RADIODETECTION®

RD Manager™

PC support program for the Precision range of locators from Radiodetection

Operation manual

90/RDMANAGER-OPMAN-ENG/05

Compatible with the following Precision locator ranges:
- RD7100 and RD8100 Cable and Pipe locator
- RD7000+ and RD8000 Cable, Pipe and Marker locator

RDManager

SPX®

Preface

Before you begin

Please read this user manual before installing and attempting to use RD Manager.

Note that this manual and all its contents are subject to change. Radiodetection products are under continuous development. Radiodetection Ltd. reserves the right to modify the product without notice and some product changes may have taken place after this user manual was published.

Contact your local Radiodetection dealer or visit www.radiodetection.com for the latest information about RD Manager, including this manual.

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Contents

Section 1 - Introduction to RD Manager

This section introduces the RD Manager software and provides an installation guide.

1.1 About RD Manager

RD Manager is a Radiodetection program for Microsoft® Windows® and is compatible with all models of RD8100 and RD7100 Cable and Pipe locators, and all models of RD7000+ and RD8000 Cable, Pipe and Marker locators.

Once installed onto your PC or laptop, RD Manager can be used to:

- Register your products to extend your locator or transmitter warranty to a total of 3 years
- Update the software of your locators*
- Update the locator's configuration settings
- Setup custom frequencies **
- Enable or Disable Strike*Alert*
- Perform an eCert™ calibration and print a Radiodetection Calibration Certificate
- Retrieve the latest factory calibration data to print a copy of the latest Radiodetection Calibration Certificate
- Contact the Radiodetection Customer Support department
- Book a Service Request
- Retrieve logged usage & survey data**
- Export KML survey data for interface to GIS/Mapping systems**
- Adjust the locator's date and time**
- Set the Calibration Due date (CALSafe)**

* Requires registration and an active internet connection.

** Compatible models only

1.2 System requirements

Microsoft Windows XP or higher.

A live Internet connection is required to take advantage of some RD Manager features.

A spare USB port and a Mini-USB cable are required to connect a compatible locator to the PC.

NOTE: To ensure a reliable connection use a 1m, or shorter, USB 2.0 High Speed compliant cable from a reputable manufacturer. Such cables are generally marked or specified as 28AWG/1P + 24AWG/2C or 28AWG/1PR + 24AWG/2C.

1.3 Installation guide

PC administrator rights are required to install RD Manager.

To install RD Manager onto your PC, follow these steps:

1. Ensure your locator is not connected to the PC
2. Visit www.radiodetection.com, to download the RD Manager: select Resources ▷ Software Downloads ▷ Cable and Pipe Locators, then click the icon RD Manager
   or
   Insert the RD Manager CD, use Windows Explorer, navigate to the RD Manager folder and double click the relevant setup file (32 or 64 bit) to start the installation process.

3. Accept to install the RD Manager software, figure 1.1
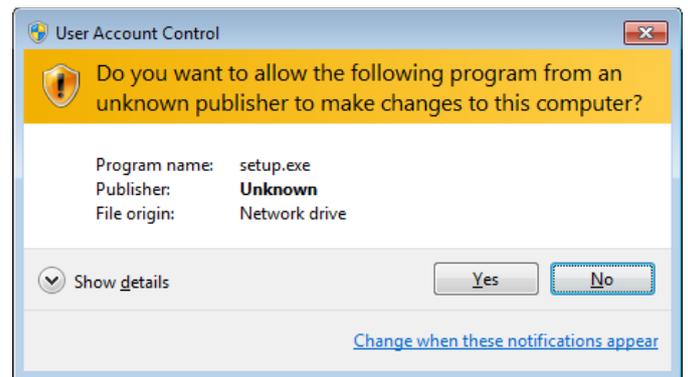
Figure 1.1 User Account Control

4. Follow the InstallShield Wizard instructions, figure 1.2
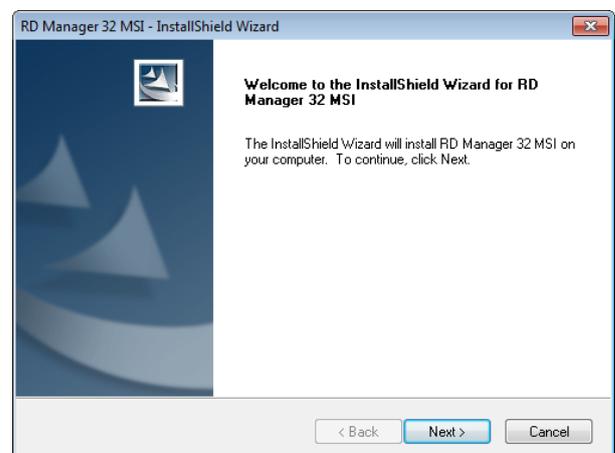
Figure 1.2 InstallShield Wizard

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5. Read the RD Manager's End User License Agreement, figure 1.3. Select **I agree the terms of the license agreement** to continue with the installation or **I do not accept the terms of the license agreement** if you decide not to accept the EULA terms.
Press **Next**

Figure 1.3 EULA Wizard

6. Wait for the installation of RD Manager to compete, figure 1.4.

Press **Finish**
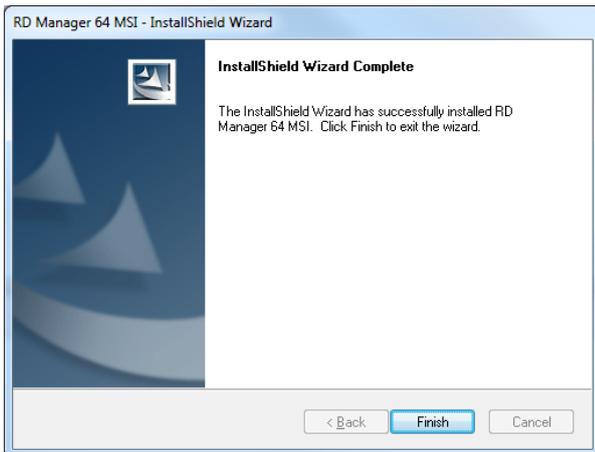
Figure 1.4 EULA Wizard

7. If your operating system is Windows Vista or later, wait for the RD Manager drivers installation process to complete, figure 1.5. You have completed the installation.
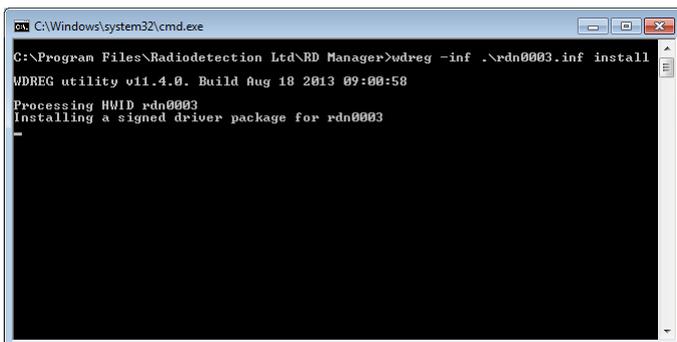
Figure 1.5 RD Manager drivers installation screen

If you operating system is Windows XP, plug your locator into the PC using the USB cable and turn the locator ON.

NOTE: You must be connected to the internet.

8. When the "Found New Hardware" wizard appears , figure 1.6, select the "**No, not this time**" option and click **Next.**

Figure 1.6 Found New Hardware Wizard

9. Select the "**Install from a list or specific location (Advanced)**" option, figure 1.7 and click **Next.**
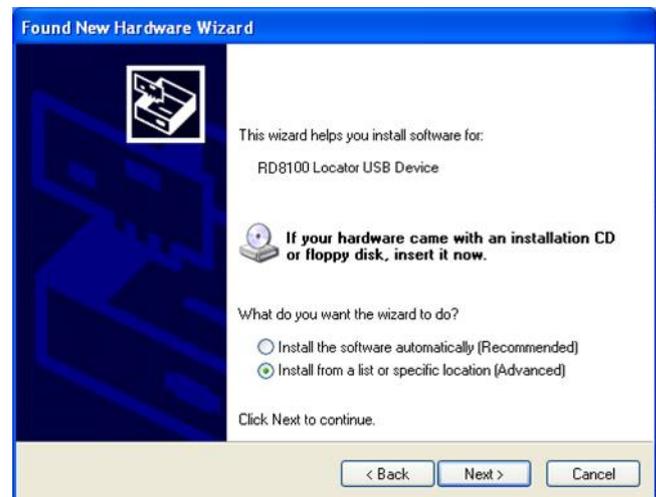
Figure 1.7 Found New Hardware Wizard

10. Select "**Include this location in the search:**" while making sure the other option is deselected, figure 1.8.
Press **Browse** to navigate to the RD Manager folder in your PC's program files (e.g.. C:\Program Files\Radiodetection Ltd\RD Manager), and click **Next**
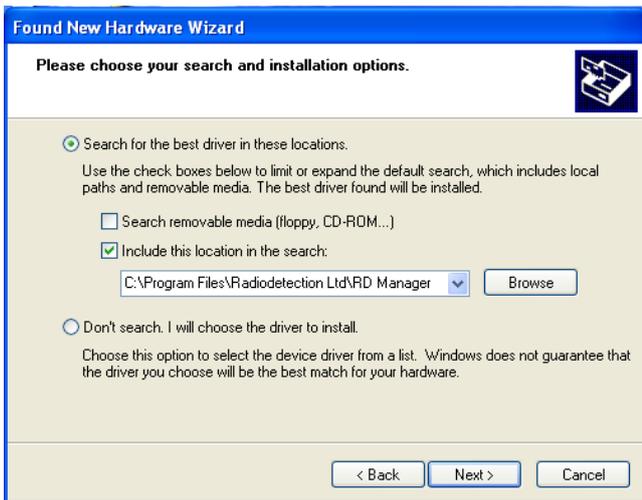
Figure 1.8 Found New Hardware Wizard

11. Press Finish, when the Wizard has finished installing the drivers, figure1.9 and 1.10.

Figure 1.9 Found New Hardware Wizard – USB Drivers 1 of 2

Figure 1.9 Found New Hardware Wizard – USB Drivers 2 of 2

Section 2 - Running RD Manager for the first time

This section introduces how to start RD Manager and describes its main screen and various features.

Toolbar   Screen tabs   Message Pad

Status bar
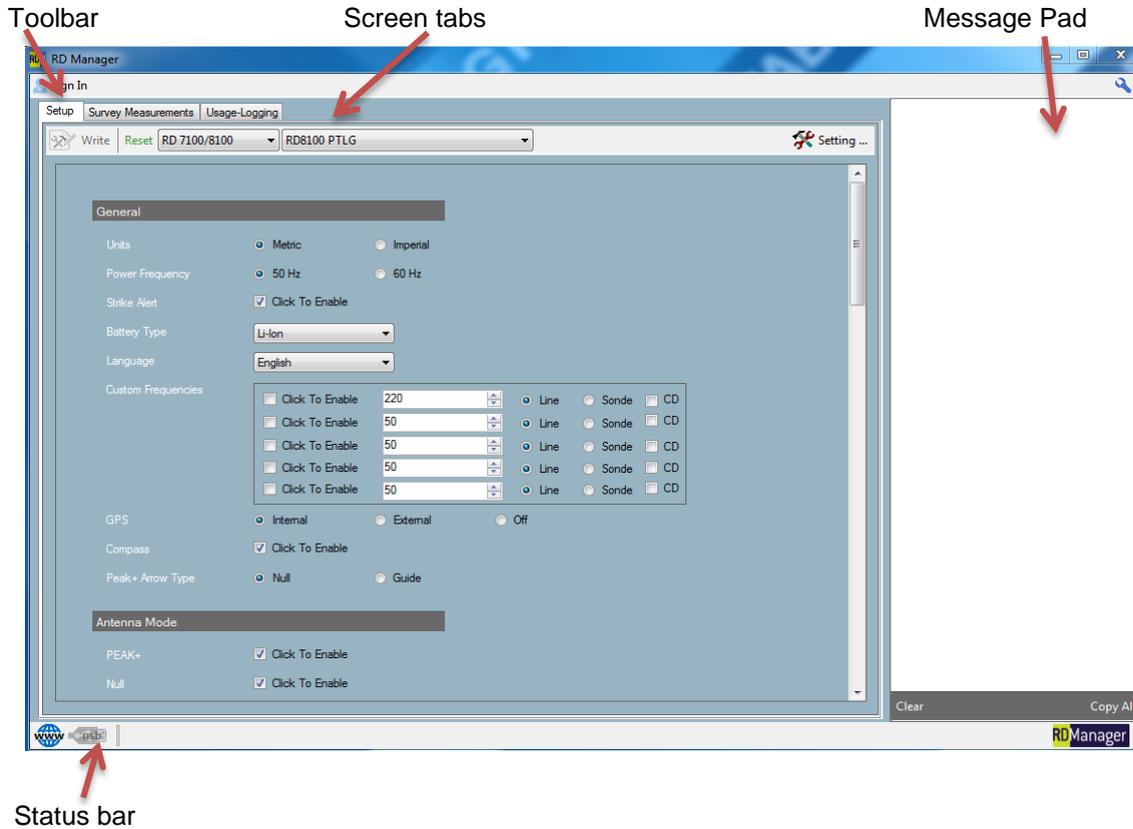
Figure 2.1 RD Manager screen

2.1 Starting RD Manager

To start RD Manager:

- Use the software icon on your desktop

or

- Go to the RD Manager folder in your programs section and select the RD Manager link.

The RD Manager screen will appear, Figure 2.1

The RD Manager screen is divided into a main program area (organized into different **Screen tabs)** and a **Message Pad** area.

The number of Screen tabs depends if you are signed in or not. These are:

- **Setup**

Allows users to setup and customize connected locators. See section 9

- **Survey Measurements**
  Allows users to download and manage their Survey Measurements. See section 5

- **Usage Logging**
  Allows users with a locator equipped with internal automatic logging, to retrieve and manage their data. See section 6

- **Advanced Setup***
  Allows users to enable CALSafe, change the CALSafe date and synchronize the locator's internal clock with Radiodetection's UTC (Coordinated Universal Time) server. See section 7

- **Software Update****
  Allows users to upgrade their locator's software. See section 8

- **Calibration****
  Allows users to retrieve the locator's factory calibration certificate; also offers eCert functionality to perform a remote calibration validation and extend the calibration certificate for another year. See section 10

- **Account****
  Allows users to manage their RD Manager account, registering their products for extended warranties and send technical queries or service requests. See section 3

*Only available if connected to the internet and signed in. The user must also have the privileged account feature enabled.

**Only available if connected to the internet and signed in.

At the top of the RD Manager screen there is the **Toolbar** giving access to programs menus and commands.

At the bottom of the screen there is the **Status Bar.**

2.2 Status bar

The Status Bar, figure 2.2, is common to all the RD Manager screens. It displays the following properties:

- Internet Connection Status
- USB Connection Status
- Serial Number of Connected Unit

Web   USB   Serial
status status number
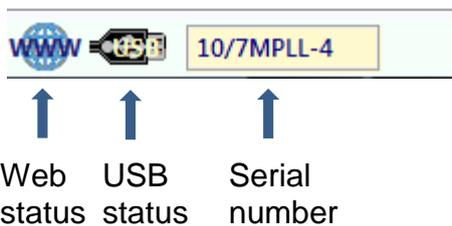
Figure 2.2 Status bar

2.3 Message pad

The Message Pad, figure 2.3 is common to all the RD Manager screens, and displays the system messages. The system messages are categorized as either

- Information
- Warnings
- Errors

You can customize the color of the system messages, see paragraph 4.1.2.

2.3.1 Message pad commands

Clear

Clear the contents of the Message Pad.

Copy All

Copy the entire contents of the Message Pad to the system clipboard.
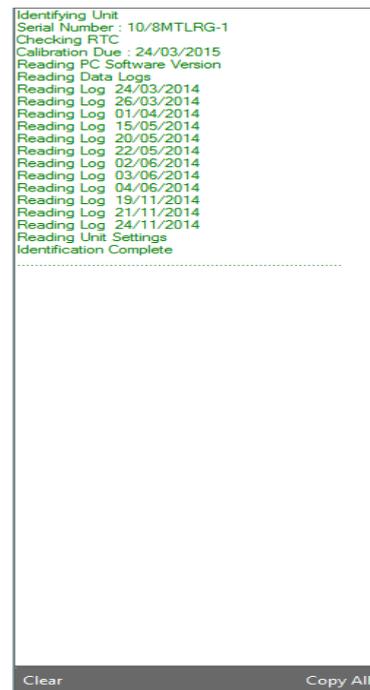
Figure 2.3 Message Pad

Section 3 - RD Manager Accounts

This section describes how to create and manage your RD Manager account. Registration is free of charge and it gives access to free software updates and e-mail alerts.

You can also use your RD Manager account to register your new locator and transmitter to take advantage of the 2 years free of charge additional warranty.

3.1 About RD Manager accounts

To take advantage of the full suite of RD Manager features, each user will need to complete the registration process. This only needs to be performed once.

Registration allows operators to:

- Register your qualifying products (locator and transmitters only) for 2 years extended warranty
- Receive warnings about software updates / upgrades as they are released
- Install software updates
- Run the eCert calibration process
- Delete usage data from compatible products (Logging and GPS models only / 'Advanced Accounts' only)
- Send a service request and request technical support

3.2 Creating an RD Manager account

To create an RD Manager account you must have a working internet connection.

1   Press the **Sign In** button on the RD Manager toolbar, the login screen will appear, Figure 3.1

Figure 3.1: RD Manager Login screen

2   Click on **Sign Up here**
3   Fill the account screen, figure 3.2
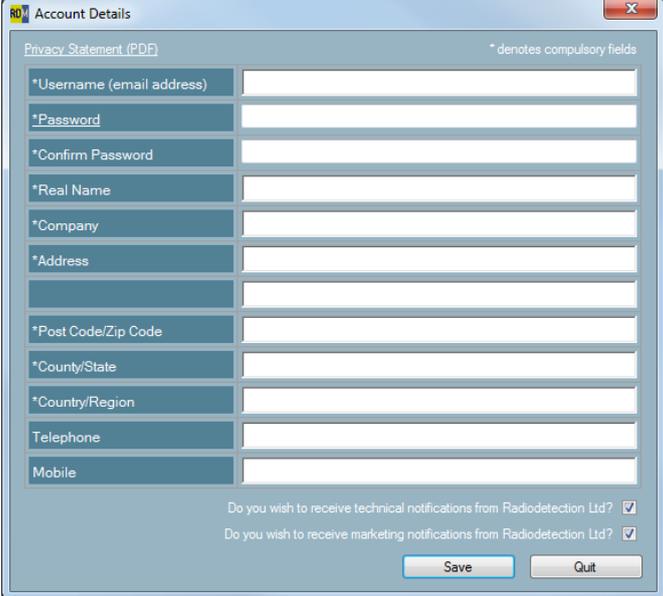
Figure 3.2 Account Details screen

4   Press **Save**

Your account will be created and RD Manager will sign you in, figure 3.3.
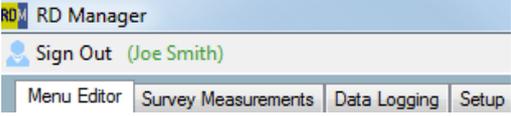
Figure 3.3: User signed in

NOTE: You can use the same login on any PC where RD Manager has been installed.

3.3 Signing out

If you are using a shared PC, then to prevent other users from accessing your RD manager account you should sign out from your account by pressing the **Sign Out** button on the toolbar.

3.4 Signing in to your account

To sign on in to your account press the **Sign In** button on the RD Manager toolbar.

3.5 Privileged account

Logging and GPS models incorporate a large data storage facility designed to offer at least one year (exact capacity is model dependent, see catalog for details) of usage log capacity. In some circumstances operators may wish to delete usage data from a usage logging compatible product

Users with a registered account can request their account be upgraded to a privileged account to enable the facility to delete the usage log.

A privileged account also allows users to edit the CALSafe settings.

Please contact your local Radiodetection office or Radiodetection approved distributor to upgrade to a privileged account.

You will need to provide the email address associated with your account and information to identify your position within your company. There is no charge for the upgrade.

You will receive an e-mail to your registered address to advise that your account has been upgraded.

CAUTION: Once an RD Manager Account is upgraded to enable usage log deletion and modify CALSafe settings, Radiodetection strongly recommend that care is taken to prevent unauthorized access to that account.

NOTE: Radiodetection cannot accept responsibility for safeguarding the data stored on RD series products and strongly recommends that data is regularly backed up to a PC using RD Manager.

3.6 Managing your account:

You can use the RD Manager Account screen, figure 3.4, to manage your account.

From here you will be able to edit your details, delete your account, and register your Precision Locate product to benefit for 2 years extended warranty and to communicate with Radiodetection.
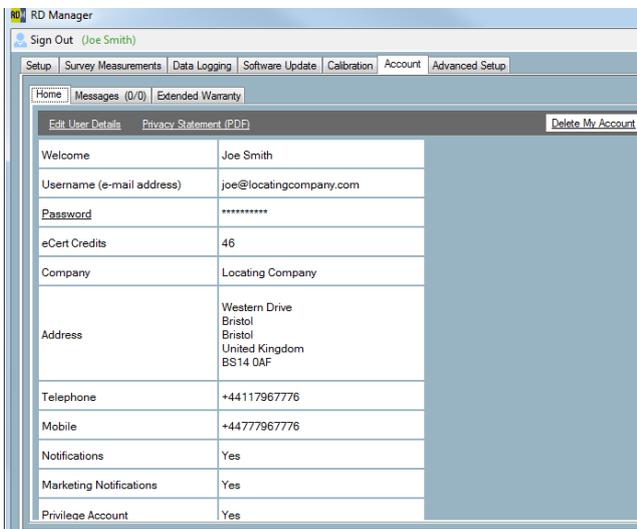
Figure 3.4: Account – Home Screen

The Account screen is only available once you have successfully signed in to your account. This is divided into 3 windows:

- **Home**: Use this window to manage your RD Manager account
- **Messages**: Use this window to communicate with us
- **Extended Warranty**: Use this window to register your locator and transmitters products to extend your standard 1 year warranty to a total of 3 years.

3.6.1 Home screen

The Home screen provides the ability to manage your RD Manager account.

Available command:

- **Edit User Details**: Allows you to amend your personal information and your notifications preferences
- **Privacy Statement**: Gives you access to the Radiodetection Privacy Statement in PDF format
- **Delete My Account**: Allows you to delete your account from our database.

⚠ CAUTION deleting your account cannot be undone.

3.6.2 Messages screen

You can use the Messages screen, figure 3.5, to access the Radiodetection online messenger system.
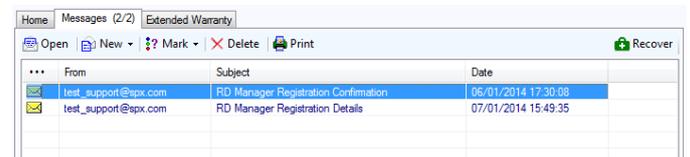
Figure 3.5: Account – Messages Screen

The messenger system is used to

- Send Customer Support requests
- Send Service/Calibration requests
- Receive notifications from Radiodetection

NOTE: You can choose to opt out of receiving notifications from Radiodetection, see section 3.2.

The message counters, to the left of the Messages screen title gives the number of unread messages / the total number of messages, for example

(2/5) means that there are 2 unread messages out of a total of 5 messages.

Available commands:

- **Open**: Opens the selected message
- **New**: Creates a new Service Request or Customer Support message
- **Mark**: Lets you change the status (read / unread) of the selected messages
- **Delete**: Erase the selected message(s)

- **Print**: Prints the selected message
- **Recover**: Recover all deleted messages

Customer Support message

Selecting **New** – **Customer Support** will open up the Customer Support Form, figure 3.6. Complete the form to send a message to the Radiodetection customer support team.
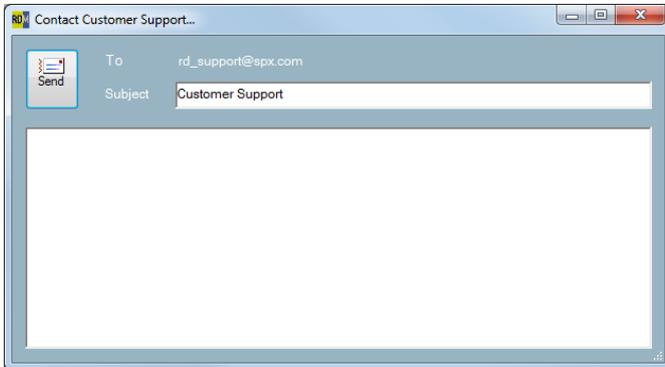
Figure 3.6: Account – Messages Screen

Service Request message

Selecting **New – Service Request** will open up the Service Request form, figure 3.7.

Complete this form to send a service request message to the Radiodetection sales support team.
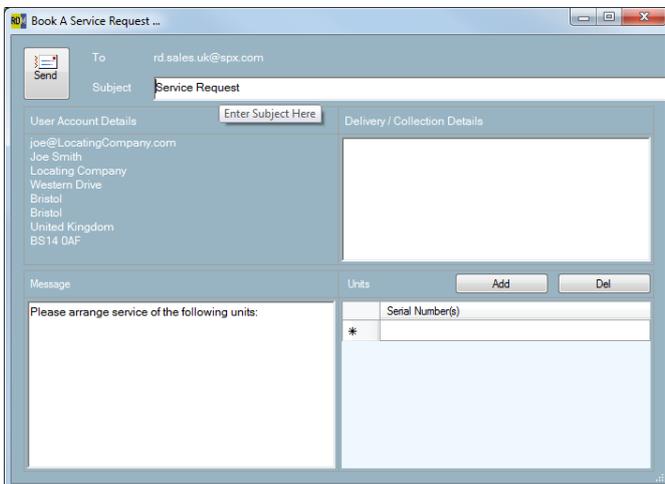
Figure 3.7: Account – Messages Screen

NOTE: Depending on the nature of your Support ore Service enquiry we may try to contact you directly. Ensure your registration details are up to date to avoid delays.

3.6.3 Extended warranty screen

The extended warranty screen, figure 3.8, allows you to register your Precision Locators and TX transmitters to extend your warranty to a total of 3 years.
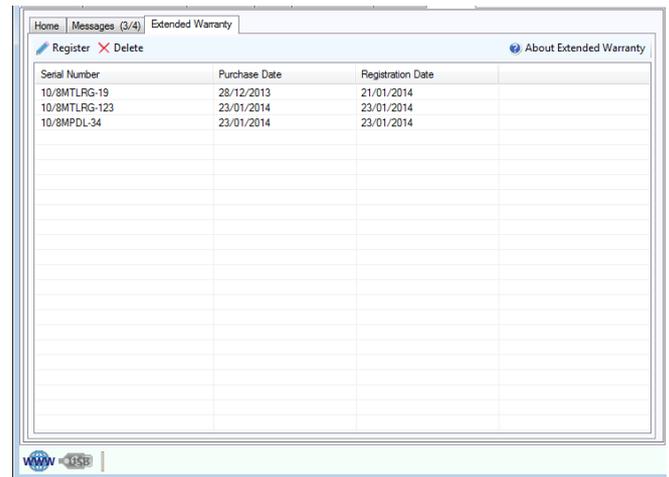
Figure 3.8: Account – Extended Warranty screen

Available commands:

- **Register**: Register your products
- **Delete**: Allows you to delete registered products (in case you made a mistake)
- **About Extended Warranty**: Provides access to our warranty terms and conditions

Registering your products

You can extend the warranty period to a total of 3 years by registering your product within 3 months of purchase.

To register your product you need to locate the serial number of your products:

- For a locator this can be found on the label next to the battery compartment.
- For a transmitter this can be found inside the battery cavity.

Follow these steps:

1. Press **Register**
2. Select your purchased date (as shown by your invoice), figure 3.9
3. Enter the serial number, commencing with **10/**

NOTE: If you have a locator connected, its serial number will automatically appear in the box

4. Press **Register** to complete the registration or **Close** to exit
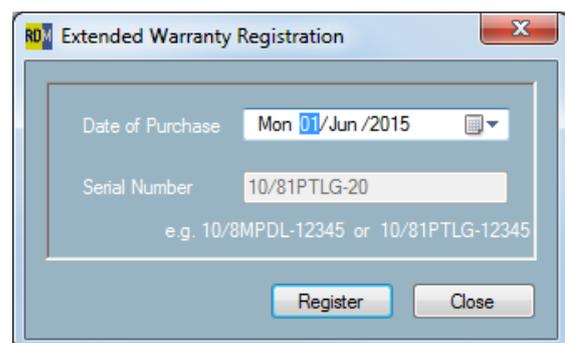
Figure 3.9: Extended Warranty Registration window

Section 4 - RD Manager menu

This section describes the commands and features available in the RD Manager menu.

The RD Manager menu, figure 4.1-2, is accessible from the toolbar, at the top right corner of the RD Manager screen.
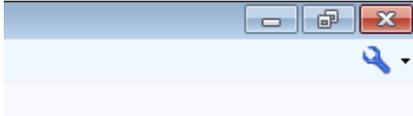
Figure 4.1: RD Manager menu on the toolbar
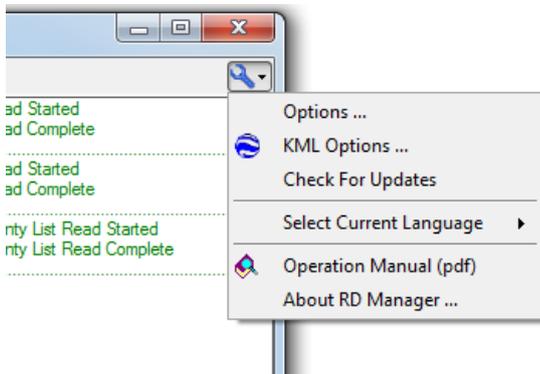
Figure 4.2: RD Manager menu

It provides access to

- Options window
- KML options
- Check for updates
- Language Selection
- RD Manager Operation Manual
- About RD Manager Window

4.1 Options window

4.1.1 Preferences tab

Use the preference tab, figure 4.3, to select the following options

- **Login Details**
  Select Auto Sign-In on Startup to automatically sign in when RD Manager starts
- **Usage Log Session Identifier**
  Select this to automatically identify different surveys when retrieving usage logs. See section 8.2 for details
- **Time Zone**
  Select your time zone
- **Date Format**
  Select your preferred date format

- **Depth Units**
  Select your preferred depth's measurement units
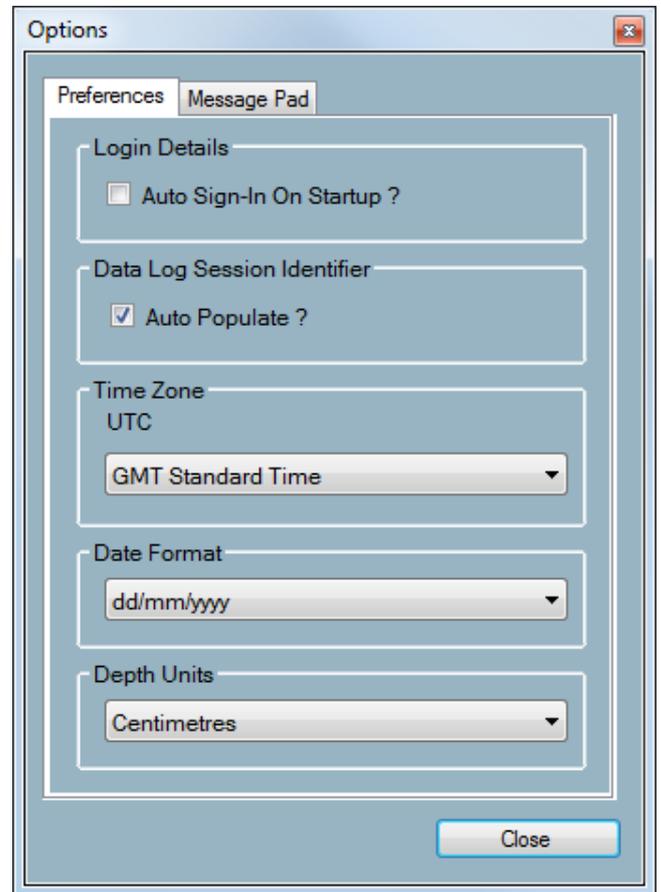
Figure 4.3: Preferences tab

4.1.2 Message Pad tab

Use the Message Pad tab, figure 4.4, to change the colors of the messages as they appear in the Message Pad.

There are 3 categories of error messages:

- **Information**
- **Warning**
- **Error**
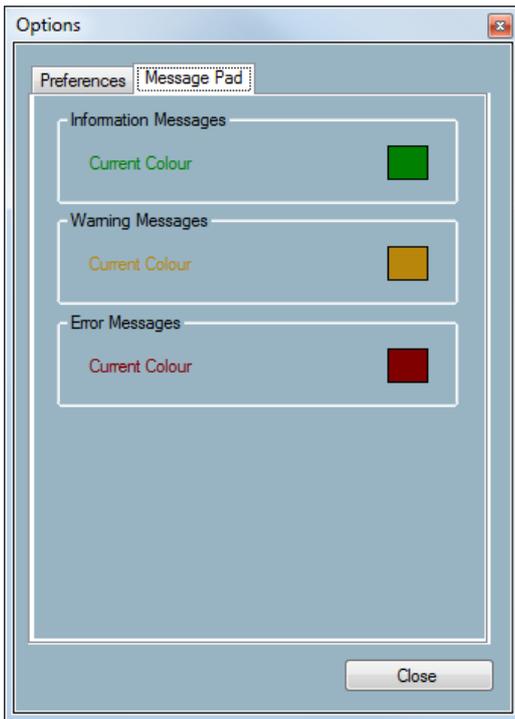
Figure 4.4: Message Pad tab

To change color just click on the box showing the current color and select a new one.

4.2 KML options

The KML Options menu allows you to configure the KML output capabilities.

KML files can be viewed in Google Earth.

NOTE: KML output is only possible for usage log/survey points where a GPS fix was present.

4.2.1 Data tab

From the data tab you can select what will data fields appear in your Survey Measurements or usage logging KML output.
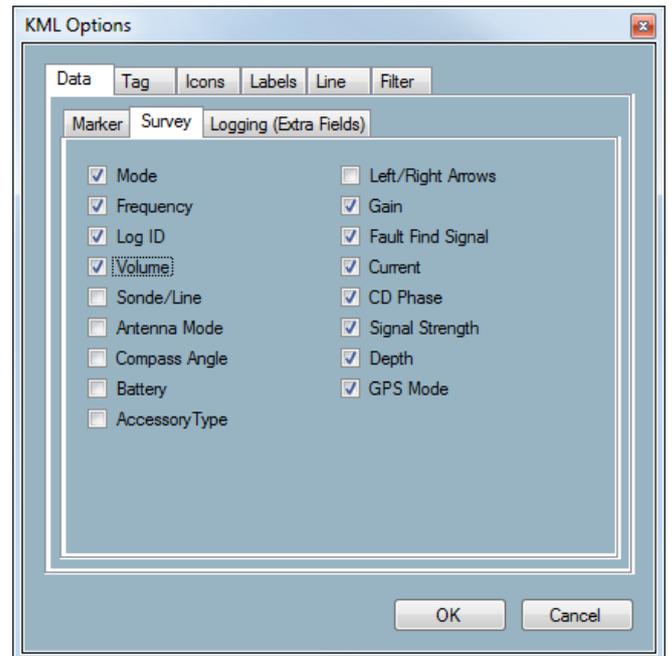
Figure 4.5: Survey tab

4.2.2 Tag tab

From the Tag tab you can customize the appearance of data tag display.
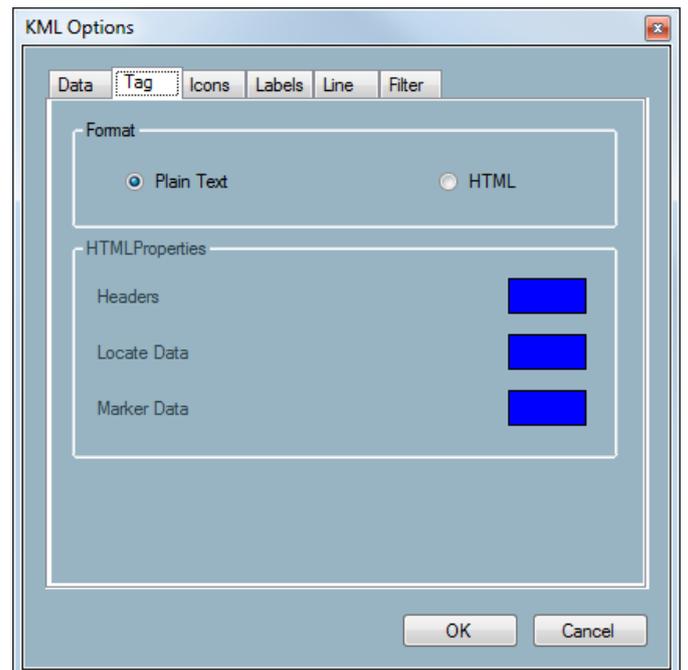
Figure 4.6: Tag tab

4.2.3 Icons tab

From the Icons tab you can customize the Icons used in the KML output file for both Survey Measurements and Usage Logging.

You can chose between different icons types, size and color.
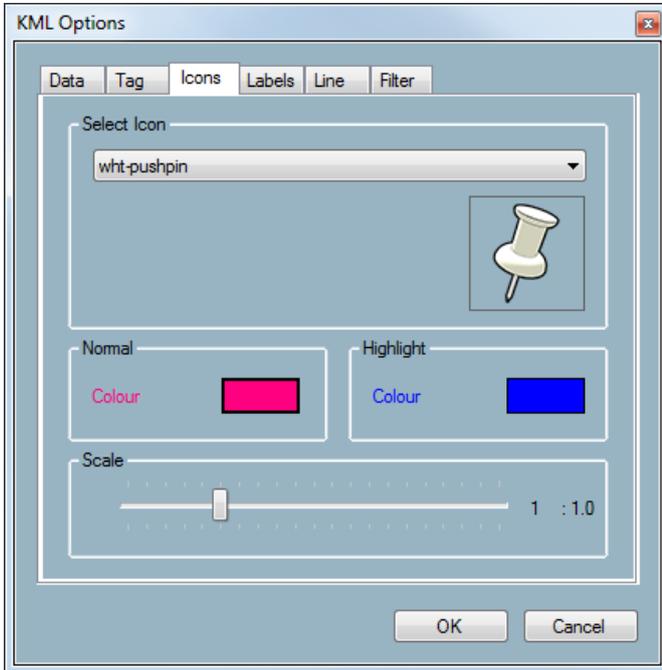
Figure 4.7: Icons tab

4.2.4 Labels tab

From the Labels tab you can customize the labels used in the KML usage log output file.

You can choose between different size, level of transparency, color and type.
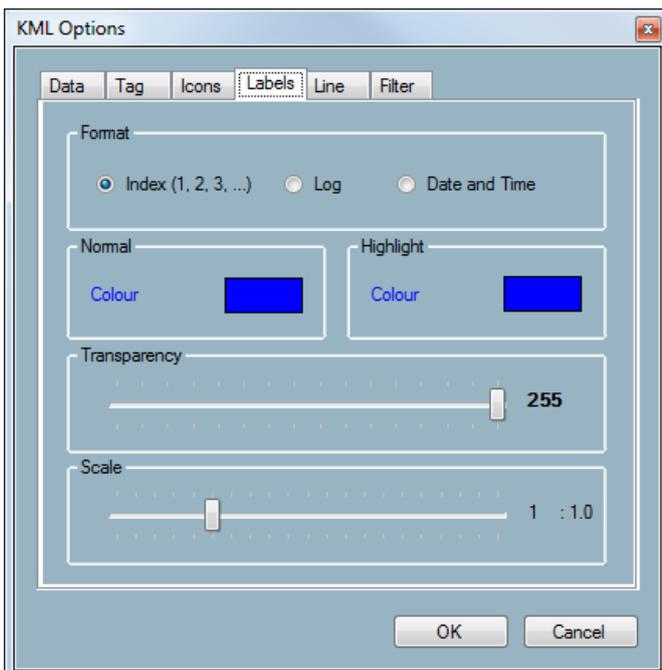
Figure 4.8: Labels tab

4.2.5 Line tab

You can use the line tab to connect all the icons displayed by the KML output file with a line.

You can customize the line color and width.
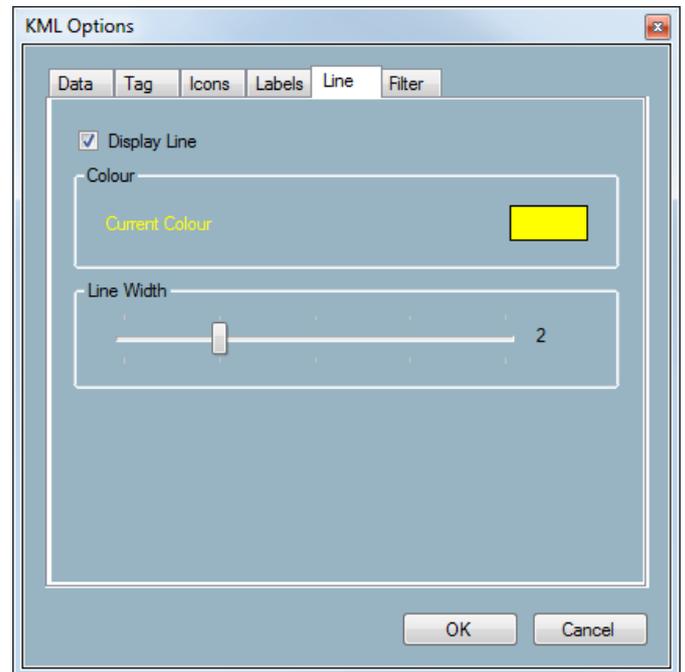
Figure 4.9: Line tab

4.2.6 Filter tab

From the Filter tab you can filter GPS data to only show more accurate measurements or just to reduce the number of points used in the final KML file.

You can choose to apply these filters to either or both Usage Log data and Survey Measurements.

- **Minimum Precision filter**
  This filter is based on the Dilution of precision (DOP) as measured by the GNSS module used.
- **Minimum Satellite**
  This filter will ignore all readings where the number of satellites is lower than the number selected.
- **Sampling Rate**
  This filter is useful to reduce the number of points used in a KML file generated by the Usage Log viewer. For example choosing 10 will only use one point every 10 so if exporting 10 minute of data this will only produce a KML file with 60 markers (points), instead of 600.
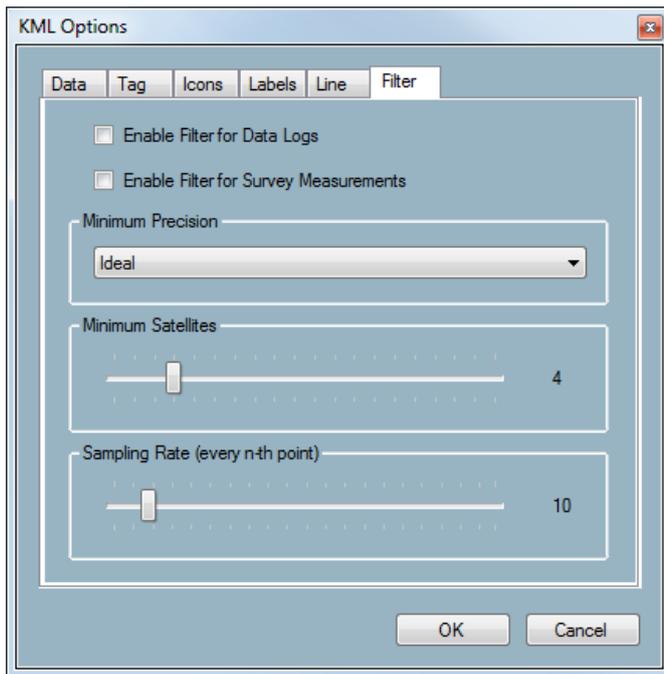
Figure 4.10: Filter tab

4.3 Check for updates

Radiodetection may, from time to time, release software updates for RD Manager and/or your locator.

Software updates offer enhanced functionalities and are free of charge.

To check for new software updates manually select **Check For Updates**.

The RD Update Manager screen will appear showing installed system components and available updates.
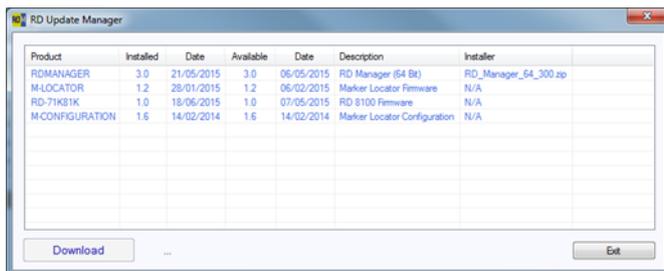
Figure 4.11: Software Update Manager screen

If required press **Download** to update the software installed on your PC.

NOTE: RD manager will automatically check for new updates every time you sign in.

4.4 Language selection

This command is used to select the default RD Manager language from the list of installed languages.

Choose your preferred language from a list of supported languages.

4.5 Operation manual

This command will display the RD Manager Operation Manual in your default PDF reader.

4.6 About window

The About RD Manager window contains the following items:

1. List of installed system components
2. Radiodetection Ltd Copyright statement
3. Software License Agreement (this will be displayed in your default PDF reader)
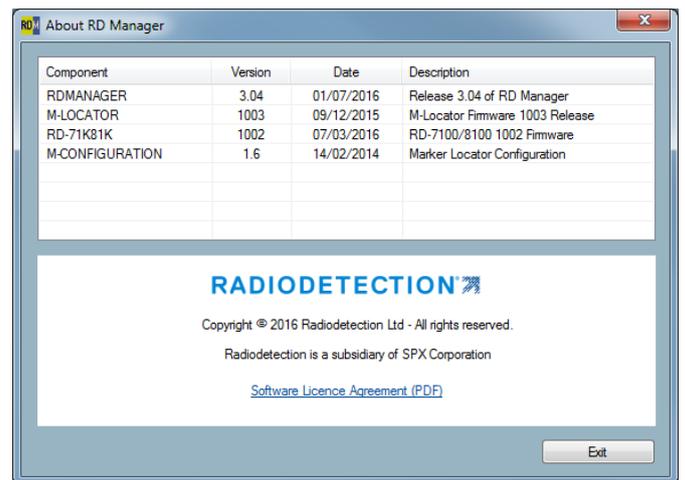
Figure 4.12: About RD Manager window

Section 5 - Setup Screen

This section explains how to use RD Manager to quickly set-up your locator
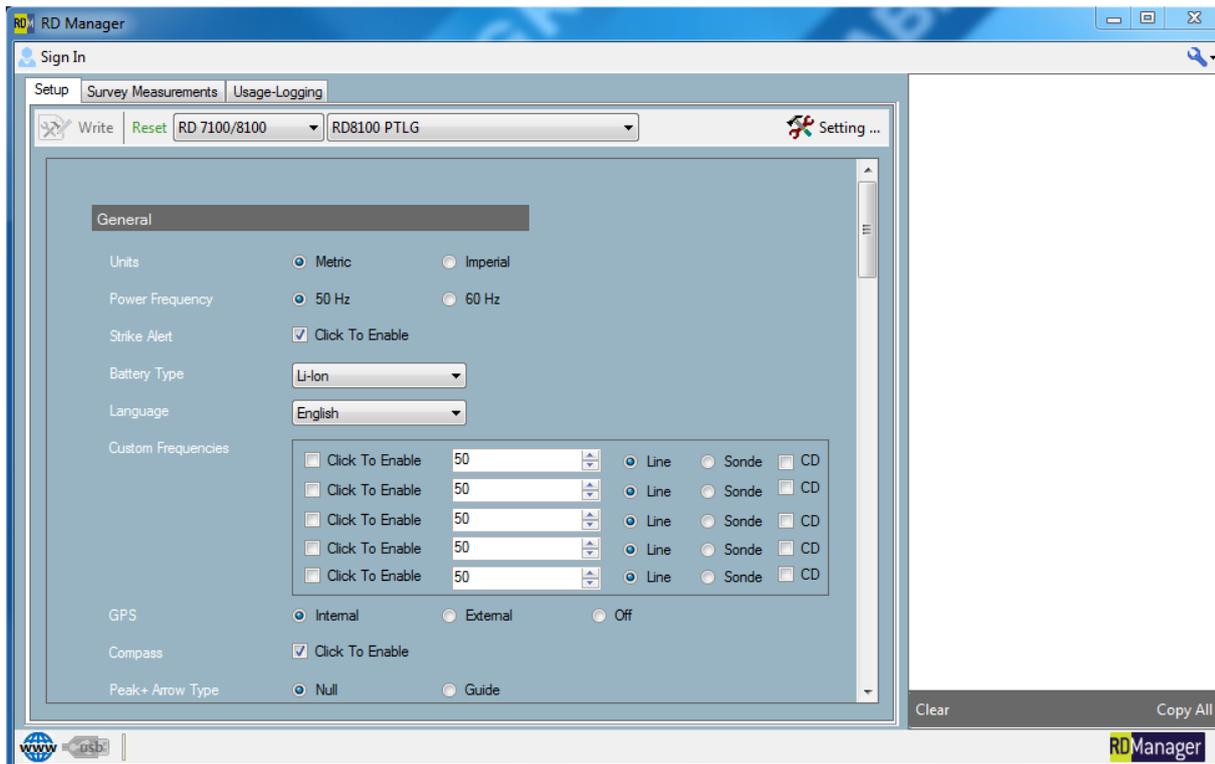
Figure 5.1: Setup screen

5.1 Setup screen

The Setup screen, Figure 5.1, allows you to review and configure you locator settings.

The Setup screen is available by default and does not require to be signed on.

Available commands:

- **Write**: Applies the configuration settings to the connected locator
- **Reset**: Reset the configuration settings to the Factory Default
- **Settings**: Manages and retrieved saved configuration settings
- **Locator Range Menu:** Selects different ranges of locator products (figure 5.2) – available if no unit is connected
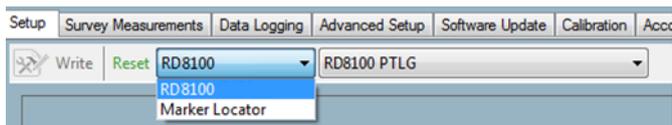
Figure 5.2: Locator Range menu

- **Model Selector Menus**: Selects different locator models, figure 5.3 – available if no unit is connected
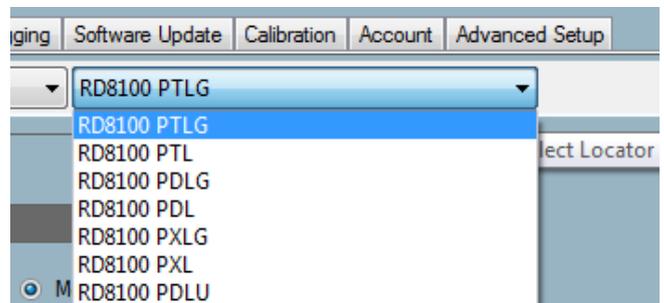
Figure 5.3: Model menu

If you connect your locator or select a locator range and model, the Setup screen will show all the available features, frequencies and options for this specific model.

You can enable or disable all available features and frequencies by selecting or deselecting the relevant check boxes. You can also set your preferred Units, Power Frequency, Battery Type and Language.

5.2 Custom frequencies

RD8100 cable and pipe locators offer the ability to setup up to 5 custom frequencies in the range 50Hz to 1000Hz.

CAUTION: When using custom frequencies in the range of 692Hz to 704Hz or 981Hz to 993Hz the locator sound feedback may interfere with the locator and must be turned off.

NOTE: some frequencies, including 440Hz, may be reserved for specific applications in your country and permission from the relevant operator(s) may be required for its use.

Contact your local Radiodetection sales office or distributor if you require help in identifying these operators.

Figure 5.4: RD8100 Custom Frequencies

To set up your desired custom frequencies:

1. Enter or dial a valid frequency in one of the 5 available frequencies boxes
2. Indicate if this is a **Sonde** or a **Line/CD** frequency
3. Enable the frequency

5.3 RF markers

You can customize your cable pipe and marker locator by enabling or disabling specific RF markers, see figure 5.5.
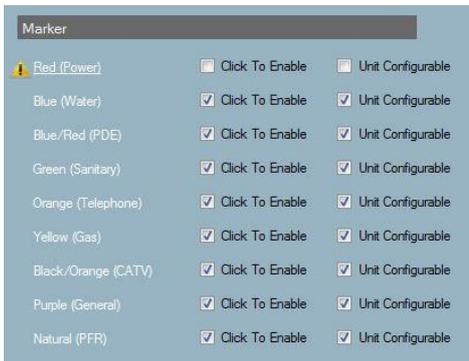
Figure 5.5: Marker Editor screen

Markers can also be disabled from the locator by de-selecting the **Unit Configurable** option.

5.3.1 Red Power marker EU limitation:

Use of the red power (PWR) locate mode is subjected to radio licensing restrictions for Short Range Devices in the EU and some other countries.

It is your responsibility to ensure that use of this marker is allowed in the country where the locator is going to be used.

When you enable the PWR marker or when you select the Unit Configurable option RD manager will prompt you, figure 5.6, to confirm that you can use this marker locate mode in your country.
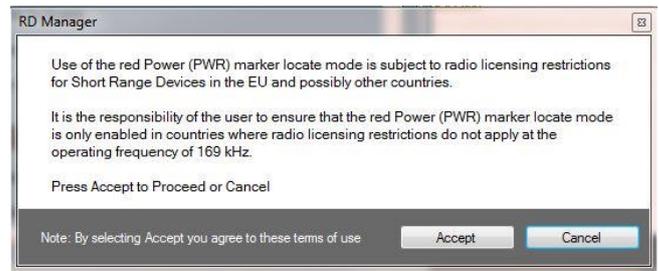
Figure 5.6: Red PWR Marker warning screen

5.4 Updating configuration settings

To update the configurations settings of your locator follow these steps:

1. Start the RD Manager program
2. Connect the locator using the USB 2.0 lead
3. Switch on the locator
4. Select the **Setup** screen
5. Customize your locator adjusting the Configurable Options
6. Press the **Write** button

5.5 Setting manager

You can use the Settings manager to create, save or edit configuration settings for all your locators.

This is useful if you prefer to customize your locators to suit specific applications or users.

To access the Setting Manager for a specific model:

1. In the Menu Screen select a locator model
2. Press **Setting**

The Setting Manager window will open, figure 5.7, showing all existing settings, if any, for the specific locator model
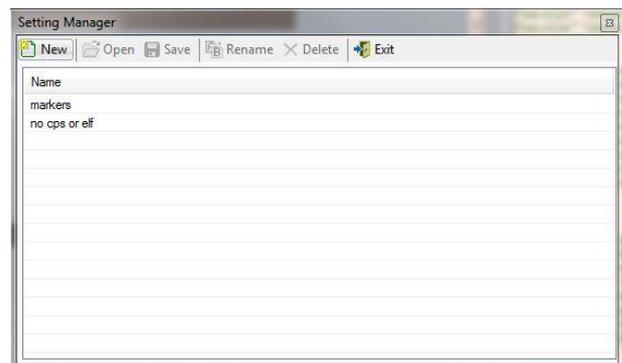
Figure 5.7: Setting Manager window

Available commands:

- **New**: saves the current Setup settings
- **Open**: retrieves existing settings
- **Save**: update the current setting
- **Rename**: renames the selected settings
- **Delete**: deletes the selected settings
- **Exit**: exits the setting manager

Section 6 - Calibration Screen

This section describes how you can retrieve and print a copy of the last valid Certificate of Calibration or to perform a remote calibration using eCert.
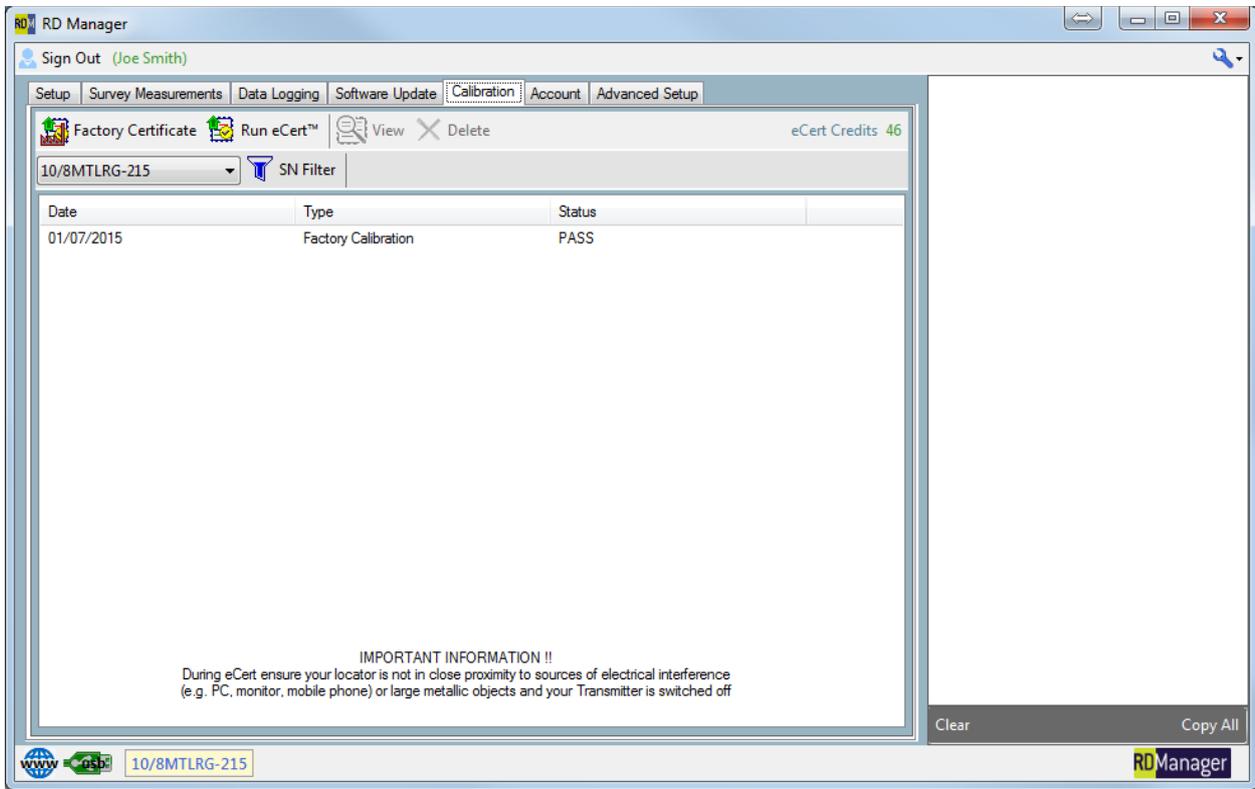
Figure 6.1: Calibration screen

6.1 Calibration screen

The Calibration screen allows you to manage the calibration certificates for all your locators.

It also allows to extend the calibration validity for a further year by performing eCert calibrations. (additional purchase may be required)

This screen is only available once you have successfully signed in to your account.

Available commands:

- **Factory Certificate:** Retrieves the latest Factory Calibration data for the connected locator
- **Run eCert**: Performs an eCert Calibration on the connected locator
- **View**: Display the selected certificate in your default internet browser
- **Delete:** Deletes the selected certificate
- **Unit Selector menu**: Selects which unit's data to display
- **SN Filter**: Serial Number filter

6.2 Retrieving the Factory Calibration data

Your locator stores the calibration data from its latest Factory Calibration data in its internal memory

To retrieve a unit's calibration data follow these steps:

1. Start the RD Manager program
2. Connect the locator using the USB 2.0 lead
3. Switch on the locator
4. Sign In
5. Select the **Calibration** screen
6. Press the **Factory Calibration** button

After retrieving the factory calibration data, the Serial Number of the connected unit will appear in the Unit Selector menu and the Factory Calibration Certificate will appear in the Calibration window.

Once retrieved your calibration certificates will be stored in your PC.

6.3 Retrieving calibration certificates

Use the Unit Selector pull down menu, figure 6.2, to select calibration certificates belonging to a specific locator.
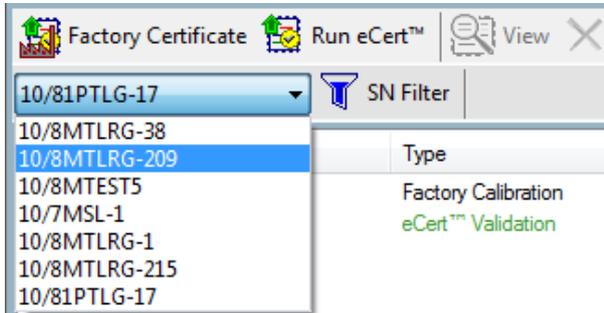
Figure 6.2: Locator Selector menu

Locator serial numbers, printed on the label next to the battery compartment, are used to catalog and store calibration certificates in RD Manager.

If you have a unit connected the Unit Selector menu will automatically display the unit's serial number if calibration data for this unit is already present.

6.3.1 Serial number filter

If you use RD Manager to manage a large number of locators you may find useful filtering the number of units available.

Press Filter, figure 6.3, to access the Serial Number Filter window.
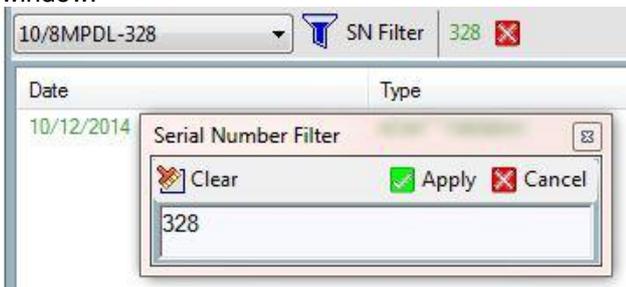
Figure 6.3: Serial Number Filter

You can use this text filter to reduce the number of serial numbers (different locators) displayed by the Locator Selector menu.

To use the Serial Number Filter:

1. Press SN **Filter**
2. Enter your filter string into the text box
3. Press **Apply** to enable the filter or Cancel to exit
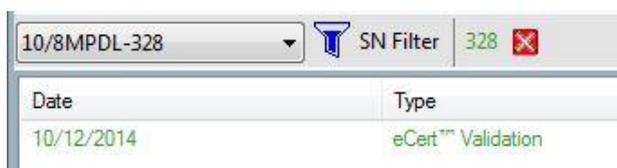
Figure 6.4: Serial Number Filter

Once applied the filter string will be displayed alongside the Filter button, figure 6.4.

To remove the Serial Number Filter:

1. Press the red **X** box next to the filter string

Only those Serial Numbers which match the filter string will appear in the Locators Selector menu. For example:

Serial Number	Filter String	Display Serial Number in Locator Selector menu?
10/8MPDBL-172		Yes
10/8MPDL-173	172	No
10/81PTL-31724		Yes

6.3.2 Review and print a certificate

Follow these steps:

1. Select the certificate you want to review
2. Press View or double click

The selected calibration certificate will open up in your default internet browser, figure 6.5.
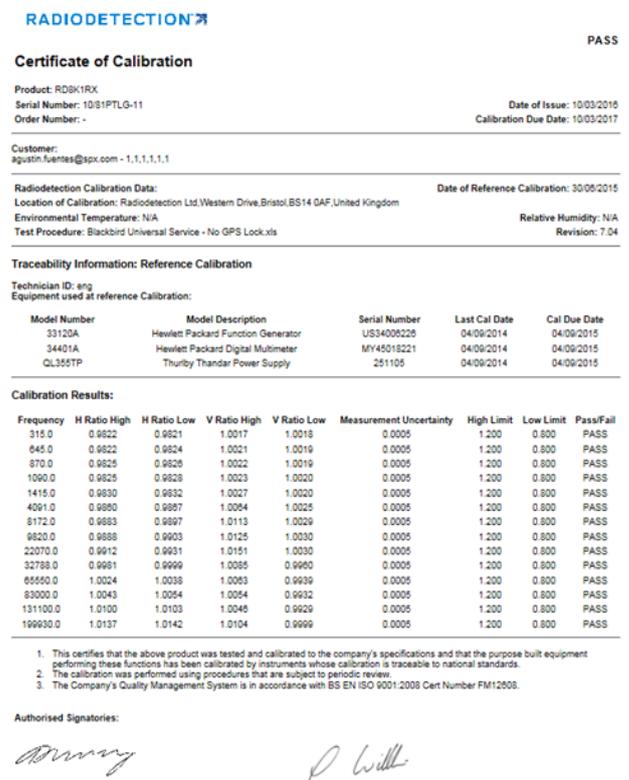
Figure 6.5: Calibration Certificate

From here you will be able to print your certificate.

6.4 Delete calibration data

To delete calibration data follow these steps:

1. Select the calibration data you want to delete
2. Press Delete

⚠️ CAUTION: Deleting calibration data cannot be undone.

6.5 How to perform an eCert calibration test

eCert Calibration allows users to extend the Factory Calibration validity of your locator for a further year, up to a maximum of ten years.

To perform an eCert you must at least one eCert credit, figure 6.6. Contact your Radiodetection's sales representative for information on how to obtain eCert credits.
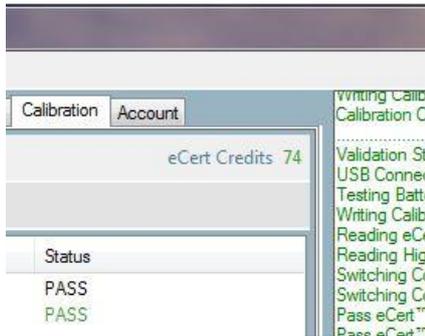
Figure 6.6: eCert Credits

Before performing an eCert Calibration, ensure that the locator to be tested is not in close proximity to sources of electrical interference (e.g. PC, monitor, mobile phones) or large metallic objects, and that any Radiodetection's transmitter or other signal transmitters in the vicinity are switched off.

To perform an eCert follow these steps:

1. Run the RD Manager program
2. Start the RD Manager program
3. Connect the locator using the USB 2.0 lead
4. Switch on the locator
5. Sign In
6. Select the **Calibration** screen
7. Press the **Run eCert** button. The eCert Disclaimer and User Details window will open, figure 6.7
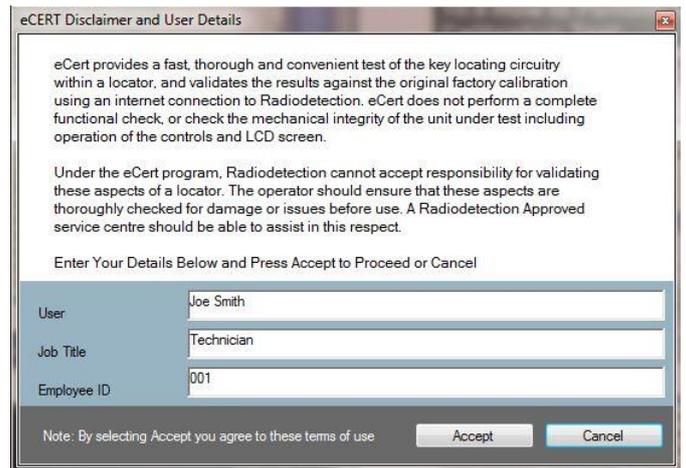
Figure 6.7: eCert Disclaimer and User Details window

8. Enter your details and press **OK** to accept Terms and Conditions or **Cancel** to exit
9. eCert will commence. You can follow the progress by looking at the system messages reported by the Message Pad window, figure 6.8

Figure 6.8: eCert system messages

10. The eCert Calibration result will automatically appear in your default internet browser, figure 6.5

You will only be charged an eCert credit if the eCert Calibration is successful.

If eCert fails, RD Manager produces an eCert Failure Report which can be printed and returned to a Radiodetection Service Centre along with the faulty locator.

Section 7 - Survey Measurements

This section describes how to retrieve Survey Measurement records logs from your compatible locator or handheld device.
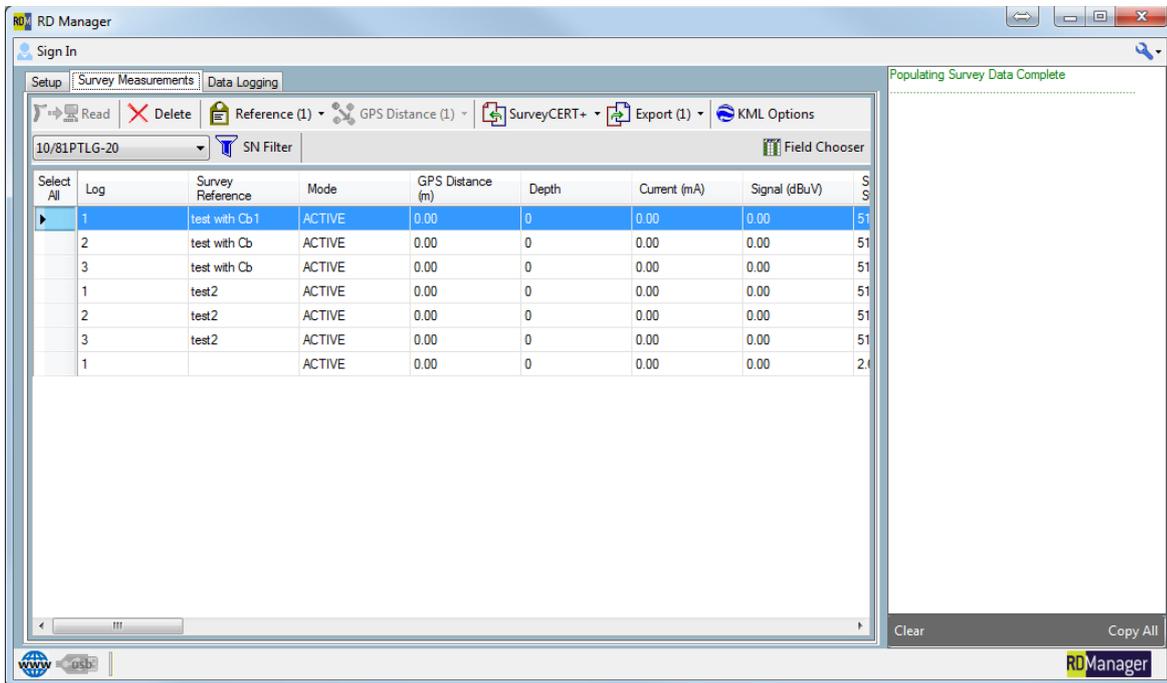
Figure 7.1: Survey Measurements window

7.1 Survey Measurements window

RD8000 and RD8100 locators have the ability to store up to 1000 Survey Measurements into their internal, non-removable, storage.

RD7000+ cable, pipe and marker locators can store Survey Measurements onto a compatible handheld device. See section 7.2.2 for further information.

The Survey Measurements window, figure 7.1, lets you retrieve, import, review and export (into various file format) survey information.

Available commands:

- **Read**: Transfers all the Survey Measurements available in the connected locator
- **Delete**: Deletes the currently selected survey logs from the PC
- **Reference**: Set the survey reference for the currently selected surveys
- **GPS Distance**: GPS distance between the selected logs relative to the previous point or first selected point. This function only works if valid GPS points are available for the selected logs
- **SurveyCERT+▶ Import from SurveyCERT+:** Import Survey Measurements from SurveyCERT+

- **Export (x)**: Exports the currently selected Survey Measurements to either CSV,XLS,XLSX or KML format. The number in brackets is the number of selected rows
- **SN Filter**: Serial Number filter
- **Field Chooser**: Use this to select and organize the Survey Measurements.
- **KML Options:** Modify KML output options

7.2 Importing Survey Measurements

7.2.1 Internal Survey Measurements

To retrieve internal Survey Measurements from your compatible locator follow these steps:

1. Ensure your locator is off
2. Start the RD Manager program
3. Connect the locator using the USB 2.0 lead
4. Turn on the locator
5. Select the **Survey Measurements** tab
6. Press **Read**
7. Enter Survey Details in the Survey Details window, see figure 7.2 and 7.3

If you are using a locator equipped with internal automatic logging you will only be asked to enter a description of the survey (maximum 50 characters).

Figure 7.2: Survey Details form (logging or GPS models)

If you using a locator with no usage-logging option, you will also be asked to enter a Survey Date and Time. By default the system will use the current time and date at the point of the data transfer.
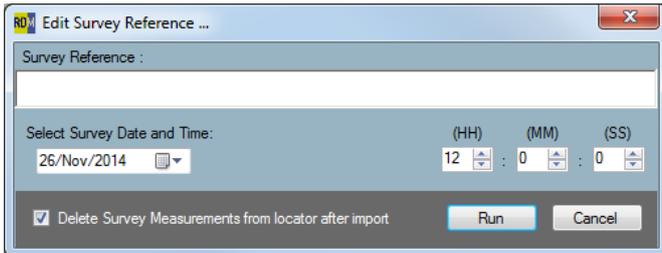
Figure 7.3: Survey Details form (non-logging models)

Both versions of the dialog provide the user with the option of deleting the survey data from the locator after a successful upload of the data. (See section 7.2.1)

New Survey Measurements will be appended to the exiting one.

7.2.2 Importing SurveyCert+ data

RD7000+ marker locators and RD8000/RD8100 locators can be paired to a handheld compatible device with an high accuracy GPS module and running a compatible application, for the purpose of storing Survey Measurements.

RD8000 and RD8100 locators will also store the Survey Measurements in their internal memory.

RD7000+ Survey Measurements will only be stored in the handheld device.

To import Survey Measurements recorded using your locator and SurveyCERT+ follow these steps:

1   Save your SurveyCERT+ log file onto your PC

2   Press SurveyCERT+ and select Import from SurveyCERT+
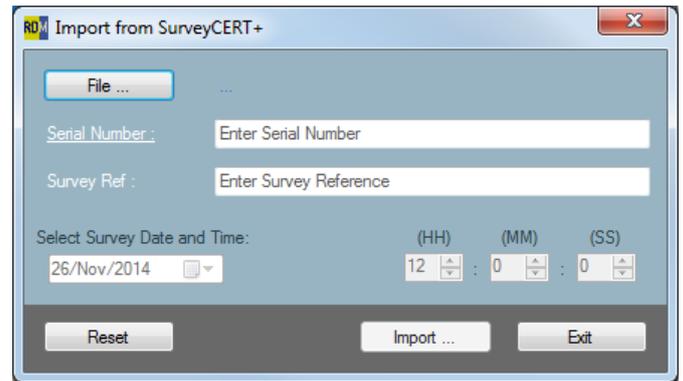
Figure 7.4: Import from SurveyCERT+

3   In the Import from Survey window, figure 5.4, use the File… to select the file to import

4   Enter the serial number of the unit used to generate the file

The serial number, starting with 10/, can be found printed on the label next to the battery compartment

5   Enter a Survey Reference

6   If required select the Survey date and time

7   Press **Import**

NOTE: Import will only operate if you enter all the relevant details

7.2.3 Deleting Survey Measurements from your locator without using RD Manager

Survey Measurements can be manually deleted from the locator's memory, once they have been transferred into RD Manager.

To delete your Survey Measurements follow these steps on your locator:

⚠ CAUTION deleting measurements cannot be undone.

1   Press the ⏻ key to enter to menu

2   Press the ⬆ or ⬇ keys to select **DATA** menu

3   Press the ⚓ key to enter the DATA menu

4   Press the ⬆ or ⬇ keys to select DEL menu

5   Press the ⚓ key to enter the DEL options menu

6   Press the ⬆ or ⬇ keys to select YES

7   Press the ⨍ key to make the selection and return to the main menu

7.3 Reviewing Survey Measurements

7.3.1 Selecting locators

RD Manager can be used to manage multiple locators.

Use the Locator Selector pull down menu, in figure 7.5, to select Survey Measurements belonging to a specific unit.
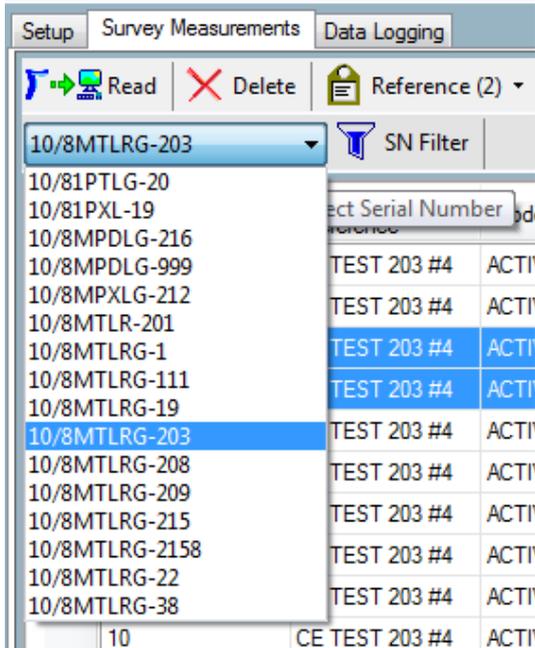
Figure 7.5: Locator Selector menu

Locator serial numbers, printed on the label next to the battery compartment, are used to catalog and store Survey Measurements in RD Manager.

If you have a unit connected the Locator Selector menu will display the connected unit's serial number and all existing surveys measurements for this unit will be displayed.

7.3.2 Serial number filter

If you use RD Manager to manage a large number of locators you may find useful to filter the serial number: press **SN Filter**, figure 5.6, to access the Serial Number Filter window.7
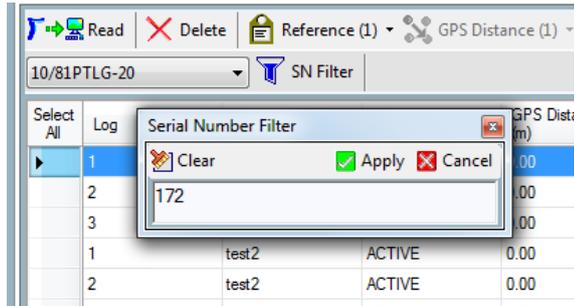
Figure 7.6: Serial Number Filter

You can use this text filter to reduce the number of serial numbers (different locators) displayed by the Locator Selector menu.

To use the Serial Number Filter:

1. Press **SN Filter**
2. Enter your filter string into **the Serial Number Filter** box
3. Press **Apply** to enable the filter or **Cancel** to exit
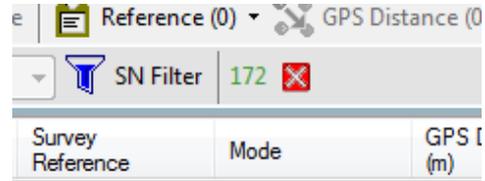
Figure 7.7: Serial Number Filter active

Once applied the filter string will be displayed alongside the SN Filter button, figure 7.7.

To remove the Serial Number Filter:

1. Press the red **X** box next to the filter string

Only those Serial Numbers which match the filter string will appear in the Locators Selector menu. For example:

Serial Number	Filter	Selected
10/8MPDBL-172		Yes
10/8MPDL-173	172	No
10/81PDLG31724		Yes

7.3.3 Survey reference

To add or modify a reference associated with a range of surveys, follow these steps:

1. Select the surveys range
2. Press Reference, see figure 7.8
3. Add or edit the Reference text
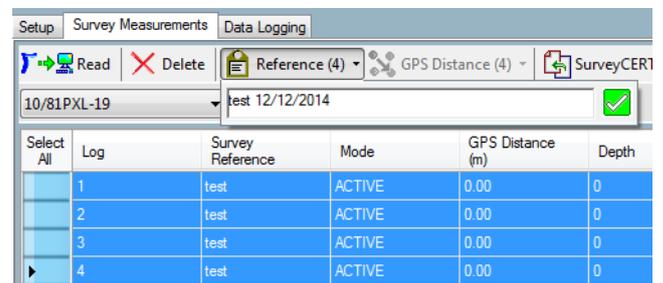
Figure 7.8: Editing the Survey Reference

4. Press the green box to apply your changes or click anywhere else on the screen to exit

7.3.4 Distance between points

If your Survey Measurements have GPS coordinates, you can estimate the distance between each successive points or the distance relative to the first measurement point.
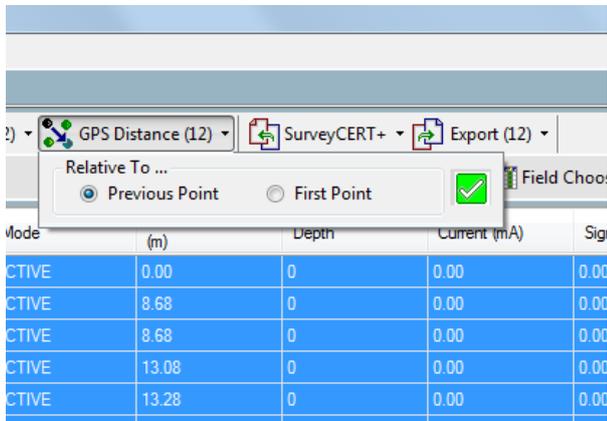
Figure 7.9: Setting up GPS distance

To set GPS Distance:

1. Select the range of points you are interested in
2. Press GPS Distance
3. Select Previous Point or First Point
4. Press the green box to apply your changes or click anywhere else on the screen to exit

NOTE: This function is only available if GPS coordinates are available in the range of points selected

7.3.5 Export Survey Measurements

Perform the following steps to export Survey Measurements data:

1. Select the **Survey Measurements** tab
2. Select the required unit
3. Select the data rows you wish to export or press the **Select All** button

NOTE: only highlighted rows will be exported

4. Press the **Export** button
5. Select either Export to CSV/XLS or Export to KML
6. Choose your destination folder and file name
7. Press **Save**

NOTE: Survey data where there is no GPS information will not be exported to KML.

NOTE: If the application associated with either of the export file types exists on your PC, then it will automatically display the file after export is complete.

7.4 KML options

You can customize the KML output data by selecting **KML Options**.

See section 4.2 for more information

Section 8 - Usage-Logging

This section explains how to retrieve and manage your locator usage logs (compatible models only).

Locator window   PC window
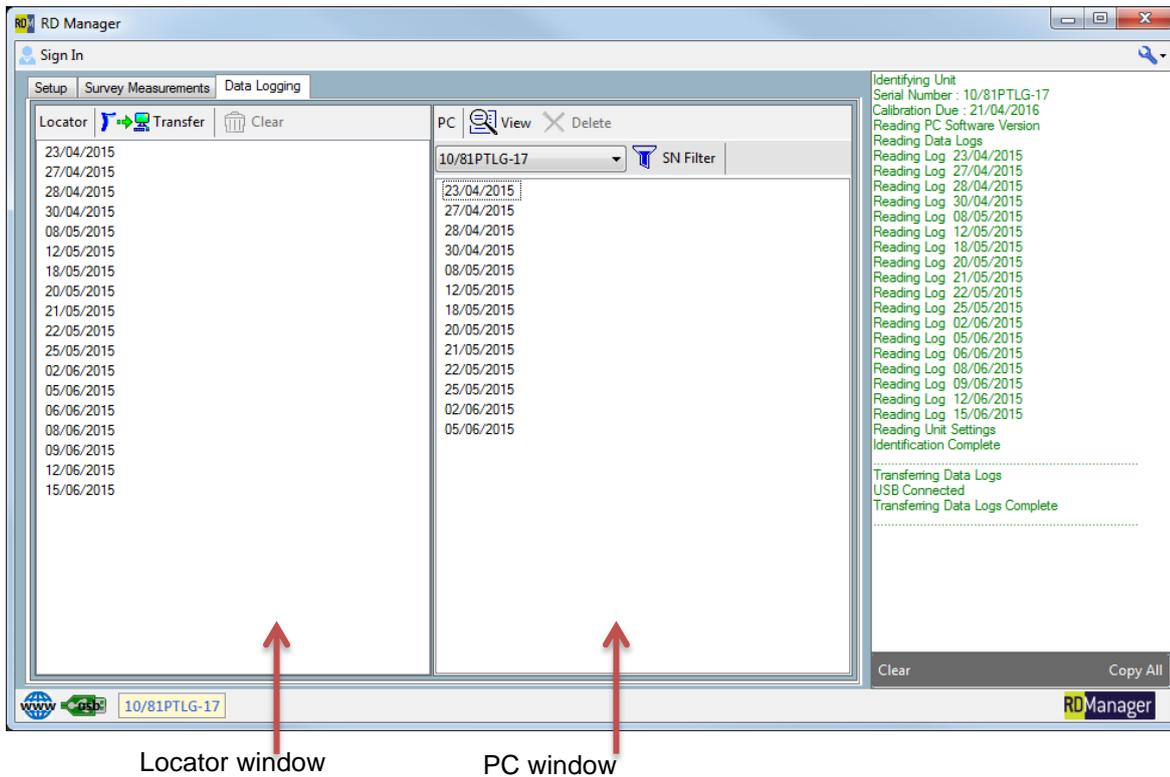
Figure 8.1: Usage-Logging screen

Locators featuring usage-logging are equipped with an internal usage-logging system which records critical locate parameters once per second.

Models with built- in GPS models also include positional data when the internal GPS module is active and locked.

The Usage Logging screen is available by default and does not require the user to be signed in.

8.1 Usage Logging screen

The screen, figure 8.1, is split into 2 windows, the locator window on the left and the PC window on the right:

- The **locator window** shows the list of logs, sorted by date, that exist on the connected locator, and which are available for transfer to the PC.
  Available commands:
    - o **Transfer**: To transfer all/or selected logs to the PC
    - o **Clear**: To delete the locator's internal logs (Privileged users only)
- The PC window shows all the logs, sorted by date, which are already stored in the PC.
  Available commands:
    - o **View**: Provides a view of the currently selected logs

- o **Delete**: Deletes the currently selected logs from the PC
- o **Unit Selector menu**: Selects which units data to display
- o **SN Filter**: Serial Number filter

8.2 Retrieving usage logs

Follow these steps to retrieve your locator usage logs:

1. Ensure your locator is off
2. Start the RD Manager program
3. Connect the locator using the USB 2.0 lead
4. Turn on the locator
5. Select the **Usage Logging** tab
6. In the Locator window select the logs you want to transfer into your PC
7. Transfer your data:
   Press the **Transfer** button to transfer the locator records. If no logs are selected in the locator window, all the logs will be transferred to the PC, otherwise only the selected logs will be transferred.

   or

   Use your mouse to drag the selected records into the PC window

---

NOTE: The duration of the data transfer depends on the number of records transferred. Regular transfers of new records only is recommended

8.3 Deleting the Locator memory

The locator's internal usage-logging memory is capable of storing at least one year's worth of data.

Erasing the locator's usage logging internal memory is a restricted operation: only privileged users can perform this operation. See section 3.2

To erase the locator's usage log memory:

1. Ensure your locator is off
2. Start the RD Manager program
3. Sign in
4. Connect the locator using the USB 2.0 lead
5. Turn On the locator
6. Select the **Usage Logging** tab
7. Select **Clear** from the Locator window

⚠ Caution: Erasing the locator's internal usage logging memory is an irreversible operation.

When the memory is full the unit will start over-writing older records.

8.4 Reviewing usage logs

8.4.1 Selecting locators

RD Manager can be used to manage multiple logging locators.

Use the Locator Selector pull down menu, figure 8.2, to select usage logs belonging to a specific locator.

Locator serial numbers, printed on the label next to the battery compartment, are used to catalog and store usage logs in RD Manager.

If you have a unit connected the Locator Selector menu, figure 8.2 will display the unit's serial number and the all existing usage logs for this unit will be displayed.
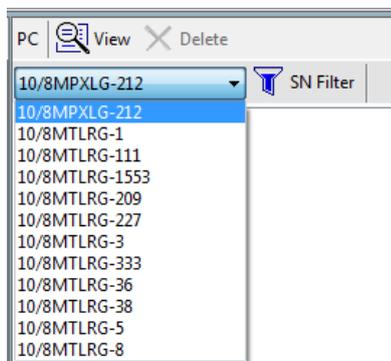
Figure 8.2: PC window –Locator Selector pull-down menu

NOTE: If you connect a unit for which no usage logs are present in RD Manager the PC window may be empty or

display usage logs belonging to another unit. Please check the Locator Box.

8.4.2 Serial number filter

The Serial Number Filter, figure 8.3, is useful if you manage a large number of locators.
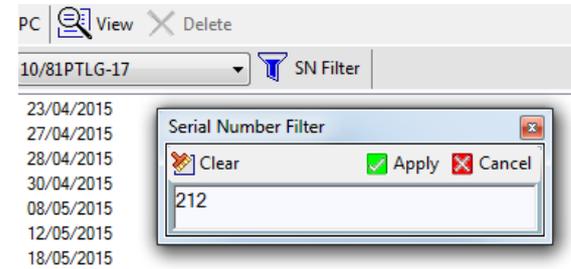
Figure 8.3: Serial Number Filter

You can use this text filter to reduce the number of serial numbers (different locators) displayed by the Locator Selector menu.

To use the Serial Number Filter:

4. Press **SN Filter**
5. Enter your filter string into the text box
6. Press Apply to enable the filter or Cancel to exit

Figure 8.4: Serial Number Filter

Once applied the filter string will be displayed alongside the Filter button, figure 8.4.

To remove the Serial Number Filter:

1. Press the red **X** box next to the filter string

Only those Serial Numbers which match the filter string will appear in the Locators Selector menu. For example:

Serial Number	Filter String	Selected
10/8MPDBL-172		Yes
10/81PDLG-173	172	No
10/7MTL-31724		Yes

8.4.3 Viewing usage logs for a specific locator

Once you have selected a specific locator, the RD Manager PC window will show all the usage logs associated with the unit sorted by date in ascending order, figure 8.5.
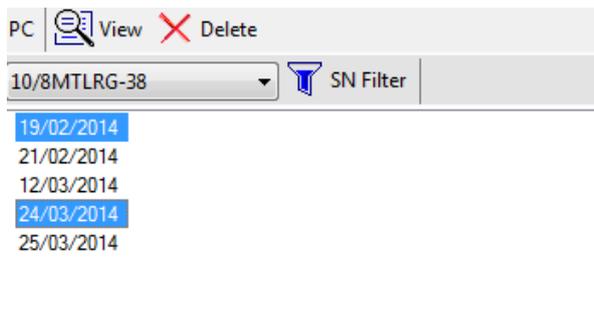
Figure 8.5: PC window with usage logs

To review usage logs associated with specific dates, select these and press the **View** button.

The Data Collector window will open up, figure 8.6.

You can use this window to quickly review the logs, within the selected dates.
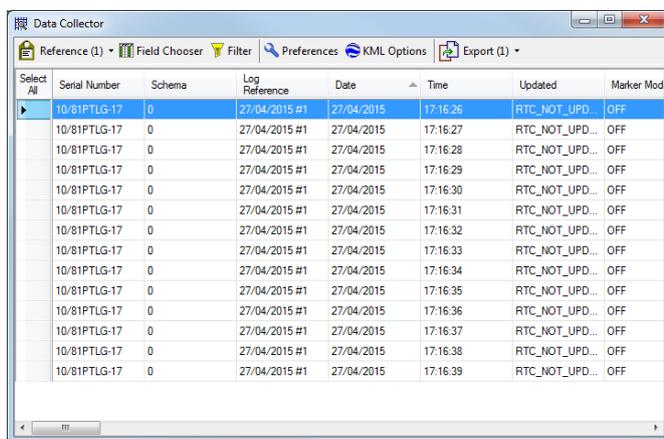
Figure 8.6: Data Collector window

8.4.1 Deleting usage logs on a PC

You can delete usage logs stored on your PC, associated to a specific locator:

1. Select the logs you wish to delete, see figure 8.5
2. Press Delete

CAUTION: Deleting usage logs cannot be undone.

8.5 Using the Data Collector

The Data Collector is used to review and export usage logs

Available commands:

- **Select All:** Select all usage logs present in the viewer
- **Reference:** Lets you change the Reference associated with the selected logs. The number in brackets is the number of selected rows
- **Field Chooser**: Lets you chose the fields you wish to review and export

- **SN Filter:** Use this to choose a different locator and/or specific dates
- **Preferences:** Modify time zone, date format and depth units
- **KML Options:** Modify KML output options
- **Export :** Exports the selected logs to either CSV, XLS, XLSX or KML format. The number in brackets is the number of selected rows

8.5.1 KML options

You can customize the KML output data by selecting **KML Options**.

See section 4.2 for more information

8.5.2 Usage log reference

To add or modify a Usage Log Reference associated with a range of logs, follow these steps:

1. Select the log range to be referenced
2. Press Reference, see figure 8.7
3. Add or edit the Reference text
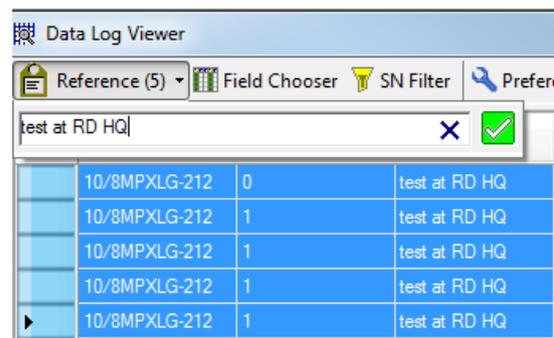
Figure 8.7: Editing the Usage Log Reference

4. Press the X key to clear the text
5. Press the green box to apply your changes or click anywhere else on the screen to exit

8.5.3 Field chooser

The Field Chooser window, figure 8.8, lets you decide which log fields to display in the Data Collector window, and in which order.

- Use the check boxes to decide which fields to show or hide (Checked = Shown)
- Use the arrow buttons to the left of the screen to change the order your fields are displayed
- Press **OK** to apply your settings or **Cancel**
- Press **Reset** to reset to factory default

Your selection will be saved and remain active until modified or reset.
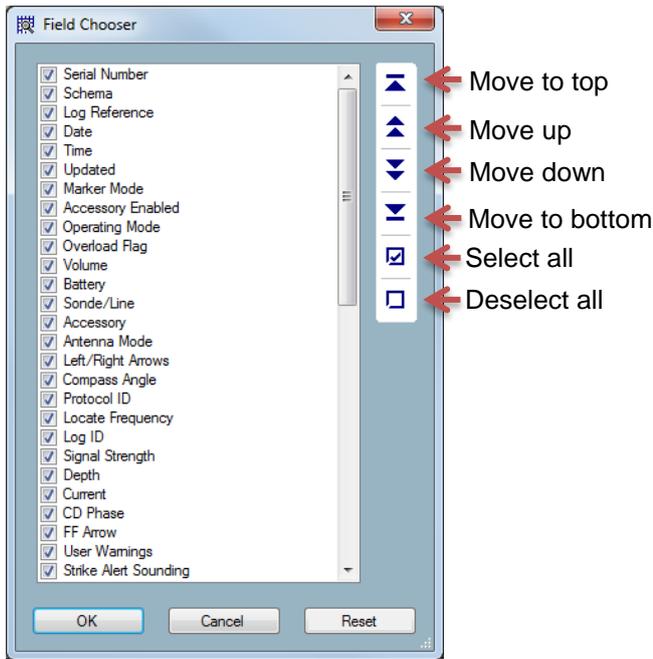
Figure 8.8: Field Chooser window

8.5.4 Serial number and date filter

You can use the Serial Number and Date Filter to review usage logs of a single or multiple locators.

From this filter you can also select a range of dates.

To use the Serial Number and Date Filter follow these steps:

1. Press the **SN and Date Filter** button
2. The filter window will open up, figure 8.9
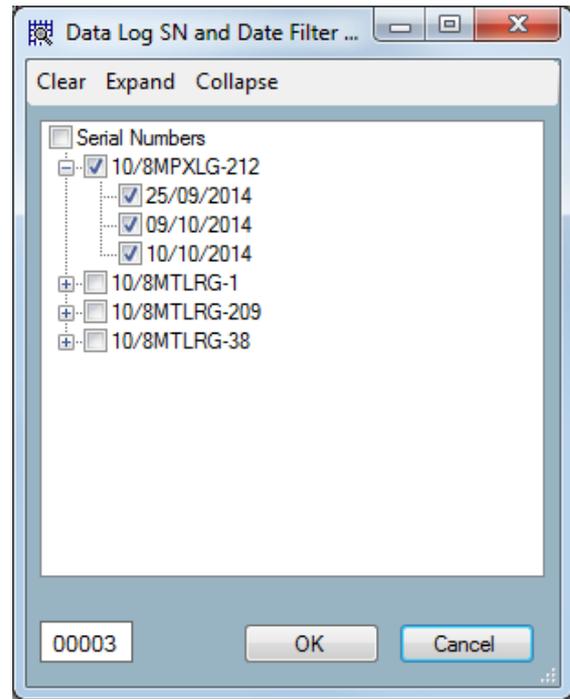
Figure 8.9: SN and Date Filter

1. Use the **Clear**, **Expand** and **Collapse** to aid your selection
2. Select the units and dates you want to review
3. Press **OK** or **Cancel**

The box at the bottom left side of the filter windows indicates the number of distinct survey dates you have selected: for example in figure 8.9 this is 00003

Section 9 - Advanced Setup Screen

This section describes the setup the CALSafe feature of the Logging and GPS locator models. You need to have access to a privileged account to access this screen.
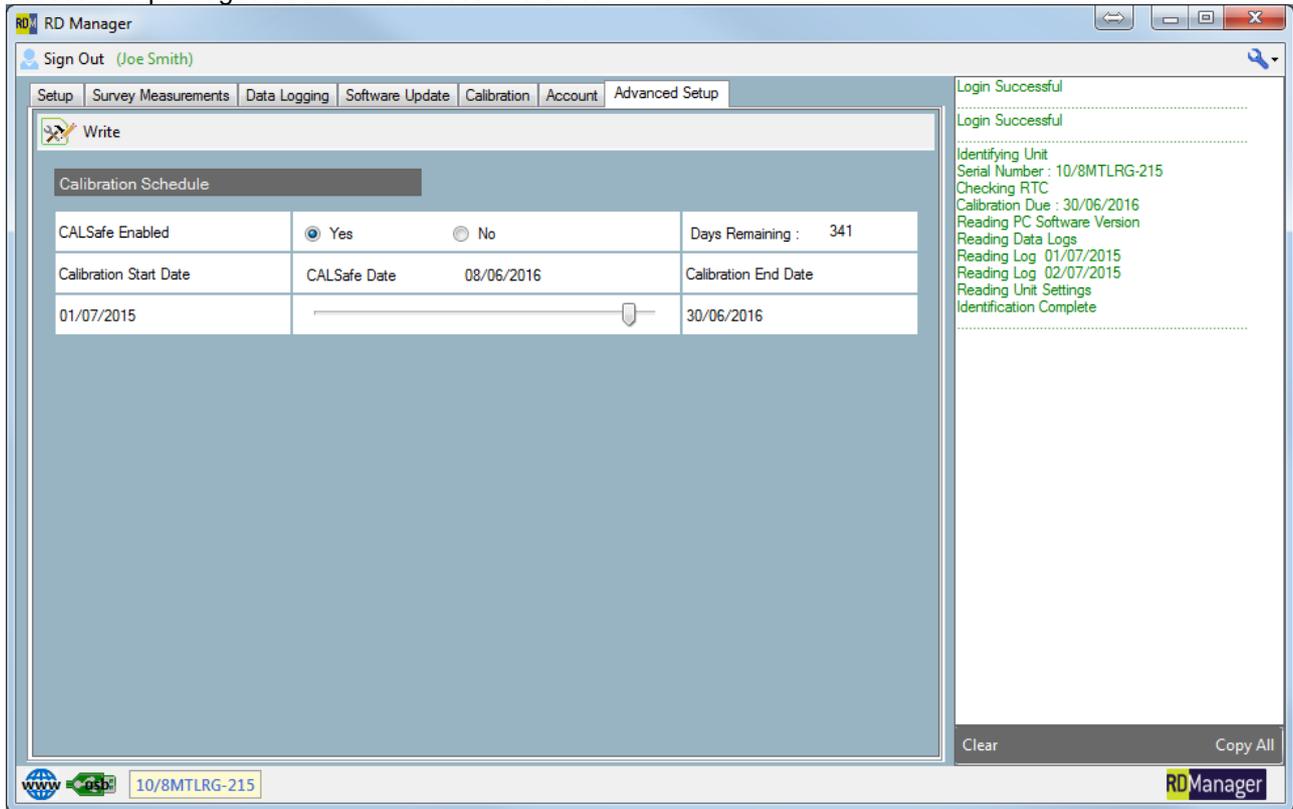
Figure 7.1: Advanced Setup Screen

9.1 Advanced setup screen

This screen, figure 7.1, allows you to personalize the CALSafe settings of a Logging or GPS locator model.

Available commands:

- **Write**: Saves your changes to the locator

9.2 CALSafe

CALSafe is an advanced feature of your logging or GPS locator. This can be set to prevent the unit from operating outside the defined service/calibration period, helping to ensure compliance with individual company polices.

Users can set a CALSafe date. When the unit is within 30 days from the CALSafe date the unit will display at startup the number of days left. The locator will stop functioning on the CALSafe date.

To setup CALSafe use the commands available in the CALSafe portion of the Advanced Setup screen, figure 7.2.

Figure 7.2: CALSafe

To setup CALSafe in your locator follow these steps:

1. Run the RD Manager program
2. Connect the locator via USB 2.0 lead
3. Sign in into your advanced account
4. Switch on the locator
5. Select the **Advanced Setup** tab
6. Select **Yes** or **No** to enable or disable CALSafe

NOTE: When the Calibration End Date is reached the locator will stop working after a 31-day ycount-down.

7. Use the slider bar to vary the number of days to the CALSafe date.
8. Select **Write**

Section 10 - Software Update Screen

This section describes how to update your locator software.
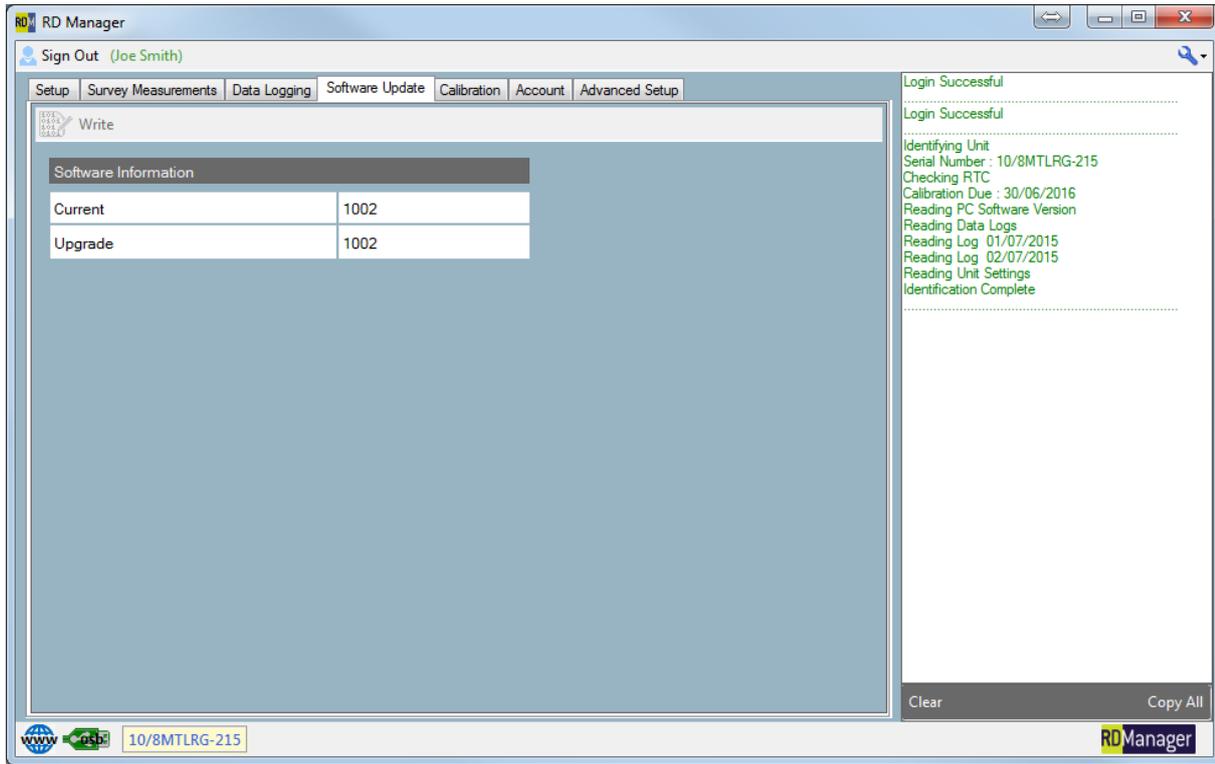
10.1 Software update screen

Once signed on in your account you can use RD Manager to update your locator to the latest software.

Radiodetection recommends keeping your locators up-to-date with the latest software. Software upgrades offer enhanced performance and are free to download.

10.2 Updating your locator

To perform a software upgrade of your locator:

1. Ensure your locator is off
2. Start the RD Manager program
3. Sign-in
4. Check that your PC software is up-to-date, see section 4.2
5. Connect the locator using the USB Cable
6. Turn On the locator
7. Select the **Software Update** tab
   The software update screen will show your locator **current** software and the one available on your PC, figure 8.2.

Figure 10.2: Software Information

8. Press the **Write** button.

NOTE: The Write button is only active if software update is possible

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