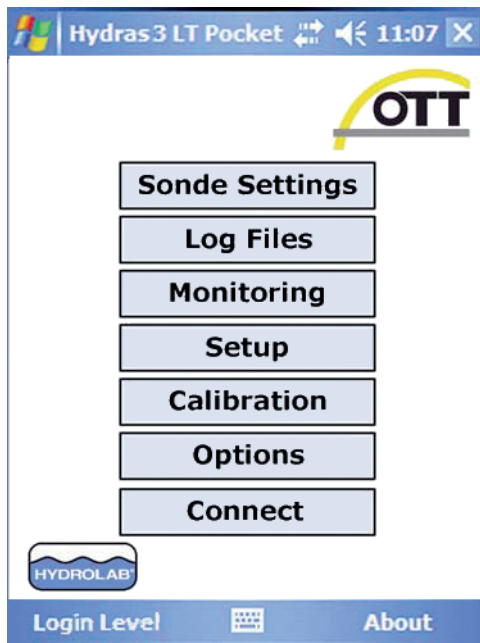


User Manual  
**Application Software**  
**OTT Hydras 3 LT Pocket**



English



# Table of Contents

---

<b>Section 1 General information</b>	5
1.1 Hydras 3 LT Pocket description	5
1.2 Sonde compatibility	5
1.3 PDA requirements	5
1.4 Trial software	6
<b>Section 2 Installing the software</b>	7
2.1 Required items	7
2.2 Installing Hydras 3 LT Pocket on the PDA	7
2.3 Installing the trial software	8
<b>Section 3 Operation</b>	9
3.1 Connecting the PDA to a sonde	9
3.2 Hydras 3 LT Pocket overview	9
3.2.1 Starting Hydras 3 LT Pocket	9
3.2.2 Menu structure	10
3.3 Using Hydras 3 LT Pocket with a sonde	11
3.3.1 Changing the sonde settings	11
3.3.1.1 Changing the sonde ID, circulator and audio settings	11
3.3.1.2 Changing the communication settings	11
3.3.1.3 Setting the date and time	12
3.3.1.4 Creating a backup log file	13
3.3.1.5 Activating the TTY mode	13
3.3.1.6 Changing the battery information	13
3.3.2 Setting up the sonde for remote data logging	14
3.3.2.1 Creating a new log file	14
3.3.2.2 Activating a log file	15
3.3.2.3 Downloading a log file from a sonde to the PDA	16
3.3.3 Monitoring sonde data in real time	18
3.3.3.1 Monitoring by time	18
3.3.3.2 Monitoring by depth	19
3.3.3.3 Monitoring by manual capture	20
3.3.3.4 Viewing data graphs during online monitoring	22
3.3.4 Changing parameter setup options	22
3.3.5 Calibrating the sonde	23
3.3.6 Changing units, date format and log file format	24
3.4 Transferring data files to a PC	25
3.4.1 Downloading files using ActiveSync	25
3.4.2 Downloading files using Hydras 3	25
<b>Section 4 Troubleshooting</b>	27
<b>Section 5 Contact Information</b>	29
<b>Index</b>	30



# Section 1      General information

---

## 1.1 Hydras 3 LT Pocket description

Hydras 3 LT Pocket for Hydrolab products is a software application that allows communication between a Hydrolab sonde and a PDA (Personal Digital Assistant). Hydras 3 LT Pocket is a variant of the Hydras 3 LT software used for communication between a Hydrolab sonde and a PC.

Using Hydras 3 LT Pocket, a PDA can be used to change the settings of Hydrolab Series 4a and 5 sondes, perform on-line monitoring, set up log files and download data. Data can be displayed on the PDA using the graphing function or can be downloaded to a PC for display in table format. Any log files held in memory in the sonde will be recognized by the Hydras 3 LT Pocket software.

## 1.2 Sonde compatibility

**Important Note:** *A PDA will not power the Hydrolab sonde! For use in the field, the sonde must be equipped with an internal battery pack or must be connected to an external battery.*

The following Hydrolab sondes can be used with Hydras 3 LT Pocket:

- |                   |  |
|-------------------|--|
| Series 5 sondes:  | <ul style="list-style-type: none"><li>• DS5X</li><li>• DS5</li><li>• MS5</li></ul>                           |
| Series 4a sondes: | <ul style="list-style-type: none"><li>• DataSonde 4X</li><li>• DataSonde 4a</li><li>• MiniSonde 4a</li></ul> |

## 1.3 PDA requirements

**Important Note:** *Recharge the batteries of your PDA regularly! A completely drained main and reserve battery can erase all programs and saved data (occurs with operating systems prior to Windows Mobile 5.0). This includes Hydras 3 LT Pocket software and all measurements that have been stored. Refer to your PDA user manual for recharging instructions.*

Hydras 3 LT Pocket is compatible with Windows Mobile 2003 and Windows Mobile 5 software. Connection to a sonde requires a PDA to RS232 (DB-9) adapter cable with null-modem adapter (see Figure 1 on page 9).

OTT has tested various PDA's to determine full compatibility with the Hydras 3 LT Pocket software. A complete list of tested PDA's is available upon request.

To determine if a PDA that has not been tested by OTT is compatible with the software, test a free trial version of Hydras 3 LT Pocket on the PDA in question. See section 1.4 on page 6 for more information regarding trial software.

### 1.4 Trial software

A trial version of Hydras 3 LT Pocket software is available at no charge and can be used to test compatibility with a specific PDA. There is no consistent or common error that will be viewed by the user when the PDA is not compatible with the software. However, the user will be unable to establish a connection with a sonde or communicate with the sonde if the PDA is not compatible.

**Important Note:** *Log files and online monitoring functions are very limited in the trial version. The trial software version is intended primarily for confirming communication with the PDA.*

Obtain the trial software by using one of the following methods:

- Download a free trial version of the software from the OTT web site: [www.ott.com](http://www.ott.com) (myOTT / software updates).
- Contact [info@ott.com](mailto:info@ott.com) for a trial software CD.
- Contact your local sales representative for a copy of the software.

#### **Trial software installation**

To install the trial software, follow the instructions for installing the full version of Hydras 3 LT Pocket (section 2.2 on page 7). When prompted for the license number, select **CANCEL**. For further information, see the "Readme.txt" document included with the trial software.

## Section 2 Installing the software

---

### 2.1 Required items

The following items must be available before installing or using the Hydras 3 LT Pocket software:

- Hydras 3 LT Pocket Software CD
- PDA with the following components:
  - ARM-compatible processor (for example, Intel XScale® or Samsung S3C2440)
  - Clock frequency > 300 MHz
  - Working memory > 64 MB
  - Operating system: Microsoft® Windows Mobile® 2003 software (Pocket PC 2003) or newer
- Microsoft® ActiveSync® technology, 3.7 or newer for installation on PC. Provided with PDA, or available for download at no charge from [www.microsoft.com](http://www.microsoft.com).
- Current standard PC (desktop or notebook) with Microsoft® Windows® 2000 operating system or newer
- PDA to USB adapter for connection to PC
- PDA to RS232 (DB-9) adapter cable for connection to sonde
- Null modem adapter, DB-9 male to male for connection to sonde

### 2.2 Installing Hydras 3 LT Pocket on the PDA

The installation procedure described in these instructions are based on an HP iPAQ Pocket PC 3715 with the Windows Mobile 2003 software (Pocket PC 2003). If another PDA or operating system is used, consult the "Readme" file on the Hydras 3 LT Pocket installation CD and the handbook of the PDA you are using. A "Readme.txt" document will also be included with the software to further assist with installation.

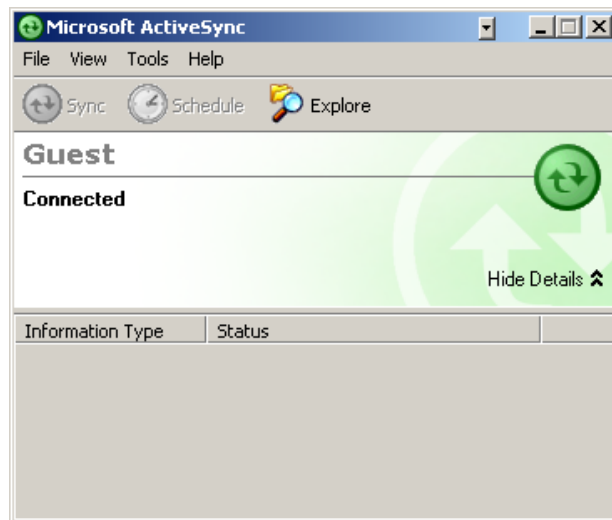
Complete the following steps to install Hydras 3 LT Pocket software on the PDA:

1. Connect the PDA to the PC using a PDA to USB adapter or infrared connection.
2. Start ActiveSync on the PC (section 2.1).

## Installing the software

---

3. Set up a new partnership (Guest Partnership) between the PDA and the PC. The following screen will appear on the PC:



4. Insert the Hydras 3 LT Pocket CD into a PC. Find but DO NOT OPEN the "Hydras3LTPocket.CAB" file.
5. In the ActiveSync window on the PC, click **EXPLORE** to view the folders on the PDA. Open "My Windows Mobile-Based Device". Drag the .CAB file from the open CD window into one of the PDA folders under "My Windows Mobile-Based Device".
6. On the PDA, select **START>PROGRAMS>FILE EXPLORER** and find the Hydras3LTPocket.CAB file that was copied from step 5. Tap once on the file. The PDA will begin to install Hydras 3 LT Pocket in the program directory.
7. The license agreement window will open. Read the Hydras 3 LT Pocket license agreement. To accept the terms of the agreement, select **I AGREE**. To decline the terms, select **I DECLINE**. If the agreement is declined, the software cannot be installed.
8. Enter the license number for the software that is located on the CD case label and tap **OK**. Once installed, the Hydras 3 LT Pocket program will open and the main screen will be displayed. Keep the CD and the license key in a secure location in the event that re-installation is required in the future.

**Note:** If installing the trial software, select **CANCEL** when prompted for the license number. For further information, see the "Readme.txt" document included with the trial software.

To create a link to the start menu, select **START>SETTINGS Personal tab>MENUS** and activate the **Hydras 3 LT Pocket** check box.

## 2.3 Installing the trial software

Install the trial software by following the installation instructions detailed in section 2.2. When prompted for the license number, select **CANCEL**. The trial software will operate in a demo mode.



## Section 3 Operation

### 3.1 Connecting the PDA to a sonde

Connect the PDA to the sonde as detailed in Figure 1. The PDA to RS232 adapter cable is available from most PDA suppliers.

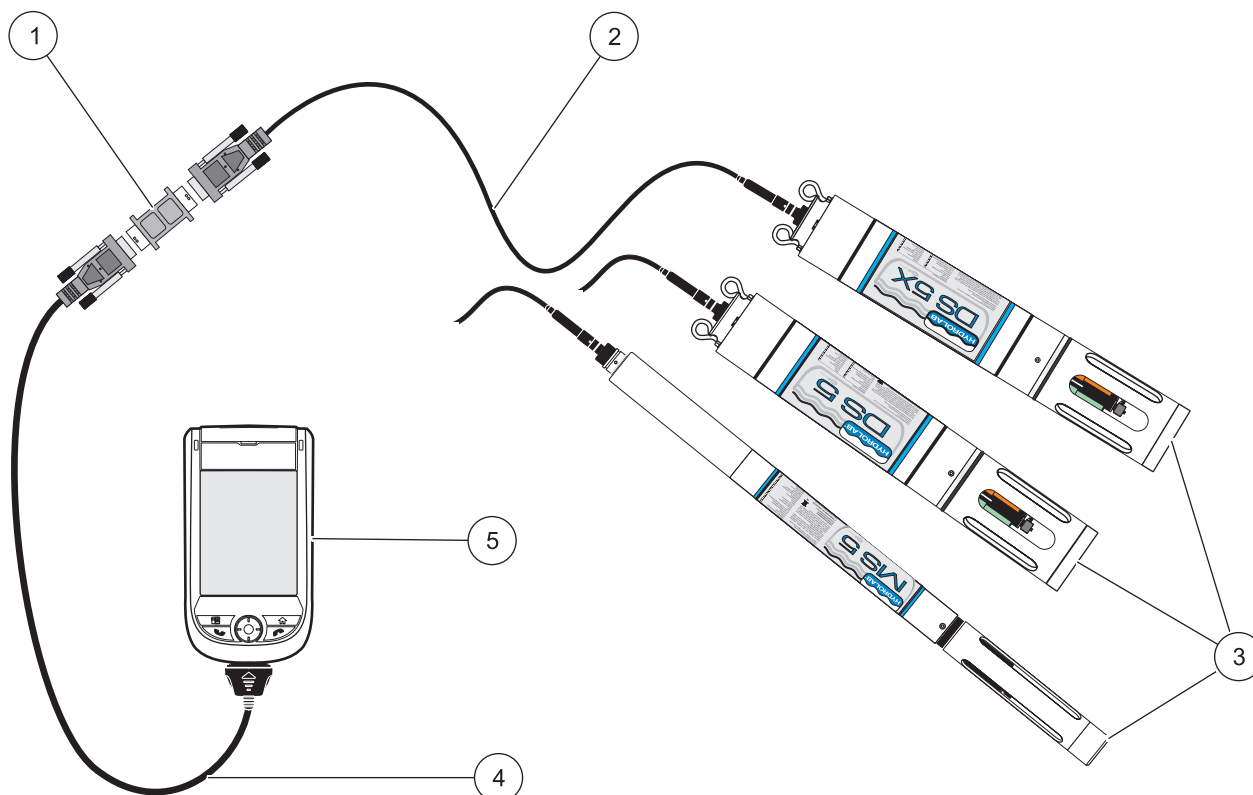


Figure 1 Typical configuration—PDA connection to sonde

1	Null modem adapter, DB-9 male to male	4	PDA to RS232 cable (available from PDA supplier)
2	Underwater cable (accessory: 55.495.51X.9.5) (or calibration cable, 55.495.500.9.5, not shown)	5	PDA
3	DataSonde or MiniSonde		

### 3.2 Hydras 3 LT Pocket overview

#### 3.2.1 Starting Hydras 3 LT Pocket

1. Connect the PDA to the sonde using a PDA to RS232 cable and null-modem adapter as detailed in Figure 1.
2. Open Hydras 3 LT Pocket from the **START** menu on the PDA. The main screen will be displayed (Figure 2).
3. Select **CONNECT** to establish communication with the sonde.

**Note:** The default security setting is LoginLevel 2. To change the security setting, select LoginLevel from the main menu. To change the setting to a level 3, enter Hydrolab for the password (case sensitive).

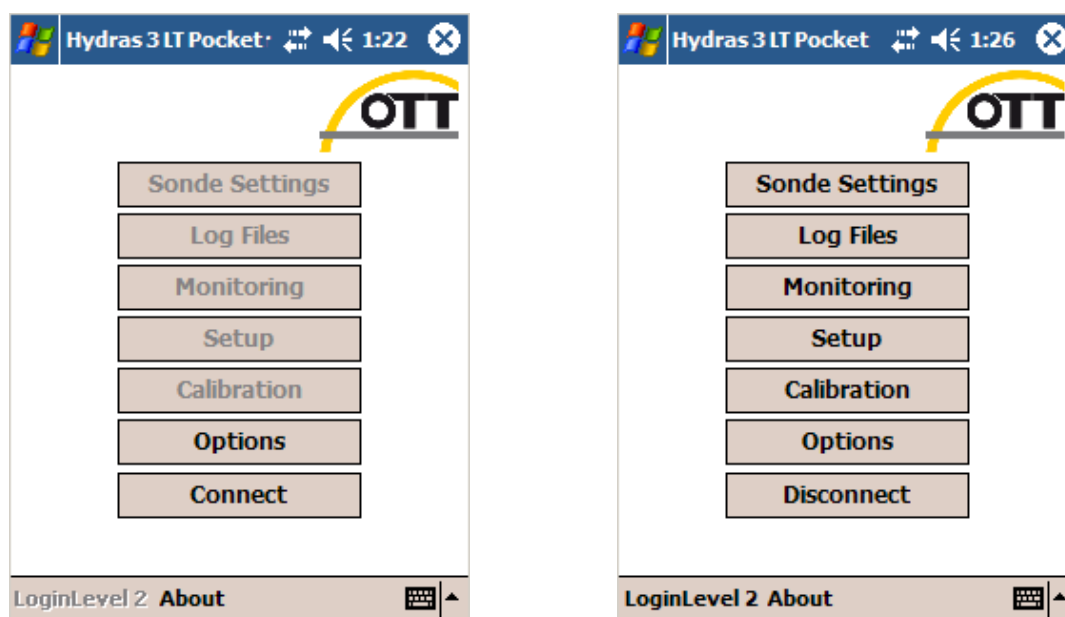


Figure 2 Hydras 3 LT Pocket main screen before and after connection to a sonde

### 3.2.2 Menu structure

The Hydras 3 LT Pocket main screen (Figure 2) contains seven options for sonde operation or data management. Each option is detailed in Table 1.

**Table 1 Hydras 3 LT Pocket menu structure**

Menu option	Description
<b>Sonde Settings</b>	Change the settings that are stored in the sonde.
Info tab	View sonde information such as serial number and software version. Assign an instrument ID. Start or stop the circulator or turn audio on or off.
Communication tab	Set the communication baud rate, Modbus address and SDI-12 options.
DateTime tab	Set the date and time.
LogFiles tab	Select the number of data log files. Turn automatic data logging on or off.
TTY tab	Activate the TTY mode (for external devices that interface with earlier generations of sondes).
Battery tab	Enter the sonde battery capacity, voltage and type.
<b>Log Files</b>	Create new log files, download, graph, edit or delete existing log files.
General tab	Select the time period, interval, warm-up, circulator and audio when creating or editing log files.
Parameters tab	Select parameters and change the parameter order when creating or editing log files.
<b>Monitoring</b>	Collect real-time data while the PDA is connected to a sonde.
Time Series tab	Capture data at user-defined time intervals.
Depth Profile tab	Capture data at user-defined depth levels.
Manual Mode tab	Capture single data points and view in real time.
<b>Setup</b>	Select specific parameter information such as number of calibration points.
<b>Calibration</b>	Calibrate sensors in the field.
<b>Options</b>	Select units for temperature, depth or battery. Change the date or log file format.
<b>Connect/Disconnect</b>	Connect (or disconnect) the PDA to a sonde.

## 3.3 Using Hydras 3 LT Pocket with a sonde

### 3.3.1 Changing the sonde settings

Use the Settings screen to set up basic sonde information such as ID, circulator, audio, communication, date, time, battery and log files.

#### 3.3.1.1 Changing the sonde ID, circulator and audio settings

Use the Info tab on the Settings screen to view specific information about the sonde, assign an instrument ID, start or stop the circulator or turn audio on or off.

1. Select **SONDE SETTINGS>Info** tab. The sonde manufacturer, model, serial number and software will be displayed.
2. Change any of the available options as follows:
  - **Instrument ID:** enter an ID for the sonde
  - **Circulator:** start or stop the circulator
  - **Audio:** turn the sonde audio on or off
3. Select **OK** to return to the main screen.

#### 3.3.1.2 Changing the communication settings

Use the Communication tab to change the baud rate, Modbus address and SDI-12 settings.

1. Select **SONDE SETTINGS>Communication** tab.
2. Change any of the available options as follows:
  - **Baudrate:** select a baud rate of 19200 or 9600.
  - **Modbus address:** The default Modbus address is 1. When using multiple sondes, assign a unique address (1 to 247) for each sonde. The Modbus works with even-parity, 8 data bit and 1 stop bit.
  - **SDI 12:** Enable SDI-12 (Serial Data Interface) when multiple sondes or other SDI-12 enabled sensors are connected to a single SDI-12 controller. Set the delay to allow the sensors to warm-up and stabilize for accurate measurements.

The transmitter factory default SDI-12 address is 0 for all parameters. If continuous mode is enabled, the unit will never enter sleep mode and measurements will be available immediately upon receiving an SDI-12 data request.

To define which parameters are reported for an SDI-12

data request, select **SET PARAMETER ORDER**. The Parameter Order screen will be displayed. To add parameters to be reported with SDI-12 data requests, select the check box next to the parameter. To order the parameters, highlight a parameter and select **UP** or **DOWN** to place the parameter in the desired order. Select **SAVE SETTINGS** to save the parameter settings.

**Note:** The parameter order set in this screen will also be used by the TTY mode for reporting data values.

3. Select **SAVE SETTINGS** to save the communication settings.

### 3.3.1.3 Setting the date and time

The screenshot shows the 'Settings' application with the 'Date/Time' tab selected. The screen displays the current date and time as 9/13/2006 01:20:42. There are two main options: 'Set clock to PocketPC time' and 'Set clock manually'. The 'Set clock manually' option is selected, showing a date picker for 9/13/2006 and a time picker for 13:41:00. Below these, there is a 'DateFormat' dropdown set to 'MMDDYY' and a checked checkbox for 'Use Date/Time delimiter'. At the bottom, there are tabs for 'Info', 'Communication', 'DateTime', and 'LogFile', with 'DateTime' being the active tab. A keyboard icon is visible in the bottom right corner.

The date and time for the sonde can be set to match the PDA or can be set manually. The manual setting is useful when sondes are located in different time zones.

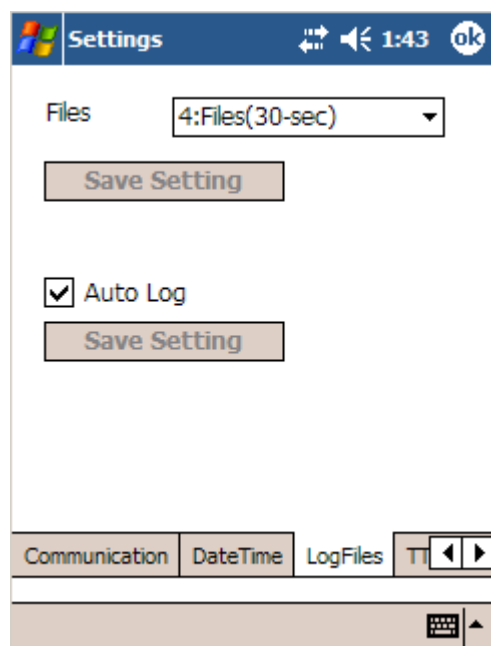
To change the date and time:

1. Select **SONDE SETTINGS>DateTime** tab.
2. Change the date and time using either the PDA clock or manual settings:
  - **PDA clock:** select **SET CLOCK TO POCKET PC TIME**. The PDA time will be displayed.
  - **Manual clock:** select the desired date and time and then select **SET CLOCK MANUALLY**. The new clock settings will be displayed.
3. To change the date format, select one of the options next to **DateFormat**.
4. To use a date/time delimiter, select the check box next to **Use Date/Time delimiter**.

**Note:** The message "This will affect currently enabled log files!" will be displayed to indicate that the settings will change any log files that are enabled. Select **YES** to change the date and time.

**Note:** The date format and date/time delimiter settings are used only for a TTY or Terminal interface.

### 3.3.1.4 Creating a backup log file

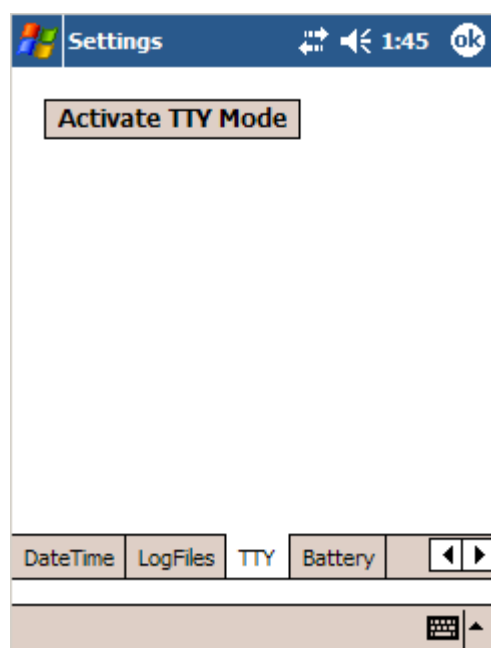


Use the LogFiles tab to create a backup log file or to change the maximum number of log files. The maximum number of log files can only be changed when there are no log files currently stored on the sonde. Reduce the number of log files when an interval less than 30 seconds is required. The minimum log interval is indicated in the parentheses next to the number of files.

1. Select **SONDE SETTINGS>LogFiles** tab.
2. Select **Auto Log** to create a backup logging file. **Auto Log** captures a reading of all available parameters, battery voltages and turns on the audio and circulator with a two-minute warm-up (if circulator is installed) once every hour.
3. Select the maximum number of log files in the drop-down menu next to **Files** and select **SAVE SETTING** to save the selection.

**Note:** A new log file cannot be created when the maximum number of log files exists. See section 3.3.2.1 on page 14 for information on adding or deleting log files.

### 3.3.1.5 Activating the TTY mode



**Important Note:**

Do not activate the TTY mode unless it is required for backwards compatibility. Once the TTY mode is activated, the PDA will no longer communicate with the sonde.

The TTY mode provides data and limited menu access for external devices that interface with earlier generations of sondes. The TTY mode is provided for backwards compatibility only.

To activate the TTY mode:

1. Select **SONDE SETTINGS>TTY** tab.
2. Select **ACTIVATE TTY MODE**.

**Important Note:** Once the TTY mode is activated, the PDA can no longer communicate with the sonde. The only way to exit the TTY mode is to connect the sonde to a PC and open a terminal screen. Set the connection speed at the current baud rate of 8:N:1. Then press the space bar followed by the letter Q to quit.

### 3.3.1.6 Changing the battery information

Battery information is entered at the factory and does not normally need to be entered into Hydras 3 LT Pocket. However, a sonde may lose this information when new firmware is loaded.

To enter the battery voltage and capacity:

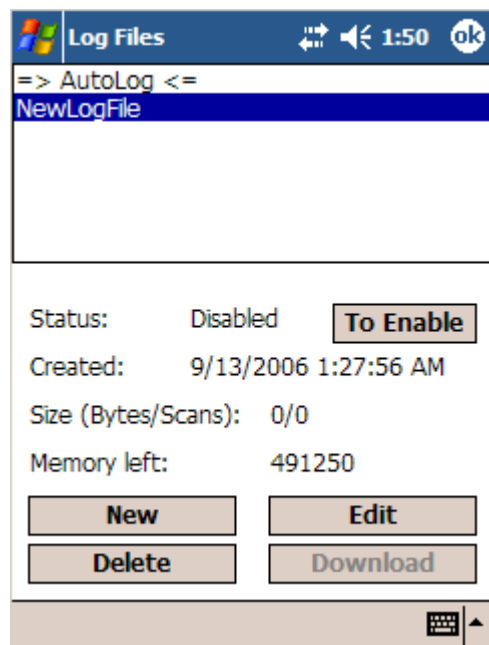
1. Select **SONDE SETTINGS>Battery** tab.
2. Enter the battery capacity and voltage specifications.
3. Select the battery type (internal or external). Save the settings.

## Operation

### 3.3.2 Setting up the sonde for remote data logging

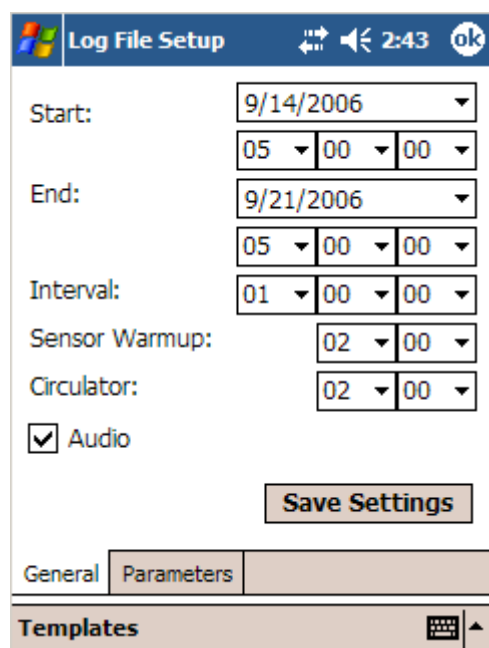
Set up and download data logs using the log files option.  
Completed log files can be viewed graphically.

#### 3.3.2.1 Creating a new log file

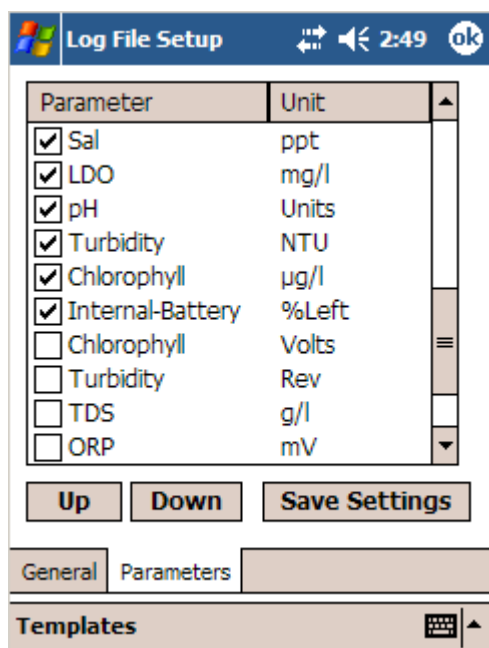


To create a new log file:

1. Select **LOG FILES** from the main screen. The Log Files screen will be displayed.
2. Select **NEW**.
3. Enter the name of the new log file and select **OK**. The Log File Setup screen will be displayed.



4. Select the **General** tab. Enter the setup information for the log file as follows:
  - **Start:** date and time when the log file will begin collecting data.
  - **End:** date and time when the log file will stop collecting data.
  - **Interval:** time interval (HH:MM:SS) between data points.
  - **Sensor Warmup:** time for sensors to warm up and stabilize before each measurement.
  - **Circulator:** time for the circulator (if installed) to operate before each measurement.
  - **Audio:** sound made when measurements are taking place.

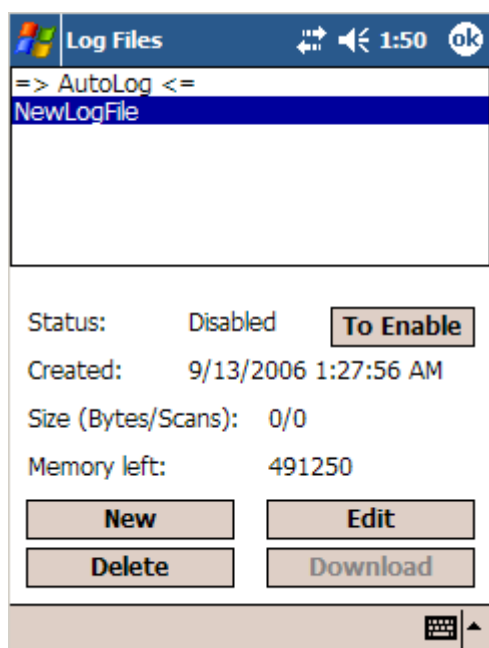


5. Select the **Parameters** tab. Add the parameters to include in the log file by selecting the check box next to each parameter. Change the order by highlighting the parameter and selecting **UP** or **DOWN** to move the parameter. Use the scroll bar to scroll up or down.
6. Select **SAVE SETTINGS** to save the log file settings.
7. Select **Templates** in the lower left corner to save the log file settings in the PDA for use in multiple sondes. Enter a name for the template and select **OK**.

When setting up a new log file in a different sonde, select **Templates>Load** to populate the setup fields.

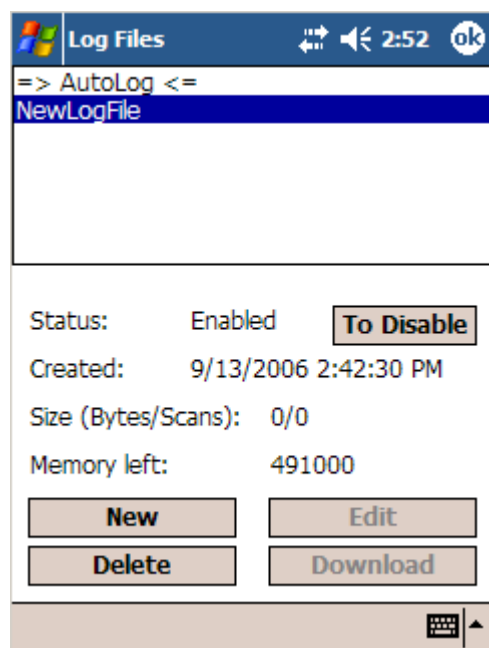
**Note:** The new log file will not log data until it is activated (section 3.3.2.2).

### 3.3.2.2 Activating a log file



1. Select **LOG FILES** from the main screen. The Log Files screen will be displayed.
2. Highlight the log file to activate and select **TO ENABLE**.

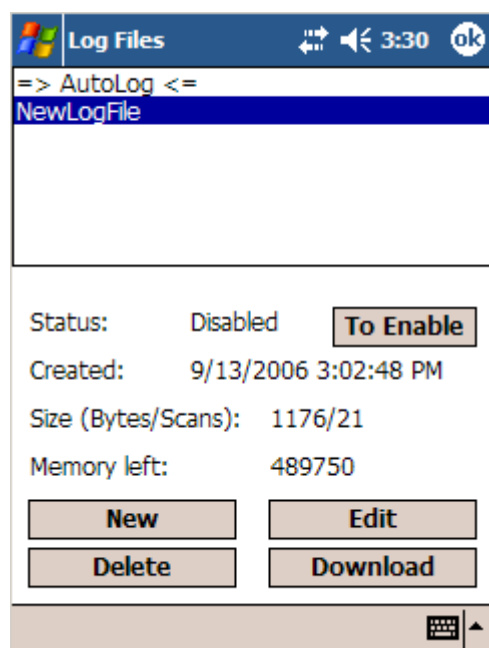
## Operation



The status will change from Disabled to Enabled. The sonde will begin recording data in the new log file at the specified start time.

**Important Note:** Log files that have completed running cannot be activated for re-use by changing the date. For log files occurring in the future, always set up a new log file!

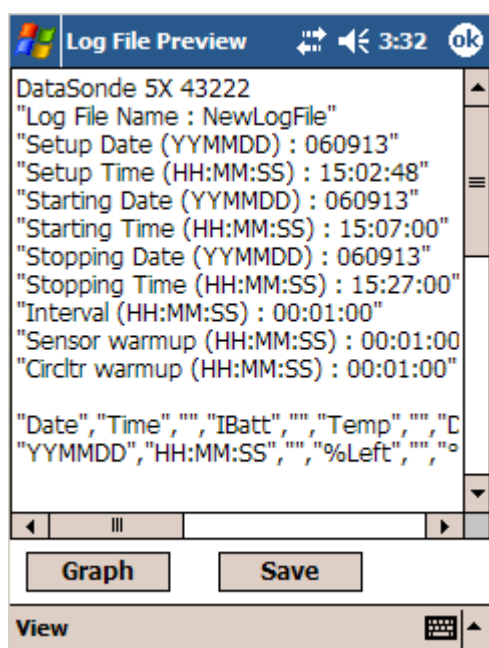
### 3.3.2.3 Downloading a log file from a sonde to the PDA



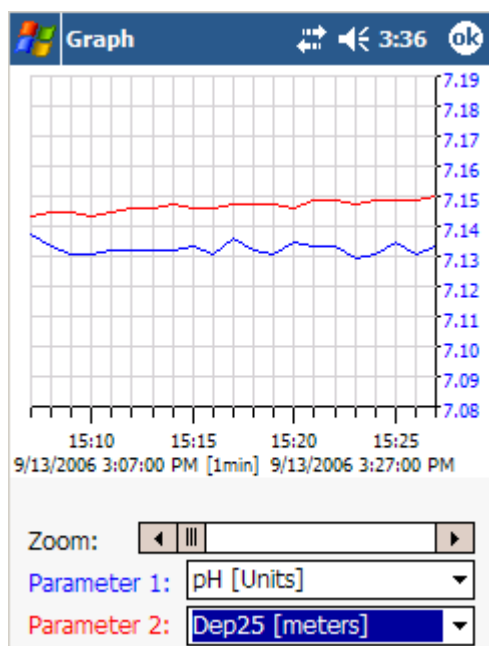
1. Select **LOG FILES** from the main screen. The Log Files screen will be displayed.
2. Highlight the log file to download and select **DOWNLOAD**. The Log File Preview screen will be displayed.

**Note:** To transfer a log file from the PDA to a PC, see section 3.4 on page 25.





- When the log file is complete and downloaded, select **SAVE** to save the file. Enter the name of the file. Select the folder, type, location and save the file.



- To view the data graphically, select **GRAPH**. A graph will be displayed. Two parameters can be displayed on the graph. Select the parameters to be displayed. Tap the Y-axis to toggle between the Y-axis values for parameter 1 and parameter 2.

### 3.3.3 Monitoring sonde data in real time

Use online monitoring to capture real-time data from a sonde while it is connected to the PDA. Online monitoring can be set up to capture data by time, depth or by manual capture of individual data points (sections 3.3.3.1, 3.3.3.2 and 3.3.3.3). Results can be displayed graphically.

Stability criteria can be set before capturing data when using the depth or manual mode. The stability criteria must be met before a measurement can be taken. When more than one stability criteria is checked, all conditions must be met before data can be collected.

#### 3.3.3.1 Monitoring by time

Online Monitoring

Interval:

00 01 00

Time Series Depth Profile Manual Mode

Start >>

1. Select **MONITORING>Time Series** tab. The Online Monitoring screen will be displayed.
2. Select the time interval in hours, minutes and seconds.
3. Select **START** to begin monitoring.

OnlineMonitoringSt

Current Depth: 0

Next Depth: 0

Internal Battery 10.8 V [100.0 %]

External Battery 11.1 V [40.9 %]

# Samples 1

Circulator Start Stop

Graph Statistics

Current Values

Stop Save File

4. Select any of the following options during monitoring:
  - Circulator **START/STOP**: start or stop the circulator.
  - **GRAPH**: view a graph of the data (section 3.3.3.4).
  - **STATISTICS**: view the minimum, maximum, mean and standard deviation values for a parameter.
  - **CURRENT VALUES**: view data and add or delete parameters.
5. To end data collection, select **STOP**.
6. Save the file by selecting **SAVE FILE**. A list of parameters will be displayed.
7. Select the parameters to save and tap **SELECT**. The Save As screen will be displayed.
8. Enter the name of the file. Select the folder, type and location. Select **SAVE**.

### 3.3.3.2 Monitoring by depth

Parameter	Delta [# Sam...]
<input type="checkbox"/> LDO_BP [mmHg]	0 [0]
<input checked="" type="checkbox"/> LDO [mg/l]	0 [0]
<input type="checkbox"/> LDO% [Sat]	0 [0]
<input type="checkbox"/> Turbidity [Volts]	0 [0]
<input checked="" type="checkbox"/> Turbidity [NTU]	10% [5]
<input type="checkbox"/> Turbidity [Rev]	0 [0]

Parameter: Turbidity [NTU]  
 Max. Delta: 10  
☒ Delta in percer  
 # Samples: 5

1. Select **MONITORING** from the main screen. The Online Monitoring screen will be displayed.
2. Select the **Depth Profile** tab.
3. Select the distance between data points next to **Step**. Select **CHANGE DIRECTION** to change the direction in which measurements will be taken (current direction is indicated by the arrow).
4. To set up stability criteria that must be met before a measurement is taken, select the check box next to **Use stability check**.
5. Select **CONFIGURATION** to define the stability criteria. The Stability Configuration screen will be displayed.
6. Highlight a parameter and enter the stability criteria:
  - **Max. Delta:** maximum delta value (maximum difference between smallest and largest value)
  - **Delta in percent:** maximum delta value in percent
  - **# Samples:** the number of samples that must meet the stability criteria
7. Select the check box next to the parameter to include it in the stability criteria check. When more than one parameter is checked, all conditions must be met before data is collected. Select **SAVE** to save the stability criteria.
8. Select **START** to begin monitoring. Measurements will begin when the stability criteria is met.

OnlineMonitoringSt

Current Depth: 0 [meters]  
Next Depth: 1 [meters]  
Internal Battery: 10.8 V [100.0 %]  
External Battery: 11.1 V [40.9 %]  
# Samples: 0  
Circulator: **Start** **Stop**

**Graph** **Statistics**  
**Current Values**

**Stop** **Save File**

9. Select any of the following options during monitoring:
  - Circulator **START/STOP**: start or stop the circulator.
  - **GRAPH**: view a graph of the data (section 3.3.3.4).
  - **STATISTICS**: view the minimum, maximum, mean and standard deviation values for a parameter.
  - **CURRENT VALUES**: view data and add or delete parameters.
10. To end data collection, select **STOP**.
11. Save the file by selecting **SAVE FILE**. A list of parameters will be displayed.
12. Select the parameters to save and tap **SELECT**. The Save As screen will be displayed.
13. Enter the name of the file. Select the folder, type and location. Select **SAVE**.

### 3.3.3.3 Monitoring by manual capture

Online Monitoring

☒ Use stability check  
**Configuration**

Time Series Depth Profile Manual Mode **Start >>**

1. Select **MONITORING** from the main screen. The Online Monitoring screen will be displayed.
2. Select the **Manual Mode** tab.
3. To set up stability criteria that must be met before a measurement is taken, select the check box next to **Use stability check**.
4. Select **CONFIGURATION** to define the stability criteria. The Stability Configuration screen will be displayed.

Parameter	Delta [# Sam...]
<input type="checkbox"/> LDO_BP [mmHg]	0 [0]
<input checked="" type="checkbox"/> LDO [mg/l]	0 [0]
<input type="checkbox"/> LDO% [Sat]	0 [0]
<input type="checkbox"/> Turbidity [Volts]	0 [0]
<input checked="" type="checkbox"/> Turbidity [NTU]	10% [5]
<input type="checkbox"/> Turbidity [Rev]	0 [0]

Parameter: Turbidity [NTU]

Max. Delta: 10

☒ Delta in percer

# Samples: 5

Save

Current Depth: 0

Next Depth: 0

Internal Battery: 10.8 V [100.0 %]

External Battery: 11.1 V [40.9 %]

# Samples: 1

Circulator: Start Stop

Graph Statistics

Current Values

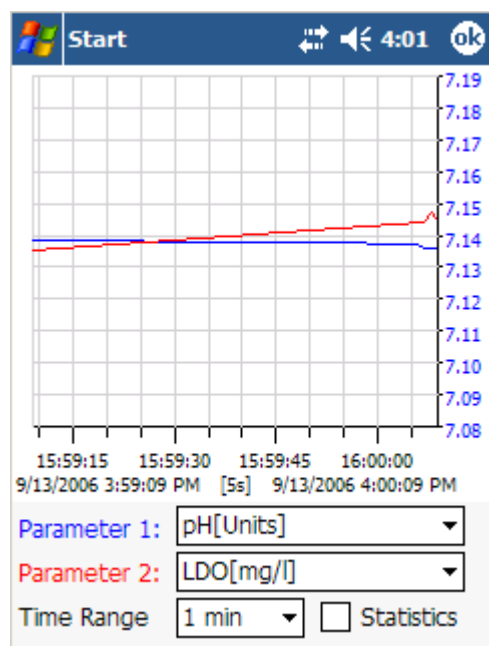
Capture

Stop Save File

5. Highlight a parameter and enter the stability criteria:
  - **Max. Delta:** maximum delta value (maximum difference between smallest and largest value)
  - **Delta in percent:** maximum delta value in percent
  - **# Samples:** the number of samples that must meet the stability criteria
6. Select the check box next to the parameter to include it in the stability criteria check. When more than one parameter is checked, all conditions must be met before data is collected. Select **SAVE** to save the stability criteria.
7. Select **START** to go to the Online Monitoring screen.
8. Select **CAPTURE** to take a reading. The reading will be taken as soon as the stability criteria is met. The number of samples (# Samples) displayed will indicate the number of measurements that have been taken.
9. Continue to select **CAPTURE** to take additional readings.
10. Select any of the following options during monitoring:
  - **Circulator START/STOP:** start or stop the circulator.
  - **GRAPH:** view a graph of the data (section 3.3.3.4).
  - **STATISTICS:** view the minimum, maximum, mean and standard deviation values for a parameter.
  - **CURRENT VALUES:** view data and add or delete parameters.
11. To end data collection, select **STOP**.
12. Save the file by selecting **SAVE FILE**. A list of parameters will be displayed.
13. Select the parameters to save and tap **SELECT**. The Save As screen will be displayed.
14. Enter the name of the file. Select the folder, type and location. Select **SAVE**.

## Operation

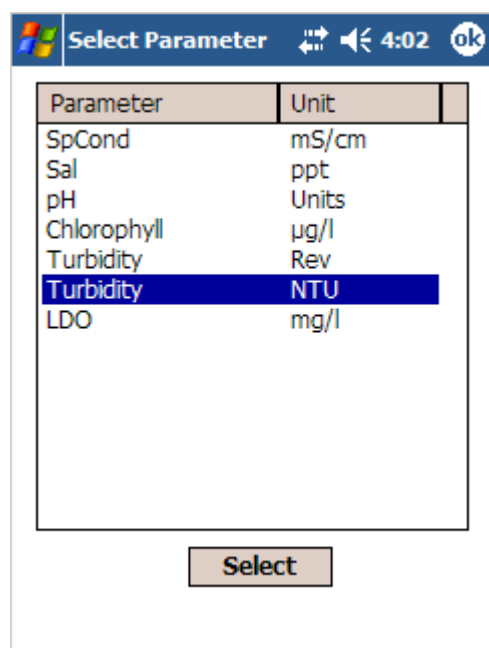
### 3.3.3.4 Viewing data graphs during online monitoring



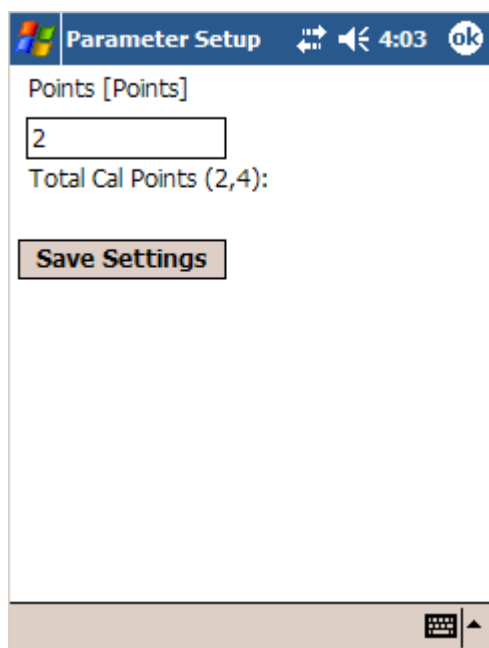
1. To view data in graph format during online monitoring, select **GRAPH**. A graph will be displayed. Two parameters can be displayed on the graph.
2. Select the parameters to be displayed next to **Parameter 1** and **Parameter 2**.
3. Tap the Y-axis to change the Y-axis values for each parameter. The color of the Y-axis values correspond to the color of the Parameter 1 or Parameter 2 text.

### 3.3.4 Changing parameter setup options

Use the **SETUP** option from the main screen to enter setup information such as the number of calibration standards for individual parameters.



1. Select **SETUP** from the main screen. The Parameter list will be displayed.
2. Highlight the parameter to change the setup options and tap **SELECT**.

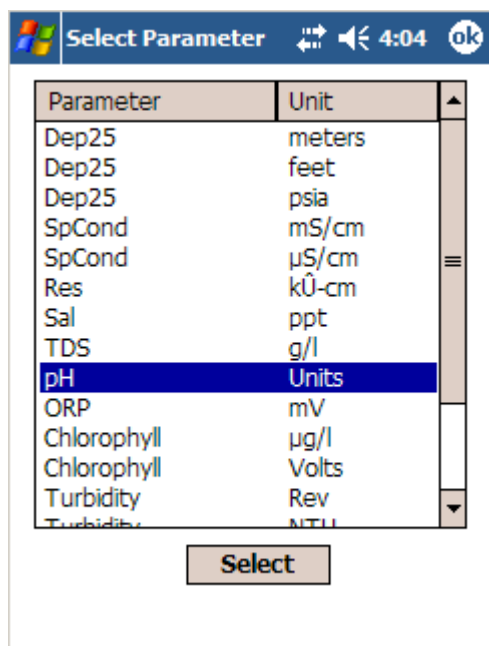


3. Enter or select the criteria and select **SAVE SETTINGS**.

**Note:** The available criteria for each parameter is dependent upon the parameter. Refer to the documentation supplied with each sensor for more information.

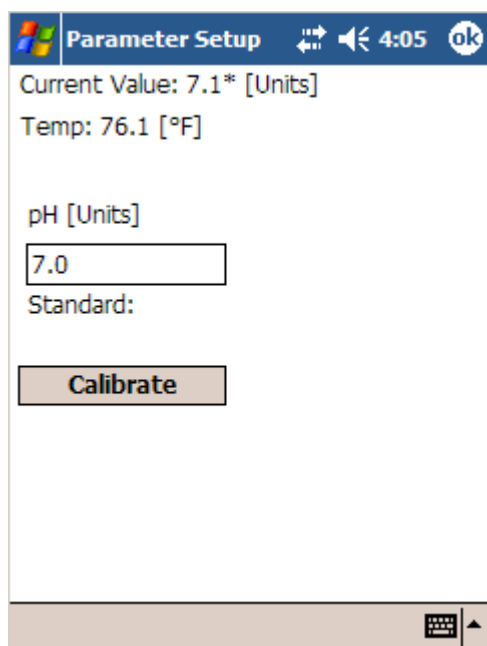
### 3.3.5 Calibrating the sonde

Use the **CALIBRATION** option to calibrate sensors in the field. Refer to the documentation supplied with each sensor for the complete calibration procedure.



1. Select **CALIBRATION** from the main screen. A list of parameters will be displayed.
2. Highlight the parameter to calibrate and tap **SELECT**.

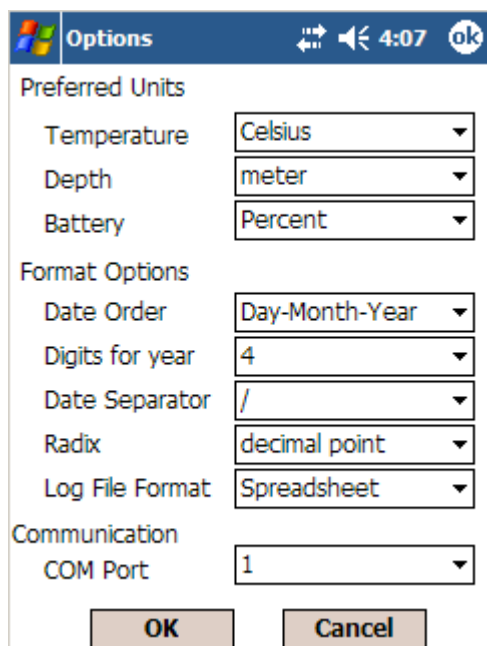
## Operation



3. Enter the concentration of the calibration standard(s).
4. Place the sensor in the standard solution and select **CALIBRATE**. A dialog box will indicate whether the calibration was successful or failed. If the calibration failed, review the calibration procedure in the user manual for the sensor.

### 3.3.6 Changing units, date format and log file format

Use **OPTIONS** to change the preferred units, date format or log file format used by the software. Any changes that are made will be displayed when log files are viewed on the PDA or PC.



1. Select **OPTIONS** from the main screen. The Options screen will be displayed.
2. Change any of the available options as follows:
  - **Preferred Units:** set units for temperature, depth and battery
  - **Format Options:** select the date format, radix and log file format
  - **Communication:** select the COM port on the PDA that is used to connect to the sonde



---

## 3.4 Transferring data files to a PC

Log files or online monitoring files that are saved in the PDA can be transferred to a PC.

### 3.4.1 Downloading files using ActiveSync

To download completed data log files to a PC:

1. Connect the PDA to the PC using a PDA to USB adapter or infrared connection.
2. Open ActiveSync on the PC and set up a Standard or Guest partnership.
3. If using a Guest partnership, select **EXPLORE**. Locate the file to transfer on the PDA. Copy the file from the PDA to a folder on the PC.

If using a Standard partnership, the contents of the "My Documents" sub-folders on the PDA are automatically synchronized with the corresponding folder on the PC ("My Documents\PocketPC My Documents").

4. To view the file on the PC, open an application such as Microsoft® Excel® spreadsheet software and then open the data file. When importing the file, select delimited for the data type and comma as the delimiter.

### 3.4.2 Downloading files using Hydras 3

Users of Hydras 3 (not Hydras 3 LT) can import log files or online monitoring files that are saved in the PDA from within Hydras 3.

To import files from Hydras 3:

1. Open the Multi Column Import using menu item **Extras | Multi Column Import**.
2. In the dialog window, select **PDA** (Figure 3). A file browser window will open (Figure 4).
3. Select the file and click **PREVIEW** to view the content of the selected file. To import a file, select the file and click **OK**.

**Note:** For further details about using Multi Column Import in Hydras 3, see the online help feature in Hydras 3.

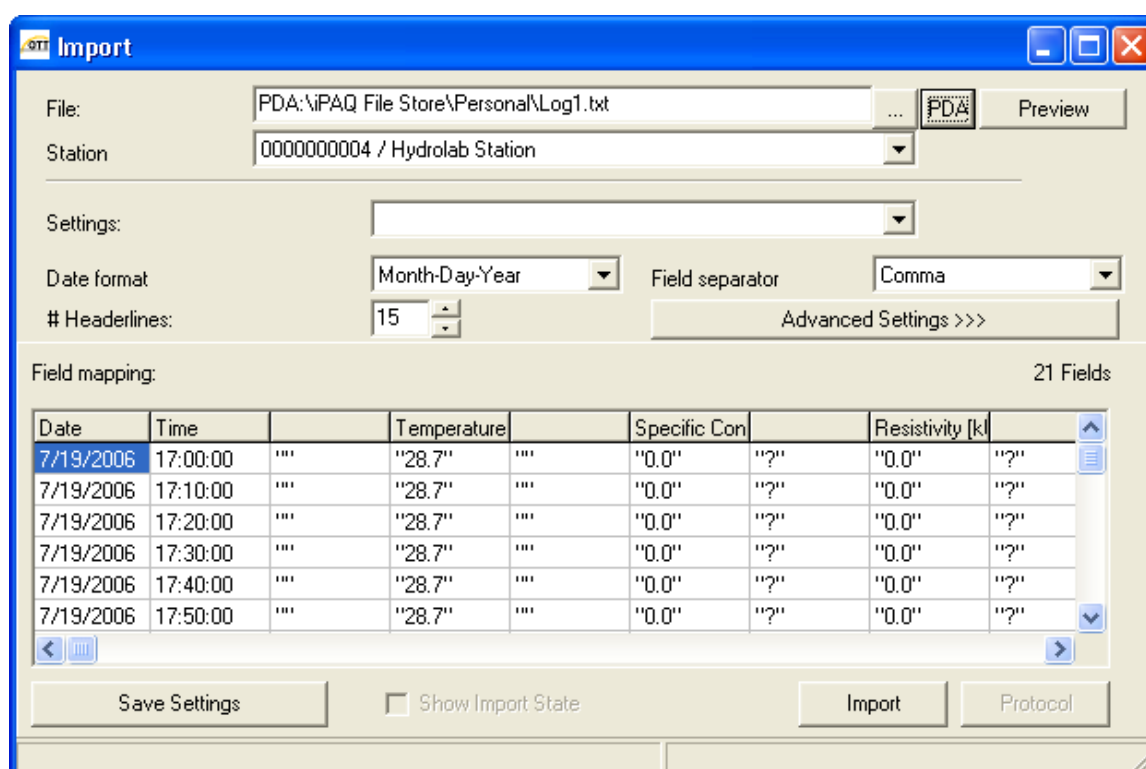


Figure 3 Hydras 3 multi-column import window

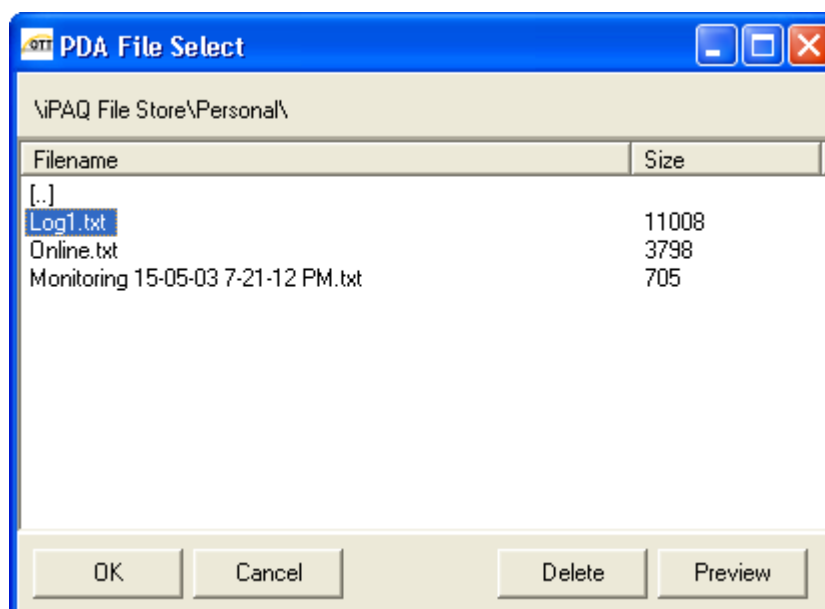


Figure 4 Select PDA file window for import to Hydras 3

## Section 4 Troubleshooting

Table 2 details potential problems that may occur when using Hydras 3 LT Pocket. For problems related to the sonde, refer to the user manual for the sonde being used.

**Table 2 Troubleshooting information**

Problem	Solution
"No Sonde found!" displayed when connecting to the sonde	Try to connect again. The sonde may be attempting to wake up. If the sonde is still not found, make sure that the sonde is properly powered. If the sonde is running on an internal battery, make sure that the battery has enough power left. Use Hydras 3 LT or HyperTerminal to confirm that the sonde has a minimum battery voltage of 7 V.
"Open Failed" and "Serial Exception: CreateFile Failed: 55" displayed when connecting to the sonde	Select <b>START&gt;SETTINGS&gt;CONNECTIONS&gt;BEAM</b> and disable "Receive all incoming beams".
PDA screen goes blank	The PDA screen can go blank for two reasons: <ul style="list-style-type: none"> <li>• The backlight was turned off by the menu setting for the backlight.</li> <li>• The PDA power was turned off, either manually or by selected menu items.</li> </ul> To restore the screen, tap the screen or press the power button on the PDA. If the screen is still blank, the PDA battery may need to be charged.  <b>Note:</b> Consult the user manual for the PDA being used. In most cases the user can configure the power settings of the PDA to prevent the screen from going blank.  <b>Note:</b> It is important to keep the PDA charged. If the PDA batteries lose power, all software programs and stored data can be lost. Consult the user manual for the PDA being used to find the current battery status.
Graph displays "No Data"	Check the date and time of the sonde and make sure that it matches the date and time of the log file. Check the time displayed on the graph. For example, if the log file was set up to run once a week, and the time shown on the graph is in minutes, the graph will not have room to display the data in the space provided.
"OutOfMemoryException" displayed during operation	Review the available memory in the PDA by selecting <b>START&gt;SETTINGS&gt;Program tab&gt;MEMORY</b> . Close any other programs and large files that are in use.
"Not all values are valid!" during manual online monitoring	At least one of the values used for the stability check is not valid (e.g. the parameter is not calibrated). See the user manual for the sonde for more information.
"Warmup Time not correct"	Sensor warm-up time when setting up log files must be at least 10 seconds (older versions require a minimum warm-up time of 30 seconds).
Download option for log files is not available	Log file has not run yet or does not contain data.
"Log file could not be created. Probably maximum number of files reached!"	The maximum number of log files is four. If the maximum number has been reached, delete a file or change the maximum number of log files in <b>SONDE SETTINGS&gt;Log Files</b> tab.
Sonde makes a beeping sound	The beeping sound will be activated when auto logging is enabled or when audio is selected in the Sonde Settings or Log Files menu.



## Section 5      Contact Information

---

### U.S.A. Customers

**By Telephone:**

6:30 a.m. to 5:00 p.m. MST  
Monday through Friday  
(800) 949-3766

**By Fax:**

(970)461-3921

**By Mail:**

Hach Environmental  
P.O. Box 389  
Loveland, Colorado 80539-0389 U.S.A.

**Ordering information by e-mail:** [sales@hachenvironmental.com](mailto:sales@hachenvironmental.com)

### International Customers

To locate the representative nearest you, send an e-mail to:  
[info@ott.com](mailto:info@ott.com) or contact:

OTT Hydromet GmbH  
Sales department  
Ludwigstrasse 16  
87437 Kempten  
Germany  
Phone: +49 831 5617-0  
Fax:    +49 831 5617-209

## A

ActiveSync	
for installing Hydras 3 LT Pocket	7
for transferring files to a PC	25
audio	
for auto logging	13
for log files	14
turning on or off	11
auto logging	13

## B

backup files	13
baud rate	11
beeping sound. See audio	

## C

calibration	
calibrating the sonde	23
selecting the number of calibration standards	22
circulator	
for auto logging	13
for depth monitoring	20
for log files	14
for manual monitoring	21
for time monitoring	18
starting or stopping	11
clock, setting	12

## D

date	
changing the date	12
changing the date format	24

## E

error messages	27
----------------	----

## G

graphs	
viewing log files	17
viewing online monitoring data	22

## H

Hydras 3, importing files into	25
--------------------------------	----

## I

ID for sonde	11
--------------	----

## L

log files	
activating	15
backup	13
changing the log file format	24

creating	14
downloading	16
downloading to a PC	25
graphing	17
maximum number of	13
templates for	15

## M

Modbus address, changing	11
--------------------------	----

## P

parameters	
adding to a log file	15
changing the order for SDI	12
selecting for depth monitoring	20
selecting for manual monitoring	21
selecting for time monitoring	18
selecting the number of calibration standards	22
password for LoginLevel3	9
PDA	
connecting the sonde	9
installing software on	25
requirements	5
testing compatibility	6
programming the sonde. See log files	

## R

radix	24
remote measurements. See log files	

## S

SDI (Serial Data Interface)	11
security settings	9
sensor warm-up time	14
sondes	
assigning an ID	11
compatibility with Hydras 3 LT Pocket	5
connecting the PDA	9
stability criteria	
for depth monitoring	19
for manual monitoring	21
for online monitoring	18

## T

templates	15
time interval	
for log files	14
for online monitoring	18
time, changing	12
trial software	
installing	8
testing on PDA's	6

Index

---

troubleshooting .....	27	<b>U</b>	
TTY		units, changing .....	24
activating TTY mode .....	13		
parameter order .....	12		

Document number  
56.WPH.11M.B.E 02-0511

**OTT Hydromet GmbH**

Ludwigstrasse 16  
87437 Kempten · Germany  
Tel. +49 831 5617-0  
Fax +49 831 5617-209  
info@ott.com · www.ott.com