RADCOM Technologies, Inc.

RADLOG for Windows™

RADLOG for Windows™

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1.0 Introduction

RADLOG for Windows™ is a powerful software package used with the full range of Radcom portable and telemetry linked dataloggers. It is designed to act as the main controlling software, providing the basis for filing, communications and data analysis. It also provides the source of data for the higher level data handling packages such as the Flow and Pressure Reporters.

The Portable Range

LoLog	*Ultra low cost flow logger (Flow, Pressure, 4-20mA - 1 or 2 channels)*
Sentry	*Single channel, LCD Display (Flow, Pressure, 4-20 mA)*
Centurion	*Single or dual channel (Flow, Pressure, 0-1v, & 4-20 mA)*
MultiLog	*Multi channel (1 -4 inputs) (Flow, Pressure, 0-1 v, 4-20 mA)*

The Telemetry Range

Centurion II	*Single / dual channel (with LCD) (Flow, Pressure, 0-1 v, 4-20 mA)*
GSM/PCS	*Single / dual or multi channel logger with Cellular communications (Flow, Pressure, 0-1 v, 4-20 mA)*
MultiLog	*Multi channel (1 -4 inputs) (Flow, Pressure, 0-1 v, 4-20 mA)*

RADLOG for Windows™

1.1 The Five Main Programs

This manual is intended as an introduction to the RADLOG for Windows software released by RADCOM Technologies. As well as briefly covering all the functions offered by the package, the manual also gives more detailed instructions covering the more common applications.

The RADLOG for Windows package comprises five main programs:

Setup	configures the hardware, data storage database, file management & access control
Download Upload	collects data (direct & / or telemetry linked), automatically stores data, and programs Dataloggers
View	selects data to be viewed, displays & manipulates graphs / tabular data, prints &/or exports data to other packages
Auto Call	controls automatic telemetry communications *(Only available if you are using Telemetry Dataloggers)*
Administration	sets up user profiles and controls user access

The install program will automatically create a new Windows group [***RADLOG for Windows***] containing these five programs & a ***Readme*** containing update information about this version.

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Installation

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RADLOG for Windows is supplied on a single CD with an install program. This installs the Set Up, Download/Upload and View programs. Other modules can be installed if needed and/or purchased from the main screen.

The following section details:

- Hardware Requirements
- Installation Procedure
- Getting Started
- Software License

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2.0 Installation

2.1 Minimum Hardware Requirements

IBM PC or compatible	80486 processor or better
Hard disk	20 Mb
CD Drive	To install Software
RAM	8 Mb
Environment	Microsoft Windows™ 3.1, 3.11 (32Bit Software)
	'95, '98 or NT (32Bit Software)
Logger/PC comms port	Serial

Certain communications procedures supported by the software require the following items :

Radcom Datalogger with suitable PC connection.
Hayes compatible Modem for telephone or GSM Cellular communications.
Paknet modem for Paknet communication

2.2 Installation Procedure

1. Confirm License agreement

Radcom's software licensing conditions are detailed on the Page 10.
Your acceptance of these terms is inferred by the breaking of the media seals. If <u>any</u> condition is unacceptable, please do not install the software and contact Radcom with your concerns.

2. Run the Installation program

Put the CD in your CD Drive and follow instructions.

3. Specify destination directory

The installation will prompt with **c:\radwin** as the destination directory path for the installation. Accept this default or enter a new path if required and select **OK** to proceed with the installation.

4. Enter Registration Number

Select the **Setup** program for the first time.
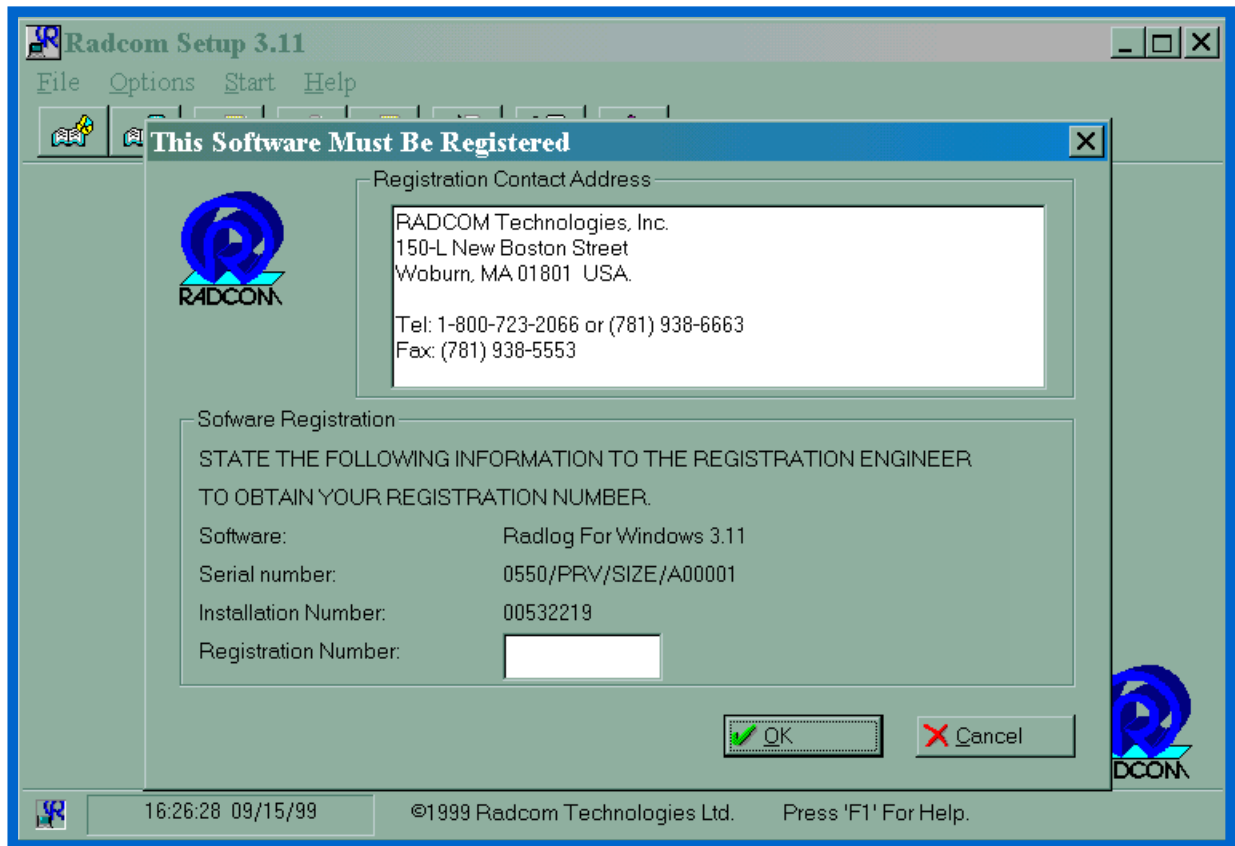
Contact Radcom at the address given on the software and be ready to quote your Serial and Installation Number.

You will then be given a Registration Number unique to the computer running the software.

Note: The software will not operate until this Registration Number has been completed.

2.3 RADCOM Technologies Multi User License Agreement

Carefully read all the terms and conditions of this agreement prior to using this RADLOG Software.

License: You have the non-exclusive right to use the enclosed Program on a CPU. You may physically transfer the Program from one CPU to another provided that the Program is used, only by the licensed company. You may not distribute copies of the Program or related documentation to others. You may not modify or translate the Program or related documentation without the prior written consent of RADCOM. You may not use, copy, modify or transfer the Program or documentation, or any copy thereof, or permit anyone else to do so, except as expressly provided in this agreement.

Back-up and Transfer: You may make one (1) copy of the Program solely for your own back-up purposes. You must reproduce and include the copyright notice on the back-up copy. Transfer of Program and license to another party may only be made after written approval from RADCOM, provided the other party agrees to the terms and conditions of this agreement and completes and returns a Product Registration Form to RADCOM. If you transfer the Program you must at the same time transfer the documentation and back-up copies or transfer the documentation and destroy the back-up copies.

Copyright: The Program and its related documentation are copyrighted. You may not copy the Program or its documentation except for your own back-up purposes and to load the Program into the computer as part of executing the Program. All other copies of the Program and its documentation are in violation of this Agreement.

Terms: This license is effective until terminated. You may terminate it by destroying the Program and documentation and all copies thereof. The license will also terminate if you fail to comply with any term or condition of this Agreement. You agree upon such termination to destroy all copies of the Program and documentation.

Warranty: RADCOM warrants to the original licensee that the diskettes on which the Program is recorded be free from defects in materials and workmanship under normal use and service for a period of 90 days from the date of delivery to you as evidence by a copy of your invoice. During this period RADCOM warrants that each program, which is designated by RADCOM, as warranted in its program specifications, supplied with the program, will conform to such specifications provided that the program is properly used on the machine for which it was designed. If you believe that there is a defect in a warranted program such that it does not meet its specifications, you should notify RADCOM within the warranty period (the warranty period may be extended by signing a software update agreement with RADCOM) in a manner set forth in the program specification.

All back up copies are provided "as is" without warranty of any kind, either express or implied. The entire risk as to quality and performance of the Program is with you. Should the Program prove defective, you assume the entire cost of all necessary servicing, repair or correction. RADCOM does not warrant that the functions contained in any program will meet your requirements or that the operation of the Program will be uninterrupted or error-free or that the programs defects will be corrected.

The foregoing warranties are in lieu of all other warranties, express or implied, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose. RADCOM is not responsible for problems caused by changes made after the publication of the software in the operating characteristics of the computer hardware, test instruments or operating systems, nor for problems in the interaction of the Program with non-RADCOM software components.

Limitation of Remedies: RADCOM's entire liability and your exclusive remedy shall be as follows:
   a. With respect to defective media during the warranty period, RADCOM will replace media not meeting RADCOM's "Limited warranty", if returned to RADCOM with a copy of your receipt.
   b. With respect to warranted programs, in all situations involving performance or non-performance during the warranty period, your remedy is (1) the correction or bypass by RADCOM of program defects or (2) if, after repeated efforts, RADCOM is unable to make the Program operate as warranted you shall be entitled to a refund of the money paid.

In no event will RADCOM be liable to you for any lost profits, lost saving or other incidental or consequential damages arising out of the inability to use any program even if RADCOM have been advised of the possibility of such damages, or for any claim by any other party.

Update Policy: In order to be able to obtain updates of the Program, the licensee and persons to whom the program is transferred in accordance with this agreement must complete and return the Software Upgrade Registration Form to RADCOM. If this registration form has not been received by RADCOM, RADCOM is under no obligation to make available to you any updates.

Miscellaneous: This license agreement shall be governed by the laws of England and shall inure to the benefit of RADCOM, its assigns and successors.

Acknowledgment: You acknowledge that you have read this agreement, understand it, and agree to be bound by its terms and conditions. You also agree that this agreement is the complete and exclusive statement between the parties and supersedes all proposals or prior agreements, verbal or written, and any other communications between the parties relating to the subject matter of this agreement.

Should you have any questions concerning this agreement, please contact RADCOM in writing at the relevant address :

US Office   150-L New Boston Street   **UK Office**   2 Venture Road, Chilworth Research Centre
              Woburn, MA 01801 **USA**   Southampton   SO16 7NP   **England**
              T: 1-800-723-2066 or (781) 938-6663   T: (44) 2380-765900
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              E-mail: sales@radcom-usa.com   E-mail: sales@radcom.co.uk

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Getting Started

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Getting Started

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This section gives information on how to get started in the software.

This includes how to move round the package and how to setup the correct configuration details
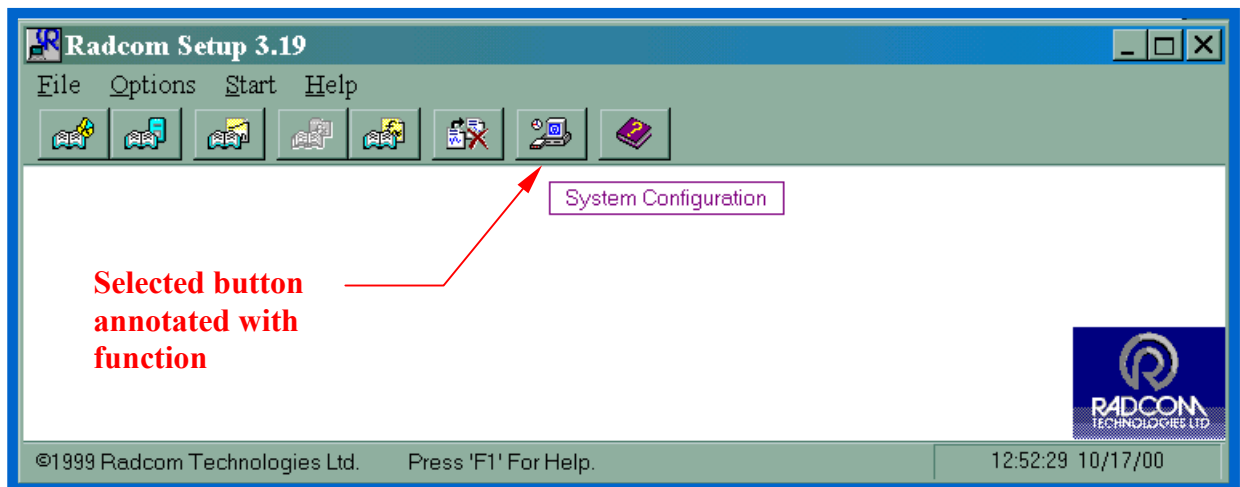
3.0 Getting Started

RADLOG for Windows uses toolbars and/or pull down menus to select from the options available.

3.1 Main Navigating Options
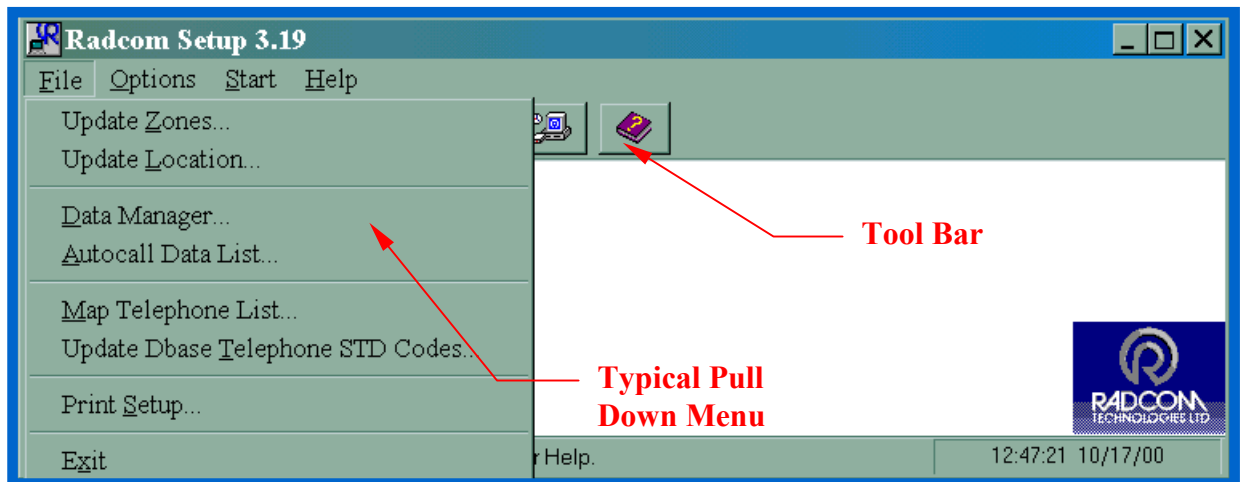
A user can select the required task from a pull down menu as follows:

1. Click once [*or 'ALT & the underscored letter*] to display menu
2. Highlight the required task [up / down arrows or click once]
3. Press **<Enter>** on your Keyboard or click once.

Toolbar buttons provide quick access to frequently used menu options.
Move the mouse over the button to display its function below the button. Click to perform the function.

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3.2 Online Help

Each window of the program contains On Line Help.
If no help button is displayed, press 'F1' to display help on the current window.
To display the help index press 'ALT F1' at any time

3.3 Configuration

It is important that RADLOG for Windows is correctly configured before running the software program for the first time. This ensures that the database path is correct as well as establishing the required file structure.

After Installation has been successfully completed, run the Setup program and select System Configuration See Page 24

3.4 Listing

When RADLOG for Windows contains lists (e.g. Function Sets, Location Names etc), it is possible to select what the list is ordered on and whether it is ascending or descending. This is done by clicking on the heading that the list is to be ordered on and then clicking on the triangular symbol next to toggle between ascending or descending order.
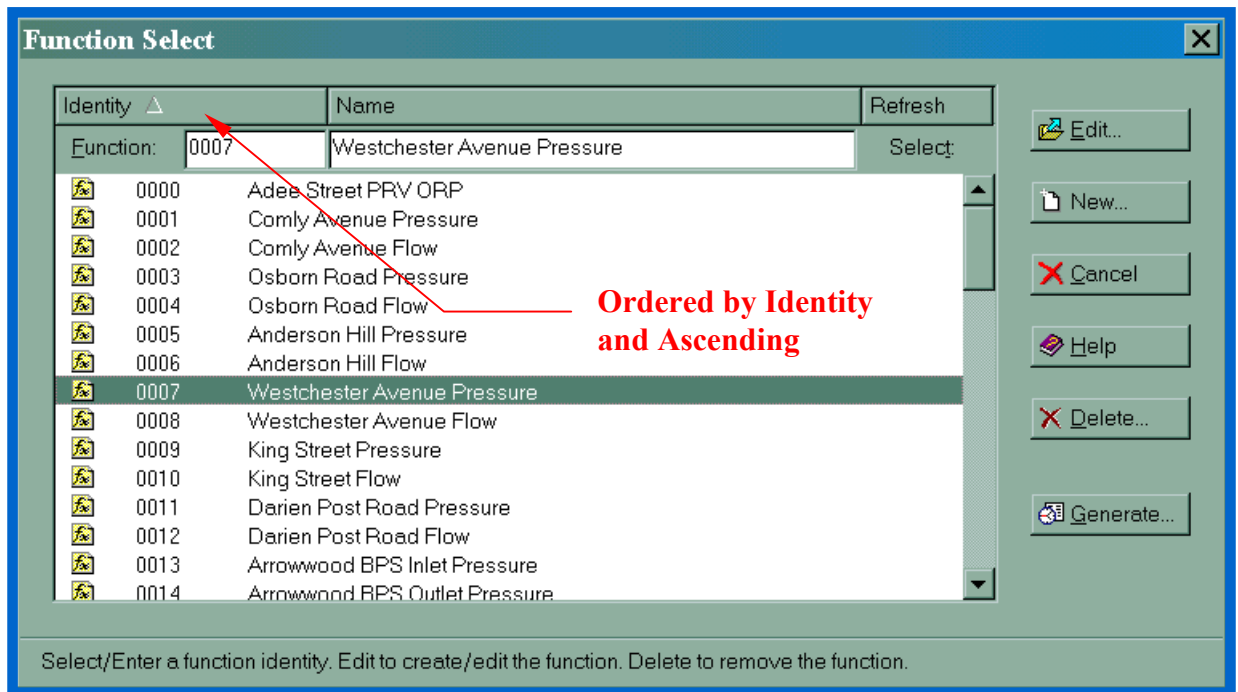
3.5 Filing Structure

Data is stored in a location database for graphical and tabular analysis; each database location can be cross-referenced to a physical location if required.
The standard 4-figure logger ID number is actually 2 two-figure numbers (XXYY).
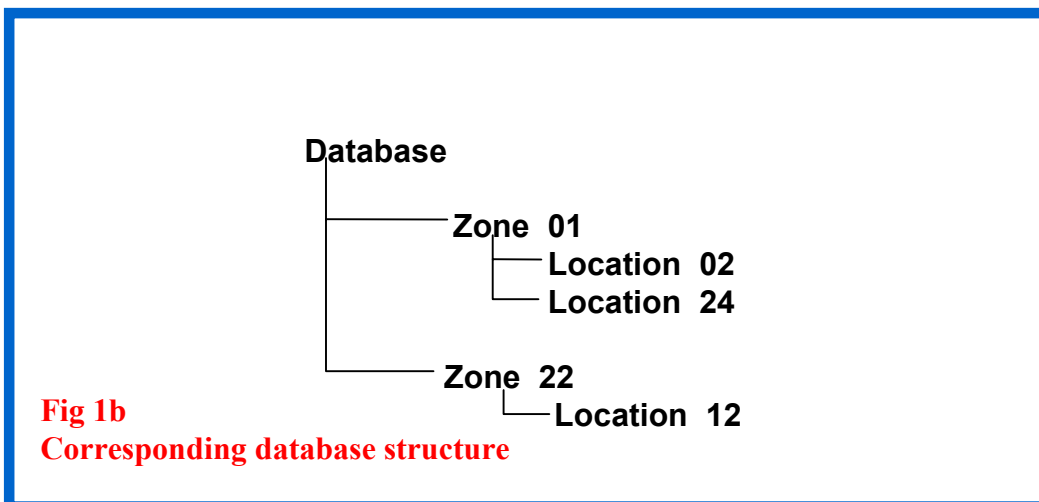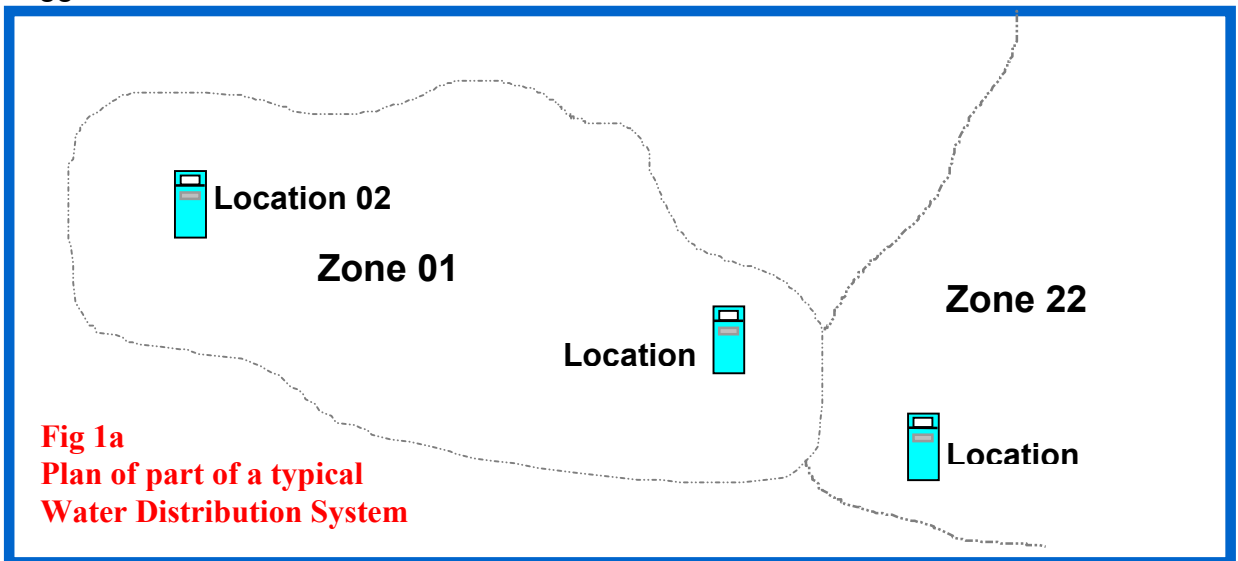XX corresponds to a **Zone** (e.g. Filing Cabinet)
YY corresponds to a **Location** within a **Zone** (e.g. Draw in Filing Cabinet)

Example
A logger ID of 0102 is filled as **Location** 02 within **Zone** 01
A logger ID of 0124 is filled as **Location** 24 within **Zone** 01
A logger ID of 2212 is filled as **Location** 12 within **Zone** 22

Location 02

Zone 01

Zone 22

Location

Location

Fig 1a
Plan of part of a typical
Water Distribution System

Database

Zone 01
Location 02
Location 24

Zone 22
Location 12

Fig 1b
Corresponding database structure

Note: Provision has been made for the next generation of loggers to have a 4 figure **Zone** ID number and a 3 figure **Location** ID number. The current 2 figure ID numbers are automatically prefixed by two underscores (i.e. _ _) for **Zone** and one for **Location** during Set Up.

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Setup

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The SETUP program of this software is used for

- Hardware Configuration
- Data Storage Database
- File Management
- Function Sets
- Lookup Tables

4.0 Setup

The Setup program is used to define the principal system default settings, as well as setting up Zones and Locations in the filing system.

4.1 Summary of Menu Options

4.1.1 File

Update Zones	Create/Edit/Delete a Zone
Update Locations	Create/Edit/Delete a Location Configure Locations by defining Logger type, Transducer types, Telephone/Cellular number, Population, Properties, known night-time consumption *(see also supplement in back of manual for Portable Datalogging)*
Data Manager	Copy, Delete and Repair data files
Autocall Data List	Displays Autocall Data List
Map Telephone List	Create/Edit/Delete a Telephone Map File
Update Database	Replace old area codes with the new area code
Telephone STD Code	
Print Setup	Displays Printer Setup
Exit	Displays confirmation window before exiting Set Up

4.1.2 Options

System Configuration	Set main system defaults Database path, Units, Port configuration, Modem set up
Sensors/Units	Select sensor types other than flow/pressure Create user defined sensor types
Update Login Path	Change access password
Optimize Database	Database utilities delete / re-create database; increase accessing speed; Delete unwanted files
Lookup Tables	Convert logger values using non-linear conversion
Function Groups	Allows for subdivision of Function Sets
Function Sets	Generate archived Autocall data for viewing

4.1.3 Start

RADCOM Download	Switch to the Download/Upload program
RADCOM View	Switch to the View program
RADCOM Auto Call	Switch to the Auto call program
RADCOM Administration	Switch to the Administration program

4.1.4 Help

Help Index	Displays a list of topics supported by On Line Help
How to use Help	Displays the Program Manager's 'How to Use Help'
Technical Support	Gives Technical Support information
About Setup	Displays release information about Setup

4.2 Menu Options

4.2.1 File

A.) Setting Up A New Zone

1. Select **Update Zones…**

2. Enter new Zone Code number and new Zone name in correct boxes.

3. Press **Save** to create new Zone.

Selecting/Editing/Deleting Existing Zone

1. In **Update Zones…** select required Zone by clicking mouse on Zone name or enter required Zone code.

2. Edit Zone name (Zone code cannot be edited) and press **Save**

3. A Zone can only be deleted if it contains no locations.

B.) Setting Up A New Location
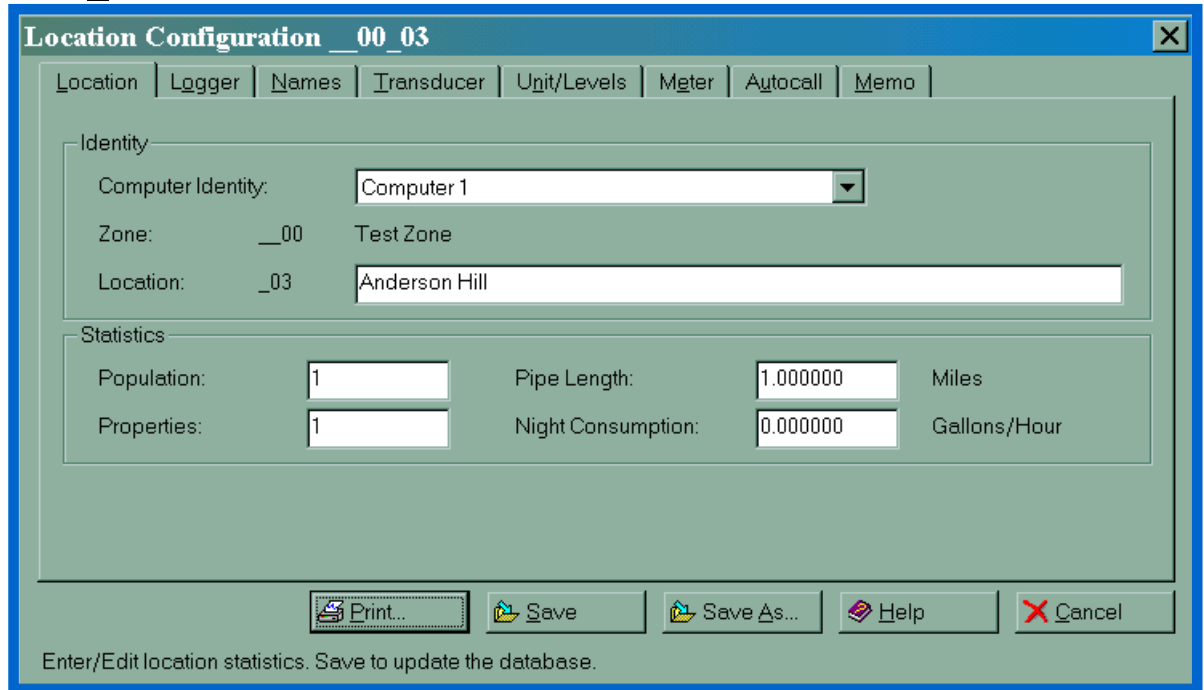
The location contains details of the logger, sensors and site.

1. Select **Update Location…**

2. Select Zone under which new location will be stored.

A list of current Location identities and names is displayed in the Location   Select Box.

3. Enter the new Location Identity number in the box and press **Edit…** to start Location Configuration.

Fill out Location Sheet as follows:

4. Selected required computer identity

5. Enter the new Location name

Note: If the Software is being used for Portable Datalogging only, this is as far as you need to go on this section click on **Save** and repeat numbers 1-5 as needed.
The following numbers in this section refer to permanent (Telemetry) installations only.

Statistics (flow loggers only)

6. Enter Population, Properties Length of Pipe and any Known Night Consumption in the boxes provided. This data is used to calculate leakage data in the View module.
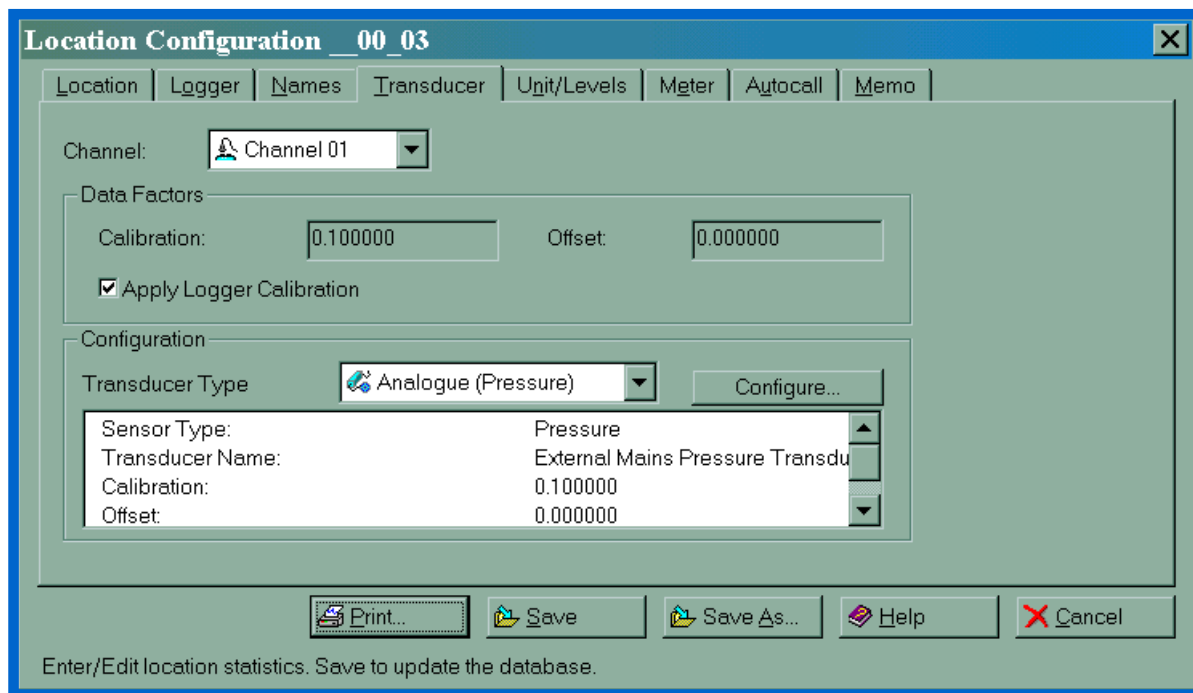
Select Logger sheet

7. Select required Logger Type at the Location by clicking on right arrow and choosing a logger from the list.

8. Fill out Date of Manufacture, Last Battery Change and Serial Number if required.

9. Select required Baud Rate by clicking on right arrow.

10. Select Connection Type for logger (Modem connection is not available for Pulsar or Sentry Loggers).

11. Enter Telephone and Pager Number (if relevant)

Select <u>N</u>ames sheet

12. This enables you to enter titles/info for each individual channel of the datalogger.
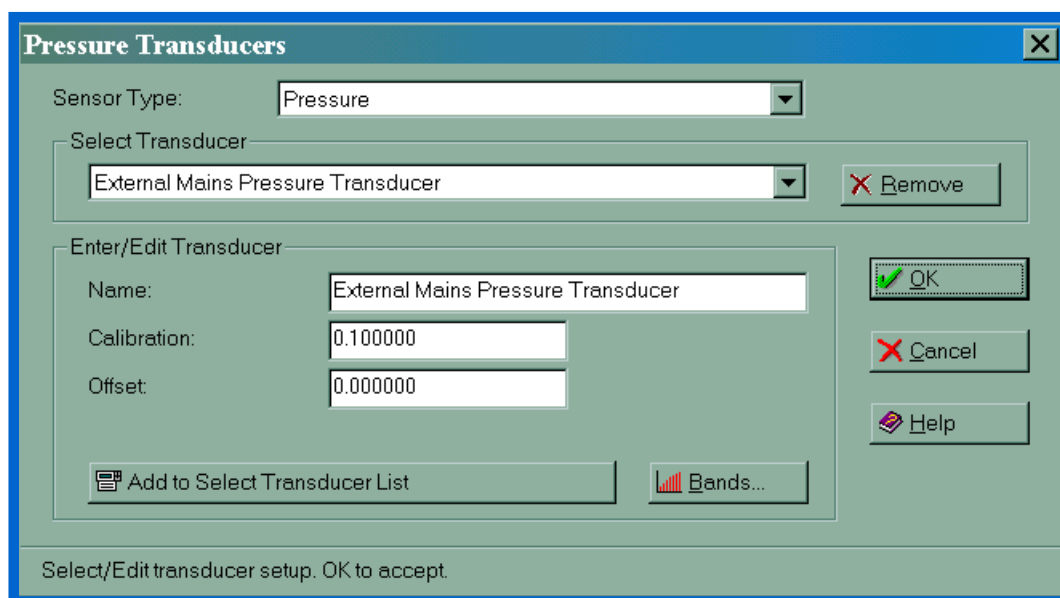
Select Trans<u>d</u>ucer sheet

13. Select required channel.

14. Select Transducer Type and then click on Configure…

15. For **Pressure**
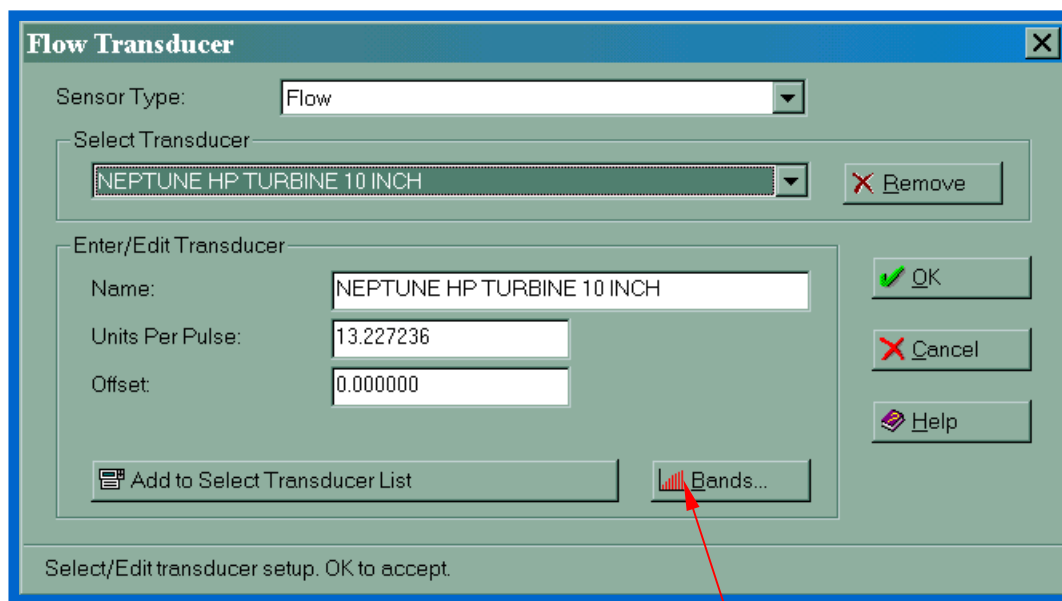
a) Select required Sensor/Transducer combination by clicking on and choosing from list.

b) The correct calibration and offset values are automatically saved. Click **OK** to save selection.

16. For **Flow**

For Meter Sizing Options see Section 6.4

a) Select required Sensor Type (Flow) and then select the required Meter by clicking on the right arrow in the Select Transducer box, and choose from list.

b) The correct Units Per Pulse (offset value is always 0) is automatically saved. Click on **OK** to save selection.

c) If the required Meter is not in the list, type in Name in the Enter/Edit Transducer section. Also enter the correct Units (US Gallons or Litre's) Per Pulse associated with the new Meter. Click on **Add to Select Transducer List** to permanently store New entry in main list.

d) Click on **OK** to save selection.

e) The correct Calibration and Offset values should be displayed on the main Transducer Sheet. Select next channel if required and repeat process.

17. For **Flow (Quadrina)**

a) Enter the values from site/Quadrina calibration certificate/Quadrina manual in the boxes provided. The correct calibration will be automatically calculated in the software.

b) Click on **OK** to set value.
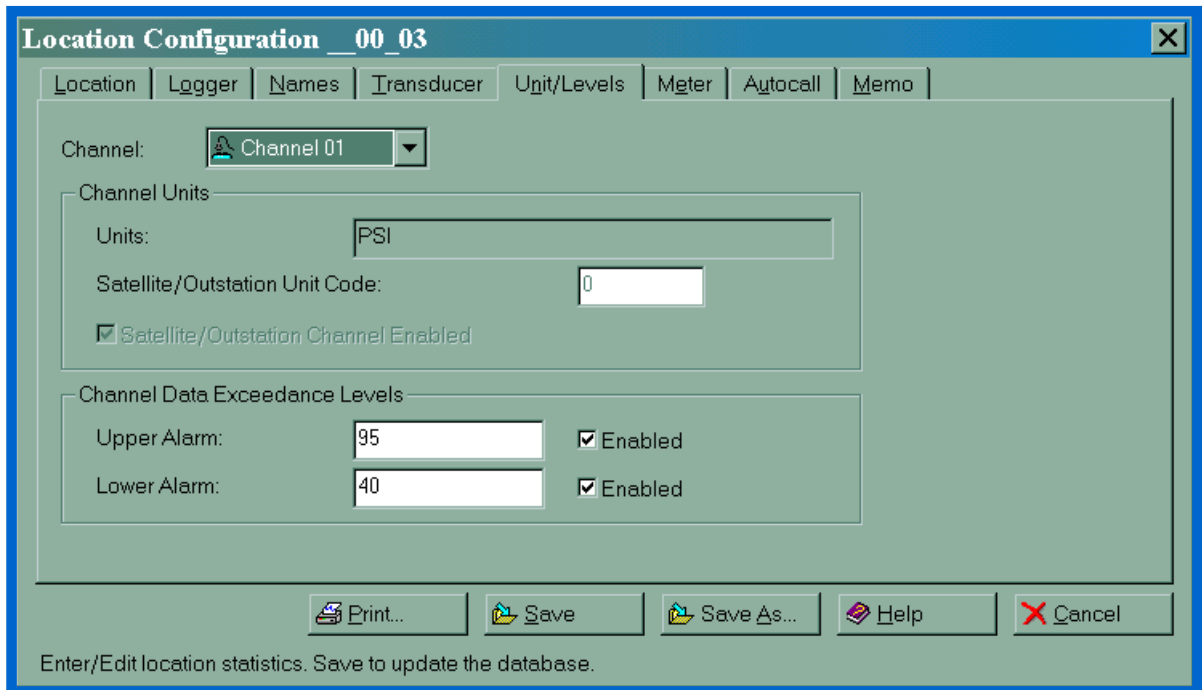
18. For **4-20mA** and **0-1V**

a) Select the required sensor type by clicking on the right arrow and choosing from list. If the sensor type is Flow, the Full Scale Deflection has to be in the software base units for Flow which is **Gallons/Second** or **Litre's/Second**

   If the sensor type is Pressure, the Full Scale Deflection has to be in the software base units for Pressure, which is **Metres Head**

b) Enter the Full Scale Deflection value (i.e. 20mA OR 1Volt value) in box provided.

c) Click on **OK** to carry out calculation of Calibration and Offset and fix value.

Select Unit/Levels Sheet

This section allows you to enter alarm levels, which will be applied to data being downloaded via 'Auto Call'.

19. Select a Channel

20. Enter the required values for Upper/Lower Alarm. The values will be in whatever is shown in **Channel Units**
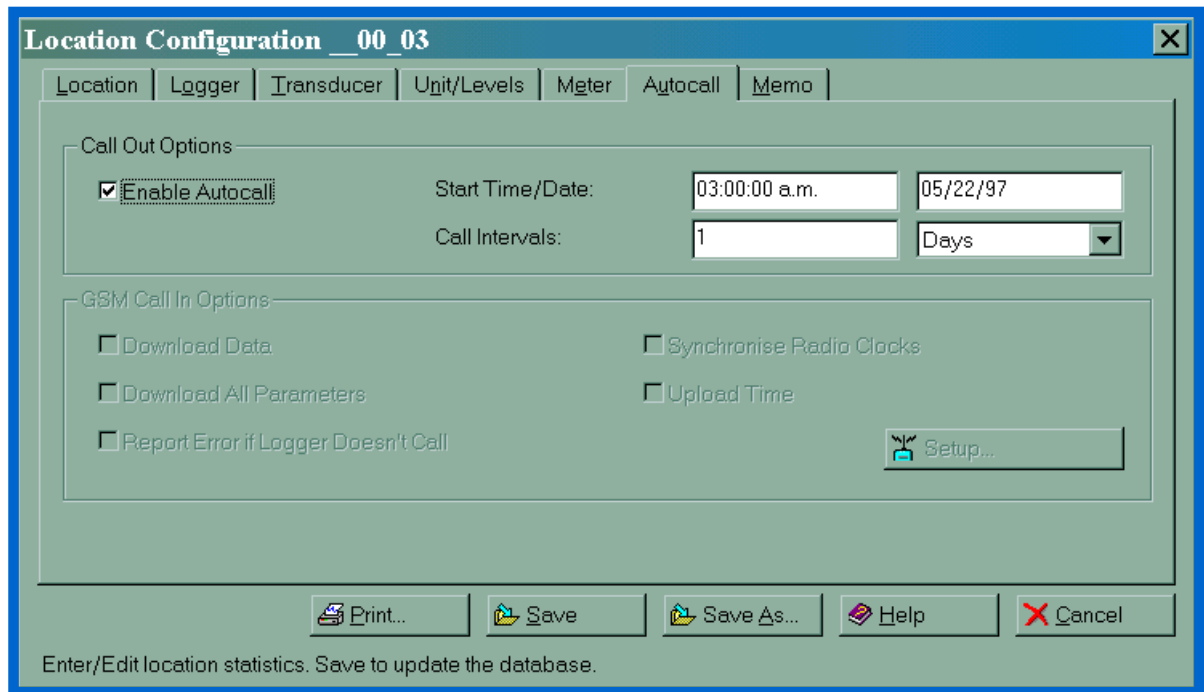
21. Make sure the **Enabled** boxes are checked if you want the alarms to apply.

Select Meters Sheet

22. Fill out sheet if required with information concerning the meter being logged.

Select Autocall Sheet

This section allows for automatic dialing of Telemetry/Cellular loggers, as well as downloading of portable loggers into archive files.

23. Enter the required **Start Time/Date** for the logger.

24. Enter the required **Call Interval** in days or hours.

25. Toggle **Enable Autocall** box on or off as required. The logger will only be auto-called when this box is checked.

GSM Call In Options
Will not apply for GSM Cellular Dataloggers purchased from the Year 2000 and beyond, as they will be set up the same as a normal Telemetry Datalogger.

Select Memo Sheet

26. Enter site information as required on Memo Sheet.

This completes location configuration

27. Click on **Save** to store location information and if needed click on **Print…** To have a hard copy of the location information.

C.) Data Manager

Enables data files to be copied, deleted or repaired. Select the required Zone and Location to display current list of files. Carry out operation on selected file as required.

D.) Autocall Data List

Displays a list of all locations in the database with the time of the last archive data stored for each location for the current computer identity. Items that are displayed crossed out are not currently enabled for auto call. The computer identity combo box contains all the computer identities found in the database. Selecting a different computer identity from this list will display the locations with that computer identity.

E.) Map Telephone List

This feature is for use where telephone numbers may vary depending on where the logger is being called from. The regular database will contain numbers that are valid from the normal calling location, but some numbers may need to change if a 'portable' computer is being used to download the loggers from a different location.
This allows you to Create/Edit/Delete a "Telephone Map File" containing a list of loggers id's and telephone numbers (2 columns) to override the numbers stored in the regular database for those loggers that are incorrect. These files will be stored in a directory called 'telemap' from the database path e.g. 'c:\radwin\data\telemap'. Mapping files may have any name you wish. The mapping file only needs to contain those numbers that need to be changed.

F.) Update Database Telephone STD Codes

This performs a search and replace on database telephone numbers. It searches for the Old entered STD code at the start of numbers, and if found replaces it with the New entered STD code.

Select **OK** to display the update confirmation window before updating the database.

G.) Print Setup

Allows you to choose the Printer you wish to use and the properties.

H.) Exit
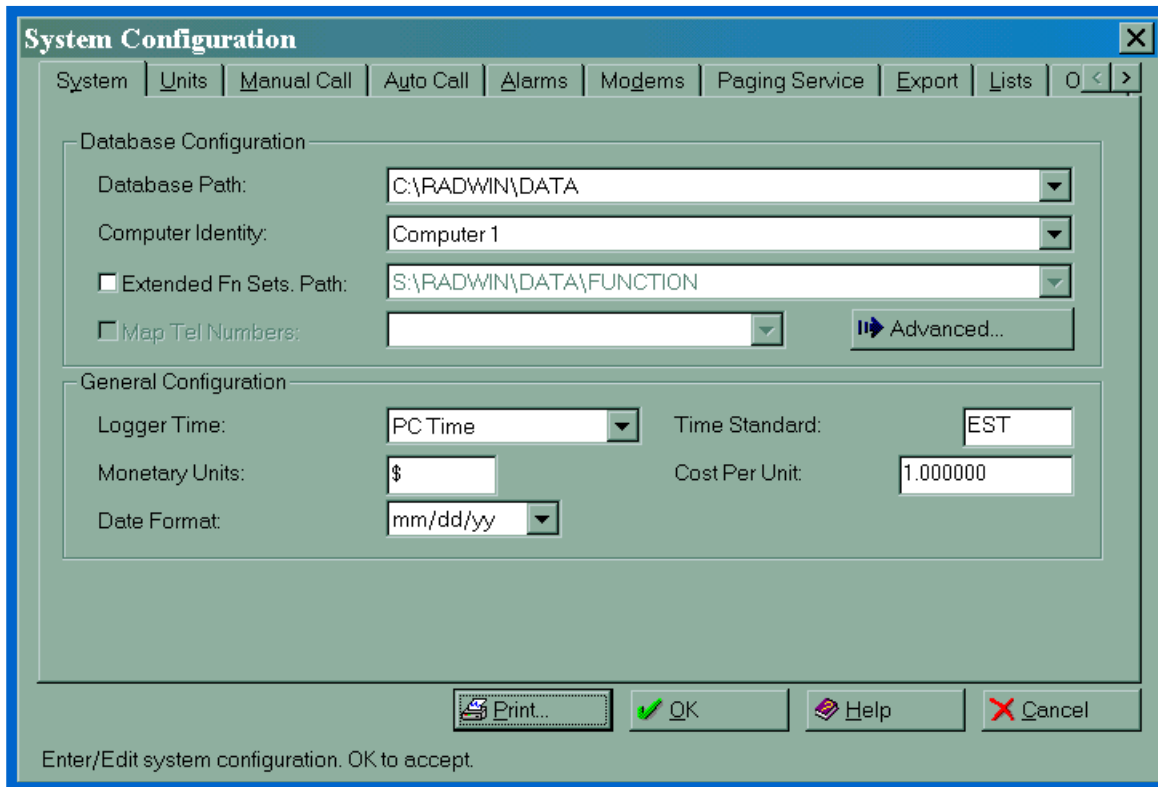
Displays confirmation window before exiting Set Up.

4.2.2 Options

A.) System Configuration

Set main system defaults Database path, Units, Port configuration, Modem set up, etc…

System Sheet

Database Configuration

Database Path
The database path specifies where the logger database will be stored, and where the software will look to find its data files. Multiple databases may be created on a system by specifying different paths in the database path entry field. If the database specified exists, this will be used throughout the software, otherwise a new database will be created in this location.

Computer Identity
The Computer Identity is used to associate a name with a computer. Computer Identities re also assigned to locations in the database. All locations in the database that have a computer identity that matches the System Configuration Computer Identity are recognized by the Autocall software running on this computer. This allows a common database to be maintained on a Server, with a number of computers running RADLOG for Windows Autocall downloading data. Each computer will only download data for those locations in the database with a computer identity that matches that particular computer's System Configuration computer identity.

If a shared database is not required, or if one computer is responsible for downloading data from all loggers, the computer identity is not important, but all locations in the database must be set with the identity entered in the System Configuration.

Map Tel Numbers
Map telephone numbers option included in system configuration. This feature is for use where telephone numbers may vary depending on where the logger is being called from. The database will contain numbers that are valid from the normal calling location, but some numbers may need to change if a 'portable' computer is being used to download the loggers from a different location.
All the files that have been created with the "Telephone Map File" option will be displayed in the mapping file selection combo box in the system configuration.

Extended Function Sets Box
Extended function sets allow Groups of function sets to be created. By default this option is disabled, which results in all function sets being created in a single group. If it is required to split function sets up, e.g. into different regions such as North, East, South, West, to make the system more manageable, enable this option. This also has the advantage of making the total number of function sets unlimited (each group containing a maximum of 10000 function sets).
Enter a path where the function sets are to be stored. This may be on the local PC, or on a Server allowing multiple users access to the function sets.
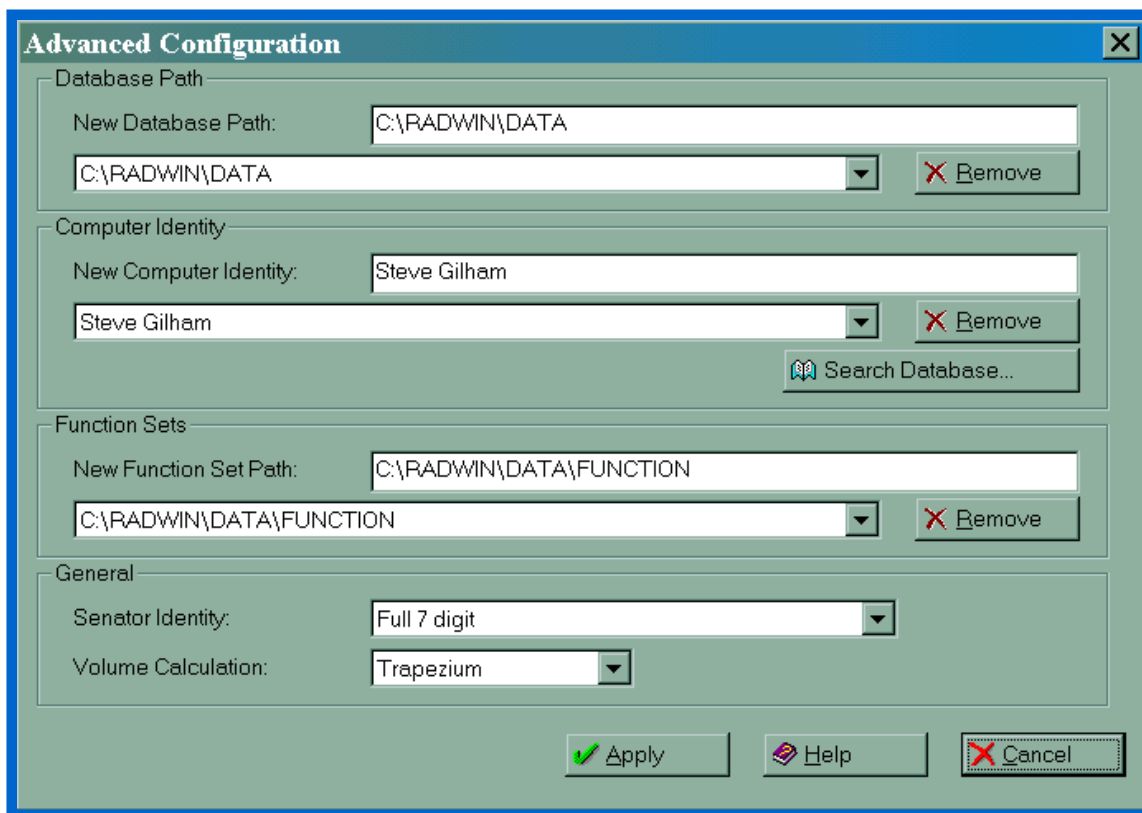
Path
This specifies where the extended function sets will be stored

The settings detailed above can be changed by clicking the **Advanced…** button.
This also allows access to two further settings.

Advanced Configuration

Database Path

New Database Path: `C:\RADWIN\DATA`

`C:\RADWIN\DATA`   ✕ Remove

Computer Identity

New Computer Identity: `Steve Gilham`

`Steve Gilham`   ✕ Remove

📖 Search Database...

Function Sets

New Function Set Path: `C:\RADWIN\DATA\FUNCTION`

`C:\RADWIN\DATA\FUNCTION`   ✕ Remove

General

Senator Identity: `Full 7 digit`

Volume Calculation: `Trapezium`

✓ Apply   ✎ Help   ✕ Cancel

General

Senator Identity

Determines the method used for decoding a Senator (Multi Channel) logger identity.

Full 7 Digit: The rightmost 7 characters of the identity are used and broken down into the appropriate lengths to form the zone and location identities. This is the standard for all new databases.

RADLOG Win < 2.1 Compatible: 6/7 digit: Early versions of RADLOG for Windows used the rightmost 6 digits of the logger identity. This was broken down into a 4-digit zone with the rightmost 2 digits forming the location. When a configurable zone/location identity was introduced in the software the strategy remained the same for databases with a 4-digit zone and 3-digit location. Other database formats used a 7-digit identity.
If a match is not found in the database for an identity decoded in this manner, a check will then be made for an identity that matches the Full 7 Digit identity.

RADLOG DOS Compatible: 4 digit - To maintain compatibility with RADLOG DOS systems that use a 4 digit identity for all logger types. When a logger is downloaded the right most 4 characters of the identity will be used for searching for the logger in the database (2 digit zone and 2 digit location).

If a match is not found in the database for an identity decoded in this manner, a check will then be made for an identity that matches the RADLOG Win < 2.1 Compatible: 6/7 digit, and then the Full 7 Digit identity if the identity was still not found.

Volume Calculation

Two options are available for Volume Calculation, Trapezium and Summation. Trapezium calculates the area under a graph, while Summation adds each data point to get the resultant volume. The Volume Calculation should be "Summation" if flow is being logged by a Digital pulsed signal i.e. Magnetic & Optical sensors etc. and "Trapezium" if the flow is being logged by an Analogue signal i.e. 4-20mA & 0-1volt etc.

Once these parameters have been set, click on **Apply**

General Configuration

Logger Time

The logger time is the default time that will get uploaded to loggers, and will be used for comparing downloaded logger times with the PC time. This is useful when the PC is operating in a different time standard to the loggers

e.g. the PC may be working in Daylight Savings Time and the loggers all working in Eastern Standard Time. Setting the Logger Time to PC Time - 1 hour will compensate for the different time standards.

Time Standard

Time Standard is a three-character text field for entering the time standard that is to be displayed on graphs, i.e. GMT, EST, and PST etc.

Monetary Units

The monetary unit is a 2-character text field specifying the symbol to use for water costs. e.g. $

Cost Per Unit

Cost per unit is the cost of water in the above monetary units*.*
The unit is the base unit for Flow in the software, either: Litres or US Gallons.

Date Format

The date format allows the date format to be changed between European (dd/mm/yy), US (mm/dd/yy) and Asian (yy/mm/dd) formats.

Select Units Sheet

The base flow units determine which system unit types are to be used.

Sensor Default Units
This list displays all the sensor types currently available. The default units to be used for each sensor are also displayed, along with the missing data value. To change the default units and/or missing data value double click on the sensor type, or select the required type and select the Edit button.

The missing data value is the data replacement value that will be used in place of missing data. This may be a user-defined value or the next available data value.

These default units are used system wide wherever a sensor of this type is used.

Select Manual Call Sheet

Selects the comms ports and default baud rates to be used for communicating with loggers connected directly to the PC and for modem loggers. The Download software will use either the logger or modem port depending on the connection type selected for download/upload.

If only 1 Serial port is available on your PC, then use this port for both types of communication, connecting a modem to the port as required. If more than 1 Serial port is available, set the logger and modem to use different ports. The baud rate selection is a default displayed in the downloading software.

Select Auto Call Sheet

The Auto call software may operate on up to 32 comms ports simultaneously, allowing up to 32 loggers to be downloaded at a time.

Enable the ports that are to be used for auto call, and set the connection type. This determines which type of communications may take place on that particular port. The default baud rate specifies the baud rate of the port when no auto call communications are in progress. To receive a call from a GSM logger that has a baud rate of 9600, the modem will have to be attached to an auto call port configured as a modem type with a default baud rate of 9600. For outgoing calls the baud rate specified for the location in the database will be used.

Autogenerate Data Time
This is the time selected for the auto call software to auto generate data. When the auto call software is running and this time elapses, it will search all the function sets and generate data for those that have automatic data generation options selected. Automatic data generation may be enabled by selecting this check box or disabled if it is not selected.

Download Data Retry Limit
The maximum call attempts sets the number of times the Auto call software will try to call and download a logger before abandoning the call until the next scheduled call time.

Auto Clear Error Table
The auto clear error table entries should be checked if entries in the Auto call error table are to be automatically deleted when they are the selected number of days old.

Enable Modem Auto Answer
If disabled this will prevent the software from receiving calls e.g. from outstations satelliting, but will also prevent any other call from being answered if this is a security issue.

Select <u>A</u>larms Sheet

The alarm reporter software may operate on up to 32 comms ports simultaneously, allowing more than 1 alarm to be received at a time. Enable the ports that are to be used for receiving incoming alarms, and set the connection type. The connection type will normally be set to Modem. The default baud rate specifies the baud rate of the port when it is waiting to receive alarms.

Select Mo<u>d</u>ems Sheet

Double click on the Comms port you want to configure

Escape
Sets the modem escape speed, Fast or Slow. For modern fast modems set this option to fast. If errors are reported resetting a modem after a call, try changing the escape speed.

Dial Mode
Each modem port must also have a dial mode selected, to indicate if Tone or Pulse dialing is to be used.

Line Type
Specify a line type for the modem:
If the modem is attached to an external line, select External.
If the modem is attached to an internal exchange line where a leading number must be inserted on telephone numbers to get an external line, select Internal. If Internal lines are being used, enter the number required to get an external line in the internal line Dial Out Code entry field.

Modem Control String

Specifies a modem control string for each modem attached to your computer. This allows the operation of a modem to be adjusted to make it comply with special software/hardware requirements. The default settings should be suitable for use with most modems. A different control string may be specified for each serial port, allowing modem types to be mixed. The default modem control string is: S2=43S12=25M0. If this default modem control string causes problems, it may often be rectified by inserting an F1 in front of the string so the control string becomes: F1S2=43S12=25M0. (If it still does not work, consult the Modem user manual.) This sets a factory default Hardware Flow Control Template configuration in the modem.

Internal Exchange Dial Out Code

Specifies the number(s) used to acquire an outside line.

Modem/Paknet No Carrier Timeout

Specifies the time elapsed before Auto call declares a Timeout due to No Carrier.

Pager Wake Up Time

Species the time to wait between calling a loggers Pager number and then calling the loggers GSM/PCS modem number. This must be long enough to allow the pager to receive the call and wake up the logger before the loggers modem number is dialed.

Paging Service

This is used in Europe

Export

The export data directories specify the directories for storing data that has been auto-generated from function sets by the Auto call software. Function sets allow different data types to be selected for generating data each day when all loggers have been called.

Lists

Logger Types
RADLOG for Windows is suitable for use with all Radcom products. If it is not required that certain logger types be displayed in the logger type selection lists, check only those types required.

Default Logger Type
Selects the required logger type from a list, which is then used as the default. This is for use when entering new locations in the database, or at any other time when a logger list gets displayed without a location from the database having been previously selected.

OM<u>S</u>

This is a special configuration for logging onto the Thames Water (UK) OMS system before performing Master Satellite Communications. Allows four connection times to be specified at which time the Auto call software will read the oms_link.txt file that should be located in the directory specified. This performs the logon procedure for logging onto the OMS system.

Connection Retries:
Maximum number of attempts to be made to log onto the OMS system for a given connection time.

Time Between Retries:
The time that should elapse between a logon failure and a logon retry.

No Response Timeout:
Time to wait for a response from the OMS system before aborting a connection attempt.

P<u>r</u>inting

Allows print margins, headers and footers to be specified.

B.) <u>Sensors/Units</u>

The system includes a number of pre-defined sensor types, and allows the user to define their own. Sensor types other than FLOW or PRESSURE are only applicable to 4-20mA and 0-1V transducers.
To enter a user defined sensor type select user defined in the Select Sensor Type combo box. The User Defined Sensor name filed now becomes selectable. Enter the name of the sensor, and select **<u>C</u>reate** to create the sensor type.
To delete a sensor (only user defined sensor types may be deleted), select the sensor from the list then select **<u>R</u>emove** to delete it.
Units may be entered for each sensor type, both system defined sensor types and user defined sensor types. Select the sensor type to edit the units for, and select **U<u>n</u>its**.

C.) <u>Update Login Path</u>

Sets the Login Path used with the Admin Package (See Section 8.0 for further details).

D.) <u>Optimise Database</u>

Database utilities delete/re-create database; Increases accessing speed; Deletes unwanted files.

Optimise Database Access

This speeds up database operations and recovers a corrupted filing system directory structure. This is recommended if many zones and/or locations have been deleted, or if some elements of the database directory structure have been deleted by another source.

Note: - this will not recover any deleted data files.

Optimise And Restore Database

Performs the above optimization, but will also recreate database entries by scanning the filling system structure. The zones and locations found in the filling system that are not in the database will be given the name RECOVERED to indicate that they were created from a recovery operation. All locations created will be given a default set up.

This is recommended if database files have been corrupted or deleted outside of RADLOG for Windows requiring the database to be recreated.

E.) Lookup Tables

A lookup table is used for mapping data values returned from a data logger to a genuine data value. This may be useful in cases where a non-linear conversion is required, such as a depth transducer in a reservoir whose area varies with depth, to get a volume of water figure.

Enter/Select the identity of the Lookup Table to enter. Lookup Table identities must be in the range 0000 - 9999.

Select **Edit…** after entering an identity or double click on existing entry in the table to enter the Lookup Table.

New… selects first unused identity number.

F.) Function Groups

Allows for subdivision of Function Sets if option is enabled in system configuration. Functionality operates as for the Zone/Location subdivision.

G.) Function Sets

A function set is used to combine a number of data sets obtained from different locations to get a net result. The function may apply lookup tables to data, as well as constant values to arrive at the required results. Function sets may also be used to display multiple graphs, by defining a set that contains graphing elements. To display data using a function, use the View software, which allows a function set to be selected and a time period to be specified for the data to be generated and displayed.

Note: Function sets may only be applied to Autocall data. To perform arithmetic operations (including applying lookup tables) to manual call data, use the Derive function provided in the View software.

Select Edit after entering an identity (0000 – 9999) or double click on existing entry in the table to enter the Function Set. **New…** selects first unused identity number.

A function may consist of 3 basic element types, logger data, a constant value, and other function sets.

To enter an element (location, constant, or function) select the appropriate button. This will display a selection/entry window to allow the element to be configured and included in the set.
To delete an element, select the element to delete and select the Delete button.
To insert an element, select the element after which the new element is to be inserted, and then select the appropriate type button to be inserted.

To edit an element, select the element followed by the Edit button, or double click on the element with the mouse.

Example 1
A function that consists of a location multiplied by a constant:

Each element in a function occupies one line of the table. Each line reads from left to right. This function reads - function 0002 = zone 09 location 16 channel 1 with lookup table 0002 applied to it, multiplied by 2.

Example 2

fx	0002 =

1	- ⌇⌇ ▢ __09_16 ⚲ 1 ☑ 0002 METER-C-
2	/ 2.000000

A function similar to example 1, except with a - operator on the first element (which will have the effect of inverting the data from this location).

A graph has also been specified for this element (the type(s) for this are selected in the location element selection), which will produce a graph for this locations data in addition to the resultant graph of dividing the inverted logger data by 2.

Example 3

A function used to display a graph of location 09 16 channel 1 data (note that this data does not have a lookup table applied unlike the locations in the previous examples) along with a graph of function set 0002 and function set 0003, but without a resultant graph for this set.

fx	0013 =	
1	⌇⌇ ▢ __09_16 ⚲ 1	METER-C-
2	⌇⌇ fx 0002	LARGE USER METER 2
3	⌇⌇ fx 0003	TOTAL FLOW LARGE USER

When elements are entered in a function set that contain no math's operator (i.e. the math's operator was selected as a graph fn in the edit/enter element window), that element will play no part in creating a resultant graph for the function set, but will cause a graph for that element in the function to be created. As all the elements in this example have graphs selected with no math's operator, it will have the effect of displaying a graph for each of these elements.

Note: These examples were to demonstrate concepts in generating (and reading) function sets, and by no means cover all the permutations available for including loggers, constants, and functions within functions.

Function Set Output

By default, a function set will generate data that will display as an all data graph in View. If different graph types are required (i.e. min data, max data etc.), or if a lookup table is required to be applied to the output of the function set, select the top line of the table fx nnnn =. Double click on this line or select it followed by edit to display the function set output window. This will allow different graph types to be displayed, and a lookup table to be applied if required.

Add Location Object

Math's Operator
The math's operator determines how the location will be included within the function set. Select the required operator from the combo box. Operators containing the word Diff are difference operators. In this case the difference between consecutive values is used in calculations instead of the true data value.

Note: If this element is to produce a graph only, and play no part in generating data for inclusion in the function calculation, select Graph Fn as the math's operator type. This indicates the element is a graphing function element. A graph type or types must be selected for graphing elements.

Graph Types
If a graph is to be generated for this element select one or more of the graph type check boxes. (If a Graph Fn was selected as the math's operator then at least one graph type must be selected). The graph types are:

DAT   Generate graph using all the data.
MIN   Generate graph using daily minimum values.
MAX   Generate graph using daily maximum values.
TMIN   Generate graph with vertical axis as time, to show the daily time at minimum.
TMAX   Generate graph with vertical axis as time, to show the daily time at maximum.
TOT   Generate graph showing a daily value as the sum of the days data.

Channel Number
Select the channel number of the data required.

Apply Selected Lookup Table
If a lookup table is to applied to the data, select the lookup table required from the list and select this check box so it gets applied to the data.

Select **OK** to include the element into the function.

Add Constant

Math's Operator
The math's operator determines how the location will be included within the function set. Select the required operator from the combo box.

Value
Enter the constant value (NOT 0).

Select **OK** to include the element into the function.

Add Function Object

Math's Operator
The math's operator determines how the function will be included within the function set. Select the required operator from the combo box.

Note: If this element is to produce a graph only, and play no part in generating data for inclusion in the function calculation, select Graph Fn as the math's operator type. This indicates the element is a graphing function element. A graph type or types must be selected for graphing elements.

Graph Types
If a graph is to be generated for this element select one or more of the graph type check boxes. (If a Graph Fn was selected as the math's operator then at least one graph type must be selected). The graph types are:

DAT   Generate graph using all the data.
MIN   Generate graph using daily minimum values.
MAX   Generate graph using daily maximum values.
TMIN Generate graph with vertical axis as time, to show the daily time at minimum.
TMAX Generate graph with vertical axis as time, to show the daily time at maximum.
TOT   Generate graph showing a daily values as the sum of the days data.

Code
Select/Enter the code of the function set to be included within the current function set.

Select **OK** to include the element into the function.

Select **Save** to store the entered function.

Select **Save As…** to copy the function set to a different identity.

Function Set Auto-generate Data

This enables data to be automatically generated by the Auto Call software. The Auto Call software generates data at the time of day specified in the System Configuration (provided the auto generate data option is enabled in the System Configuration). The Auto Call software may also be used to force generate data on request for all or selected function sets.

Select the types of data required by selecting the appropriate check boxes. If data generation is not required for this function set, but is enabled in the System Configuration, ensure no data types are selected.

Select/Enter the time span of the data to be generated.

Select **Save** to store the entered function.

Select **Save As…** to copy the function set to a different identity.

Function Set Statistics

The function statistics are used when calculating statistics for Flow data. The values required may be automatically generated by reading the statistics from the database for each location included in the set (select Auto Calculate), or may entered by the user (select User Defined).

Select **Save** to store the entered function.

Select **Save As…** to copy the function set to a different identity.

Setting Up Function Sets

1. Select Function Sets

2. Enter the new 4 figure Code Number in the box provided and press **Edit…** or click on **New…**

3. Enter the new Function Set Name.

4. Click on **Location** to access the filing system.

5. Select the required Zone and Location.

This accesses the **Edit Location Element** Sheet.

6. Select the required operator (+, -, /, x, pwr) by clicking on the right arrow.

7. Select the required channel of the logger by clicking on right arrow.

8. A Look Up Table can also be applied at this point if required.

9. Select Statistics to set property and population figures for the Function set. The function statistics are used when calculating statistics for Flow data. The values required may automatically be generated by reading the statistics from the database for each location included in the set (select Auto Calculate), or may be entered by the user (select User Defined).

10. Auto Generate Data enables data to be automatically generated by the Auto call software. The Autocall software generates data at the time of day specified in the System Configuration (provided the auto generate data option is enabled in the System Configuration). The Autocall software may also be used to force generate data on request for all, or selected, function sets.

    Select the types of data required by selecting the appropriate check boxes. If data generation is not required for this function set, but is enabled in the System Configuration, ensure no data types are selected.

11. When sheet is complete, click on **OK** to select.

12. Further selection can then be added as required to build the complete Function Set.

13. It is also possible to add and subtract complete Function Sets by clicking on **Function**

14. When Function Set is correct, click on **Save** to store.

Editing/Deleting Function Sets

1. Select Function Sets

2. Select the function set by double clicking the mouse on the set or entering correct set code.

3. Press **Edit…**

4. Edit or Delete Function Sets as required

.

5. When Function Set is correct, click on **Save** to store.

4.2.3 Start

The Start function is used to move between different modules of the RADLOG for Windows software.

A.) Radcom Download

Switch to the Download/Upload program

B.) Radcom View

Switch to the View program

C.) Radcom Auto Call

Switch to the Auto call program

D.) Radcom Administration

Switch to the Administration program

4.2.4 Help

A.) Help Index

Displays a list of topics supported by On Line Help

B.) How to use Help

Displays the Program Manager's How to Use Help

C.) Technical Support

Displays technical support information

D.) About Setup

Displays release information about Setup

4.3 Setup - Toolbar Buttons

Radcom Setup 3.19	
File Options Start Help	
©1999 Radcom Technologies Ltd.	Press 'F1' For Help.
	12:56:22 10/17/00

Help Index

System Configuration

Data Manager

Function Sets

Function Groups

Lookup Tables

Update Location

Update Zone

RADLOG for Windows   RADLOG for Windows

Download/Upload

RADLOG for Windows   RADLOG for Windows

Download/Upload

RADLOG for Windows   RADLOG for Windows

Download/Upload

RADLOG for Windows   RADLOG for Windows

Download/Upload

RADLOG for Windows   RADLOG for Windows

Download/Upload

RADLOG for Windows   RADLOG for Windows

Download/Upload

RADLOG for Windows   RADLOG for Windows

Download/Upload

RADLOG for Windows   RADLOG for Windows

The DOWNLOAD/UPLOAD program of this software is used for

- Collecting data (direct, telemetry &/or radio linked)
- Automatic data storage
- Re-programming a Radcom datalogger

5.0 Download

5.1 Principle Features of Download

5.1.1 Select Location

A user can select the required 'target' location from a database

5.1.2 Download

Download Parameters and/or data from a <u>selected</u> location
- Automatic data storage if ID matches a Zone and location
- Move data to another database location
- Change transducers for the downloaded data
- Apply text comment to downloaded data
- View/Edit logger Parameters
- Store/Load parameters in database
- View Logger Status

Download Parameters and/or data from an <u>unknown</u> location
- Store data in temporary file if no location exists for logger ID
- Move data to another database location
- Change transducers for the downloaded data
- Apply text comment to downloaded data
- View/Edit logger Parameters
- Store/Load parameters in database
- View Logger Status

5.1.3 Reprogram a Dataloggers

A user is able to:
- View/Edit logger parameters
- Store/Load parameters in database
- View Logger Status
- Change logger identity
- Upload parameters
- Start recording

5.2 Menu Options

5.2.1 File

A.) Select Location

Select **OK** to read the location communications information from the database. Selecting Download/Upload will then display the Download window with this location.

B.) Exit

Displays confirmation window before exiting

5.2.2 Transfers

A.) Download/Upload

The logger type and baud rate must be set before proceeding with a download or upload. If a location was previously selected from the database, the logger details will be displayed according to those stored in the database for this location.

Type
The type of logger that is to be downloaded should be selected from the **Logger Type** selection combo box. This is important, since different types of download are applicable to different logger types. Correct logger selection will allow the full parameter set for that logger type to be displayed, edited and uploaded.

Incorrect logger type selection may result in the download failing, which will display a time-out message, or for a reduced parameter set to be displayed.

e.g.
Downloading a LoLog as a Centurion or Sentry will result in a reduced parameter set being displayed, and uploading these parameters will fail.
Downloading a Senator as anything other than a Senator will fail.

The list includes various forms of each logger type. It is not important that the exact form of the logger is selected i.e. selecting a Sentry Flow to download a Sentry Pressure logger is acceptable. The mismatch will be automatically detected after download and the exact logger type will be automatically determined.

Note: It is important to select Centurion Pressure Transient to download a pressure transient logger, and not to select this option for any other Centurion type. Data downloaded from a Pressure Transient logger may only be viewed using the Transient View software, which allows data to be viewed that has a sample rate in milliseconds.

Baud Rate

The choice of baud rates in the **Baud Rate** selection combo box updates itself based on the type of logger selected. It will also update when switching between direct and modem connection. This is to help the user with the baud rate selection, only allowing baud rates to be selected which are applicable to the selected logger and connection type.

Connection

Select the connection type according to the type of download. The modem option will only be selectable if a logger type that is able support modem communications has been selected.

Modem

The logger is to be downloaded via a modem. The comms port selected for Modem Comms in the **Setup** software will be used for this download. A modem must be attached to this comms port.
When modem is selected a telephone number must be entered.

Direct

The logger is to be downloaded using suitable download leads attached to the PC. The comms port selected for Portable Comms in the **Setup** software will be used for this download. The download leads must be attached to this comms port.

Options

Enter New Parameters

Allows a set of parameters for the selected logger type to be entered and uploaded.

It is also possible to use the **Parameter Settings For Last Recording** option in preference to this option. This will allow the logger's current parameter set and status to be viewed before changes are made.

Parameter Settings for Last Recording

This will download the logger parameters only. This will allow the logger status to be viewed, and parameters to be viewed, edited and uploaded.

Parameter Settings and All Recorded Data

Downloads all the data for the last recording. The parameters are also downloaded as above.
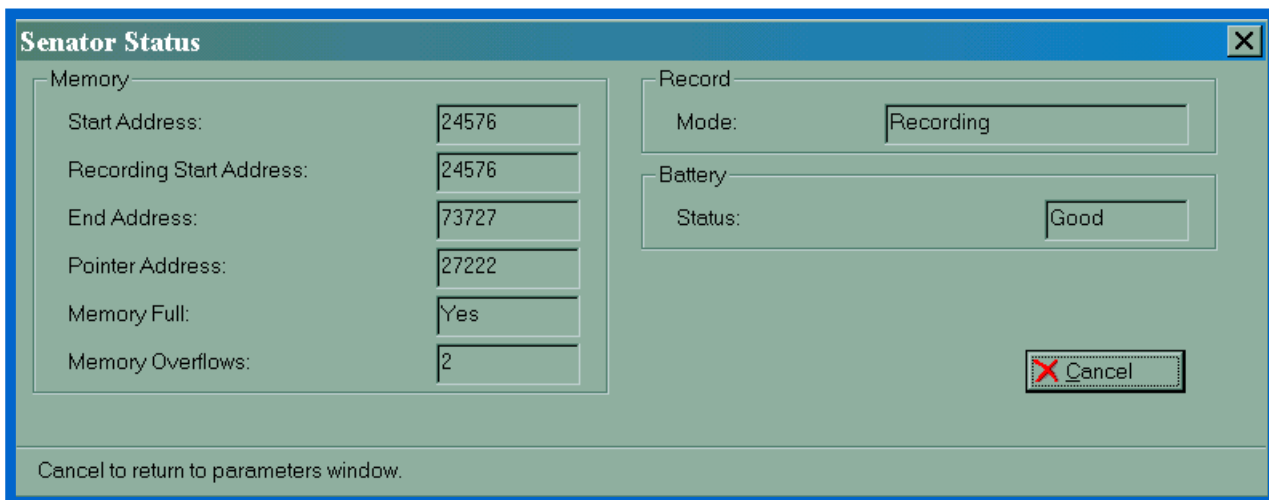
Last Number Of Hours Data

Downloads the specified number of hours of data from the logger. The parameters are also downloaded as above.

Logger Memory
Downloads logger memory from the specified address of the specified length. The parameters are also downloaded as above.

Data is stored in memory from the Start address up to the End address. Each reading requires two memory slots. Check the logger status page for Start and End address information, i.e. to download 96 readings (24 hours at 15 min sample rate) per channel from the Start address on a Senator logger with 4 Channels recording, enter 24576 as the Start address and 96 x 2 x 4 = 768 for the length.

Senator Status

Memory

Start Address:	24576
Recording Start Address:	24576
End Address:	73727
Pointer Address:	27222
Memory Full:	Yes
Memory Overflows:	2

Record

Mode:	Recording

Battery

Status:	Good

X Cancel

Cancel to return to parameters window.

Note: This type of file does not have a time stamp, and so the correct Start time and End time will have to be added manually when viewing the file.

Select **OK** to perform the selected download. If data is being downloaded, the downloaded data screen will be displayed, and then the logger parameters screen will be displayed after successful download.

5.2.3 Start

The Start function is used to move between different modules of the RADLOG for Windows software.

A.) RADCOM Setup

Switch to the Setup program

B.) RADCOM View

Switch to the View program

C.) RADCOM Auto Call

Switch to the Auto call program

D.) RADCOM Administration

Switch to the Administration program

5.2.4 Help

A.) Help Index

Displays a list of topics supported by On Line Help

B.) How to use Help

Displays the Program Manager's 'How to Use Help'

C.) Technical Support
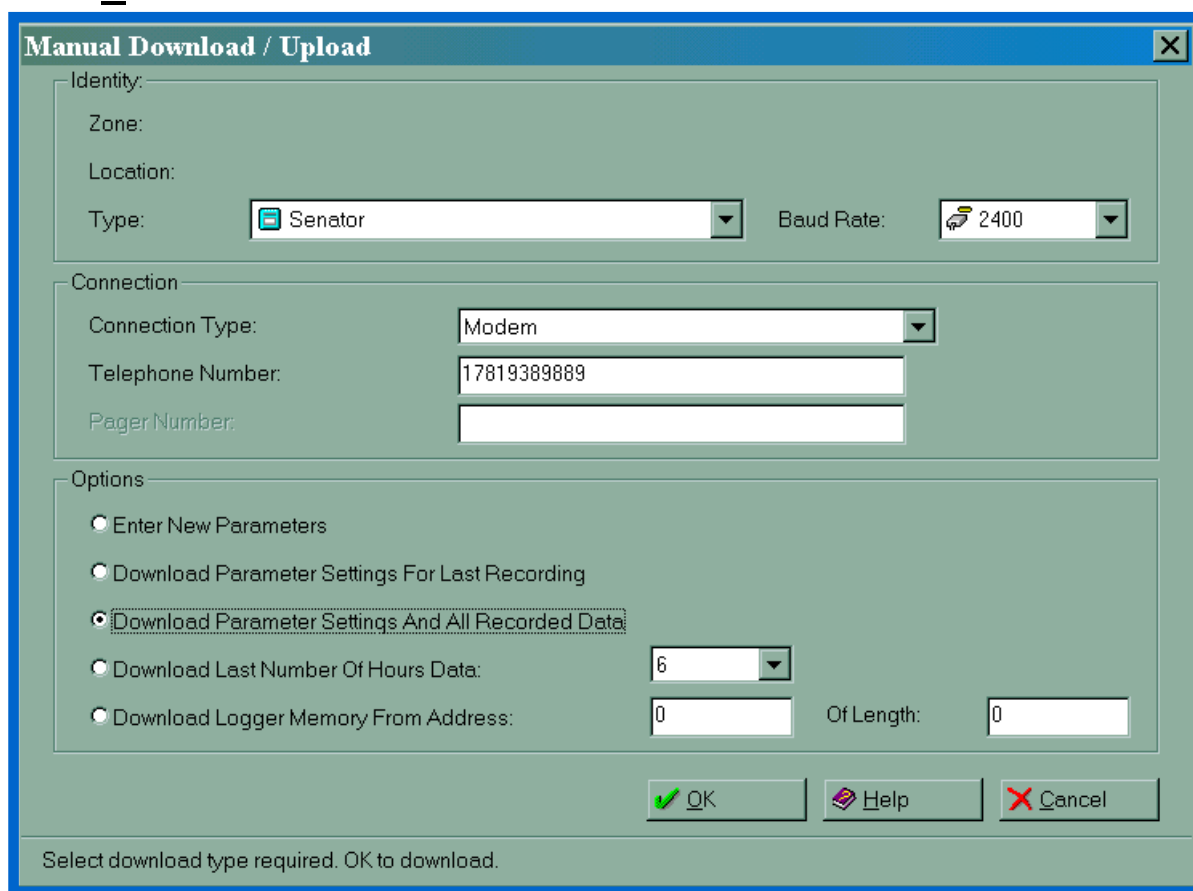
Gives Technical Support information

D.) About Manual Call

Displays release information about Manual Call

5.3 Examples of Logger Downloading/Uploading

1. Choose **Select Location…**

2. Select required Zone and Location. This sets the correct logger type and baud rate for the download

3. Select **Download/Upload…**

4. Select correct **Connection** Type and enter a phone number if appropriate.

5. Select **Download Parameter Settings And All Recorded Data.**

6. Press **OK**

Note: that in the example above, the Location has not been pre-selected (i.e. steps 1 and 2 have not been carried out), requiring selection of Logger **Type** and **Baud Rate**.

A bar indicating Downloading in Process should now be displayed

7. When downloading is completed, the Zone, Location and Filename of the Data are displayed. Add a comment in the box provided if required.

8. If the logger Location is incorrect, press **Change Identity…** to enter the filing system and choose the correct Location. The revised Zone/Location is displayed.

9. The Calibration and Offset values previously set in the Location Configuration in the SetUp program will be applied to the new data. If this information has altered, press **Transducers…** and change the detail accordingly.

10. When all the information is correct, press **OK** to store the data.

Uploading Logger Parameters

1. Choose **Select Location…**

2. Select required Zone and Location. This sets the correct logger type and baud rate for the download.

3. Select **Download/Upload…**

4. Select correct **Connection** Type and enter a phone number if appropriate.

5. Select **Enter New Parameters** and press **OK**

6. Set all parameters correctly, including altering **Identity** if necessary.

7. Press **Upload…** and check Upload Parameters Sheet is correct.

8. Click on Options as required. These will alter depending on the type of logger selected.

9. Press **OK** to start Upload.

A bar indicating Upload progress should now be displayed.

10. Following a successful Upload, the logger parameters are now displayed.

11. Press **Cancel** twice to exit.

5.4 Troubleshooting Communications Problems

Overview

During communications with a data logger, the comms progress bar will be seen to advance as data is transmitted and received from a logger. When data is being sent from the PC to the logger, the bar will move in Blue blocks. When data is being received from a logger the bar will move in Red blocks.

If error messages are consistently received when receiving data (i.e. the bar is moving in Red blocks), try decreasing the baud rate. This situation can arise with older PCs communicating at high baud rates. Also ensure that no other devices are reading this comms port, such as network drivers.

Error Messages

Following are all the error messages that may be reported before, or during communications, with suggestions on their cause and possible solution.

Note: To change the comms port being used, select the system configuration option in the Setup software.

Unable To Open Commx - Bad comms ID
Unable To Open Commx - Bad baud rate
Unable To Open Commx - Bad byte size
Unable To Open Commx - Bad defaults
Unable To Open Commx - Unable to change state
Unable To Open Commx - Unknown error

This comms port is not supported in this version of windows with the required settings. Try a different comms port, i.e. Comm1 or Comm2.

Unable To Open Commx - Memory allocation
Unable To Open Commx - Port not open
Unable To Open Commx - Bad DCB

This comms port was not opened. Try closing down other applications to free some memory.

Unable To Open Commx - Port is in use by another application
Unable To Open Commx - Port already open

The comms port selected is in use by another application or is already open. If the port is in use by another application, close the application that is using the port, or select another port to use. If the port is already open, the port wasn't shut down correctly after the last download. Try again. If problem persists restart the application.

Interrupt comms not supported

This version of windows does not support interrupt comms. Update to a later Windows version. This should not occur if you are using Windows 3.1 or later.

Comms Timed Out

No response was received from the logger. Check all connections. Check the correct comms port is being used - check with the system configuration in the Setup software, Check the baud rate is correct. Check the logger type selected is correct. Try again.

Unknown Comms Error
Data Retry Error
Comms CRC Error
Header Length Error
Comms Framing Error
Comms Overrun Error
Comms Parity Error

Bad data was received during communications. Check all connections. Ensure logger is still not downloading before retrying.

Comms Data Address Error

An unexpected data address change was received. Check the logger type selected is correct. Ensure logger is still not downloading before retrying.

Comms Aborted By User

The user selecting the Cancel button terminated the communications**.**

5.5 Download/Upload - Toolbar Options
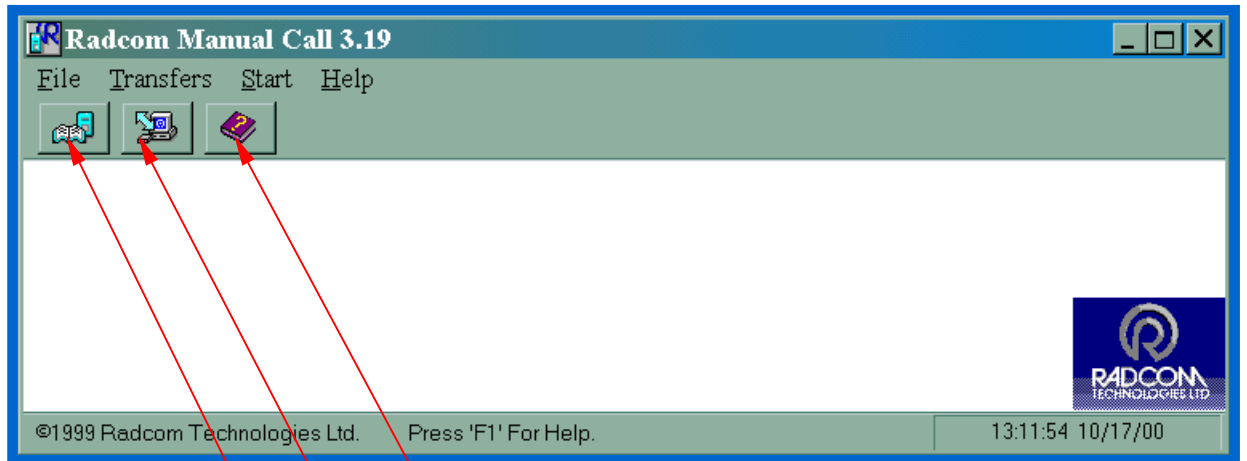
	Help Index
	Download/Upload
	Select Location

RADLOG for Windows   *RADLOG for Windows*

View

RADLOG for Windows   *RADLOG for Windows*

View

RADLOG for Windows   *RADLOG for Windows*

View

RADLOG for Windows   *RADLOG for Windows*

View

RADLOG for Windows   *RADLOG for Windows*

View

RADLOG for Windows   *RADLOG for Windows*

View

RADLOG for Windows   *RADLOG for Windows*

View

RADLOG for Windows   *RADLOG for Windows*
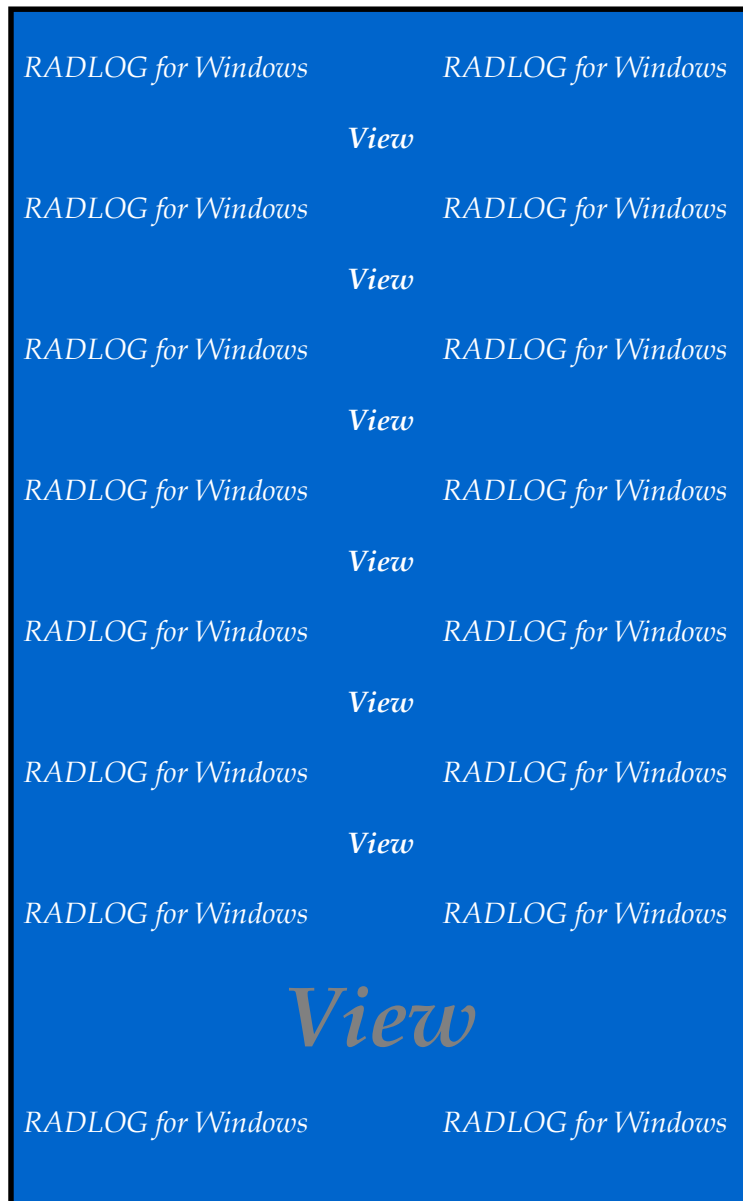
The VIEW program of this software is used to

- Select data to be viewed
- Display and manipulate graphs and tabular data
- Print and export data to other packages

6.0 View

6.1 Summary of Menu Options

6.1.1 File

Open Data File	Offers a list of files available for view
Open Autocall Function Data	Offers a list of function sets available for view
Open Last Manual Download	Displays all data from the last manual download.
Open Temporary Manual File	Displays all the data from the temporary data file
	A temporary file is created when data is downloaded from a logger but a database location does not exist
Remove Graph	Removes the primary graph from the current graph window, or removes the current window if it contains no graphs.
Print Graph	Prints the current graph (via the Windows Print Manager)
Print Setup	Configures the relevant print options
Export Data	Select the format required for exporting the primary graph's data.
Save Graph	Saves the graphs displayed on the current graph window, as a new data file
Exit	Displays confirmation window before exiting the View program.

6.1.2 Edit

Parameters	Units; Orientation; Limit lines; Transducers; Times
Graph Titles	Allows a user to edit a graph's title.
Enter Text	Allows a user to add a text comment to a graph. Frequently used text may be stored in a text library.
Edit Text	Allows a user to edit a text comment on a graph.
Copy Graph to Clipboard	Allows a user to copy the current graph to the Windows Clipboard for use in other software packages (i.e. word processors, Graphics packages etc).

6.1.3 Zoom

Zoom Region	Zoom into a region on the graph.
	Select the start and end zoom points on the graph
Zoom Out	Zooms out to the previous zoom level.
Zoom Full	Zooms out to display the complete graph.

6.1.4 Options

Graph Options

Options

Default Window Title	The main Title of a Graph Window
Cursor Line	Displays a vertical line on the graph as the cursor moves over it
Grid	Displays a grid on the graph
Snap Cursor To Graph	Makes the cursor line move between graph points instead of following the cursor movement exactly
Data Summary-include…	Specify if incomplete days should be displayed in the data summary.
Autoscale Y=0	Automatically scales from the x-axis
Highlight Missing Data	Shades in areas of missing data
Summarise FD Tabular Data	Summarises Frequency Distribution Tabular Data in Meter Sizing Software
Limit Frequency Bands To	Restricts number of Data Bands used in Meter Sizing Software
Display Graph Text	Turns graph text on or off. If off then graph text will not be displayed on the graph.
Print Stats With Graph	If on, the statistics for each of the graphs displayed will be printed when the graph is printed.
Summary Graphs As Bar…	Displays summary information as a Bar Graph
Save Graph on Exit	If on, the Cursor Line, Grid, Snap Cursor, Display Text, Print Stats, Axis Font, and Text Font will be stored when the user exits the program.
Display Meter Bands	Displays Meter Bands in Meter Sizing Software

Colors

Text Font	Offers the available fonts for graph text comments
Axis Font	Offers the available fonts for graph axis labels
Colors	Offers the available colors for graph text comments, axis labels and graph lines

Mask Graphs

Allows graphs to be masked so they are removed from the display, but are not actually deleted

6.1.5 Special

Y-Axis Scaling	Allows the user to manually define the Y-Axis (vertical axis)
Graph Statistics	Displays the statistics for the primary graph
Tabular Data	Displays the data for the selected graph in a tabular format
Data Summary	Displays a summary of the selected data
Derive Graph	Allows displayed graphs to be added and subtracted to derive new graphs.
Create Data Frequency Distribution	Allows Meter Sizing Analysis.
Create Data Bands Distribution	Allows Meter Sizing Analysis.
Create Performance Graph	Plots one graph against another e.g. flow against pressure
Pipe Test	Shows pipe pressure testing info
Memo	Creates a Scratch Pad.
Logger Parameters	Displays logger parameters linked to data file.

6.1.6 Window

Cascade	Re-sizes and layers all graph windows
Tile	Re-sizes and arranges all graph windows so they are all visible.
Create Window	Creates a new graph window onto which a new graph can be added
Remove Window	Removes the current graph window
Remove All Windows	Removes all current graph windows

6.1.7 Start

RADCOM Download	Switch to the Download/Upload program
RADCOM Setup	Switch to the Setup program
RADCOM Auto Call	Switch to the Auto call program
RADCOM Administration	Switch to the Administration program

6.1.8 Help

Help Index	Displays a list of topics supported by On Line Help
How to use Help	Displays the Program Manager's 'How to Use Help'
Technical Support	Gives Technical Support information
About View	Displays release information about View

6.2 Menu Options

6.2.1 File

A.) Open Data File

Accesses the zone/location filing system. Select the required zone/location, then open the required file.

The data file list displays all the data files stored for the selected location. There are 4 types of data file:

Autocall (archive) data files, which start with an '**A**'

Manual data files, which start with an '**M**'

Transient data files (manually downloaded data from a transient logger), which start with an '**M**', but have a different icon to normal Manual data files

Saved graph window data files, which start with a '**U**'
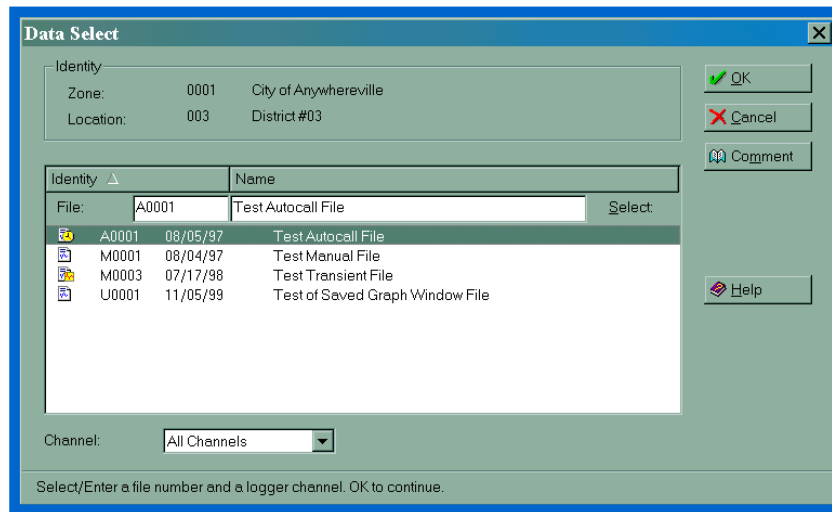
Note: Transient data may only be displayed by using the Transient version of the View software. Manual and Auto Call data may only be displayed using the standard view software.

Select/Enter the file number required. Wildcard numbers may be entered in the file number entry field to limit the files displayed in the list.

Wildcard characters:

    ? = Single character wildcard.

    001? Indicates a list of all files in the range 0010 to 0019.

    00?1 indicates list all file that begin 00 and end in 1.

    * = Multiple character wildcard.

    * indicates a list of all files.

    1* indicates a list all files that begin with 1.

Select the required channels from the **Channel Select** combo box. Clicking **All Channels** will select all the available channels for the recording.

Select **OK** to display the selected data files.

Double clicking on the required file in the list will automatically load all channels for that data recording.

Select Comment to edit the comment associated with the data
(not available for archive data).

B.) Open Autocall Function Data

Generates data using function sets entered in the **Setup** program. Function Sets are generated using Auto Call data only.

Select/Enter the function set required and the time period to be viewed.

Select **OK** to generate and display the data. If data is not available for the time period required an error message is displayed.

C.) Open Last Manual Download

Displays all data from the last manual download.

D.) Open Temporary Manual File

Displays all the data from the temporary data file that is created when data is downloaded from a logger with an identity that does not exist as a zone/location within the database.

E.) Remove Graph

Removes the primary graph from the current graph window, or removes the current window if it contains no graphs.

F.) Print Graph

Prints the current graph via the Windows Print Manager.

G.) <u>Print Setup</u>

Select the required printer from the list. The printers displayed are those that have been installed via Print Manager in Windows. If your printer does not appear in this list, then a suitable Windows driver must installed via windows Print Manager.

Select **OK** to update the printer.

H.) <u>Export Data</u>

Select the format required for exporting the primary graph's data. Once format is selected, name file and select directory/folder for storage.

I.) <u>Save Graph</u>

Saves the graphs displayed on the current graph window in data files under a user selected location. All graphs except masked graphs are stored. The data is stored is stored for the currently displayed graph region. Graphs stored in this way have filenames starting with **U**.

J.) <u>Exit</u>

Displays confirmation window before exiting the **View** program.

6.2.2 Edit

A.) <u>Parameters</u>

Graph Units
Select the units for the data from the units list. If the required units are not in the list select User Defined and enter the units name and data multiplication factor in the user defined group.

Invert Graph
To invert the primary graph, select the invert graph option. This will invert the graph about the y=0 line.

Limit Lines
Enter values for upper and lower limit lines if required. Text may be entered in the text fields for each limit line. Enable the required lines by selecting the appropriate boxes.

Limit Line Positioning
Dragging the text with the left mouse button depressed to the required position on the line may change the position where the limit line text is displayed on the graph.

Start Time and Date
Enter a new start time and date for the data to move the graph in time. This only applies to the data being viewed, and does not alter the data in the database.

Averaging Factor
Apply an averaging factor to smooth a graph or to change the sample rate to match another graph.

Transducer Type
Allows editing on the type of transducer associated with the primary plot.

B.) Graph Titles

Allows a user to edit a graph's title

C.) Enter Text

Allows a user to add a text comment to a graph. Frequently used text may be stored in a text library.

D.) Edit Text

Allows a user to edit a text comment on a graph

E.) Copy Graph to Clipboard

Allows a user to copy the current graph to the Windows Clipboard for use in other software packages (i.e. Word-Processors, Spreadsheets, Databases and Graphics packages.)

6.2.3 Zoom

A.) Zoom Region

Zoom into a region on the graph defined by 2 vertical lines. Select the start and end zoom points on the graph by moving the cursor and clicking once.

Two further Zoom In types (between 2 horizontal lines and a click and drag box) are available from the icon bar.

B.) Zoom Out

Zooms out once to the previous zoom level.

C.) Zoom Full

Zooms out to display the complete graph

6.2.4 Options

A.) Graph Options

Options

Cursor Line
Displays a vertical line on the graph as the cursor moves over it

Grid
Displays a grid on the graph

Snap Cursor To Graph
Makes the cursor line move between graph points instead of following the cursor movement exactly.

Autoscale Y=0
Ensures automatic graph scaling will include the Y-axis value of 0 on the displayed graph axis.

Highlight Missing Data
Indicates missing data blocks on the graph by highlighting the graph background for the current graph where data is missing. Missing data occurs on archive data where the logger has not been downloaded in time before the logger memory has cycled round and overwritten its oldest values, or when generating data and a section of data is missing in the time span requested.

Data summary-include incomplete days
Specify if incomplete days should be displayed in the data summary.

Summarise Frequency Distribution Tabular Data
This option is only relevant if the Meter Sizing Option is used.

Limit Frequency Bands To
Restricts number of Data Bands, used in Meter Sizing Software only.

Display Graph Text
Turns graph text on or off. If this is turned off then graph text will not be displayed on the graph.

Print Stats with Graph
If this is turned on, the statistics for each of the graphs displayed will be printed when the graph is printed.

Summary Graphs As Bar Graph
Prints Min/Max/Avg. Function Sets as a bar graph.

Save Graph Text on Exit
Saves the text entered on the graph. Text entered on graphs that have been created by displaying a data file will be stored with that data file. Text entered on graphs that have been created from function sets will be stored with that function set.

Display Meter Bands
Displays Meter Bands in Meter Sizing Software only.

Colors

Text Font
Specifies the font to be used for displaying text on the graph. The fonts available are dependent on the current printer selection, as different printers/plotters support different fonts. Selecting a scaleable type font allows the graph text to be scaled with changes in the graph window size.

Axis Font
Specifies the font to be used for the graph axis. The fonts available are dependent on the current printer selection, as different printers/plotters support different fonts. Selecting a scaleable type font allows the axis text to be scaled with changes in the graph window size.

Colors
Select the element from the combo box of the item to change:

The current color of the item is highlighted. Select a new color to change the setting. Selecting a line style option may change the line style. This will change the style of the primary graph line. Line styles are useful for displaying multiple lines on monochrome displays, or for printing using a black and white printer.

The color settings apply to all graph windows.

Use the **Save** button to store all your new Graph Options.

6.2.5 Special

A.) Y-Axis Scaling

Select the y-axis scaling for the primary graph.

Auto Scaling
All graphs of the same type i.e. analogue or digital are automatically aligned on the axis - default.

Manual Scaling
If a graph is manually scaled a new axis specific to this graph is created. The minimum and maximum axis values are entered which represent the minimum and maximum values displayable.

Select **OK** to apply the selected scaling to the y-axis.

B.) Graph Statistics

Displays the statistics for the primary graph. A typical example for a flow logger is shown below. Properties, Population, KNC and Water Cost information is picked up from the Setup part of the program. For the duration that the graph is displayed only, this can be edited at this point by entering the required values and exiting then re-entering Graph Statistics.

C.) Tabular Data

Selects the type of tabular data to be displayed:

Data in selected units - data as displayed on the graph
Raw data in decimal - data as read from the logger
Raw data in hexadecimal - data as read from the logger

Select **OK** to display the tabular data in the selected format for the current time span of the graph.

D.) Data Summary

Displays a summary of the selected data, including Date, Min, Max, and Avg. as well as household and personal consumption for Flow.

E.) Derive Graph

The derive graph option allows graphs that are currently displayed to be added, subtracted, multiplied and divided by themselves and constant values and allows lookup tables to be applied.
A graph is derived by forming a function that consists of currently displayed graphs and constant values.

To enter an element (graph or constant) select the appropriate button. This will display a selection/entry window to allow the element to be configured and included in the function.
To delete an element, select the element to delete and select the Delete button.
To insert an element, select the element after which the new element is to be inserted, and then select the appropriate type button to be inserted.
To edit an element, select the element followed by the Edit button or double click on the element with the mouse.

Function Graph
The math's operator to be applied to this element in the function should be selected from the operator's list.

Select the graph required from the list. If no graph has been entered in the function, this list will include all the graphs displayed. If a graph is already in the function, only those graphs with a matching Sensor type will be displayed i.e. a Flow graph cannot be added to a Pressure graph. Each graph in the list is preceded by a window number and graph number e.g. 1-2 means window 1 graph 2.

Select a lookup table from the lookup table if required.
Select the Apply lookup table check button to apply the selected lookup table to the data.

Select **OK** to include the element into the function.

F.) Create Data Frequency Distribution

See Section 6.4

G.) Create Data Bands Distribution

See Section 6.4

H.) Create Performance Graph

Plots one graph against another e.g. flow against pressure

I.) Memo

Creates a Scratch Pad for notes concerning the graph

J.) Logger Parameters

Displays logger parameters linked to data file

6.2.6 Window

A.) Cascade

Re-sizes and layers all graph windows

B.) Tile

Re-sizes and arranges all graph windows so they are all visible.

C.) Create Window

Creates a new graph window onto which a new graph can be added

D.) Remove Window

Removes the current graph window

E.) Remove All Windows

Removes all current graph windows

6.2.7 Start

The Start function is used to move between different modules of the RADLOG for Windows software.

A.) RADCOM Setup

Switch to the Setup program

B.) RADCOM Download

Switch to the View program

C.) RADCOM Auto Call

Switch to the Auto Call program

D.) RADCOM Administration

Switch to the Administration program

6.2.8 Help

A.) Help Index

Displays a list of topics supported by on-line help

B.) How to use help

Displays the Program Manager's 'How to Use Help"

C.) Technical Support

Gives Technical Support information

D.) About View

Displays release information about View

6.3 Changing Graph Type & Primary Plot Selection

6 different graph types can be selected, these are:

Points, Line, Filled Line, 3D Line, Bar & 3D Bar

Selecting one of the icons shown below can change them.

Up to 8 plots can be displayed on any one-graph window. If more than one plot is showing, only the designated primary plot can be altered or have tabular & summary data displayed. Pressing the plot number as indicated below can alter the choice of primary plot.
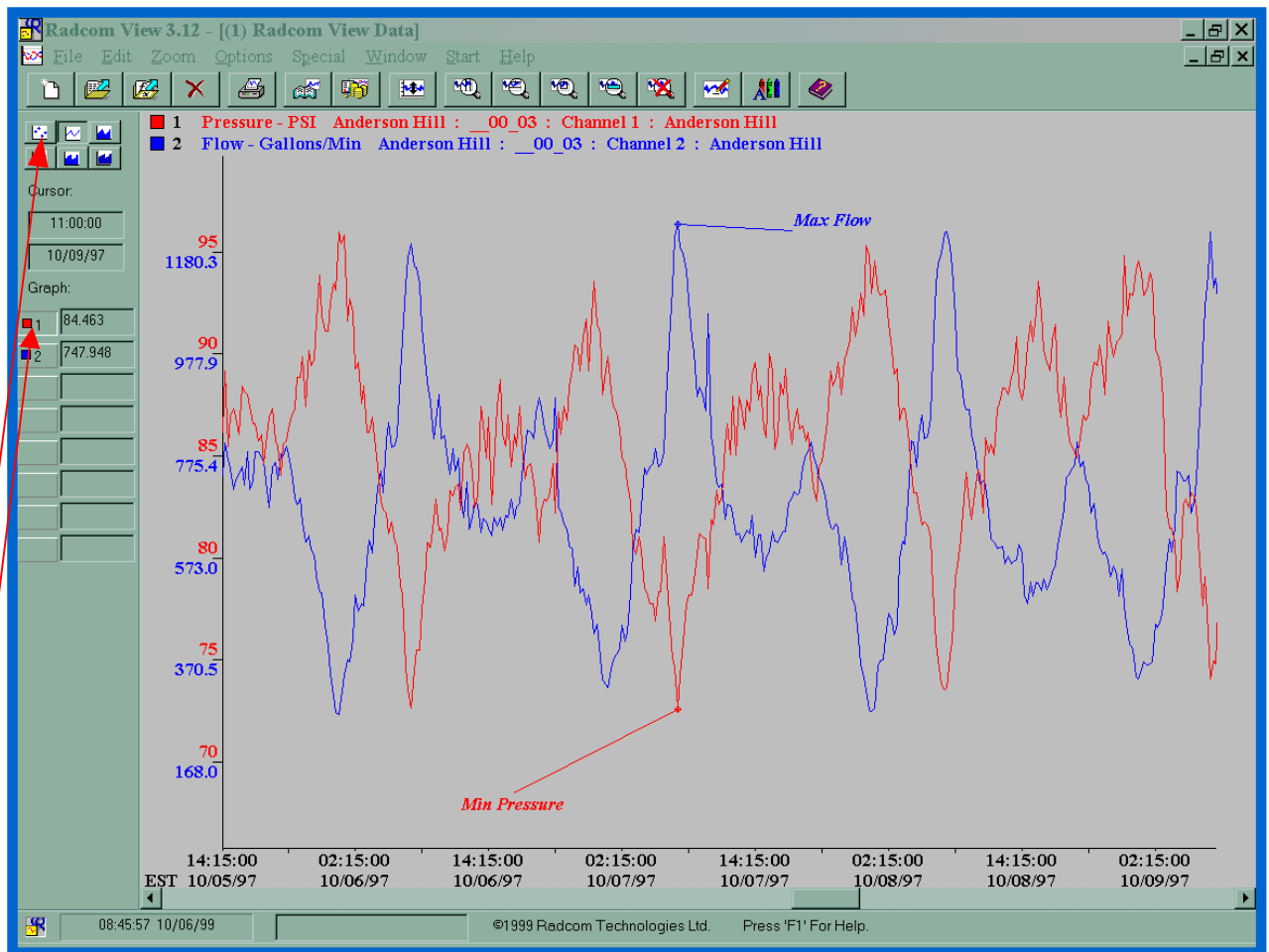
Changes Primary Graph
Changes Graph Type

6.4 Meter Sizing

The Meter Sizing part of the package is optional and is contained within the flow transducer set up.

Water Meter Sizing means having the correct size water meter feeding every location within a water utility.

All water meters have a Qmin and Qmax, which means they have a minimum flow rate they can coup 100% accurately and a maximum flow rate that they can coup with 100% accurately. Therefore a utility should make sure that the meter installed in a facility has flow rates going though it between its Qmin & Qmax.
This feature allows for statistical analysis of archive or manual files and compares results to the flow characteristics (Qmin, Qmax etc) of a meter.

Having called up the required archive or manual data in the "View" part of RADLOG for Windows. You have two analysis options (Create Data Frequency Distribution & Create Data Bands Distribution) in the pull-down menu under "Special".
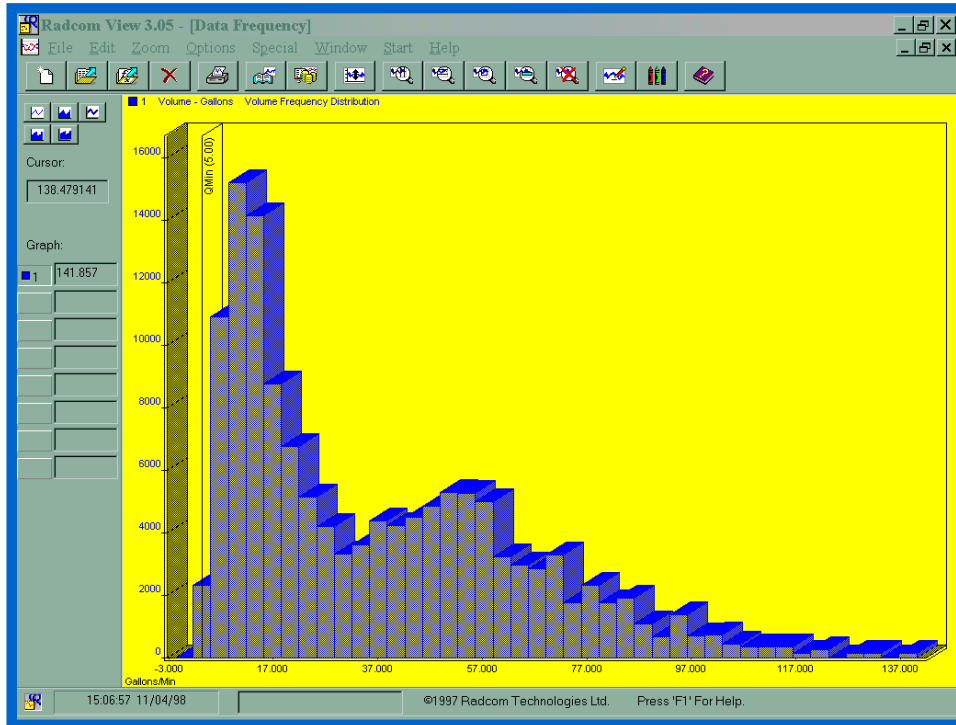
6.4.1 Create Data Frequency Distribution

The create data frequency distribution option allows the user to view a flow data graph in another two graphical and tabular ways.
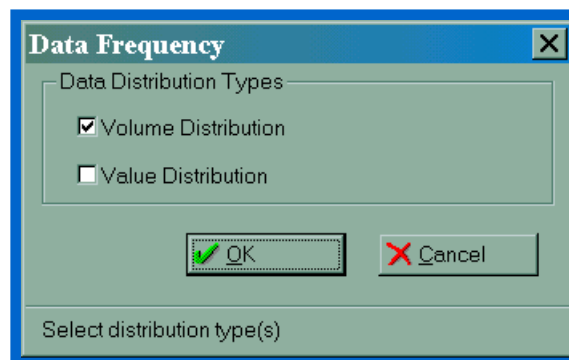
A.) Volume Distribution

This shows the amount of volume each flow rate obtained, and the percentage of that volume, over the total volume.
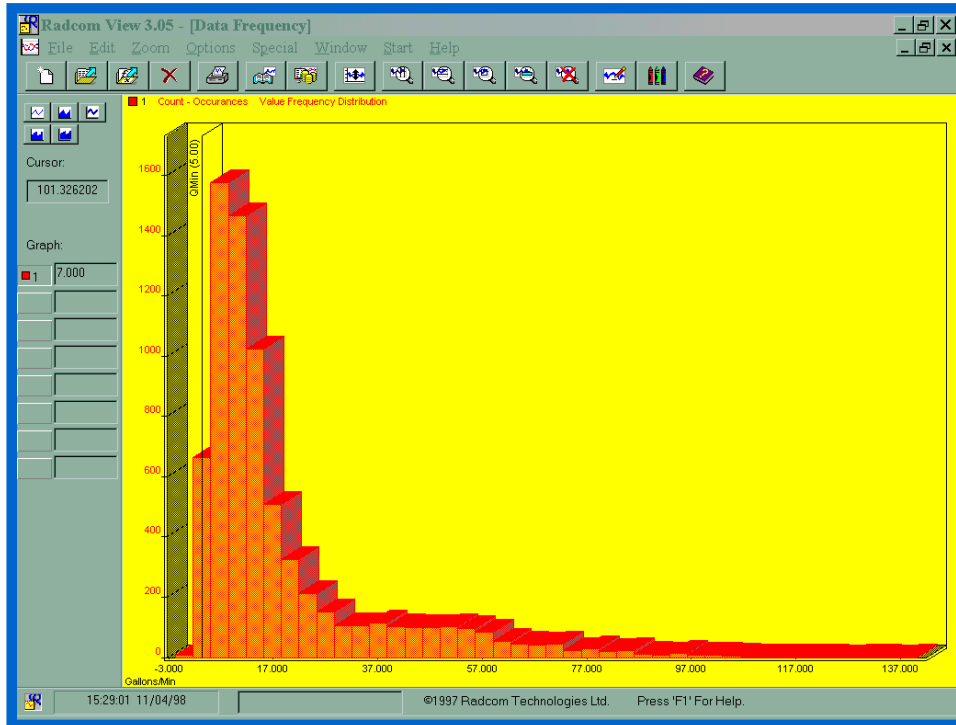
RADLOG for Windows™

B.) Value Distribution

This shows every single flow rate that occurred in the recording session, the amount of times each flow rate occurred in the recording session and the percentage of each flow rate compared to the total flow.

Value Frequency Distribution

Data:	Section A : __99_99 : Channel 1 : 28 Prestonfield Road
Time Span:	09:44:46 10/16/98 to 09:28:46 10/21/98
Sample Rate:	00:01:00
Total:	7185.0000 Occurances
Meter:	NEPTUNE TRIDENT TURBINE 3 INCH
QMin:	5.00 Gallons/Min
QMax:	450.00 Gallons/Min
QNominal:	225.00 Gallons/Min

	Gallons/Min	Occurances	Percentage
1	0.000000	9.000	0.1253
2	3.377540	664.000	9.2415
3	6.755080	1575.000	21.9207
4	10.132620	1465.000	20.3897
5	13.510160	1023.000	14.2380
6	16.887701	507.000	7.0564
7	20.265240	325.000	4.5233
8	23.642780	212.000	2.9506
9	27.020321	152.000	2.1155
10	30.397861	106.000	1.4753

Select Print to print the data. Cancel to remove the window.

6.4.2 Create Data Bands Distribution

This shows up to 20 "User Defined" flow rate bands, against volume and percentage. This as with the Frequency Distribution can be seen graphically, and in a tabular format.
In this mode it is only necessary to view the information as **Volume Distribution**

A.) Volume Distribution
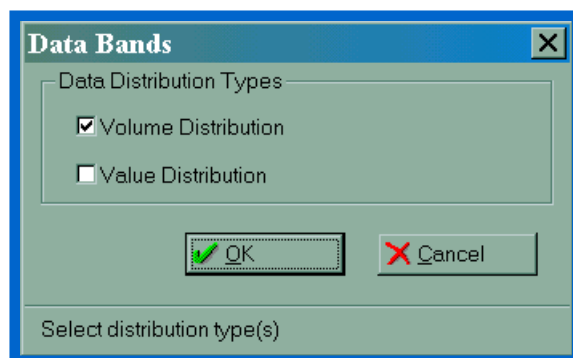
Information can only be viewed, when values have been entered for any of the 20 bands of the water meter used for the recording session. Once the flow graph has been brought up on the screen click on the *<Edit Graph Parameters>* icon.

Then click on the icon labeled **Transducers…**

Then click on the icon labeled **Flow…**

Channel Transducer Types

Data Factors

Calibration: 0.057665   Offset: 0.000000

Transducer Type

☑ Flow...

☐ Flow (Quadrina)...

☐ Pressure...

☐ 4-20 mA...

☐ 0-1 V...

Logger

Calibration: 60.000000

Offset: 0.000000

☑ Apply

Help

✔ OK   ✗ Cancel

Select/Edit channel transducers. OK to update.
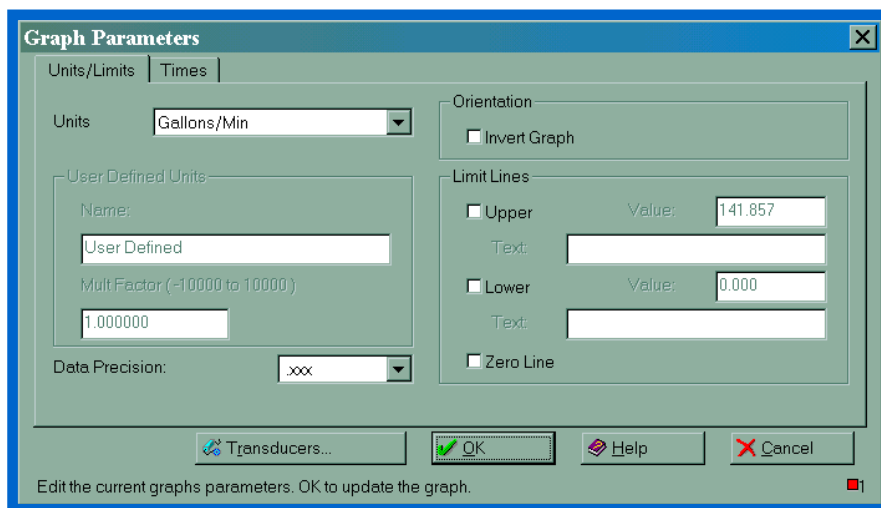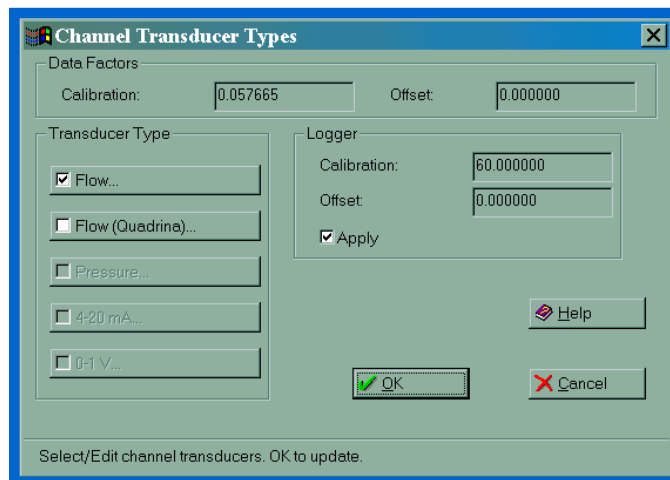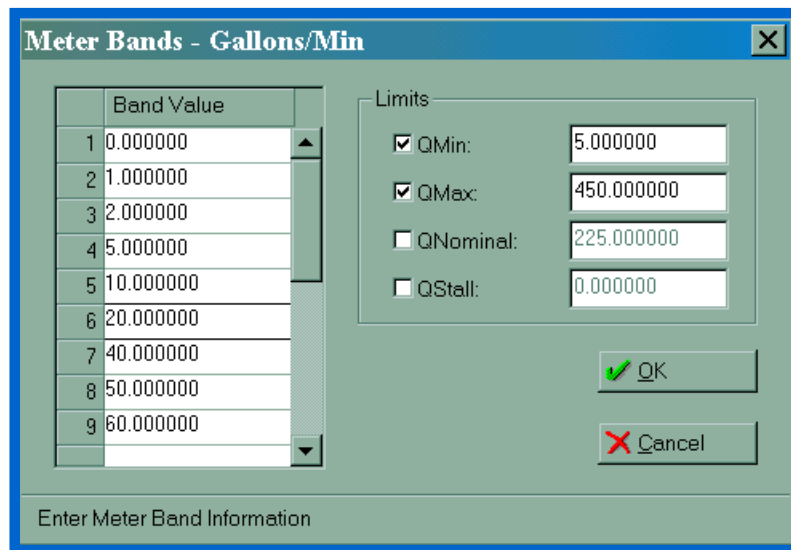
This will bring up the selected meter for the recording session, click on the icon labeled **Bands…**

Flow Transducer

Sensor Type: Flow

Select Transducer

NEPTUNE TRIDENT TURBINE 3 INCH   ✗ Remove

Enter/Edit Transducer

Name: NEPTUNE TRIDENT TURBINE 3 INCH

Units Per Pulse: 3.459919

Offset: 0.000000

✔ OK

✗ Cancel

Help

Add to Select Transducer List   Bands...

Select/Edit transducer setup. OK to accept.
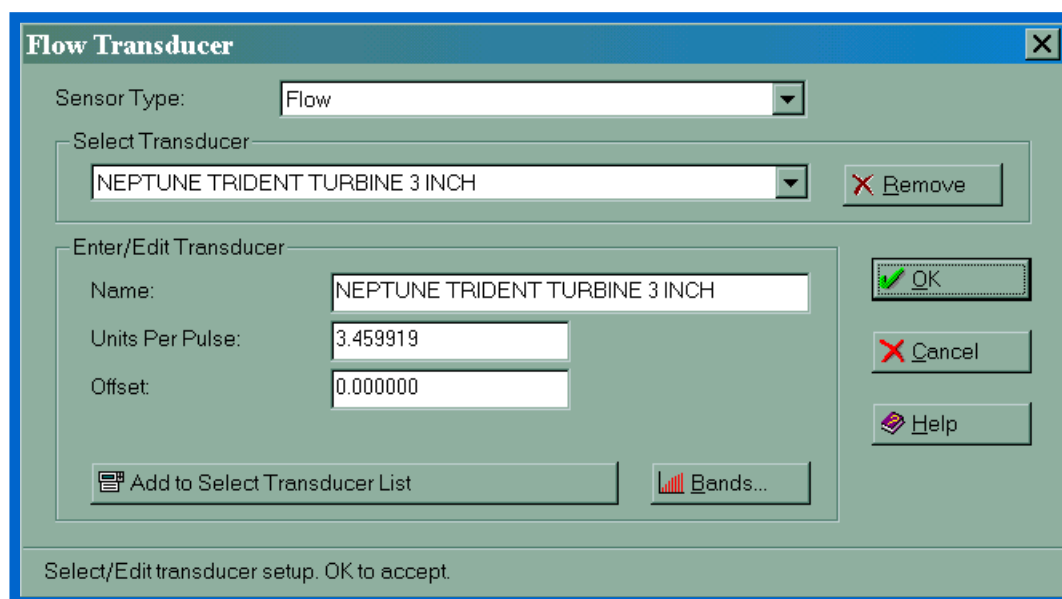
Now values can be entered in the selected flow rate, (normally Gallons/Min) for up to 20 bands. At the same time values can be entered for QMin (the minimum flow the meter can coup with 100% accurately) Qmax (the maximum flow the meter can coup with 100% accurately) etc…

Qmin and Qmax values can be found in the meter manufactures literature and are (in the USA) always shown in Gallons/Min.

If you check the boxes for these values, as shown below with Qmin & Qmax, they will be displayed on your graphical and tabular data.

Having entered values click the icon labeled **OK.** This will bring you back to the Flow Transducer screen shown at the top of page, to make sure the band information entered is saved with the meter, you must now click on the icon labeled **Add to Select Transducer List.** Then click on **OK** and **OK** again, you will then be asked to "Select SAVE to Store the New Transducer with the data" Click on the icon labeled **Save** then click on **OK** once more. You will now be able to view data as Band Distribution.

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This data is very useful when sizing water meters.
With correctly sized water meter all the flow should be between the Qmin and Qmax as with the example shown below.

6.5 View - Toolbar Options

1   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16

1. **New Window**

2. **Open a Data File**

3. **Open a Function Set**

4. **Remove Graph**

5. **Print Graph**

6. **Edit Graph Parameters**

7. **Display Graph Statistics**

8. **Y-Axis Scaling**

9. **Zoom Time Region**

10. **Zoom Y-Axis Region**

11. **Zoom Y-Axis And Time Region**

12. **Zoom Out**

13. **Zoom Full**

14. **Add Texts To Graph**

15. **Change Graph Colors**

16. **Help Index**

The Autocall program of this software is used to control automatic telemetry and direct Downloading of loggers into archive data files.

7.0 Auto Call

When Auto Call is selected, the program automatically initializes the comms ports based on the information contained in the Configuration part of the Setup program.
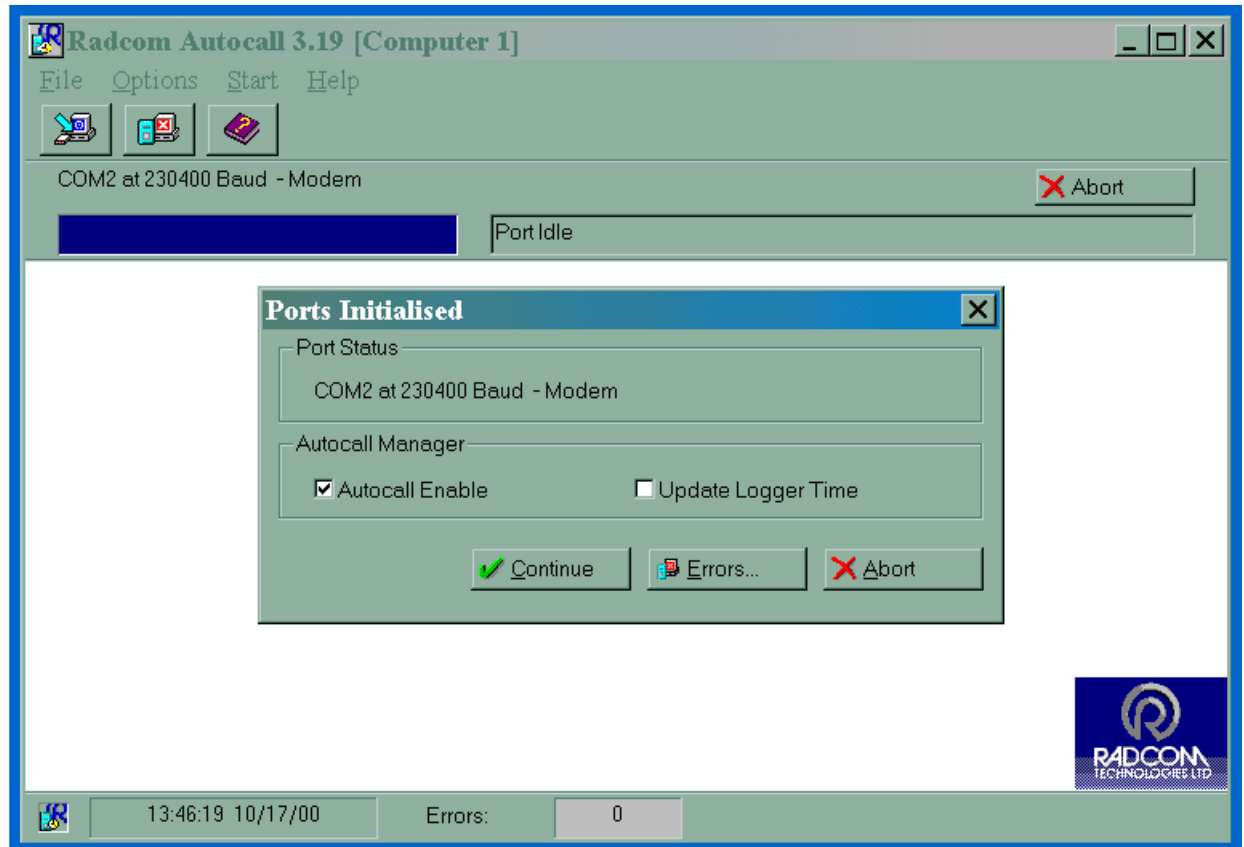
The Auto Call Enable box is always checked when you first enter the Auto Call module, if you require your whole list of Dataloggers to be automatically called press **Continue**

Any Locations overdue for Auto Call will now be automatically dialed and the relevant archive file updated from the logger.

If you only want to call selected Dataloggers form your Auto Call list then, Un-Check the Auto Call Enable box before clicking on **Continue**

To manually download a Location or Locations, press the *<Call Status>* icon, select the required site or sites and press **Force Download…**

7.1 Menu Options

7.1.1 File

A.) Print Setup

Select the required printer from the list. The printers displayed are those that have been installed via Print Manager. If your printer does not appear in this list, then a suitable Windows driver must installed via windows Print Manager.

Select **OK** to update the printer.

B.) Exit

Displays confirmation window before exiting the Autocall program

7.1.2 Options

A.) Autocall Manager

Select the Auto Call Enable check box to enable locations to be called at their scheduled times.

Select the Update Logger Time check box if the Logger clocks need to be updated to the P.C. time. For example when the clocks go back and forward every 6 months.
When using this feature, the Datalogger stops recording, the new time is applied and then the Datalogger starts recording again at the next convenient sample rate boundary.
This creates a new Archive file, which has a seamless join to the pervious Archive file when view the data in a "Function Set".

B.) Call Status

The call status is split into four tables, Modem Connection, Modem GSM Connection, Paknet Modem Connection and Direct connection. These lists contain all the locations in the database that are enabled for Autocall, and indicates their call status.

Modem Connection
This table contains all the items that are set for Autocall enabled with a modem connection in the database (excluding GSM loggers). All items in this list will be automatically called and downloaded at the predefined time intervals specified in the database. The table indicates the next scheduled time when the logger will be called.
To force an immediate download of an item in this list, select Force Download.

Modem GSM Connection

This table contains all the GSM loggers in the database with a modem connection. GSM loggers differ from conventional loggers as they call the PC at predefined times, instead of the PC calling them. The last good call time is displayed for each item in the list.
GSM loggers are able to answer calls for limited time periods unless continuously powered externally. Use the Force Download button to call a GSM logger and perform the upload/download options specified in the database. If the call fails, check the logger is able to receive a call at the current time.
Note: The new GSM/PCS Cellular Loggers will work the same way as conventional Telemetry Loggers

Paknet GSM Connection

This table contains all the loggers in the database with a Paknet connection.

Direct Connection

This table contains all items set for Auto Call that do not have a modem connection in the database. It also contains all direct connection GSM loggers.
All loggers that appear in this list Do Not get called by the scheduler, and must be Force Downloaded. Other items such as direct connection Outstations will get scheduled.

To force an immediate download of an item in this list, select Force Download, ensuring the device is connected to the appropriate comms port with suitable download leads.

To download a PSION connect it to a port configured for direct logger connection. Set the Psion to do a block download of the stored data, and select the Psion Download button. The Auto Call software will then extract all the data from the Psion. Only data for locations that have Auto Call enable set in the database will get downloaded. The force download may also be used to download data from a single location data from the Psion.

Select the identity of the data to be downloaded in the call list and select the force call button.
The identity selected from the call list must match the identity set on the Psion ready to be downloaded.

Note: Data is only stored if the downloaded data identity matches that expected, and that location must have Autocall Enable set in the database. If multiple locations are downloaded from a Psion, ensure all the locations being downloaded have Autocall Enabled.

C.) Abort All Queued Forced Calls

Gives you the option to abort all the forced calls you have pre-selected.

D.) Error Table

The error table lists all the errors that have occurred during the last 'N' days (Set in Set Up) during automatic downloads. Errors that appear in Red are current errors. These are errors that occurred on the last attempt to download the specified location or errors that may still need attention from previous downloads. Errors that are not in red are those that occurred on previous downloads.

To get more information on an error, double click on the error with the mouse, or select the error followed by View.

To remove an error, highlight the error in the list and select the Clear button.

List of Errors and Explanations
Following are all the error messages that may be reported before, or during communications, with suggestions on their cause and possible solution.

Note: To change the comms port being used, select the System Configuration option in the Setup software.

Unable To Open Commx - Bad comms ID
Unable To Open Commx - Bad baud rate
Unable To Open Commx - Bad byte size
Unable To Open Commx - Bad defaults
Unable To Open Commx - Unable to change state
Unable To Open Commx - Unknown error

This comms port is not supported in this version of windows with the required settings. Try a different comms port, i.e. Comm1 or Comm2.

Unable To Open Commx - Memory allocation
Unable To Open Commx - Port not open
Unable To Open Commx - Bad DCB

This comms port was not opened. Try closing down other applications to free some memory.

Unable To Open Commx - Port is in use by another application
Unable To Open Commx - Port already open

The comms port selected is in use by another application or is already open. If the port is in use by another application, close the application that is using the port, or select another port to use. If the port is already open, the port wasn't shut down correctly after the last download. Try again. If problem persists restart the application.

Interrupt comms not supported

This version of windows does not support interrupt comms. Update to a later windows version. This should not occur if you are using windows 3.1 or later.

Comms Timed Out

No response was received from the logger. Check all connections. Check the correct comms port is being used - check with the system configuration in the Setup software, Check the baud rate is correct. Check the logger type selected is correct. Try again.

Unknown Comms Error
Data Retry Error
Comms CRC Error
Header Length Error
Comms Framing Error
Comms Overrun Error
Comms Parity Error

Bad data was received during communications. Check all connections. Ensure logger is still not downloading before retrying.

Comms Data Address Error

An unexpected data address change was received. Check the logger type selected is correct. Ensure logger is still not downloading before retrying.

Comms Aborted By User

The communications were terminated by the user selecting the Cancel button.

E.) Generate All Data

Generates data using function sets entered in the Setup software. The time period of the data generated is as specified in the function set configuration.

Select **OK** to generate data for All function sets. The data will be stored in the directories specified in the Setup software for the data types being generated.

F.) Generate Selected Data

Generates data using function sets entered in the Setup software. The time period of the data generated is as specified in the function set configuration.

Select/Enter the function set identity to generate.

Select **OK** to generate the data. The data will be stored in the directories specified in the Setup software for the data types being generated.

7.1.3 Start

The Start function is used to move between different modules of the RADLOG for Windows software.

A.) RADCOM Download

Switch to the Download/Upload program

B.) RADCOM View

Switch to the View program

C.) RADCOM Setup

Switch to the Setup program

D.) RADCOM Administration

Switch to the Administration program

7.1.4 Help

A.) Help Index

Displays a list of topics supported by On Line Help

B.) How to use Help

Displays the Program Manager's 'How to Use Help'

C.) Technical Support

Gives Technical Support information

D.) About Auto Call

Displays release information about Auto Call

7.2 Auto Call - Toolbar Options
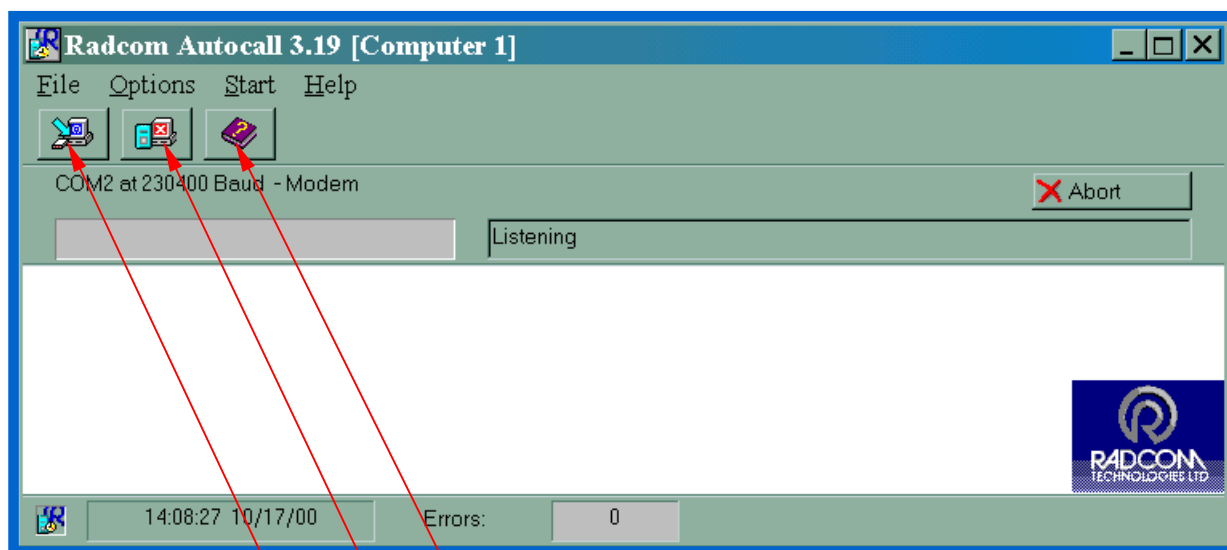
Help Index

Error Table

Call Status

RADLOG for Windows   *RADLOG for Windows*

Administration

RADLOG for Windows   *RADLOG for Windows*

Administration

RADLOG for Windows   *RADLOG for Windows*

Administration

RADLOG for Windows   *RADLOG for Windows*

Administration

RADLOG for Windows   *RADLOG for Windows*

Administration

RADLOG for Windows   *RADLOG for Windows*

Administration

RADLOG for Windows   *RADLOG for Windows*

Administration

RADLOG for Windows   *RADLOG for Windows*

The Administration Package provides user logon facilities for RADLOG For Windows.

It allows users to be given profiles to limit the functionality of the software.

8.0 Administration

The Administration Package provides user logon facilities for RADLOG for Windows. It allows a System Administrator to set up users on a networked system to with profiles to restrict the functionality of the software as required.

The Admin function is automatically set up on opening any of the RADLOG for Windows packages once the first Profile has been saved.

8.1 Menu Options

8.1.1 File

A.) Exit

Displays confirmation window before exiting

8.1.2 Options

A.) Update Profile

This command sets up and edits access granted to profiles allocated to system users. Note that the first time this option is selected once the Administration package has been opened, it is necessary to type in the Logon Path. This is usually the same as the Database Path in System Configuration in the Set Up program. Press **OK** to confirm and return to the main Administration screen. It is then possible to enter the Update Profile screens.

Entering a new profile

Enter the identity of the profile in the identity code entry field, and the profile name (optional) in the name field. Select **Edit…** to enter the Profile Editor.
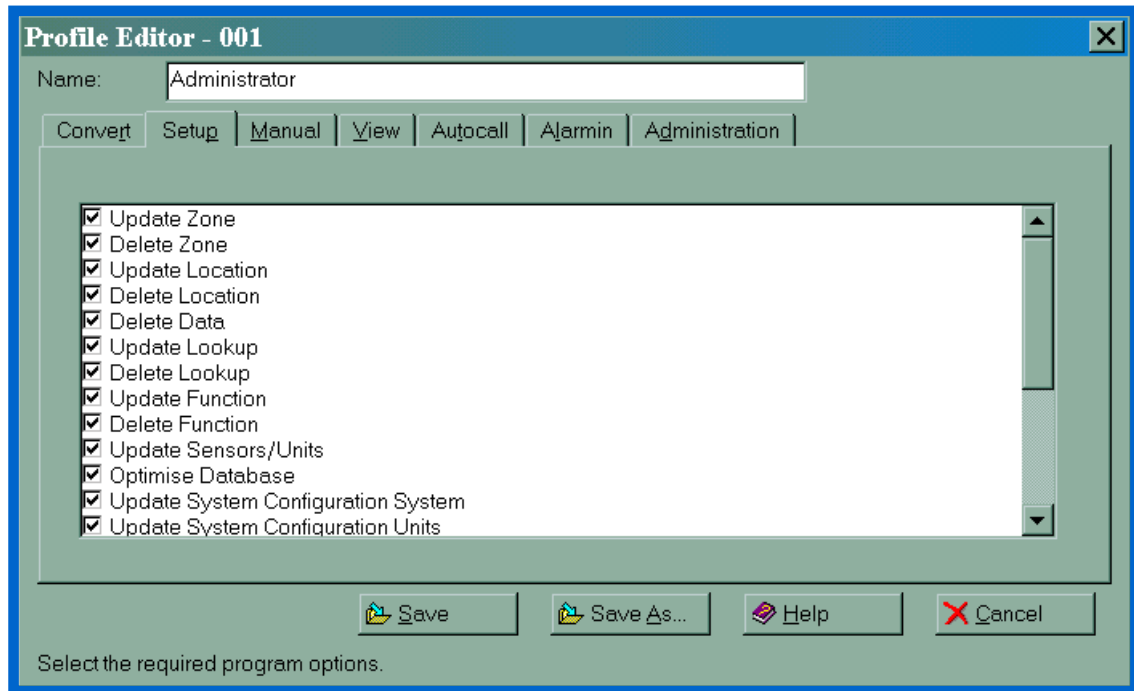
Click on the check boxes under the various programs to build up the profile required.

Press **Save** to save the profile.

Editing an existing profile

Select the profile to edit, or enter the profile identity code. Select **Edit** to edit the profile or double click the item in the list.

Deleting a profile

Select the profile to delete, or enter the profile identity code. Select <Delete> to delete the profile.

B.) Update User

The Update User command allocates a profile to a user. Note that the first time this option is selected once the Administration package has been opened, it is necessary to type in the Logon Path. This is usually the same as the Database Path in System Configuration in the Set Up program. Press **OK** to confirm and return to the main Administration screen.

It is then possible to enter the Update User screens.
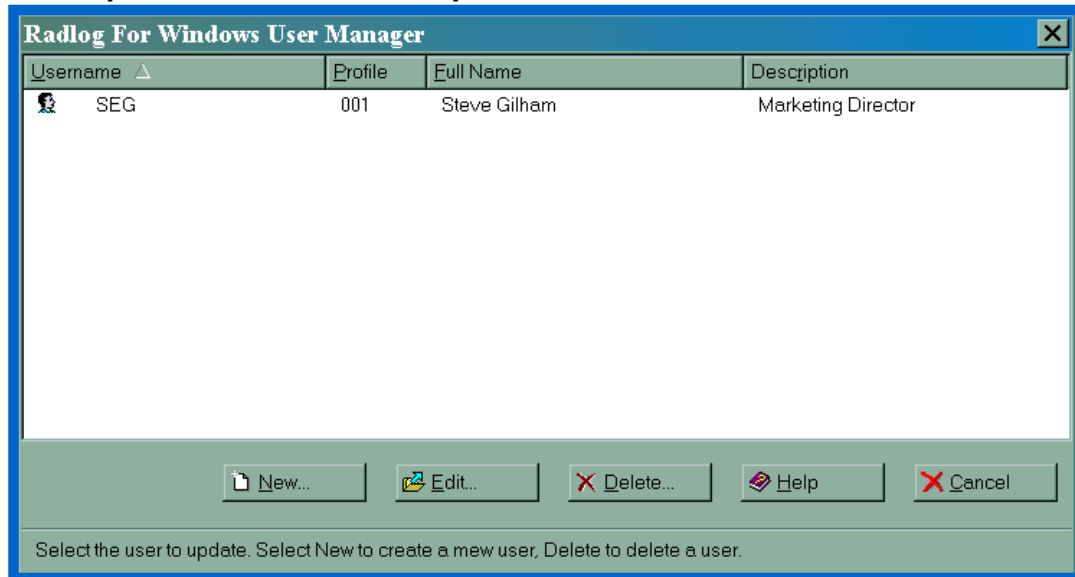
Entering a new user
Select **New…** to enter a new user.
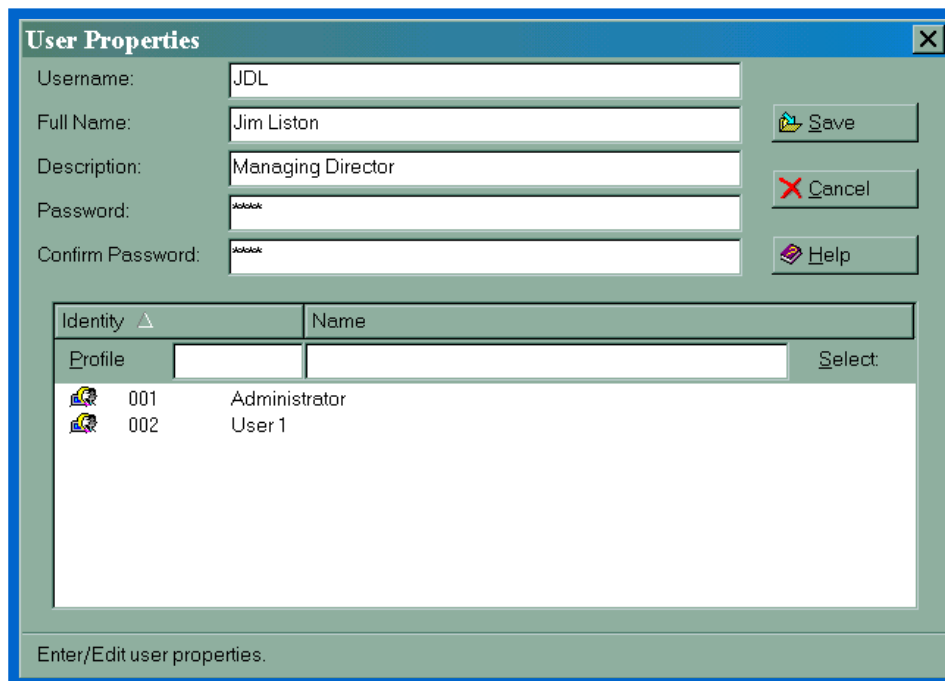
Fill out the User Properties and select the Profile the user has been allocated.

Press **Save** to save the User Profile.

Editing an existing user
Select the user from the list. Select **Edit…** or double click the item in the list to edit the user.

Deleting a user
Select the user to delete. Select **Delete…** to delete the user.

8.1.3 Start

The Start function is used to move between different modules of the RADLOG for Windows software.

A.) RADCOM Download

Switch to the Download/Upload program

B.) RADCOM View

Switch to the View program

C.) RADCOM Setup

Switch to the Setup program

D.) RADCOM Auto Call

Switch to the Auto call program

8.1.4 Help

A.) Help Index

Displays a list of topics supported by On Line Help

B.) How to use Help

Displays the Program Manager's 'How to Use Help'

C.) Technical Support

Gives Technical Support information

D.) About Administration

Displays release information about Administration
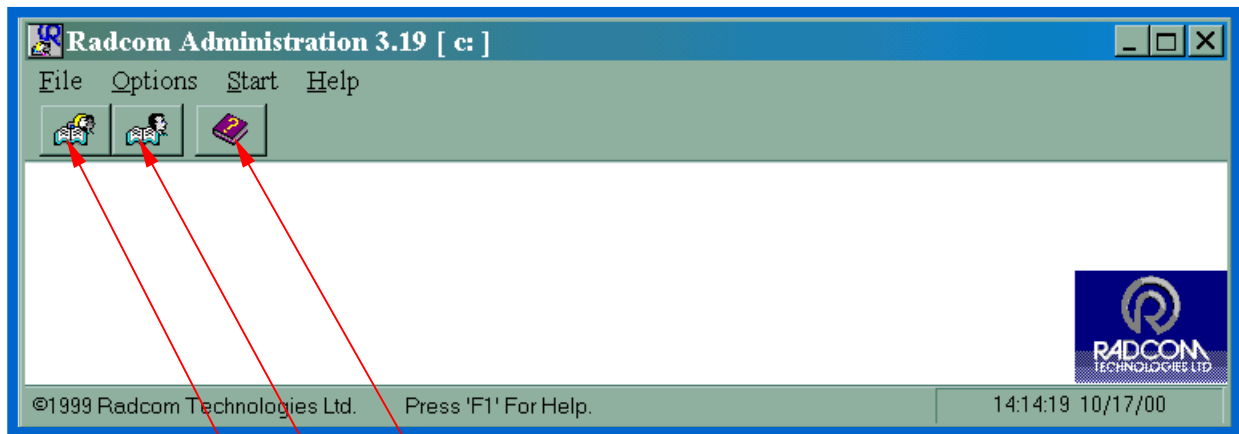
8.2 Administration - Toolbar Options

Help Index

Update User

Update Profile

9.0 Supplement for Portable Loggers

With Telemetry (Permanent) Datalogging file storage there, is an individual "Location" within the filing structure of each Datalogger. But with Portable Datalogging one Location can be used for many Datalogging files!

9.1 RADLOG for Windows Filling Structure

The only thing that you really need to grasp with RADLOG for Windows Software is the Database Filling Structure, e.g. where the Portable Datalogging session files are stored.

It is set up as a three-tier system, the top tier being described in the software as a **ZONE**. Most of RADCOM's customers normally only ever need one **ZONE** and will name it as their City or Town. (Up to 4 Digits can be used in the **ZONE** code)
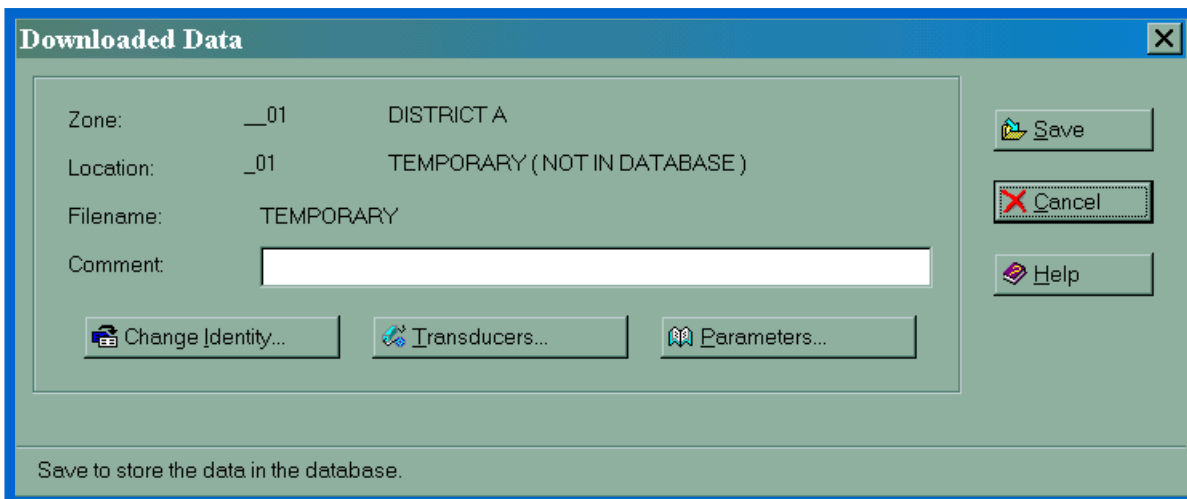
The second tier is described in the software as a **LOCATION.** Customers usually will have a number of **LOCATIONS** under their one **ZONE** and will name them as their different Districts/Sections/Wards/Meter Reading Books within the City or Town. Another way in which customers describe the **LOCATIONS** is to name them Hospitals, Schools, Apartment Buildings, Hotels, Residential etc…

The third and last tier is the actual **FILE,** this is created when Data is downloaded from a logger. The **FILE** is usually named as the actual street address and/or account number.

Database
  Zone 0001
    Location 003
      File 00001
Database structure
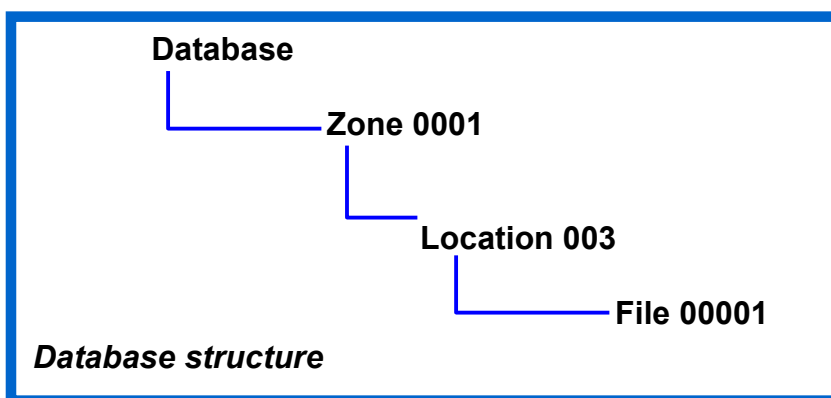
Before downloading any Data into the software **ZONES** and **LOCATIONS** have to be created, so as you have a place to put your Data **FILE.** This is explained in this software manual on Page 17.

After a Datalogger has been downloaded, you will see a screen as shown over the page. You will now move the **FILE** to the appropriate **ZONE** and **LOCATION** by clicking on **Change Identity…**
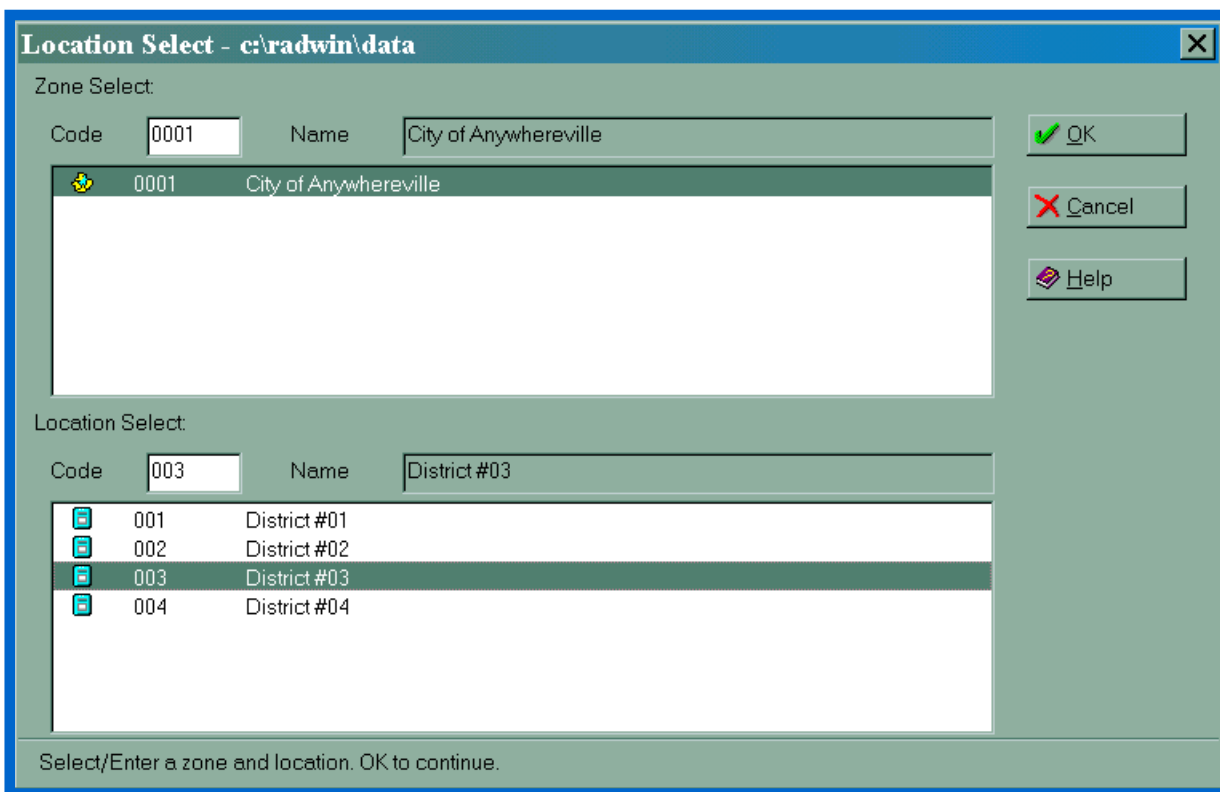
You will then be presented with a screen (see below) that at the top will show you the **ZONES** you have. By highlighting a **ZONE,** the bottom of the screen will show you the **LOCATIONS** you have under that **ZONE.**

Highlight both the **ZONE** and **LOCATION** that you what the **FILE** to go into and then click on the **OK** icon.

This will bring you back to the Download Data screen, and as you can see below the **FILE** has now been moved to:

ZONE 0001 *"City of Anywhereville"* **LOCATION** 003 *"District #03"*

At this stage you can also name (comment) the **FILE** in this case *"28 Prestonfield Road"*

Before clicking on **Save** to save the **FILE** click on the **Transducer…** icon to choose the Transducer type that was being logged i.e. Flow, Pressure, Depth, Quality parameters etc…

This is the same procedure as if setting up a permanent Telemetry **LOCATION** in the Setup part of this manual.

10.0 RADLOG for Windows History

This is taken from the 'Readme' file included with the Software

******** VERSION 2.0 ******

Bug Fixes From version 1.12

When printing, a graph can end up with the x axis divisions text tightly packed, one displayed time is almost immediately followed by another.

Sentry load/Store parameters don't work in download/upload s/w.

Pulsar Flow logger cal value should be 900, not 1.

KNC should default to 0, not 1.

View scroll range doesn't always scroll to limits of the graph

New Features

Pressure Transient Centurion, and LoLog logger types added.

Transient Version of View software available for viewing data from Pressure Transient Loggers (sample rates down to 0.05 seconds).

Enter parameters option included in download so a logger doesn't have to be downloaded before uploading new parameters.

4-20mA and 0-1V transducers now have a sensor type selection.

Setup software now allows sensors and units to be entered and stored.

Default Sensor Types:
    Pressure
    Flow
    Depth
    Dissolved Oxygen
    Chlorine
    CO2
    Suspended Solids
    Ph
    Rain Fall
    Sunshine Hours
    Humidity
    Temperature
    Wind Speed
    Wind Direction
    Precipitation
    Percentage
    Conductivity
    ORP
    Turbidity
    Time
    Gas Flow
    Electricity
    Volume
    Count
    Frequency

View software now auto-scales all data with the same sensor type on the same axis, instead of digital and analogue channels.

Psion included in download options.

Ascii export included in view that is compatible with Radalrm (Watnet). Wesnet export also included.

Allow traces to be added/subtracted from each other and to have lookup tables applied.

Allow line style selection - useful for b/w printers and monochrome displays.

Right mouse button cancels current graph mode.

When a location is selected, the filing system now defaults to the last selected zone and location.

Database updated to version 1.2.

******** VERSION 2.01 ********

Bug Fixes From version 2.0

If graph units changed from other than base units, the precision to which the axis are displayed is not updated.

Data summary only displays Flow statistics for a true flow channel. If flow selected as sensor type on 4-20mA or 0-1V then only get min, max, and average.

Printing graphs with a large number of points does not always print properly.

Edit data file comment changes the comment in the data file list, but when you go back into the list the old comment remains.

Modified average factor for last point calculation so the sum of the points involved is not divided by a value greater than the number of points in the sample to give a more sensible last point value.

When Sentry Pressure parameters are entered from scratch and then uploaded the logger does not record.

New Features

New logger types for Radio and Cellnet added to logger selections.

Radio/Cellnet logger setup included in the database.

Graph parameters and Time parameters now in a notebook object.

Autocall software for automatic data downloads, appending data to archive files, and receiving calls from cellnet loggers to download data and upload parameters.

Database updated to version 2.0.

******** VERSION 2.03 ********

Bug Fixes From version 2.01

If graph statistics are displayed for a sensor type other than Flow, Pressure is always displayed as the sensor type instead of the correct sensor type.

An area at the right side of the graph area does not always get updated.

Max data exceedance always occurs on autocall regardless of data value.

For default logger parameter set entry allow pulse power field to be selectable.

Lookup table graph first point sometime incorrect and drawing right hand edge of x axis corrected.

Default logger parameter sets should set the record start time to 23:45:00.

If zoomed in long way text can get displayed on the wrong data point.

Graph time span display is incorrect in tabular type windows (1 sample period too much - when zoomed out fully).

Radio logger setup call time table modified so table entries are not sorted now, and selection problem of selecting a call position and then entering a call time corrected.

Download Interrogator communications improved for interrogator V1.4

Convert 2.031 contains bug fix to allow autocall data to be converted.

Manual Call 2.031 contains bug fix for changing Multi Channel channel recording states.

New Features

Dos to windows data archive converter
Dos to windows Lookup table converter
Dos to windows Function Set converter
Dos to windows Telephone file converter
Allow multiple graphs from 1 function set

Function sets contain graphing elements of DAT, MIN, MAX, AVG, TMN, TMX, TOT.

Master Satellite comms now implemented in autocall software.

Display comms port in use in the manual software.

Time sensor type included with units of seconds, minutes and hours for use with time at min and time at max graphs.

Autocall now displays much more information about port setup and comms in progress.

Autocall may now be aborted, and Manual software allows modem calls to be aborted during dialing.

Autocall has improved error table and call status.

Function set entry now allows auto data generation and associated time period entry. Auto Data Generation is not implemented in V2.03 however.

In Autocall when errors have occurred the error count box is highlighted

Setup only allows multiple autocall ports of the same connection type be enabled if they are modem ports. Other types such as direct logger may only be assigned to 1 port.

Database version checking is now implemented to check the database in use is not a future version i.e. checks if a more recent software version has updated it.

LoLog now has a count/event mode selection option.

******** VERSION 2.04 ********

Bug Fixes From version 2.03/2.031

Problem of uploading logger parameters recording status that was introduced in version 2.03 has been fixed.

More comprehensive error reporting in autocall software.

******** VERSION 2.041 ********

Bug Fixes From version 2.04

Manual Call and Autocall have been updated to version 2.041 to solve logger parameters upload problems via modem.

******** VERSION 2.05 ********

Bug Fixes From version 2.041

Setup function and lookup table names now display correctly if using the complete length

Senator upload cyclic/block memory fixed. Senator parameters window now clears the name string when entering new parameters

32768 was displayed instead of 0 when downloading 0 readings in autocall

View could cause a General Protection Fault when generating data from multiple files.

Corrected exceedance values/time reporting in autocall

Last character entered on LoLog and pulsar parameters comment field now gets uploaded correctly.

Satellite comms calibration value x/y reversed for compatibility with the Dos version of Radlog.

New Features

Logger time may now be uploaded that is different from the PC, and is not forced to be uploaded when the parameters are uploaded.

Logger setup has now been restructured, and displays channel units, allows autocall exceedance checking to be enabled/disabled for each channel, and splits autocall call out and call in.

Default unit types for each sensor type may now be selected in the system configuration

Default unit types are now displayed in the update/create sensor types unit window

All Modem GSM loggers have been separated from the autocall modem logger list.

All direct connection GSM loggers get displayed in the direct connect autocall call list.

Clear All button added to the autocall error table When system configuration is updated a warning is displayed if other modules are running saying they will have to be restarted for changes to take effect.

Screen saver active warning in autocall is highlighted in red.

Autocall file transducers may now be changed in the view software.

Transducers are now displayed selected from the stored transducers list if they are present.

Modem control strings now sent in 2 parts, default part then followed by user defined as separate commands to cater for modems that only accept short control strings.

LoLog changed type changed to Lo-Log/1

LoLog/2/3/4 logger type added

Autocall data files now contain the locations name as the file comment.

System configuration now has a selection for sorting zone, location, function set, and lookup table in identity or name order.

A graph time axis text colour option has been added in view so a black background may be applied and the axis are still visible.

Confirm window added when removing transducers.

Logger list added in system setup to allow the default logger type to be selected Default logger type selection added to system setup.

Disk space now checked before doing a database update.

The maximum amount of data that may be downloaded from a Senator logger in a single autocall download has been limited, as these loggers have download time limit of 45 minutes. A Senator with a large amount of memory that is full of readings and requires a complete download may take more than one autocall download to retrieve all the data.

If an item is updated in the database that is set for autocall, the Autocall will now call it again as soon as possible.

Autocall error table now has a print option.

Data summary now applies to the currently visible time region of the data.

Exit confirmation windows have been removed from Convert, Setup, and Download/Upload. They have been retained on Autocall and View.

Database updated to v2.1

******** VERSION 2.06 ********

Bug Fixes From version 2.05

Modems are now completely reset after use.

When downloading a Senator (multi channel) logger in cyclic memory that has filled memory at least once, the channel ordering on displayed data could be displayed incorrectly.

Master Satellite communications improved in autocall.

Autocall data conversion fixed for locations that have different number of data recordings for each channel.

View graph printing modified. Fixed possible GPF when printing graph with statistics. View remove graph that contains text could cause GPF.

Function set expansion fixed when expanding functions within a function.

New Features

When a comms error has been superseded by a good call in the autocall error table, the error is now removed completely (provided the date of the good call is the same as the date of the error).

Setup system configuration now contains an id/name search option for Autocall call lists.

Host export directory path added to system configuration.

Autocall reports error if sample rate is invalid i.e. if sample rate is <=0 or > 25hours.

Autocall reports warning if record start time is not on a sample rate boundary referenced from midnight.

Autocall reports error if the start time is earlier than that of the current stored recording.

Autocall reports error if number of readings downloaded does not equal the number requested. Autocall reports error if address range received is not the address range requested.

Autocall Last good call time is now displayed in modem call list, as well as next call time.

Autocall error table now prints the logger name along with the error.

Manual download/upload now allows loggers to be stopped (Centurion, Sentry and Senator).

If autocall does not require any data from a logger, the call is terminated without downloading any data, instead of requesting 0 readings which waists time.

When the transducers for data are edited in the view software, a save confirm window is displayed to allow the new settings to be saved with the data.

File handling modified for improved performance on Network Systems, where a common database is setup on the server.

System configuration now has a computer identity entry/selection field. Locations also have a computer identity selection field. This is for use on Network systems where a common database is accessed by a number of computers each running autocall. The autocall that is running on a particular PC will only make calls to loggers in the database with a computer ID that matches the computer ID set in the system configuration for that particular computer. This allows multiple computers to autocall and store data in the same database. A list of all computer IDs set on computers accessing a database are stored with the database, and this list is used in creating computer ID selection lists.

The computer ID is also stored with function sets and lookup tables when they are created. This is to aid list sorting in future software releases.

Data length added to graph time parameters and tabular data windows

Location configuration modified to include pages for location configuration, logger configuration, and meter configuration, allowing meter readings to be stored.

System configuration now has a volume calculation method selection. Use Trapezium to calculate the area under the graph (method used on all previous Radlog DOS and Windows versions), or Summation, which adds the points together over the time period. For checking volumes against a meter reading using a digital logger channel, select the Summation method for a direct comparison.

Autocall force call list now has sort by name or by identity option in system configuration.

View now saves colour settings when Save Settings On Exit is selected. View now prints graphs with the selected background colour.

Difference operator added to function sets and derived graphs.

******** VERSION 2.07 ********

Bug Fixes From version 2.06

Download - when a Centurion logger with only channel 2 recording was downloaded, changing the transducers at time of download could cause a General Protection Fault.

Download - data downloaded from a Senator logger that is in Block memory and Full, and stopped recording, may store data with channels swapped (data correct but displayed on wrong channels).

Download - channel transducer window title displayed as 'test'.

Autocall - If Senator in block memory and full then don't report bad pointer.

Autocall - Export data filenames changed for ascii and summary data. Filenames for Flow data now begin with 'F' and for Pressure data with 'P'. 'P' was used for all data types.

Convert - when converting telephone files call frequencies entered as part days were not converted correctly i.e. a call frequency of 0.5 (half a day) was converted as 0. Call frequencies converted as 0 could then cause a General Protection Fault in Autocall.

View - Dat, Min, Max, and Avg Generated Data could display incorrectly if created from a function set line that contains a math's operator '+', '-', '*', '/'. Data generated from function set lines with a math's operator of 'Graph Fn' is OK. The data was displayed as difference data producing data lines of much less magnitude than the data expected.

New Features

Sensor type selection now available on all transducer types, analogue and digital.

Paknet now implemented for Manual and Autocall downloads.

Save As option included in Location Configuration in the Setup software, to allow configurations to be copied between locations.

******** VERSION 2.08 ********

Bug Fixes From version 2.07

Autocall - data downloaded from a Senator (multi channel) logger did not always get stored if channel 1 was not recording.

Autocall - Satellite header (non Radcom-Radcom) cal and offset values modified to include the transducer cal and offset values.

Function set expansion corrected for sets that contain sets e.g. a set of the form S1 = S2+S3 where S2 = S4+S5 and S3 = S6+S7 where S4 = L1, S5 = L2, S6 = L3 and S7 = L4 didn't work.

New Features

Setup - Units code for non Radcom-Radcom master satellite comms made editable for all logger types in logger configuration(was only editable when logger type was a Satellite type).

Logger ID now gets displayed on location configuration window title in Setup.

When loggers are created in the database download data is now automatically set for gsm/radio loggers.

Data conversion modified so logger time is Not now checked between files when converting archive data. Conversion strategy also modified to improve detection of 4-20mA type channels.

Identities downloaded from loggers are now converted to upper case before being checked for their existence in the database. The database only allows upper case characters to be entered. Loggers programmed using the PSION could be given lower case identity strings, and these would previously have been unrecognized locations in Radlog For Windows.

Generate negative pressure <= -0.1 option added to autogenerate data selection list, and implemented in autocall for auto data generation.

******** VERSION 2.081 ********

Bug Fixes From version 2.08

New Features

Function set and Lookup table selection lists are now created from a list file that gets updated automatically when a function set is updated. This has little effect on systems running a local database, but should dramatically improve performance on network databases.

System configuration now allows an external line character to be entered for telephone numbers, for obtaining an external line from internal exchanges. Modem ports may be specified as either external or internal line types. If a call is being made on an internal line and the external line character doesn't exist at the start of the stored number, the external line character is inserted before dialing. If the line is external but the external line character exists at the start of the stored number, it is removed before dialing the number, as it is not required.

Autocall Continue/Abort window now automatically continues with autocall enabled after 30 seconds if there is no user response.

Generate Data option added to Autocall Options menu to force data generation.

Save As option added to function sets in setup.

******** VERSION 2.082 ********

Bug Fixes From version 2.081

Location selection lists were not getting properly updated when a new zone was selected, adding the new zones locations to the currently displayed list.

New Features

View autocall errors button added to autocall start-up window so autocall errors may be viewed without waiting for the autocall to build its call list.

View - Y axis = 0 auto scaling option added. When selected auto scaling will always ensure the value y=0 is included on the y axis.

Setup - Logger time offset combo added to system configuration. e.g. If the PC is in BST and loggers in GMT, setting the offset to 1 hour will stop autocall logger time errors being reported for loggers that have the correct time in GMT. PC/Logger time difference in the downloaded parameters window now displays the logger time error relative to this offset.

RADLOG for Windows™

******** VERSION 2.1 ********

Bug Fixes From version 2.082

Autocall NON Radcom Radcom satellite comms modified to prevent data header file being created when no data was downloaded.

New Features

Setup system configuration has option added to specify how multi channel identities should be decoded. Options added for DOS compatible, Windows before version 2.1 compatible, and non compatible. The dos compatible only uses the last 4 digits stored, the windows before version 2.1 uses 7 digits unless a database with a 4/3 zone location format is used in which case a 6 digit identity is stored in the logger. The new non compatible version always stores the zone location identity as 7 digits.

Convert - converts area comments as part of the location name.

******** VERSION 2.11 ********

Bug Fixes From version 2.1

Bug fix in autocall that reported 'different channel data lengths' when downloading an old centurion logger from near the end of ram.

Bug fix in upload logger time. If uploading parameters it would always update the logger time as the PC time instead of the selected PC time offset selected on the logger time upload option.

Delay inserted when calling a GSM logger in Manual and Autocall between receiving a carrier after dialing and sending a command to the logger.

New Features

Setup - Function set and Lookup table New option included which automatically finds the first unused identity.

LoLog download modified in manual call and auto call to allow for new pressure and pressure/flow LoLogs.

******** VERSION 3.0 ********

Bug Fixes From version 2.11

Manual Call - Editing parameters for a Centurion logger could set the cal Y value to zero when changing channels.

Autocall - After master satellite communications a Start address error was reported. The data was stored correctly but this error was erroneously stored in the error table.

Autocall and Manual call have been modified to work with modems that return incorrect response codes when ending a call (i.e. US Robotics 33600 returns 'No Carrier' when ending a call, instead of the expected 'OK').

New Features

Setup - LoLog may now be configured with 2 channels to allow flow/pressure LoLogs to be entered.

Setup - Power and Gas flow sensor types added

Setup - Function sets now allow lookup tables to be applied to the resultant data. Graph types may also be specified for display when the set is selected in View.

Setup - Feature added for changing the generate data time period for all function sets.

Setup - The autocall data list has been enhanced to display all loggers in the database. Loggers Not set for autocall are displayed with a strikethrough. A list of all computer identities used in the location database is also displayed. Selecting an identity from the list will update the list with locations that have that computer identity.

Setup - System configuration now has a printer page setup window to allow print margins to be specified. Page headers and footers may also be specified. These print options are used on all printouts created within Radlog For Windows.

View - Function set data is now displayed for the selected time period based on the length of the shortest file (i.e. data padding is not applied to the start of the data if the data does not exist).

View - When changing parameters the currently displayed time period is maintained (previous versions always zoomed out to the full graph time span).

View - Y-Axis zoom using cursor lines implemented.

View - New statistics windows for Power and Gas Flow sensor types added

View - Graph options window added that allows a default graph window title to be entered that is displayed as the title for each graph window that is created.

View - Option added to allow graph text and titles to be stored with data. These may be stored for Manual data, Archive data, and generated data.

View - Option added to allow generated summary data (Min, Max Avg etc) to be displayed as bar type graph or as a line graph.

View - When data is generated a list of any missing data is displayed to warn the user of data that has been padded.

Autocall - May be now be configured to automatically update logger times when they are more than half a sample period adrift from the PC time.

Autocall - Call list has been modified to allow multiple list items to be selected to force call. Selecting force call will then call all the selected items. The list now highlights which items will not be called (items set for autocall that do not have a comms port of the correct type open will not get called) by displaying them with a strikethrough.

Autocall - Now makes up to 3 attempts to perform each required task for a GSM logger that has called in.

Autocall - Now stores any valid data received even if the download was not fully completed. This has been implemented for all call types. This will greatly improve the reliability of receiving data from GSM and Paknet loggers, which are both susceptible to losing the communications link during a large download (due to the nature of the GSM and Paknet networks).

Autocall - Now contains a function select window to allow data for a single function set to be force generated, in addition to the global generate that previous existed.

******** VERSION 3.01 ********

Bug Fixes From version 3.0

View - When generating function data, the complete time span requested was not always displayed when the data was being obtained from multiple recordings with data padding between recordings.

View - Zoom window error message was incorrect when times were entered that were out of range.

General - Real numbers were always expected to use '.' as the decimal point character. This resulted in unexpected value errors being displayed on systems where a different character was being for the decimal point e.g. ','.

Setup - System configuration modem control string and internal exchange character were not being stored after being modified.

Manual Call - Time delay increased between commands sent to loggers. Some Centurion 2e and Senator loggers could not be downloaded/uploaded via a modem connection.

Manual Call - LoLog and Pulsar parameters would not always upload if the comment field were left blank.

Autocall - Paknet numbers could not be force called from the call status list.

Autocall - Paknet numbers now display a calling message on the autocall comms status bars when being called.

New Features

OMS connection modified to allow up to 4 call connection times to be specified, and for the logon file to be specified for each connection time.

******** VERSION 3.02 ********

Bug Fixes From version 3.01

Convert - Archive data files now convert

Setup - Location configuration could lock when editing multiple locations

View - Viewing large amounts of data (> 32000 readings per channel) now display correctly

Function set lists containing many entries now display correctly

******** VERSION 3.03 ********

Bug Fixes From version 3.02

Autocall - Update logger time option could effect current recording data file start record time

Autocall - OMS satellite comms corrected so all data is transferred

Setup - meter readings are now sorted in chronological order

******** VERSION 3.04 ********

Bug Fixes From version 3.03

Autocall - autocall could stop downloading loggers after a period of time View - White graph background would display as black in some versions of window 3.1/3.11

New Features

Setup - Sensor Types may now be given a default missing data value. Previously missing data has always been replaced by the next data value downloaded. The system configuration now allows a default padding value to be entered to be used instead of the next data value if required.

View - Missing data may now be highlighted on the current graph. Blocks of missing data that have been set to the missing data value are highlighted by a dithered graph background (a mixture of the graph colour and the graph background colour). This is enabled by default but may be disabled in the graph options window.

Manual/Autocall - Multilog logger is now supported for download and upload.

Autocall - LoLogs may now be downloaded directly (a Psion was previously required).

General - If a time or date field is cleared, the current time or date information is now redisplayed when leaving the field.

******** VERSION 3.05 ********

Bug Fixes From version 3.04

Manual/Autocall - Multilog 4-20mA channels now stored correctly (were treated as Flow)

New Features

General - database updated to V2.03
General - LoLog Modem logger added to the software
General - 2400 baud now selectable for Centurion and Senator loggers (Only for use with new loggers that support this speed).
General - Lists with data entry fields now search for nearest match entry in the list
General - Support for Multilog Pseudo channels added
General - Transducers now store meter information for meter sizing
General - 32bit version of the software now available for Win32/NT
General - Printer setup now displays standard windows print setup window.

Setup - database update speed increased and progress bar displayed during update.
Setup - System configuration port settings modified to allow up to 32 comms ports
Setup - Memo now added to function sets

View - Now Contains METER SIZING functionality to display data frequency distributions and meter information.
(METER SIZING IS AN OPTION THAT IS DISABLED UNLESS A LICENSE HAS BEEN PURCHASED)

View - 5 different graph types now available, line graph, filled line, 3d line, bar, and 3d bar.
View - Data summary enhanced
View - logger and function set memo now editable in View module
View - progress bar now displayed for operations that take time

Autocall - call status window now has a computer identity selection combo to allow calls to be forced for locations with a different computer identity. Current computer identity is now displayed as part of the autocall main window title for clarity.

Alarmin - updated and will now receive alarms from Multilogs.

******** VERSION 3.06 ********

Bug Fixes From version 3.05

View - Grid did not print properly.

Setup - Saving function sets that contain graphing functions and generate data could display warning but then prevent function from being saved.

Alarm reporter - downloading data after an alarm could cause a program crash.

New Features

Selection windows have new improved selection lists with sort buttons, and moveable splitter bar where more than one list is displayed.

Extended function sets have been implemented, allowing groups of function sets to be created. The path to the extended function sets is entered in System Configuration. If extended function sets are not enabled, function sets work in exactly the same manner as previous software versions.

******** VERSION 3.07 ********

Bug Fixes From version 3.06

General - Selecting User Defined Transducer when updating transducers could cause a program crash.

View - Selecting data for a specific channel now works correctly.

Alarm Reporter - printing has been corrected, and dates of alarms could be reported incorrectly.

Setup - deleting zones and locations corrected

New Features

Administration software now available to allow users to be created with passwords. Each user is assigned a logon level, which allows access to selected features within the software.

General - List sorting now improved. Sort order has been removed from System Configuration. Each list now has sort buttons, which also contain sort direction indicators, up or down.

General - Creating new entries in lists has now been improved. If a new identity is entered, followed by a name in a list select window, entering the name no longer clears the identity field.

General - SLI export format added.

Setup - Copy facility added. Delete data has been enhanced to Copy/Delete data. This allows a zone and location to be selected, and any required data files. These may then be copied to a new database path, such as A: for copying data to disk.

View - ASCII Export added to data summary window so it may be imported into spreadsheets.

******** VERSION 3.08 ********

Bug Fixes From version 3.07

General 32bit - Computers running NT4 in languages other than English could cause problems, such as not allowing Comms ports to open.

View - Displaying generated data (function sets) that contain overlapping missing data could cause a program crash.

Setup - 32bit database update could display erroneous error message about not enough disk space to perform the conversion.

View - Function set names were not displayed on the graph if the function set has not been updated since V3.05 software.

View - When started from the Radcom Pressure Reporter Software to display generated data with reference data it could crash.

Manual Call - If user profile was set to enable Non-Autocall Upload, all uploads were prevented.

Autocall - Function set names were not included in export types if the function set has not been updated since V3.05 software.

View - WASIR export format corrected

New Features

General - Software Copy Protection Implemented. The software must be registered to allow it to run. Each installation of the software must registered.

General - Centurion Event logger added

General - local caching is now performed on the location database if the database is located on a different drive to the software e.g. a database on server being accessed by Radwin on a networked PC. This is to increase the speed of zone/location list creation, and autocall call list creation.

Setup - System Configuration modified so Manual Call, Auto Call, and Alarms, each have there own configuration pages

Setup - System configuration 'Database Configuration' modified so 'System' page only allows selection of database path, computer identity, and extended function set paths. An advanced button has been included to allow entry/deletion of items for these selections. The advanced window now also contains the Senator Identity decoding, and the volume calculation method options.

Setup - System Configuration Computer ID now has a search option, which searches the database for all currently used computer identities and updates the list to show these identities.

******** VERSION 3.09 ********

Bug Fixes From version 3.08

Autocall - No longer reports random exceedance errors for Multilog Pseudo Channels.

General - Comms timing adjusted when using an Infra Red Reader head. On fast computers running NT4 it was found that this type of comms may not always work.

General - Software registration could fail after registration if the registration key was entered in upper case.

Autocall - Will no longer try to download data when the logger is in waiting to record mode.

Autocall - Modification made to storing the data length check in the Data's Header file. Autocall uses this as one of its checks for the integrity of a data file. This solves a rare problem that could cause the length check stored in the header file to be incorrect. (NOTE: This problem would cause Autocall to download all data from a logger and store it in a new file for no apparent reason to the user. THE DATA IN THE OLD FILE IS STILL CORRECT AND VALID).

Manual Call - Download of last n hours data could cause a program crash.

Setup - Computer Identity selection combo in location configuration did not always show the complete list of identities entered

Setup - When Database path, Function set path, and computer identity were updated on the system configuration advanced parameters window, the combo box selections for these in the system configuration did not always show the complete list of items entered.

New Features

General - Cubic Meters/Day unit added

Autocall - reports a data error when it is about to download all data due to a problem with the current data file.

Setup - Copy/Delete data is now called Data Manager and has a feature added to view length information for a data file. It has a repair facility to allow a data file to be repaired. If Autocall does a complete download due to a data file problem, this feature may be used to fix the erroneous data file. The newly created file from the last Autocall download may then be deleted, and the next Autocall download will append to the repaired file.

******** VERSION 3.10 ********

Bug Fixes From version 3.09

Autocall - Ascii (WATNET) export date time format was exported as ddmmyyssmmhh instead of ddmmyyhhmmss

View - WATNET export date time format was exported as ddmmyyssmmhh instead of ddmmyyhhmmss

Autocall - Wacks export format logger id must only use a 4 digit logger id, padded with 0's at start to make 6 digits

New Features

General - PRV controller implemented

General - Units offset implemented so an offset may be applied to a Unit e.g. for converting temperature from degrees C to degrees F.

******** VERSION 3.11 ********

Bug Fixes From version 3.10

Manual - Interrogator will now download under windows NT.

General - Communications improvements to solve rare problem where comms port could stop transmitting characters

View - Data generated from function sets that contained data padding did not always highlight the padded data correctly

View - Generated Total data is now displayed with Volume units if it was generated from Flow data.

Manual - Loading saved Senator(Multi Channel) header parameters did not work.

Autocall - Call list last good call time sort was incorrect. It sorted on last call time (not last good call time).

Autocall - If a corrupted lolog (e.g. caused by lightening strike) was downloaded it could cause the program to crash.

New Features

General - Database Updated

Setup - System configuration now allows a manual port to be specified for Paknet (previously used the modem port)

General - Download configuration now includes a pager number to allow a pager to be dialed to wake-up a GSM module.

Setup - System configuration now allows a modem no carrier timeout period to be set (was previously fixed at 45 seconds)

Setup - System configuration now allows a Paknet no carrier timeout period to be set (was previously fixed at 45 seconds)

Setup - System configuration now allows a pager wakeup time to be set - the time required for a pager to answer and for a GSM module to come on line.

View (Meter Sizing) - Display Meter Bands added to graph options. When meter sizing is enabled meter band information was always displayed on the normal graph. It is now optional.

View - Logger parameters may now be displayed for the data files being viewed (Centurion, Centurion Event, and PRV only at present)

View - new format statistics window to allow more information to be easily viewed

View - Statistics now display Volume in the selected volume sensor units

View - Flow statistics now display pipe length information, MNF/AVG, MNF/MAX, MNF Cost, and meter information

General - function set statistics now include pipe length

General - When generating data, if data padding is found at the start of a recording, a search is now made in the previous recording data file to try to find data to replace the padded data.

View - Select location now has two data viewing options. Previously the only option was to select a single data file to view. a new option has been added to specify a data time period to view for a location.

View - Flow statistics now displays a calculated meter reading. It searches the locations stored meter readings to find the most recent value applicable for the data region currently displayed. It then calculates what the reading will be for the end time of the data period displayed. If the calculation included missing data, the reading is highlighted in Red. An option is also provided to discard flow rates below a user defined level from the reading calculation.

General - K format export file type added (daily minimums)

General - registration number displayed on About screens

General - Sentinel (PRV Controller) now available. Software may be configured by Radcom to include this functionality. Software may also be configured to include Only this functionality, for shipment with Sentinels.

Autocall/Setup - Direct Logger connection now called Direct Logger/Psion. The Default baud rate for this port is now used as the Psion baud rate, which was previously fixed at 9600.

Autocall - Call list now has a separate list for loggers connected via Paknet modems. Previously these were displayed in the modem list.

View - Graph options, colours, fonts, and save options, have been combined into a notebook type window.

View (Meter Sizing) - Graph options has new Summarize Frequency Distribution Tabular Data option. If enabled, the tabular data for a frequency distribution graph will only display values that have occurrences, filtering out all values with no occurrences.

View (Meter Sizing) - Graph options has new Limit Frequency Data Bands option. If enabled, a value is entered to specify the maximum number of bands to be displayed on a frequency graph. If the frequency distribution results in a greater number of bands than that specified, the band width is adjusted so band width = max value - min value / max bands, and the data values sorted into the appropriate bands.

******** VERSION 3.12 ********

Bug Fixes From version 3.11

Autocall - 2 leading zeros added to start of Waacks export file logger id

Autocall - Generating Wacks data would also generate Daily Minimum format data.

Convert - Wacks and Daily Minimum function set autogenerate data flags did not get converted

General - 4-20mA and 0-1V transducers did not store the entered name.

General - Extended function sets entering function identity in selection lists could cause a program crash.

Administration - Selecting Save on user profile window for an existing user without updating the password would double-encrypt the existing password preventing the user from the logging on.

General - When a standard windows file Save/Save As/Open dialogue is displayed, the original working drive/directory is now restored when the window is removed.

Manual - Identity did not get uploaded to PRV controller

New Features

Autocall - Enhancement to Paknet comms for ABB loggers to help with problems caused by pads that are incorrectly set

Setup - Function sets changed 'Generate' button text to 'Global' to save confusion

Setup - Apply Logger Calibration check box added to location configuration transducers. Previously applying logger calibration was always enabled, and could only be disabled by editing transducers on downloaded data.

Setup - Print implemented for - Zone and Location lists, System Config, Location Setup, Loop table list, lookup tables, function set lists, and function sets.

Administration - Editing data transducers in View may now be disabled

View - Option included to specify if incomplete days should be displayed in the data summary.

General - Function Sets and View's Derive Graph now have a 'power' operator under Constant, for raising data to the power of the constant value.

General - Error messages are displayed for errors encountered when logging onto the software

View - Performance graph included (plots one graph against another e.g. flow against pressure). Available as an optional extra.

General - Merlin PRV controller added

General - sentinel Plus PRV controller added

View - File comments may now be edited on all file types.

Setup/Autocall - Option included on System Configuration Autocall page to disable auto-answer on modems. (If disabled this will prevent the software from receiving calls from loggers e.g. from GSM loggers calling in or from outstations, but will also prevent any other call from being answered if this is a security issue).

Setup - Autocall exceedance levels now default to disabled when entering new locations

Autocall - Option added to remove all Forced Calls from the queue.

General - Where lists contain a time and date, the date is now displayed before the time.

Autocall - The autocall call list may now be printed

General - Map telephone numbers option included in system configuration. This feature is for use where telephone numbers may vary depending on where the logger is being called from. The database will contain numbers that are valid from the normal calling location, but some numbers may need to change if a 'portable' computer is being used to download the loggers from a different location. This allows a text file containing a list of loggers ids and telephone numbers (2 columns) to be selected to override the numbers stored in the database for those loggers that are incorrect. The files must be stored in a directory called 'telemap' from the database path e.g. 'c:\radwin\data\telemap'. Mapping files may have any name, but must have a '.tel' extension. All files of this type found in this directory are displayed in the mapping file selection combo box in the system configuration. The mapping file only needs to contain those numbers that need to be changed.

******** VERSION 3.13 ********

Bug Fixes From version 3.12

View - Performance graph x-axis data values always displayed in base units e.g. litres/sec, but axis text may display other units e.g. litres/hour.

Setup - data manager could cause a program crash.

View - trying to load invalid files could cause a program crash if no graph window was currently displayed.

Setup - System Config disable modem auto-answer status flag did not save properly.

Autocall - 32Bit Psion comms could return a data start address error.

Manual - Paknet did not dial correctly

Autocall - Auto-generate data. If data didn't exist back far enough, data put in exported file was stored starting at requested date and ending some time in the past rather than the specified end data.

View - Derive data. If the time periods of the graphs being used to derive a new graph do not overlap, the program could crash instead of displaying an error message.

New Features

View - graph option added to allow graphs to be masked so they are removed from the display but not actually deleted.

View - Export option 'ASCII - All Graphs' included to export data for all graphs on the current graph window that have the same sample rate. The format is 'Date Time Data1 Data2 Data3 ....' and may be imported into spreadsheets such as Microsoft Excel.

View - Save Graph option added. Saves the graphs displayed on the current graph window in data files under a user selected location. All graphs except masked graphs are stored. The data is stored for the currently displayed graph region. Graphs stored in this way have filenames starting with 'U'.

General - Wirelog added

View - Now displays Multilog and Wirelog parameters

Setup - Map telephone number editor added under the File menu option

Autocall - Force Call confirmation window now has option to download a selectable amount of data into a Manual file, allowing small chunks of data from multiple loggers to be downloaded using autocalls multiple for download facilities.

Autocall - If the logger start record time is found to be before the end of the last data stored, previously an error was reported and no data
downloaded. This is a condition that should not occur for systems not running daylight saving time (normal). For systems running daylight saving time, putting the logger clock back in time and restarting the logger would cause this error. An error is now reported in the error table as before, but data is now downloaded in a new file.

View - When exporting data the selected export directory is now retained for the next export.

View - The missing data list for generated data may now be printed.

General - Function Set and Lookup Table identities may now be alphanumeric. Previously these were just numeric.

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******** VERSION 3.14 ********

Bug Fixes From version 3.13

Manual - PRV logging parameters did not upload

Autocall - Scheduled calls did not store data correctly.

New Features

General - Software now not Case Sensitive when searching for directory names. When directory structures were copied using Microsoft Windows Explorer (e.g. copying a complete database) it was found that Explorer could change some characters in the names from upper to lower case and the Radwin software would not then find them.

******** VERSION 3.15 ********

Bug Fixes From version 3.14

Setup - System Configuration, Lists - Types Vibrating Wire, Sentinel, Merlin, and Sentinel Plus could not be disabled from appearing in logger type selection lists.

Autocall - Printing an individual error did not work

Autocall - Master/Satellite comms could crash after receiving data

New Features

General - Server paths may now be entered instead of having to map network drives e.g. '\\serv1\data' instead of having to map a network drive (e.g. 'h:\') to '\\serv1' and then setting the path to 'h:\data'.

View - Grid on 3D graph improved

View - If the primary and secondary graph have the same Y-Axis scaling, both Y-Axis are now displayed to the same precision (previously the secondary axis was display to 1 extra decimal place which was not necessary).

******** VERSION 3.16 ********

Bug Fixes From version 3.15

View - If loading data caused a new graph window to be created, the program could crash.

View - Data that is one continuous value may not immediately autoscale with other data of the same sensor type. It could be displayed on its own data axis until an operation was performed to force all graphs to re-scale themselves.

View - Printing graph stats with a graph could cause a program crash

New Features

Manual - Upload speed increased for Lolog, Pulsar, Multilog, PRV Controllers, and Wirelog.

General - Controllog added.

General - SLI data export now allows 2 characters to be entered for the start of the generated data filename (first 2 characters were previoulsy fixed as 'AW').

General - Logger channels may now be given individual names

General - 4-20mA and 0-1V transducers now have units selection for entering the FSD values.

General - A Sensor type may now be specified for the output of a function set. This is initialiy set to 'Default Sensor', which applies the sensor found for the first locations data within the function set (which is how the sensor type has been obtained for previous software versions).

View - Now includes pipe pressure testing.

Autocall - Autocall manager now has option to allow direct connection loggers to be automatically called.

Autocall - Update logger time implemented on Multilog, Lologs, Vibrating Wire, and Controllog (was only available on Centurion, Sentry, and Senator loggers).

Setup - File menu now has an option to update database telephone number STD codes. An old code and a new code are entered, and a search and replace operation is performed on the database to update the numbers (if a number is found that starts with the old code, the old code is replaced by the new code).

View - Logger Parameters are now only available in the 32 Bit software. This is to limit the size of the 16 Bit software.

Database updated to version 2.5.

3.16.1

View - If graph text is saved so it is positioned outside the full zoom region of the loaded data, it is displayed within the region.

Autocall - Master Satellite transducers were stored incorrectly.

******** VERSION 3.17 ********

Bug Fixes From version 3.16

Manual - Pressure Transient data did not get stored in V3.16

Autocall - ABB Aquamaster caused the program to crash when storing data

Alarm reporter - Could crash after receiving an alarm

View - Function Set elements with graphing functions. If data didn't exist back far enough, the elements graph was displayed starting at the requested start date and ending at the start date + data length available, instead of the requested end date.

Manual - Downloading Sentinel and Sentinel Plus controller parameters always produced header length download error.

New Features

General - A Unit type may now be specified for the output of a function set. This is initially set to 'Default Unit', which applies the current default unit for the specified Sensor type of the function set.

General - Transducers window updated and Vibrating Wire sensor type added

******** VERSION 3.18 ********

Bug Fixes From version 3.17

Autocall - Would crash on startup if auto clear errors was enabled in system configuration.

Autocall - exceedance errors were not always displayed correctly

New Features

General - 'TAP' (Telelocator Alphanumeric Protocol) paging service protocol implemented for pager wakeup.

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******** VERSION 3.19 ********

Bug Fixes From version 3.18

Setup - GSM logger parameters start and stop date fields displayed as 01/01/70 when re-displayed after saving a year of 00. The correct date was actually stored and would be uploaded to the logger correctly, provided the prarameters were not saved when the date was redisplayed as 01/01/70.

Setup - Deleting 'U' files did not work

Manual - Pressure Transient Logger Status battery capacity was displayed a factor of 10 too low

General - Data generated by function sets and deriving graphs in view, did not always align data the same when the data was derived from data with different sample rate boundaries.

Autocall - force calls did not update the last good call time in the call list.

Autocall - multiple ports now check to make sure they are not trying to call the same telephone number. This was a problem with master satellite.

Setup - It was not possible to create a Graphing Function element without specifying Dat, Min, Max, or Avg, as one of the graph types required.

Manual - If the transducer information to be stored with data was changed before saving downloaded data, the meter bands
information was not stored with the data for the new transducer selection.

Autocall - Psion download did not always work

Autocall - GSM upload options flags did not get cleared after being performed

New Features

Pegasus PRV controller added.

Autocall, Manual Call - If a modem fails to respond after it receives an AT command, the command is now retried. This makes modem comms more reliable with problematic modems.

View - Total added to Non-Flow graph statistics, and Daily Total added to Non-Flow data summary.

Autocall/View - Function sets that include function sets with a multilply or divided maths operator, now perform the multiplication or division using that sets first element (the multiply/divide was previosly ignored and the sets first maths operator was used).

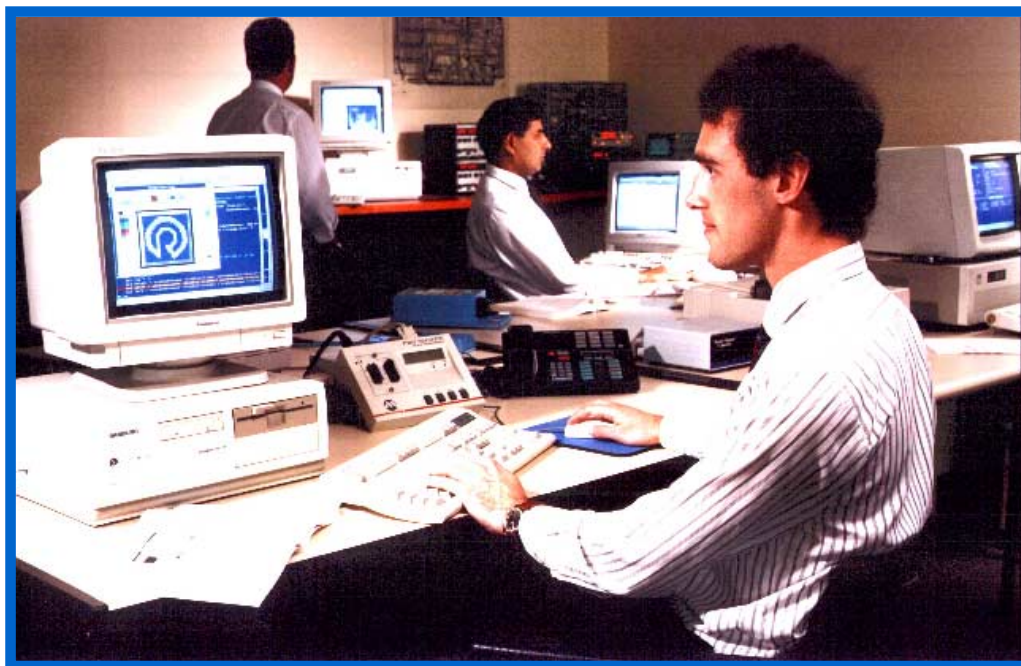View - display data for time period now has All Channels option

Alarm receiver - now receives alarms from GSM centurions

View - compatible with new Radcom Easy GIS for displaying data

Alarm receiver - compatible with new Radcom Easy GIS for reporting alarm occurances

Free online support for all Hardware & Software questions:

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