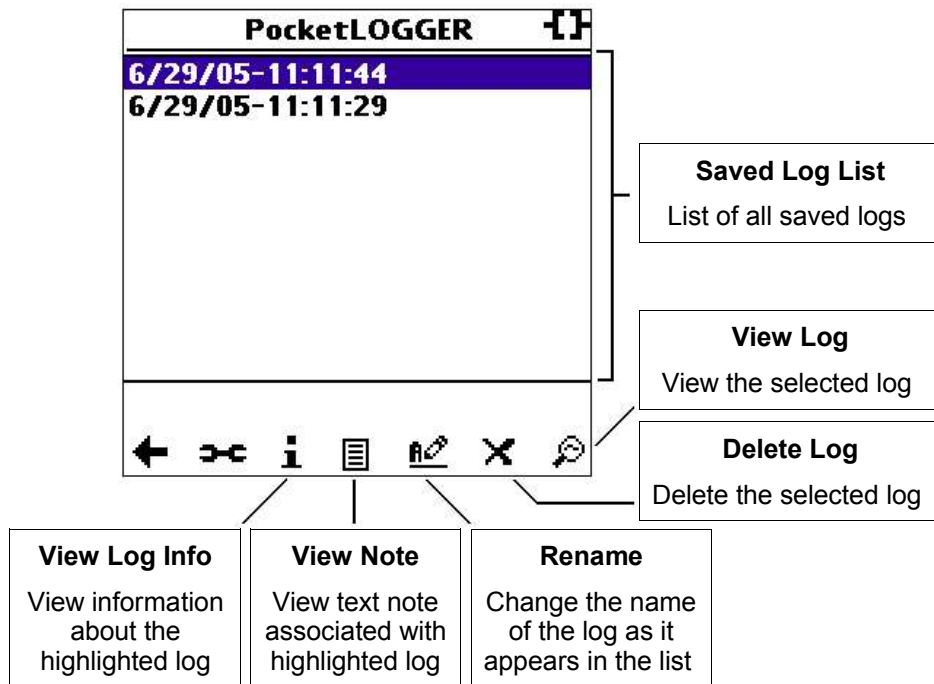
OK Program

# PocketLOGGER ZT Instruction Guide

## Software (cont.)

### Viewing Saved Logs

From the main screen, tap the “View Logs” button, or the magnifying glass in the bottom right corner from either datalog screen. You will be prompted with a list of saved logs.



Select a log from the list of logs by tapping it. Once it is highlighted, choose one of the icons at the bottom of the screen, or tap the back arrow icon to go back to the main screen.

**View Log Info:** Displays information about the log such as the time and date it was saved, the size, and the number of parameters logged.

**View Note:** Tap this to view or edit the note associated with the log. You can use the note to attach information about the log such as the weather or where the log was captured.

**Rename:** Allows you to rename the log. Logs are auto-named with a time-date stamp. If you wish to change the name to something more descriptive, you can use the rename function.

**Delete Log:** Deletes the log from your Palm. This cannot be undone.

**View Log:** Once you select a log, tap the magnifying glass view the log.

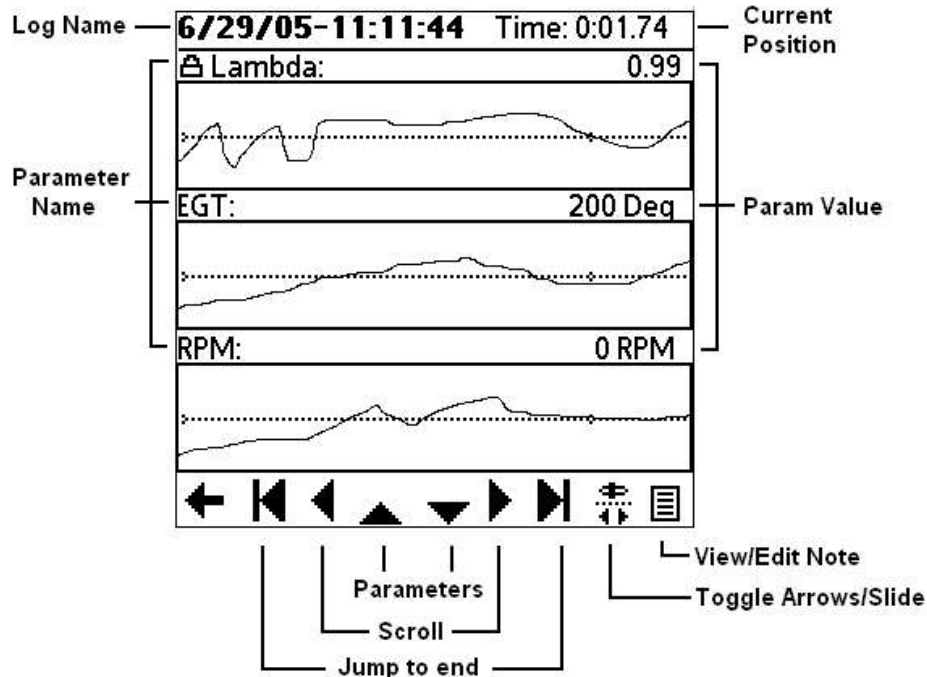


# PocketLOGGER ZT Instruction Guide

## Software (cont.)

### Viewing Saved Logs (cont.)

Once you tap the View Log icon, the log you selected will load and be displayed. Place or slide the stylus anywhere on the graph to get the actual values for that point.



**Log Name:** This is the name of the log that you are viewing.

**Parameter Name:** This is the name of the parameter whose data is being graphed in the box directly below.

**Jump to end:** Tapping either of these icons will jump you to the beginning or the end of the log respectively.

**Scroll:** Tapping either of the scroll icons move the graphs approximately  $\frac{3}{4}$  of a screen in the respective direction. Tapping or dragging the stylus to the left or right edge of the graphs scrolls as well.

**Parameter:** Tapping the Up/Down Parameter icons will display other parameters that may have been logged. These buttons will not do anything if there were 3 or less parameters logged.

**Toggle Arrows/Slide:** This toggles the navigation display between the arrows (shown) and the slider. The slider allows you to quickly jump to any point in time. When sliding the slider, only the time is updated.

**View/Edit Note:** This is the same as the View/Edit note on the Log List screen. It allows you to view or edit the note associated with this log. You can enter any text you wish in the note.

**Param Value:** The actual value at the point at which you place the stylus on the graph is displayed here for each parameter.

**Current Position:** The position in the log at the point at which you place the stylus on the graph.

# PocketLOGGER ZT Instruction Guide

## Software (cont.)

### Viewing Saved Logs (cont.)

#### Locking a parameter:

You will notice in the previous picture, there is a lock symbol next to the Lambda parameter name. This indicates that the parameter is locked into that position. Using the Parameter Scroll Up/Down arrows, the other two graphs will change, but the top one will remain Lambda. You can lock up to two parameters. This allows you to view any three parameters, by locking two and scrolling the third using the Parameter Up/Down buttons.

To lock a parameter simply tap the parameter's name.  
To unlock the parameter, tap the parameter's name again.

#### Zooming in and out:

You can increase the horizontal resolution by zooming in and out. This “spreads out” the graphs so you can see more detail.

To zoom in, press the hard Page Up button or up on the 5-way navigator.  
To zoom out, press the hard Page Down button or down on the 5-way navigator.

Note: The “Hard” page up/down buttons and “5-way navigator” are the physical buttons towards the bottom of the Palm. Which one you have depends on which Palm model you have.

#### Searching:

PocketLOGGER has the ability to search a log for threshold crossings. Say, for instance, you saved a rather long log, but you are only interested in the points at which you went above 90% TPS (wide open throttle). Using the search feature, you can jump to the next point at which the TPS value crossed 90% instead of manually scrolling through the log looking for areas of interest.

To search for a threshold crossing:

1. Scroll the parameters so that you can see the graph of the data you wish to search.
2. Tap the numeric value immediately above and to the right of the graph.
3. You will see “Searching” appear above that graph.
4. Take the stylus and place it down in the graph. The numeric value will update with the current vertical position of the stylus.
5. Drag the stylus until it reads the value of the threshold you wish to search for and then lift.
6. The graph will jump to the next point that the graph crosses that value.

Please note:

- The search only searches forward from the current position in time. It will not search backwards.
- The search searches for threshold crossings. In other words, it will stop any time the log crosses the value that you specified. If you searched for 90% TPS, it will stop when the TPS goes above 90% and again when the TPS drops below 90%
- If you lift the stylus off the screen outside of the graph you are searching, the search is canceled.
- If you tap outside of the graph you are searching, the search is canceled.
- You can only search in one graph at a time and it can only be the graph whose value you tapped to start the search in step 2.

# PocketLOGGER ZT Instruction Guide

## Software (cont.)

### Preferences Screen

From the main screen, tap the menu silkscreen button and tap "Preferences". You will see the screen on the right.

#### Tap anywhere to start log:

When checked, you don't have to tap the small "GO" button on the datalog screens, you can just tap anywhere on the screen to start and stop the log.

#### 5 Second beep while logging:

Simply makes the Palm beep every 5 seconds while datalogging so you don't forget it's logging. Remember that while datalogging, the Palm's memory is slowly being used up.

#### Display Wideband as:

Allows you to select the units to display the Air/Fuel ratio in.

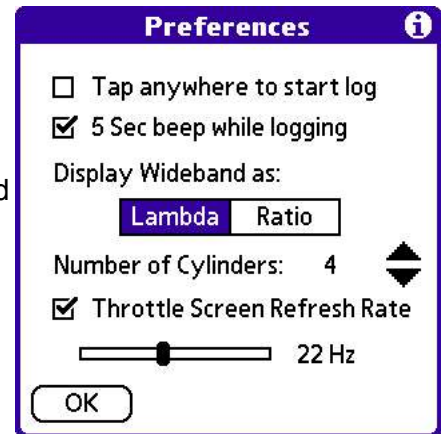
#### Number of Cylinders:

Tells the program how many cylinders in your engine so it can scale the RPM display properly.

#### Throttle Screen Refresh Rate

Some Palm screens have a slow reaction time and cause fast moving displays to blur. You can check the "Throttle Screen Refresh Rate" and select a refresh rate using the slider control. This will slow down the rate at which the "View Numbers" screen is updated. It does not affect the actual data capture rate, only the number of times a second the screen is updated. Data is still logged at the rate indicated in the top left corner of the datalog screens.

All preferences are remembered between program executions.



### Alarm and Trigger

PocketLOGGER ZT has the ability for the user to set one alarm and one trigger "condition". A "condition" is basically a rule that says "if parameter X is above / is below value Y, then...".

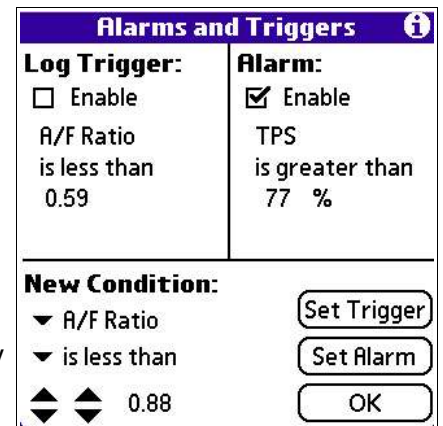
#### Alarm:

When the alarm condition is met, the Palm will beep continuously. For example, you could set it so the alarm is triggered when EGT is above 1500 degrees F.

#### Trigger:

When the Trigger condition is met, PocketLOGGER will automatically start datalogging IF:

- You are currently on a datalogging screen AND
- You have tapped the GO button so that the button now says "ARMED".



# PocketLOGGER ZT Instruction Guide

## Software (cont.)

### Alarm and Trigger (cont.)

To set an alarm or trigger:

1. Tap the menu button and select "Alarm and Trigger"
2. In the "New Condition" area, use the arrows and pulldowns to set the desired condition
3. Tap the appropriate button to copy the condition into either the Alarm or Log Trigger box.
4. Tap the "Enable" checkbox to enable checking for the condition.

The alarm and/or trigger can be disabled by unchecking the "Enable" box. The condition is still saved even when disabled so you can simply enable it again in the future without having to setup the condition again.

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