



Pocket Dials for Pocket PC  
User Guide

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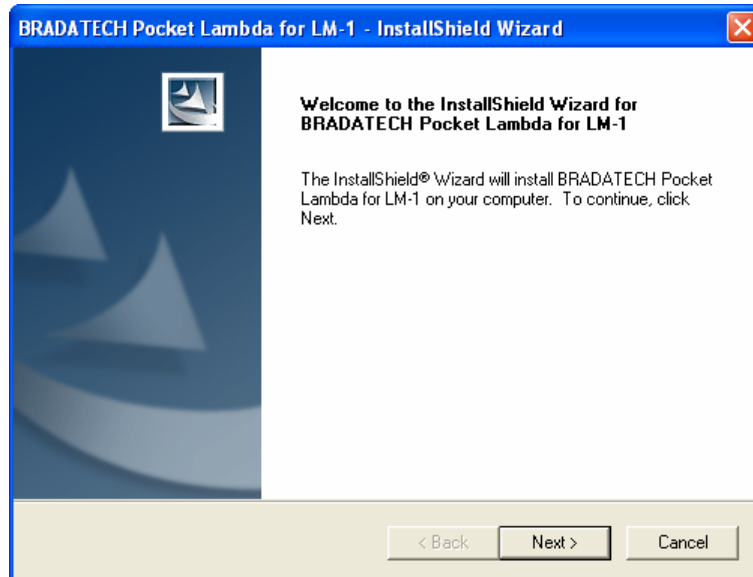
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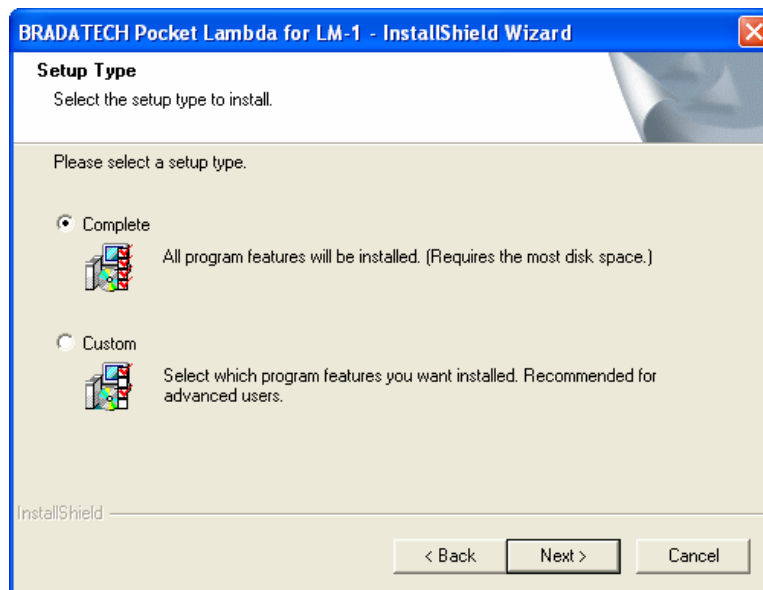
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## Installing Software

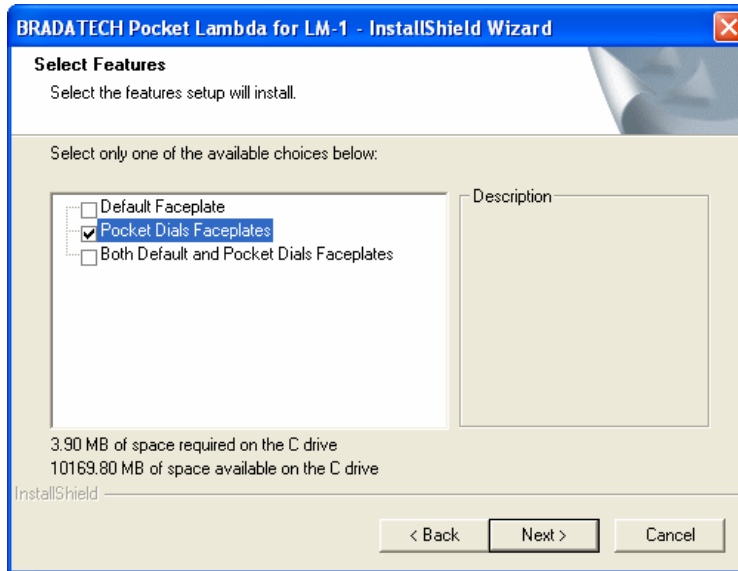
Launch the **PocketLambda.exe** program on your workstation running ActiveSync to install the cab files required for the Pocket Lambda installation to your Pocket PC. Follow the onscreen instructions.



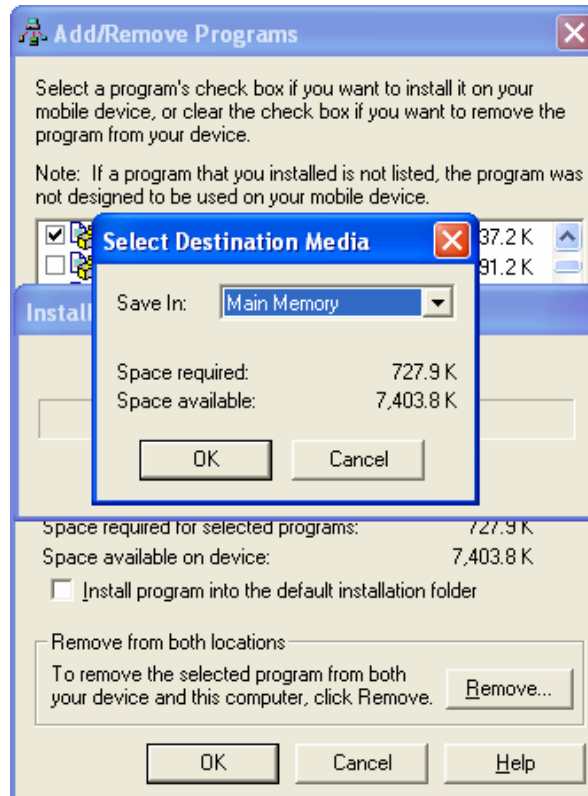
To install both the **Default** and **Pocket Dials** faceplates, select Complete from the setup type screen.





To install single faceplates, select **custom** from the setup types screen. Click next and select a single faceplate by clicking the appropriate checkbox.



Install to the default directory *Program Files\Pocket Lambda* by selecting *Main Memory* or select an available *storage card*.



## Using Pocket Dials

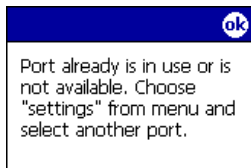
1. Connect your Pocket PC to your LM-1 or LC-1 using a serial cable or our BlueSerial adapter for LM-1, or LCXD-1 if your Pocket PC device has Bluetooth capabilities.
2. Power on your LM-1/LC-1 device(s).
3. {Click}  on the toolbar and {select}  Programs.  
 --- The Programs screen appears. ---



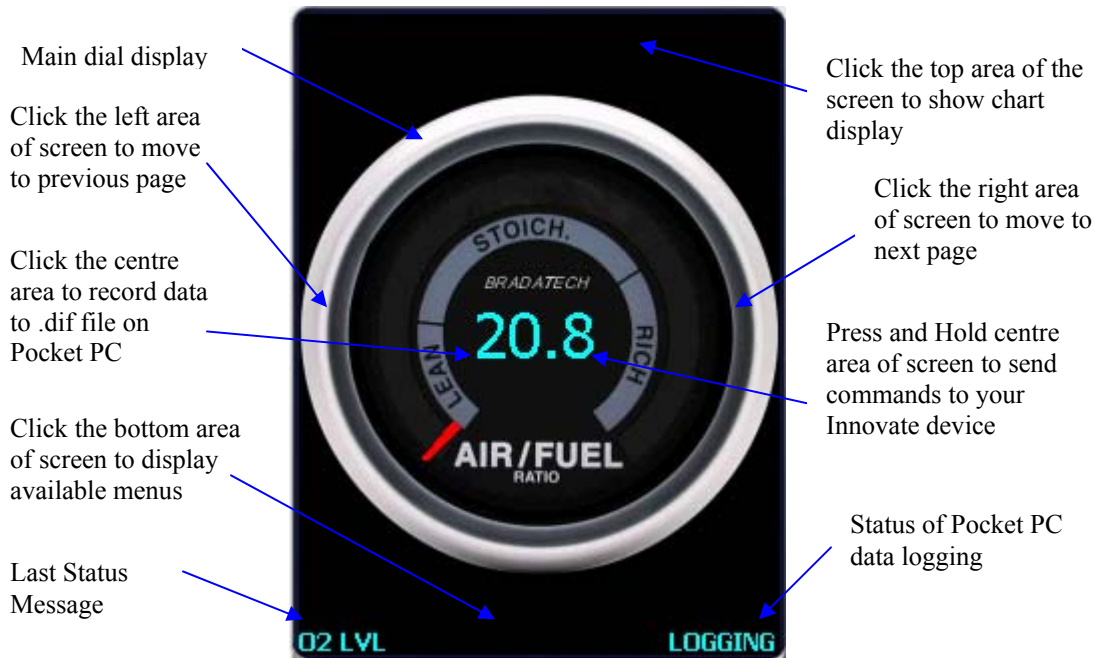
4. {Click} **Pocket Dials** to launch Pocket Dials.  
 --- The faceplate screen appears. ---



Proceed to the next section *Configuring your Pocket Dials Software* if you receive the following message.



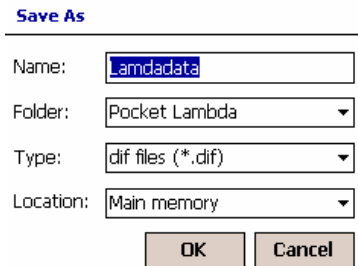
5. The faceplate controls are described below.



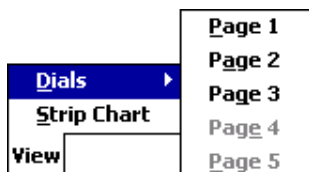
6. {Click} the bottom area of the screen of any page to display the following menu items.




The File menu provides the ability to modify the current log file name.

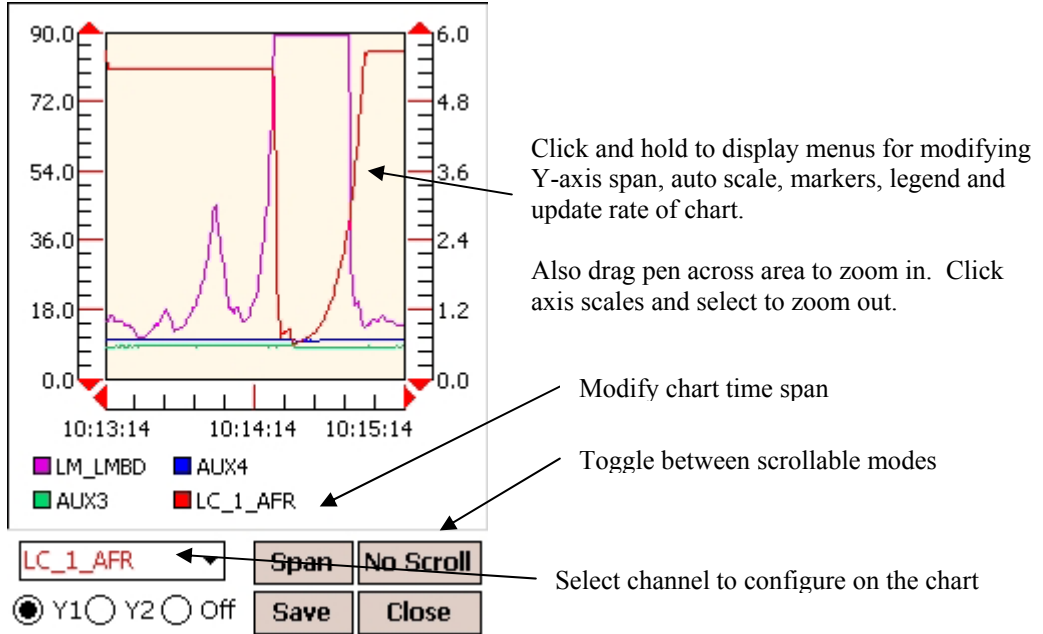


The View menu provides the ability to select available dial pages.



## Accessing Historical Charts

1. {Click}  on the main faceplate screen.  
 --- The chart screen appears. ---



2. The chart updates at a half-second interval, but this sampling rate can be changed to a greater value if your Pocket PC device has difficulty with refreshing the chart (especially when more input channels are enabled in the settings).
3. When the sample rate is modified, sampled data is averaged for that time period. For example, if the chart's sample rate is set to 5 seconds, a total of  $5 \times 12$  samples/sec (from LM-1/LC-1) = 60 values are averaged for each point on the chart. This is done for each input channel displayed on the chart.





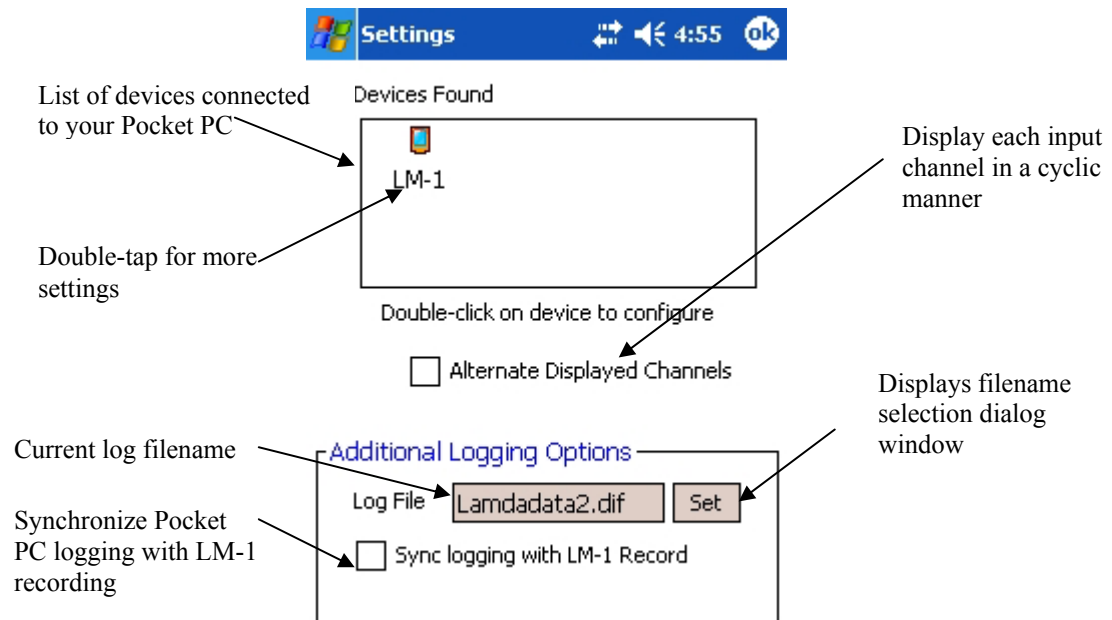
The chart stores 1000 points, therefore a sample rate of 1 second will provide historical data for 16.5 minutes. A sample rate of 5 seconds will provide historical data for 83 minutes.



Chart data is discarded when Pocket Dials closes. If you would like to have sampled data stored to a .dif file, refer to the *Configuring your Pocket Dials Software* section which explains the logging process.

## Configuring your Pocket Dials Software

1. {Click}  on the main faceplate screen to display the menus. --- The following menu items are available to the user. ---  

2. {Click} **Edit**, then **Port**, then the COM port your Innovate device is connected to. If you are using a Bluetooth adapter from Bradatech, refer to the *Using Bluetooth with your Pocket Dials Software* section near the end of this document.
3. Once connected (when **SEEK** is no longer displayed), {Click} **Edit**, then **Settings...**. --- The main settings screen appears. ---



List of devices connected to your Pocket PC

Double-tap for more settings

Double-click on device to configure

Alternate Displayed Channels

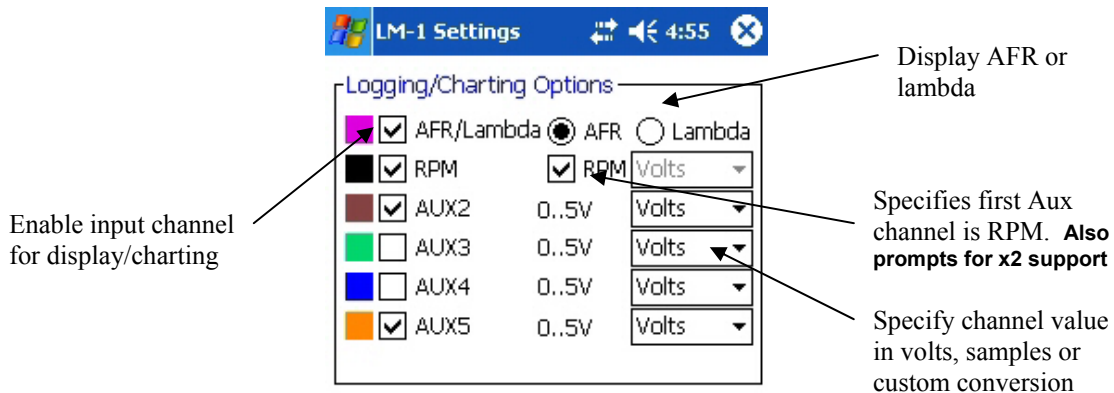
Additional Logging Options

Log File:

Sync logging with LM-1 Record

Displays filename selection dialog window

4. Double-tap the device. If the device is an LM-1, the following screen will be displayed. If the device is an LC-1, **only the first channel having the AFR/Lambda option will be available.**



LM-1 Settings

Logging/Charting Options

AFR/Lambda  AFR  Lambda

RPM  RPM

AUX2 0..5V

AUX3 0..5V

AUX4 0..5V

AUX5 0..5V

Enable input channel for display/charting

Display AFR or lambda

Specifies first Aux channel is RPM. Also prompts for x2 support

Specify channel value in volts, samples or custom conversion

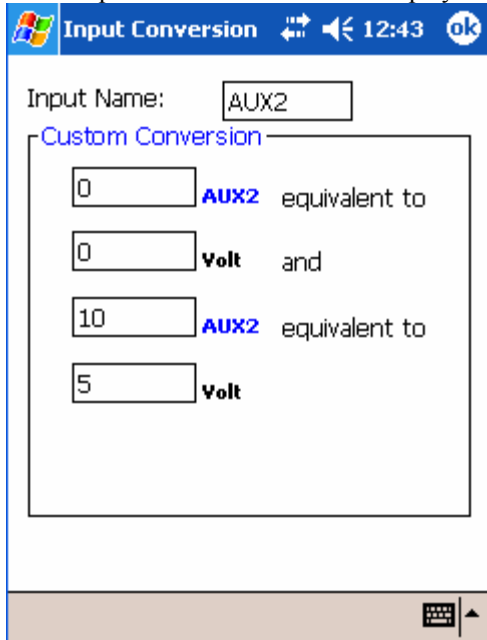
5. {Click} any of the colour boxes on the left of the checkboxes.  
 --- The colour palette is displayed. ---





6. {Click} the colour you would like to use when charting the input channel.  
 --- The colour palette is closed. ---
7. {Select} the input channel type by {clicking} the appropriate dropdown list beside the channel.

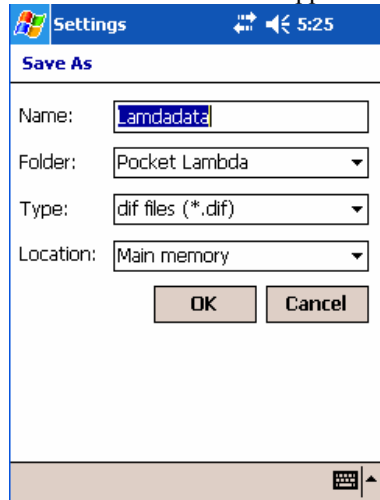




8. {Select} **Custom** if you require a custom conversion for the channel.  
 --- The *input conversion window* is displayed. ---




9. {Enter} the appropriate information for converting the raw input value to the required units and {click} 

10. To modify the log filename for Pocket PC data logging, {click}  .  
--- The *Save as..* window appears. ---



Fill-in the required filename information and {click}  to save or  to discard the changes.

11. The  Sync logging with LM-1 Record setting will automatically coordinate Pocket PC logging with the LM-1 record process. When the record button is pressed on the LM-1, Pocket Dials will also be logging the data for the selected input channels to the file specified in the last step.
12. {Click}  to save Pocket Dials settings.

## Sending Commands to your LM-1 or LC-1

You can send the following commands to your Innovate device using Pocket Lambda:

- LM-1 Record
- LM-1 Stop Recording
- Free Air Calibration (LM-1 and LC-1)
- LM-1 Memory Erase/Reset

Press and Hold the Pocket Lambda record button on the main faceplate for **2 seconds** to display the Innovate device control menu.



The refreshing of the display and charts is paused while the Innovate device control menu is displayed. Select a command quickly to avoid losing data and causing gaps in your log file.



1. {Select} **LM Record** to initiate the LM-1 record action.
2. {Select} **LM Air Cal Req** to initiate the free air calibration.
3. {Select} **LM Memory Reset** to erase/reset the LM-1's memory.
4. {Select} **Cancel** to close the control menu.

## Modifying the Layout of your Pocket Dials Software

1. {Click} the bottom area of the screen on any page to display the menus.  
 --- The following menu items are available to the user. ---



{Click} **Edit**, then **Layout...**

--- The layout screen appears. ---

| Page     | Slot* | Input | Dial Used |
|----------|-------|-------|-----------|
| <b>1</b> | 1     | AFR   | AFR       |
|          | 2     | None  | None      |
| <b>2</b> | 1     | RPM   | Tach      |
|          | 2     | None  | None      |
| <b>3</b> | 1     | AFR   | AFR       |
|          | 2     | RPM   | Tach      |
| <b>4</b> | 1     | None  | None      |
|          | 2     | None  | None      |
| <b>5</b> | 1     | None  | None      |
|          | 2     | None  | None      |

\* Fill-in slot 1 only for full page dials.  Hide LM-1 Status  
 Update Rate .2 s



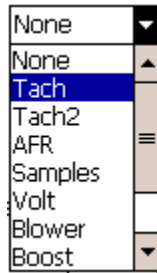
If you are experiencing erratic behaviour with the display or dials appear to not properly update, especially on slower devices, **increase the update rate** setting here.

2. {Click} the **input** value for the page you wish to modify the dial layout.  
 --- The list of available input channels appear. ---



3. {Choose} which input channel will drive the dial

4. {Click} the **dial used** value for the page you wish to modify the dial layout.  
--- The list of available dial gauges appears. ---




5. {Choose} the gauge you would like to use for displaying the input channel value selected in the previous step.



Each dial gauge has a fixed lower and upper limit (as shown on the dials themselves). If an input channels value falls outside these limits, the dial will remain frozen in its lower or upper limits just like real dial gauges.



Smaller dial gauges will be used when filling in both Slot 1 and Slot 2. For full screen dials, specify values for only Slot 1 or Slot 2 but not both.

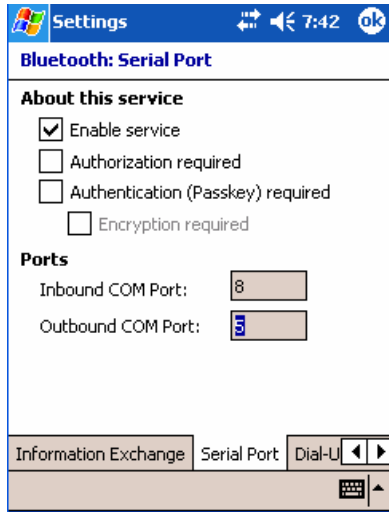
6. {Click}  to save your layout and close the window.

## Using Bluetooth with your Pocket Dials Software

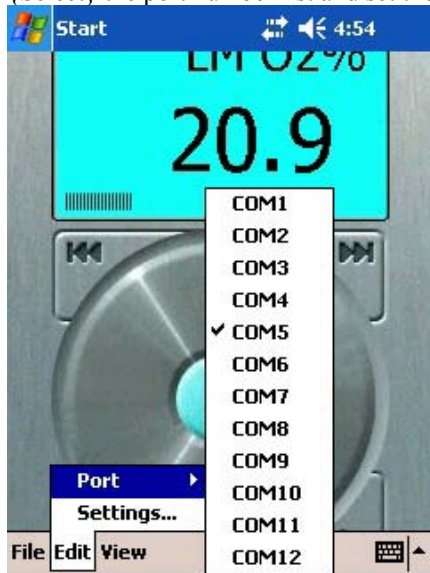



A BlueSerial adapter for the LM-1 and LCXD-1 ([http://www.bradatech.com/bluetooth/blueserial\\_lm1.asp](http://www.bradatech.com/bluetooth/blueserial_lm1.asp)) can be purchased from BRADATECH to enable Bluetooth communications with your Innovate device.

1. {Select} the *Bluetooth Manager* from your Pocket PC *Settings, System* panel and locate the *Serial Port* tab.



2. Take note of the *Outgoing COM Port* value.
3. {Launch} Pocket Dials and call-up the *Settings* window.
4. {Select} the port number list and set the port to the same as the *Outgoing COM Port* value above.



5. {Click}  to save changes.  
 --- The Bluetooth console appears and displays the available devices. ---



6. {Click} the  btLM-1 device.



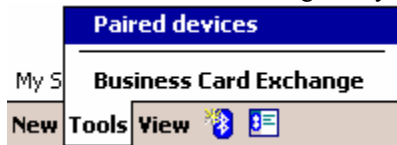
For Windows Mobile 5 edition, refer to the instructions included with your Pocket PC on how to pair with Bluetooth devices and establish partnerships. You will need the passkey (**1234**) to the Bluetooth Adapter for your Innovate device when establishing partnerships under Windows Mobile 5.

### ***Automatically Connect to a Paired Bluetooth Device (without Prompt)***



The following method was used to pair a Bluetooth device using an HP iPaq Pocket PC device and Windows Mobile 2003. Pairing on other devices may be different. Follow the manufacturer's specifications on pairing Bluetooth devices.

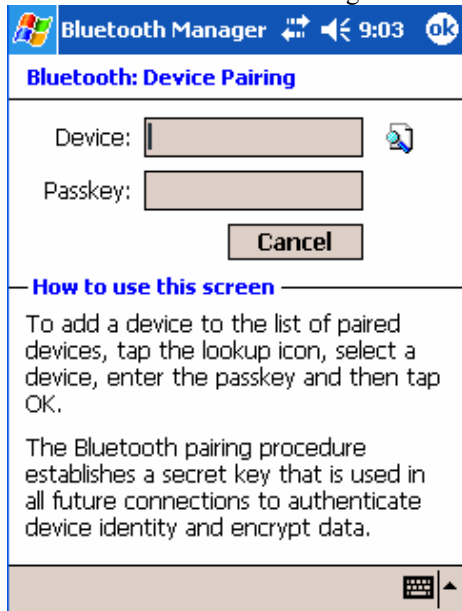
1. {Connect} the BlueSerial Adapter for LM-1 or LCXD-1 from BRADATECH and turn on your Innovate unit.
2. Access the Bluetooth Manager on your Pocket PC device. {Click} *Tools*.





{Select} *Paired Devices*.  
 --- The *Add/Remove* display is shown. ---




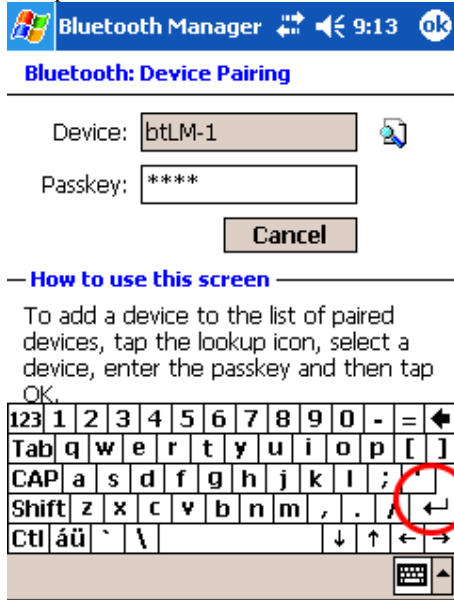
3. {Click} *Add*.  
 --- The Bluetooth Device Pairing screen is shown. ---




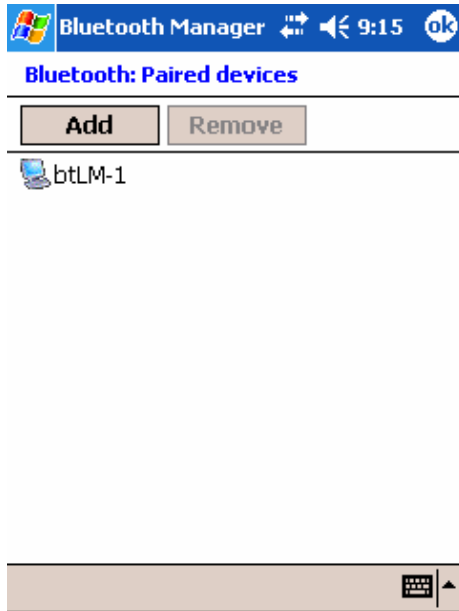
4. {Click}  to browse available devices and wait for the  btLM-1 device to appear. Refresh if necessary.



- 5. {Click}  btLM-1. {Enter} 1234 in the Passkey field. {Click} the carriage return (CR) key to accept.



- 6. The  btLM-1 device will appear in the list of paired devices if it was successfully paired with the LM-1.



- 7. {Click}  to close.



The following page describes adding a registry key to your Pocket PC settings to prevent the Bluetooth console from appearing each time you connect using Bluetooth. The Bluetooth Manager will now use the paired device created in the previous step if you perform the next registry modification.

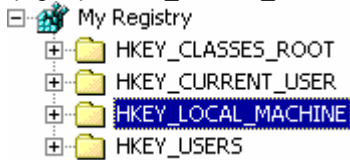


Performing the following modifications to the registry on your Pocket PC requires the use of a registry editing tool found on many Internet sites. You must be knowledgeable in performing this change since making an incorrect modification or deleting keys in the registry may cause your Pocket PC to malfunction.



**BRADATECH is not responsible for malfunctions caused by improperly performing the registry modifications shown below. We have included this information without warranty.**

1. {Open} *HKEY\_LOCAL\_MACHINE*



2. {Open} *Software*



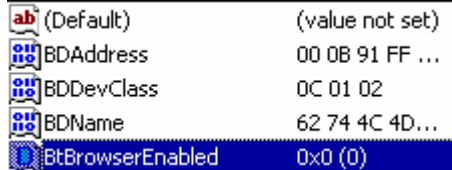
3. {Open} *Widcomm* and *BtConfig*



4. {Open} *AutoConnect* and search for the same port number as the *Outgoing COM Port* value found in step 2 on page 10 (in our case, port 5 was used).



5. {Browse} the available settings under this key and {create} a new DWORD value called **BtBrowserEnabled**. Set its value to **0**.



6. {Save} your changes.
7. {Launch} Pocket Dials and confirm that you do not get prompted for a Bluetooth device and you automatically connect to the LM-1 unit.