

SCOTT®



I.R.I.S

Base Unit

User Instructions



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Skelmersdale, Lancashire, WN8 9RA, United Kingdom.

WARNINGS

Please Read Carefully and Fully Understand

This manual is intended for use by personnel trained in the use and care of **IRIS** data communications systems and **MUST NOT** be used as a self-teaching guide by untrained Users. Failure to understand or comply with these User Instructions may result in injury or death; and invalidate any warranty or insurance claims.

Scott Health and Safety Limited have taken great care to ensure that the information in this manual is accurate, complete and clear. However, **Training & Technical Support Services** will be pleased to clarify any points in the manual and answer questions on **SCOTT** products.



Read this Manual in conjunction with the User Instructions for the BA Set with which IRIS is intended for use.



DO NOT take the Base Unit into a fire or into a potentially flammable or explosive atmosphere. The Base Unit must ONLY be operated in a safe area away from the hazardous atmosphere. Use of the Base Unit in a potentially flammable or explosive atmosphere may cause ignition of the atmosphere, which could result in serious injury or death.



IRIS is not approved for operation in oxygen-enriched atmospheres.



Ensure that the antennas of hand-held radios are kept at least 150mm away from the IRIS Base Unit and Portable Unit when transmitting. Close proximity of radio equipment to IRIS during radio transmission may cause the equipment to malfunction.



Be aware of the potential effect of radio transmissions from base station or truck-mounted radios when using IRIS. Close proximity of radio equipment to IRIS during radio transmission may cause the unit to malfunction.



Radio Frequency Interference (RFI) may cause IRIS to malfunction. Users of BA Sets equipped with IRIS must be aware of the proper operation of the distress alarm. Failure to recognize a malfunction of the equipment and take proper corrective action may result in failure of the IRIS distress alarm and lead to serious injury or death.



DO NOT use equipment that is damaged or beyond its service-due date.



DO NOT attempt to remove or change batteries in a flammable atmosphere.

DISCLAIMER

Failure to comply with these instructions or misuse of the equipment may result in: death, injury or material damage, and invalidate any warranty or insurance claims.

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1. INTRODUCTION

1.1 ABBREVIATIONS

The following abbreviations are used in this manual:

ADSU	Automatic Distress Signal Unit
BA	Breathing Apparatus
BU	Base Unit
EMU	Electronic Monitoring Unit
GHz	Gigahertz
IRIS	Integrated Radio Information System
kHz	Kilohertz
Km	Kilometres
LCD	Liquid Crystal Display
LED	Light Emitting Diode
MHz	Megahertz
mW	Milliwatts
PASS	Personal Alert Safety System
PC	Personal Computer
PU	Portable Unit

1.2 PERSONNEL TRAINING

Personnel using **IRIS** must be fully trained in accordance with these instructions and national guidelines.

These instructions cannot replace an accredited training course run by fully-qualified instructors in the proper and safe use of **IRIS** data communications.

Please contact **Training & Technical Support Services** for training course details.

Training & Technical Support Services:

Scott Health and Safety Limited

Pimbo Road, West Pimbo,
Skelmersdale, Lancashire,
WN8 9RA, United Kingdom.

Tel: +44 (0) 1695 711711

Fax: +44 (0) 1695 711775

1.3 SPARE PARTS AND ACCESSORIES

Customer Services provide an efficient, friendly, customer contact point for ordering new equipment, spare parts and accessories. The team can also provide general information on other **SCOTT** products.

Customer Services:

Scott Health and Safety Limited

Pimbo Road, West Pimbo,
Skelmersdale, Lancashire,
WN8 9RA, United Kingdom.

Tel: +44 (0) 1695 711711

Fax: +44 (0) 1695 711775

1.4 SERVICING AND PARAMETER RE-PROGRAMMING

The replacement of external parts and re-programming of variable parameters must only be carried out by personnel who have completed a formal training course and hold a current certificate for the servicing and parameter re-programming of **IRIS**.

1.5 QUALITY ATTRIBUTES

The **IRIS** Base Unit is approved to the following Standards:

1.5.1 Functional Specifications

- 'CE' Marked in accordance with EEC Directive 93/68/EEC.

1.5.2 Safety Specifications

- BS EN 61508 : Parts 1-7 - Functional Safety of Electrical/Electronic Programmable Electronic Safety Related Systems.
- BS EN 60950-1 : 2002 - Information Technology Equipment - Safety General Requirements.

1.5.3 EMC/Radio Type Approval

- ETSI 301 489 Parts 1 & 3 - EMC Standard for Radio Equipment and Services. Specific conditions for Short- Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz.
- MG 41 (Issue 1.4) - Performance & Regulatory Standards for Radio Telemetry Systems for use by the Fire Service in the 862-863 MHz frequency range.
- MG 41A (Issue 1.2) - At-Incident Telemetry Common Air Interface Document.
- ETSI 300 220-3 - Radio Equipment and Systems (RES); Short Range Devices (SRD); Technical characteristics and test methods for radio equipment to be used in the 25 MHz to 1000 MHz frequency range with power levels ranging up to 500mW.

1.5.4 Environmental

- BS EN 60529 : 1992 +A1 +A2 - Specification for degrees of protection provided by enclosures (IP Code).
- BS EN 60721-3-2 : 1997 - Classification of environmental conditions. Part 3 Classification of groups of environmental parameters and their severities. Section 2; Transportation.

1.5.5 Notified Bodies

prEN 137:

Inspec International Ltd
(Number 0194)
Upper Wingbury Courtyard,
Wingrave,
Aylesbury,
Buckinghamshire,
HP22 4LW,
United Kingdom.

Environmental:

British Standards Institute
(Number 0086)
389 Chiswick High Road,
London,
W4 4AL,
United Kingdom.

British Standards Institute
(Number 0086)
Maylands Avenue,
Hemel Hempstead.
Hertfordshire,
HP2 4SQ,
United Kingdom.

ATEX:

Sira Certification Service
(Number 0518)
South Hill,
Chiselhurst,
Kent,
BR7 5EH,
United Kingdom.
Certificate Number:
Sira 04ATEX2177

EMC/Radio Type Approval:

Radio Frequency Investigation Ltd
(Number 0889)
Ewhurst Park,
Ramsdell,
Basingstoke,
Hampshire,
RG26 5RQ,
United Kingdom.

2. EQUIPMENT DESCRIPTION

2.1 GENERAL

IRIS is a modular data communications device which in its basic form senses and transmits atmospheric and operational data to the wearer in the form of a visual display in conjunction with an audible alarm. Once the equipment is fully activated, a built-in event logging function registers critical data at intervals of one minute. This data can be downloaded to a PC/Laptop for the purpose of analysis. A further addition can be made to the system which will enable two-way data communication between the wearer and the Entry Control Officer.

The basic equipment comprises a Portable Unit (PU) which is worn by the User as a part of the BA Set, providing atmospheric and operational data to the wearer relating to his immediate environment and operational condition of that particular BA Set. The PU comprises an Electronic Monitoring Unit (EMU) which is attached by a flame-retardant, reinforced umbilical cord to the Personal Alert Safety System (PASS) Unit (also known as ADSU). The PU is connected to the BA Set by means of a high-pressure hose which fits directly into the reducer valve located on the backplate of the BA Set.

The equipment may be further enhanced by the addition of a telemetry module, which can be purchased either as a kit or factory-fitted. When fitted with a telemetry module and used in conjunction with a telemetric Base Unit, the resultant system enables two-way data communication between the wearer and the Entry Control Officer, based up to 0.8 Km un-obstructed distance from the PU.

The BU can be used to control up-to 50 active Portable Units and enables the **Ricochet** feature to be activated, in which alarm messages can be sent by the Entry Control Officer to a wearer who is out of range by 'bouncing' the message via an active EMU that is within range.

2.2 BASE UNIT

The BU casing is fabricated from aluminium alloy, providing a robust, damage-resistant protective shell for the delicate electronics contained within. The unit is powered by six, 'C-size' alkaline batteries, providing a minimum of 12 hours of continuous battery life. The batteries are easily accessible, being housed within three battery compartments located between the mounting feet of the unit.

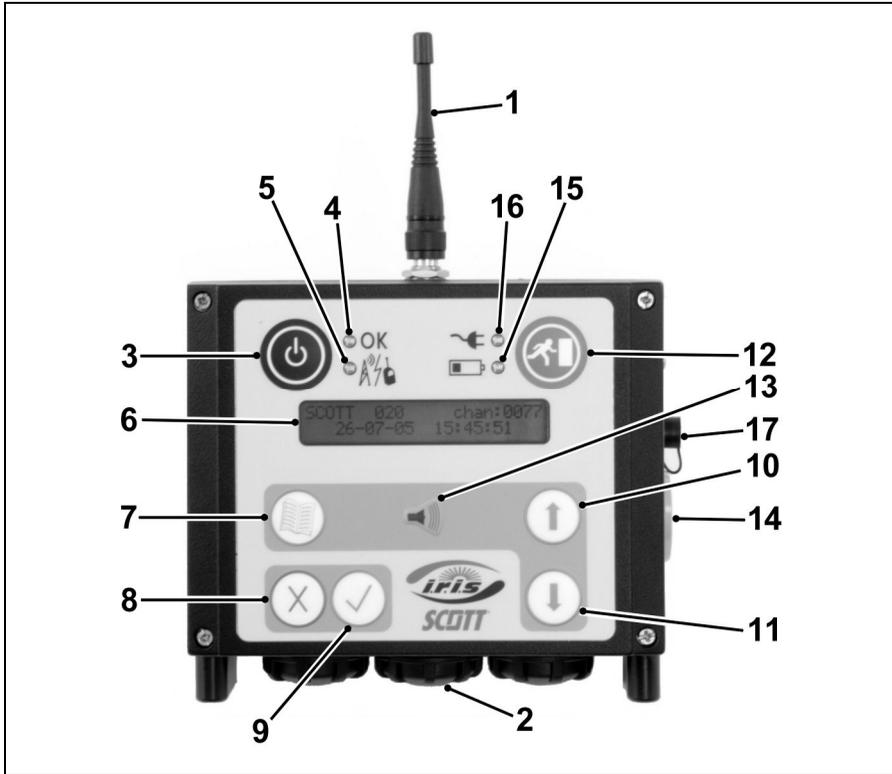
Data signals are transmitted and received via a flexible, quarter-wave antenna connected to the unit by a 50 ohm TNC female interface connector.

The control panel contains seven soft-power function buttons, five LEDs and an LCD message display screen. The purpose of each function button and LED is represented by internationally-recognised graphics, which can be understood regardless of the language spoken by the User. Function buttons control the power state of the unit, transmission of evacuation instructions and the selection of menu options. The five LEDs advise the status of the BU to the User, as follows: 'OK' function, 'alarm' function, 'battery low', 'external power source' and 'out-of-range' warning. The LCD screen is automatically backlit when a function button is pressed or if a data message is received. The backlight acts on a timer and in order to conserve power, will switch off after a set period of time. The precise time period to switch-off can be re-programmed to suit the User's preference. Display brightness and contrast levels can also be re-programmed if required.

Audible warnings are transmitted through a sounder located on the side of the unit, providing warning sounds up-to a volume of 85 dB(A) at a distance of one metre.

A cable port capable of accepting either a serial data cable for link-up to a PC/Laptop or a 12/24 volt power-cable linked to an external power source is situated close to the warning sounder at the side of the unit.

2.3 LAYOUT OF BASE UNIT



- | | |
|----------------------------------|------------------------------------|
| 1 = Antenna | 10 = Scroll Button - (Scroll Up) |
| 2 = Battery Compartment Cover(s) | 11 = Scroll Button - (Scroll Down) |
| 3 = Power ON/OFF Button | 12 = Evacuate Button |
| 4 = 'OK' LED | 13 = 'Alarm' LED |
| 5 = 'Out of Range' LED | 14 = Alarm Sounder |
| 6 = LCD Screen | 15 = 'Battery Low' LED |
| 7 = Menu Button | 16 = 'Ext. D.C.' LED |
| 8 = Clear/Reject Button | 17 = Cable Port Cover |
| 9 = Acknowledge/Confirm Button | |

2.4 COMPONENT FUNCTIONS

(1) Antenna

The screw-in, flexible antenna can transmit and receive data messages for up-to 0.8 Km of un-obstructed distance from the 'safe' area.

(2) Battery Compartment Cover(s)

Batteries are housed in three compartments, each containing two batteries and secured in position by a screw-on battery cover.

(3) Power ON/OFF Button

Press the button to apply power to, or remove power from the BU.

(4) 'OK' LED

The green, 'OK' LED flashes when battery power is applied to the BU to demonstrate that all systems are functioning normally. The LED remains off when power is not applied to the BU or in the event of a BU failure.

(5) 'Out of Range' LED

The yellow, 'Out of Range' LED has three states:

- i) Off; when all PUs in the status list are in direct or indirect radio contact with the BU.
- ii) Flashing; when one logged-on or activated PU in the status list has not been in radio contact with the BU for the programmed time period (re-programmable using the Service Centre Software).
- iii) On continuously; in the event of a BU failure, or when two or more logged-on or activated PUs in the status list have not been in radio contact with the BU for the programmed time period (re-programmable using the Service Centre Software).

(6) LCD Screen

Capable of displaying up-to 48 alphanumeric characters in the form of 2 rows x 24 columns. The screen is back-lit to facilitate use in poor light conditions. The status display mode appears as a default setting.

(7) Menu Button

Press the button to change from *Status Display Mode* to *Menu Display Mode* and vice versa. When in the *Menu Display Mode*, this button also acts as a 'save and exit' function.

(8) Clear/Reject Button

When pressed, the button rejects the function displayed on the LCD screen and also acts as a 'quit' or 'escape' key. In order to avoid accidental activation, it is necessary to press and hold the button for a period of time to allow it to register.

The precise period of time is a programmable option and if 'Button Click' is enabled, a low-volume beep is heard when the button is pressed.

(9) Acknowledge/Confirm Button

When pressed, the button accepts the function displayed on the LCD screen and also acts as a 'enter' or 'select' key. In order to avoid accidental activation, it is necessary to press and hold the button for a period of time to allow it to register. The precise period of time is a programmable option and if 'Button Click' is enabled, a low-volume beep is heard when the button is pressed.

(10) Scroll Button - (Scroll Up)

This button, when used in conjunction with the Scroll Down Button, allows the Entry Control Officer to navigate through the Menu Display in order to access the various options available, or when in the Status Display Mode, enables the Entry Control Officer to traverse through the database of PU Users.

(11) Scroll Button - (Scroll Down)

This button, when used in conjunction with the Scroll Up Button, allows the Entry Control Officer to navigate through the Menu Display in order to access the various options available, or when in the *Status Display Mode*, enables the Entry Control Officer to traverse through the database of PU users.

(12) Evacuate Button

When pressed, this button initiates a selective or board evacuation message.

(13) 'Alarm' LED

The red, 'Alarm' LED has three states:

- i) Off; normal.
- ii) Flashing; when one logged on or activated PU in the status list is in the un-acknowledged alarm, withdraw or low air state.
- iii) On continuously; when two or more logged on or activated PUs in the status list are in the un-acknowledged alarm, withdraw or low air state; or in the event of a BU failure.

(14) Alarm Sounder

Audible warnings are transmitted through the sounder which is located on the side of the unit.

(15) 'Battery Low' LED

The yellow, 'Battery Low' LED has two states:

- i) Off; normal.
- ii) Flashing; when the BU battery voltage has dropped below the factory-set low battery threshold.

(16) 'Ext. D.C.' LED

The green, 'Ext. D.C.' LED has two states:

- i) Off; when the BU is not powered externally.
- ii) On continuously; when the BU is being powered externally.

(17) Cable Port

The RS 232 bi-directional port accepts either a serial data cable for link-up to a PC/Laptop or a 12/24 volt power cable linked to an external power source. Both of these functions are combined in one data cable, which is available from **Scott Health and Safety Limited** under Article Number 2016497.

2.5 LAYOUT OF LCD SCREEN

A typical PU status list entry is displayed as follows:

SCOTT 001-001 * Wdrawing 20:38 13m 200 Bar <23m> 12
--

Key:

- SCOTT = Brigade name/identification of PU.
- 001 = Fire appliance number.
- 001 = PU position on fire appliance.
- * = Indication of an un-acknowledged message.
- Wdrawing = The message.
- 20:38 = Time of message.
- 13m = Elapsed time in minutes since PU was activated.
- 200 Bar = Air cylinder pressure of PU.
- <23m> = Time-to-whistle status value (in minutes).
- 12 = Number of PUs logged on to this BU.

2.6 SOUNDER FUNCTIONS

The sounder operates on a single frequency and has two levels of volume, dependant upon the message being communicated by the BU. The range of messages and the resultant sounder states are shown in *Table 1* below:

Sounder State	Message
Off.	BU is operating under normal, fault-free conditions and there are no actions pending by the Entry Control Officer.
3 short pulses at low volume during Power-on operation.	Confirmation that the sounder is functioning correctly.
1 short pulse at low volume when a button has been pressed.	User-configurable parameter acknowledging that a button has been pressed.
High-volume, intermittent.	At least one PU in the status list is in the un-acknowledged alarm or withdraw state.
Low-volume, intermittent.	A message of a lower priority than an alarm or withdraw has been received, (such as a logon request), but has not yet been acknowledged.
Low-volume, continuous.	BU has an internal fault.

Table 1: Sounder States and their Operational Meanings

2.7 PRODUCT APPLICATION REQUIREMENTS

The equipment's intended use is to provide short-range, two-way radio telemetry data communication between fire-fighters wearing breathing apparatus and their Entry Control point.

There are no User controls or adjustments that affect the radio performance. Only the manufacturer shall make any repairs or adjustments.

The equipment has been certified for EMC to ETSI 301 489 Part 3 and Radio Type approval to EN 300-220 Part 3 / Home Office Specification MG41A over the frequency range 862 to 870 MHz.

Only certain frequencies within the certified frequency range are permitted within countries of the European Union.

Within the UK, the only frequency channel available is 862.9625 MHz (designated as channel 77).

Elsewhere in Europe the licence-exempt band as specified in the Conference of European Postal and Telecommunication (CEPT), European Radio Communications Committee (ERC), Recommendation 70-03 Relating to the use of Short Range Devices (SRD), may be available. The available frequency channels are as follows:

Channel Number	Frequency (MHz)
593	869.4125
594	869.4250
595	869.4375
596	869.4500
597	869.4625
598	869.4750
599	869.4875
600	869.5000
601	869.5125
602	869.5250
603	869.5375
604	869.5500
605	869.5625
606	869.5750
607	869.5875
608	869.6000
609	869.6125
610	869.6250
611	869.6375

Table 2: Available Frequency Channels

IRIS is intended for use in the following countries:

Austria (AT)	Greece (GR)	Poland (PL)
Belgium (BE)	Hungary (HU)	Portugal (PT)
Bulgaria (BG)	Iceland (IS)	Romania (RO)
Croatia (HR)	Ireland (IE)	Slovakia (SK)
Cyprus (CY)	Italy (IT)	Slovenia (SL)
Czech Rep. (CZ)	Latvia (LV)	Spain (ES)
Denmark (DK)	Lithuania (LT)	Sweden (SE)
Estonia (EE)	Luxembourg (LU)	Switzerland (CH)
Finland (FI)	Malta (MT)	Turkey (TR)
France (FR)	Netherlands (NL)	United Kingdom (GB)
Germany (DE)	Norway (NO)	

Table 3: Countries of Intended Use

2.8 OPERATIONAL TEMPERATURE LIMITATIONS

The equipment is certified for operational use at between -15°C and +55°C.

3. PREPARATION FOR USE

3.1 INITIAL SET-UP OF BU OPERATIONAL DETAILS

By using a serial port data cable and the Service Centre Software, a range of operational details can be set up on the BU and logged into a PC/Laptop.

The following should form part of your initial BU set-up process:

- Enter radio channel number.
- Enter brigade name/number.
- Enter Base Unit identification number.
- Set internal BU date and time clock.
- Verify that factory-set parameters conform to your specific requirements.

For further details, please refer to the **IRIS** Service Manual.

3.2 RE-PROGRAMMABLE PARAMETER ADJUSTMENT

By using a serial port data cable and the Service Centre Software, a range of BU functional parameters can be re-programmed.

For further details, please refer to the **IRIS** Service Manual.

4. PRE-USE CHECKS

4.1 CHECK BASE UNIT

Thoroughly inspect the BU to ensure that there are no signs of damage; and that the antenna is present and correctly fitted.

WARNING:

DO NOT use equipment that exhibits signs of damage.

4.2 START-UP PROCEDURE

Press the Power ON/OFF Button and the unit will carry out a self-test sequence which will take up-to five seconds to complete.

The following self-tests are performed:

- LCD test (all segments on).
- LED test (all lamps on then off).
- Internal memory check.
- Sounder test (three tones).

During the self-test, the following message appears on the LCD screen:

SELF TEST IN PROGRESS
PLEASE WAIT...

4.3 SUCCESSFUL START-UP

A successful start-up is indicated by three tones from the sounder and the display will default to the Status Display Mode. The pre-use checks are now complete and the BU is fully operational.

The initial contents of the display will depend upon the condition of the status list stored in the memory. If the status list is empty, the BU's identity, radio channel number and the current date and time will be displayed until a message is received or an operation is initiated by the Entry Control Officer.

If the status list is not empty, the display will provide details of the highest priority PU. Possible reasons for the status list not being empty could be:

- The BU was powered off for a battery change during an incident.

- One or more PUs failed to log-off at the end of an incident and the Entry Control Officer failed to perform a 'clear-up' operation.

Unwanted entries from a previous incident can be removed using the *Clear up PU Database* menu (see *Section 5.4.7*).

After a successful start-up and assuming that there are no PUs logged on from a previous incident, the LCD screen will display the following typical details:

```

SCOTT      001-001      chan:0042
21-03-05   16:12:26
    
```

Key:

- SCOTT = Brigade name/identification of PU.
- 001 = Fire appliance number.
- 001 = PU position on fire appliance.
- chan:0042 = Radio channel number.
- 21-03-05 = Current date (dd-mm-yy).
- 16:12:26 = Current time (hh:mm:ss).

4.4 UNSUCCESSFUL START-UP

An unsuccessful start-up is indicated by a continuous, low-volume sound and the LCD screen will display one of the following error messages:

Message	Meaning
EEPROM	Memory Failure
Flash Memory Failure	
Telemetry HW Failure	Telemetry Module Failure
Real Time Clock Failure	Time Clock Failure

Table 4: Start-up Error Messages

In the event of an unsuccessful start-up, press the Power ON/OFF Button to switch the unit off and re-start as described above. Should the error persist, remove and re-fit one of the battery compartment covers (to interrupt the power supply) and re-start the unit.

WARNING:

DO NOT attempt to use equipment that exhibits signs of failure.

5. IN USE

5.1 ACTIVATE BASE UNIT

Activate the BU as described in *Section 4* of this Manual.

5.2 PRE-USE CHECKS

Carry out Pre-use Checks as described in *Section 4* of this manual.

WARNINGS:

- **DO NOT use equipment that fails the self-diagnostic test.**
- **DO NOT use equipment that exhibits any signs of damage.**

5.3 DISPLAY MODES

When the BU is activated, the LCD screen automatically defaults to the *Status Display Mode*. A *Menu Display Mode* is also available and to switch between display modes, press the Menu Button on the BU.

The *Status Display Mode* enables the User to scroll through the status list containing the identity and status of each PU that is logged on or waiting to be logged on to the BU.

The *Menu Display Mode* enables the User to configure and update settings and data held by the BU.

5.4 MENU DISPLAY MODE

The following items are contained within the menu:

- [1] Clear Reject List
- [2] Set Date & Time
- [3] Request Logon
- [4] Request Update
- [5] Identify Base Unit
- [6] Set Display
- [7] Clear up PU Database

Only one menu item at a time is displayed on the LCD screen and navigation between menu items is achieved using the Scroll Up and/or Scroll Down Buttons.

5.4.1 Clear Reject List

The *Clear Reject List* menu item is used to delete records of any PUs that have been rejected by the Entry Control Officer since the BU has been in operation at the incident. Messages from a PU that may be associated with another BU can therefore be deleted using this function.

1. Select the *Clear Reject List* screen.

```
[1] Clear Reject List
21-03-05 16:12:26
```

2. Press the *Acknowledge/Confirm* Button and the following will be displayed:

```
[1] Clear Reject List
ARE YOU SURE ?
```

3. Confirm the action by pressing the *Acknowledge/Confirm* Button or cancel by pressing the *Clear/Reject* Button.

5.4.2 Set Date & Time

This menu item enables the BU's date and time to be changed. Please note that this function cannot be performed if there are PUs logged on to the BU.

1. Select the *Set Date & Time* screen.

```
[2] Set Date & Time
21-03-05 16:12:26
```

2. Press the *Acknowledge/Confirm* Button and the current date and time will be displayed with a pointer positioned below the first digit.

```
21-03-05 16:12:26
^
```

3. To change the digit at the position of the pointer, press the *Scroll Up* or *Scroll Down* Buttons.
4. To move the pointer to the next digit, press the *Acknowledge/Confirm* Button.
5. To move the pointer back to the previous digit, press the *Clear/Reject* Button.
6. To save the new date and time setting, press the *Menu* Button.

7. The original date and time can be restored at any time during this adjustment by re-positioning the pointer beneath the first digit and pressing the *Clear/Reject* Button.

5.4.3 Request Logon

The *Request Logon* menu item enables the Entry Control Officer to instruct all PUs not currently logged on to the subject BU, to issue logon requests.

1. Select the *Request Logon* screen.

```
[3] Request Logon
21-03-05 16:12:26
```

2. Confirm the action by pressing the *Acknowledge/Confirm* Button or cancel by pressing the *Clear/Reject* Button.
3. If the action is confirmed, the display will change to:

```
Logon Request
in Progress
```

4. This display will remain for several seconds while the BU broadcasts logon request messages to the PUs, after which time the LCD will revert back to the *Status Display Mode*.

5.4.4 Request Update

This menu item enables the Entry Control Officer to instruct a PU to send data.

1. Select the *Request Update* screen.

```
[4] Request Update
21-03-05 16:12:26
```

2. Press the *Acknowledge/Confirm* Button and the BU displays the identity of the first PU in the status list.

```
SCOTT 001-001 OK
Update ?
```

3. There are three options available:
 - i) Request data from the displayed PU by pressing the *Acknowledge/Confirm* Button. When the updated data has been received, the display will change to:

```
SCOTT 001-001 OK
Updated !
```

ii) Request data from another PU in the status list by using the Scroll Up or Scroll Down Buttons until the desired PU is displayed, and proceed as above.

iii) Terminate the procedure by pressing the Clear/Reject Button. If this option is chosen, the display will change to the *Status Display Mode* for the PU identified on the display screen.

Notes:

- If there are no logged-on PUs in the status list, the display does not change when the *Request Update* screen is selected.
- If a PU is in the status list but is not logged on to this BU, the following is displayed:

```
SCOTT    001-001    Alarm ??
Update not possible !
```

5.4.5 Identify Base Unit

The *Identify Base Unit* menu item allows the Entry Control Officer to display the identification details of the BU.

1. Select the *Identify Base Unit* screen.

```
[5] Identify Base Unit
21-03-05 16:12:26
```

2. Press the Acknowledge/Confirm Button and the identification details of the BU are displayed.

```
SCOTT    001-001    chan:0042
21-03-05 16:12:26
```

3. To return to the *Identify Base Unit* screen, press the Clear/Reject Button.

5.4.6 Set Display

This menu item enables three display parameters to be changed: contrast, brightness and backlight time (the period between BU inactivity and automatic switching off of the display backlight).

1. Select the *Set Display* screen.

```
[6] Set Display
21-03-05 16:12:26
```

2. Press the Acknowledge/Confirm Button and using the Scroll Up or Scroll Down Buttons, select the parameter to be changed.

```
Contrast
21-03-05 16:12:26
```

3. Press the Acknowledge/Confirm Button which confirms the parameter to be modified. The parameter is displayed along with its current setting value.

```
Contrast    9 / 32
21-03-05 16:12:26
```

4. Use the Scroll Up or Scroll Down Buttons to alter the setting value to the desired level.

Note:

To restore the original setting value, press the Clear/Reject Button.

5. To save the modified setting value, press either the Acknowledge/Confirm Button or Menu Button and the display will return to the parameter menu.

5.4.7 Clear up PU Database

The *Clear up PU Database* menu item allows the Entry Control Officer to remove any PUs from the status list that are still logged on at the end of an incident.

1. Select the *Clear up PU Database* screen.

```
[7] Clear up PU Database
21-03-05 16:12:26
```

2. Press the Acknowledge/Confirm Button and the BU displays the identity of the first PU in the status list.

```
SCOTT    001-001    OK
Delete ?
```

3. There are three options available:

i) Terminate the procedure by pressing the Clear/Reject Button.

ii) Display another PU's identity by pressing the Scroll Up or Scroll Down Buttons and adopting the following procedure.

iii) Delete the displayed PU by pressing the Acknowledge/Confirm Button. If this option is selected, the display will change to:

SCOTT	001-001	OK
20:38	01m	200 Bar
ARE YOU SURE ?		

To confirm deletion, press the Acknowledge/Confirm Button or to cancel the deletion, press the Clear/Reject Button.

If deletion is confirmed, the identity of the next logged-on PU in the status list is displayed, together with the *Delete?* prompt as described above. This procedure will continue until the opportunity has been given to delete all PUs in the status list.

At the end of the procedure, either the BU's identification details are displayed (if all PUs were deleted), or the status of the last selected PU in the status list is displayed (if not all PUs were deleted).

5.5 STATUS DISPLAY MODE

For a full explanation of the display layout and meanings, please refer to *Section 2.5*.

5.5.1 Logon and Activation

PU Logon Request

Upon receipt of a logon message from a PU, the BU displays the sender's details; for example:

SCOTT	001-002	Logon
20:38	01m	200 Bar
1		

The message text '*Logon*' flashes until the Entry Control Officer accepts or rejects the logon request.

Note:

If the logon request is from a PU that exists in the auto-logon database, (see below), the logon will be completed automatically.

PU Logon Acceptance

Press the Acknowledge/Confirm Button and the BU will send an acknowledgement message to the PU.

The message text '*Logon*' stops flashing and changes to '*Logon ACK*' to indicate that the BU has acknowledged the message. The display will automatically update the number of PUs logged on.

SCOTT	001-002	Logon ACK
20:38	01m	200 Bar
2		

Upon receipt of a confirmation of acknowledgement from the PU, the message text changes to '*Logon OK*'.

SCOTT	001-002	Logon OK
20:38	01m	200 Bar
2		

If the BU fails to receive the PU's confirmation message, the display will not change and the Entry Control Officer can send another acknowledgement message to the PU.

PU Logon Rejection

If the Clear/Reject Button is pressed during the PU logon request, the display is cleared and the PU's details are dumped into the 'Reject List'. The BU does not send an acknowledgement message to the PU, but holds the PU's details on file so that it can ignore further logon requests from that particular unit.

Note:

Details of 'rejected' PUs are not included in the scrolling status list unless they enter the alarm state.

Auto-logon

Each time a PU is accepted for logon, the Entry Control Officer is given the option of automatically logging on further units from the same Brigade number and Fire Appliance number.

SCOTT	001-	OK
LOGON APPLIANCE ?		

To accept all further units matching these criteria, press the Acknowledge/Confirm Button; or press the Clear/Reject Button to continue with the manual logon procedure.

Logon Correction

A logon error may be corrected by pressing the Clear/Reject Button when details of the incorrectly logged-on PU are displayed on the screen. A 'Reject ?' prompt will be displayed, as follows:

SCOTT	001-002	OK
20:38	11m	Reject ?

If the Clear/Reject Button is pressed, the action is cancelled and the display will return to its previous state. If the Acknowledge/Confirm Button is pressed, the BU sends a reject message and the message text will change to 'Reject ACK'.

SCOTT	001-002	Reject ACK
20:38	11m	200 Bar 2

Upon receipt of an acknowledgement to the reject message, the BU will delete the records of that particular PU and a new logon message from that PU will be displayed.

The Entry Control Officer has the opportunity to accept or reject the new request in the normal manner.

5.5.2 Logon - System Limitations

Out of a total memory size of 99 PUs, a maximum of 50 active PUs can be logged on to an individual BU. If this limit is exceeded, the display will show:

MAX PU'S LOGGED ON

In addition to the above, a maximum of 49 rejected PUs can be held on the 'Reject List' of an individual BU. If this limit is exceeded, the display will show:

PU Reject List is Full

5.5.3 Distress

Distress Indication

Upon receipt of an alarm message from a PU, the BU displays the sender's details and indicates whether the PU is logged on (either to this or another BU) by flashing the message text 'Alarm'.

SCOTT	001-002	Alarm
20:38	11m	200 Bar 2

If the PU is not logged on to any BU, the message text 'Alarm ??' is flashed.

SCOTT	001-002	Alarm ??
20:38	11m	200 Bar 2

An intermittent, high-volume sound is generated by the BU to indicate that at least one un-acknowledged alarm is present.

The Entry Control Officer's reaction to the alarm message will depend upon the PU's logon status, as follows:

Distress Acknowledgement - PU Logged on to this BU

Note:

It is not possible to ignore an alarm message by pressing the Clear/Reject Button.

Press the Acknowledge/Confirm Button and an acknowledgement message is sent to the PU. The message text 'Alarm' will stop flashing and change to 'Alarm ACK' indicating that the BU has acknowledged the message. The high-volume sound will cease.

SCOTT	001-002	Alarm ACK
20:38	11m	200 Bar 2

Upon receipt of a confirmation of acknowledgement from the PU, the message text changes to 'Distress !'.

SCOTT	001-002	Distress !
20:38	11m	200 Bar 2

If the BU fails to receive the PU's confirmation message, the display will not change and the Entry Control Officer can send another acknowledgement message to the PU.

Distress Acknowledgement - PU Logged on to another BU

The Entry Control Officer may silence the sounder by pressing the Acknowledge/Confirm Button and remove the PU from the display by pressing the Clear/Reject Button.

Distress Acknowledgement - PU not Logged on to any BU

The Entry Control Officer may silence the sounder by pressing the Acknowledge/Confirm Button. The BU does not send an acknowledgement message to the PU and the message text 'Alarm ??' will continue to flash on the display.

Two options are available to the Entry Control Officer:

- i) Remove the PU from the display by pressing the Clear/Reject Button. However, please note that pressing the Clear/Reject Button and deletion from the display does not prevent the display of a subsequent alarm from the same PU.
- ii) Simultaneously acknowledge the alarm and log the PU onto his BU by pressing the Acknowledge/Confirm Button twice, (once to initiate the logon action and once to confirm the action).

If the Acknowledge/Confirm Button is pressed, the display will flash 'Logon??'

SCOTT	001-002	Alarm ??	
20:38	11m	Logon ??	2

If the Entry Control Officer responds by pressing the Clear/Reject Button, no action is taken and the display reverts to its previous state.

If the Acknowledge/Confirm Button is pressed, the BU sends an acknowledgement message to the PU and the display stops flashing.

Upon receipt of a confirmation of acknowledgement from the PU, the display changes to 'Distress!'

If the BU fails to receive the PU's confirmation message, the display will not change and the Entry Control Officer can send another acknowledgement message to the PU.

After a successful alarm and alarm acknowledgement message exchange, the BU will include the PU in the status list and the number of PUs logged on to the BU will be increased on the LCD screen.

5.5.4 Withdraw

The procedures for acknowledging and clearing withdraw messages are identical to those described above for *Distress*, except that the message text displays 'Wdraw' instead of 'Alarm'. For example:

SCOTT	001-002	Wdraw	
20:38	11m	200 Bar	2

SCOTT	001-002	Wdraw ACK	
20:38	11m	200 Bar	2

SCOTT	001-002	Wdrawing !	
20:38	11m	200 Bar	2

Note:

The withdraw message is not displayed if the PU is already in an alarm state.

5.5.5 Low Air

The procedures for acknowledging and clearing low air messages are identical to those described above for *Distress*, except that the message text displays 'Low air' instead of 'Alarm'. For example:

SCOTT	001-002	Low air	
20:38	11m	200 Bar	2

SCOTT	001-002	Lowair ACK	
20:38	11m	200 Bar	2

SCOTT	001-002	Low air !	
20:38	11m	200 Bar	2

Note:

The low air message will not be displayed if the PU is already in an alarm state.

5.5.6 Evacuate

Evacuation Mode Selection

Evacuation is initiated when the Entry Control Officer presses the Evacuate Button on the BU. Confirmation of the instruction is requested, as follows:

```

Selective ?
    
```

If the Acknowledge/Confirm Button is pressed in response, the selective evacuation procedure is started (as described below). If the Entry Control Officer responds by pressing the Clear/Reject Button, the display changes to:

```

Evacuation by Appliance ?
    
```

If the Acknowledge/Confirm Button is pressed in response, the evacuation by appliance procedure is started (as described below). If the Entry Control Officer responds by pressing the Clear/Reject Button, the display changes to:

```

Board ?
    
```

If the Acknowledge/Confirm Button is pressed in response, the board evacuation procedure is started (as described below). If the Entry Control Officer responds by pressing the Clear/Reject Button, the operation is cancelled and the display returns to its normal state.

Selective Evacuation Procedure

If the selective evacuation procedure is instigated, the identity of the first PU in the status list is displayed with an 'Evacuate ?' prompt.

```

SCOTT      001-002   OK
           Evacuate ?
    
```

Three options are available to the Entry Control Officer:

i) Terminating the procedure by pressing the Clear/Reject Button. If this option is selected, the screen will change to the normal status display for the subject PU.

ii) Displaying the identity of a different PU by pressing the Scroll Up/Scroll Down Buttons.

iii) Evacuating the displayed PU by pressing the Acknowledge/Confirm Button. The display will change to:

```

SCOTT      001-002   Evac ACK
           Evacuate ?
    
```

The BU will send a recall message to the subject PU. To confirm that the PU has received the recall message, the display changes to:

```

SCOTT      001-002   Evacuated
           Evac done !
    
```

If the display does not change, the Entry Control Officer may press the Acknowledge/Confirm Button again to re-transmit the recall message.

When the wearer of the PU presses the Withdraw Button to acknowledge receipt of the message (and following a time-delay of up-to two minutes), the display will change, to:

```

SCOTT      001-002   Evac CONF
           Evac done !
    
```

The Scroll Up/Scroll Down Buttons can be pressed to select another PU for evacuation and the above process can be repeated.

After the first PU has been selected for evacuation, the BU will ask the Entry Control Officer if other PUs with the same Brigade and Appliance number wish to be evacuated, using the following display:

```

SCOTT      001-
           Evacuate ?
    
```

If the Acknowledge/Confirm Button is pressed, the BU will begin evacuating other PUs with the same Brigade and Appliance number. Pressing the Clear/Reject Button cancels the prompt.

Evacuation by Appliance Procedure

If the evacuation by appliance procedure is instigated, the identity of the first PU in the status list is displayed with an 'Evacuate Appliance ?' prompt.

SCOTT	001-002	OK
Evacuate Appliance ?		

Three options are available to the Entry Control Officer:

- i) Terminating the procedure by pressing the Clear/Reject Button.
- ii) Displaying the identity of a different PU by pressing the Scroll Up/Scroll Down Buttons.
- iii) Evacuating the displayed PU and associated PUs by pressing the Acknowledge/Confirm Button. The display will change to:

Evacuation In Progress

This display continues for several seconds while the BU performs the message transmission sequence. At the end of the sequence, the details of the last PU to be sent a recall message are displayed.

Note:

The evacuation by appliance procedure is automatically terminated if an alarm message is received. After dealing with the alarm, the Entry Control Officer may start the evacuation procedure once again.

Board Evacuation Procedure

If the board evacuation procedure is instigated, the display will change to:

Evacuation In Progress

The BU will broadcast an evacuation message to each individual PU logged onto that BU and all PUs that are not logged on to any BU. To confirm that each PU has received the evacuation message, the screen will display details of the last PU to be sent the evacuation message. For example:

SCOTT	001-002	Evacuated
20:38	11m	200 Bar 2

As each PU wearer presses the Withdraw Button to acknowledge receipt of the message (and following a time-delay of up-to two minutes), the display will change for each PU to:

SCOTT	001-002	Evac CONF
20:38	11m	200 Bar 2

At the end of this procedure, the Entry Control Officer can determine how many PUs were successfully evacuated by scrolling through the status list and checking that the display for each PU shows the 'Evac CONF' message.

Notes:

- The board evacuation procedure is automatically terminated if an alarm message is received. After dealing with the alarm, the Entry Control Officer may start the evacuation procedure once again.
- The BU does not send evacuation messages to PUs that are in the alarm state, or which are already in the evacuate state (possibly due to a previous selective evacuation).

5.5.7 Loss of Radio Contact

The BU regularly requests data from all PUs logged onto the BU as a means of confirming radio contact.

The time interval since the last message from each PU is monitored. If the BU detects that radio contact has been lost for a greater time period than the defined contact timeout interval, a low volume, intermittent sound is generated and the message '<?>' appears on the display.

SCOTT	001-002	OK
20:38	11m	200 Bar <?> 2

The Out of Range (yellow) LED will flash if one PU has lost radio contact, but will be lit continuously if two or more PUs are out of radio contact.

The Entry Control Officer may use the *Request Update* menu display option to confirm that contact with the subject PU has been lost.

Upon receipt of a message from the subject PU, the '<?>' symbol disappears from the display.

5.5.8 Shut-down Procedure

At the end of the incident, remove any PUs that may still be logged on to the BU by using the procedure described in *Section 5.4.7*.

Note:

If any PUs remain logged on, this information is retained and the display restored when the BU is switched on again.

Press the Power ON/OFF Button and the following display will appear briefly.

SCOTT	001-002	chan:0042
Closing Down		

6. AFTER USE

6.1 CLEANING

CAUTIONS:

- **USE ONLY** the specified cleaning method and material. **DO NOT** use bleach, solvent, detergent or abrasive cleaners.
- **DO NOT** immerse the Base Unit in water.

Wipe the exterior surfaces of the BU with *TriGene™* disinfectant wipes.

Note:

TriGene™ disinfectant wipes are available from **Scott Health and Safety Limited** under Article Number 2004225 (Pack of 20) or 1017652 (Drum of 100).

Thoroughly inspect the BU to ensure that there are no signs of damage; and that the antenna is present and correctly fitted.

6.2 STORAGE

IRIS must be stored in a clean, dry environment away from direct heat and sunlight.

Storage temperature should not exceed between -40°C and +60°C.

CAUTION:

If stored at very low temperatures, allow the equipment to re-condition at approximately +20°C for 24 hours before use.

6.3 EVENT LOG RETRIEVAL

The BU can store up-to 1000 event records in its memory. Each entry provides the following data:

- Date and time of event.
- Identity of PU (e.g. fire brigade, appliance number, position on appliance).
- Status of PU (e.g. distress).
- PU air cylinder contents (in 1 bar increments).
- Elapsed time (in minutes) since PU energised.

By using a serial port data lead and the User Software, full retrieval of event log data can be downloaded onto a PC/Laptop. Pre-programmed parameter settings for the BU can also be read by use of the software (see *Section 7*).

Note:

Information stored in the event log will eventually be over-written if it is not regularly downloaded and the event log purged.

7. USER SOFTWARE

7.1 GENERAL

The User Software enables the following activities to be performed:

- Read pre-programmed parameter settings of the subject BU.
- Verify which version of User Software is being used.
- Download and save the electronic event log.
- Refresh the event log by removing the existing data as part of the downloading function.
- Re-set the current date and time stored in the unit's memory.

This software DOES NOT allow any permanent changes to be made to the pre-programmed parameter settings.

7.2 HARDWARE REQUIREMENTS

The PC/Laptop on which the software is to be installed should run Microsoft Windows XP or 2000, with the latest service packs installed. To install this program a minimum of 10 Mega-Bytes memory space is required.

The PC/Laptop must have either:

At least one serial 'COM' port not in use by another device or application,

or

One free USB port and a USB to COM port adaptor.

A serial port data lead is required to connect the cable port of the PC/Laptop to the serial port of the subject EMU.

Note:

A serial port data lead for use with the BU is available from **Scott Health and Safety Limited** under Article Number 2016497.

7.3 LOAD SOFTWARE ONTO PC/LAPTOP

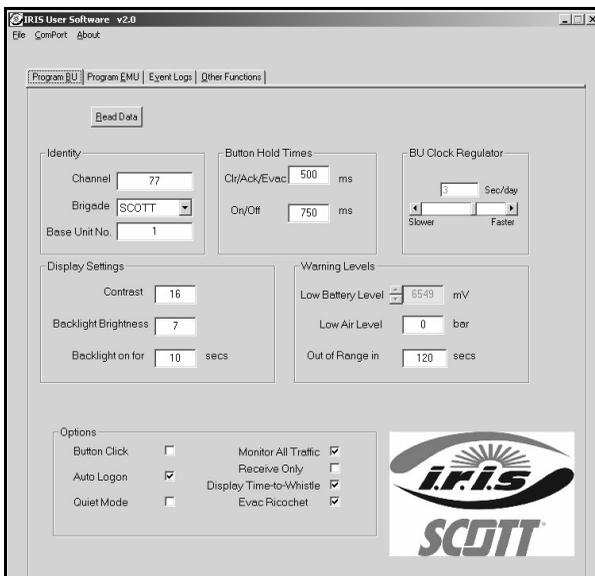
Insert the CD into the CD Drive on the PC/Laptop and the software will self-install.

In the unlikely event of the software failing to install automatically, installation

may be carried out manually by following the manual installation process relevant to the operating system being used.

Please contact your Systems Administrator for further details.

When successfully installed, double-click on the software icon and the following window will appear as a default:



A Typical Program BU Screen

7.4 EXPLORING THE SOFTWARE

7.4.1 Main Menu Items

The main menu items are displayed in the top, left-hand corner of the window, beneath the title bar; and consist of the following:

File Menu

Containing three items:

- **Open:**
Which allows the User to open a previously stored parameter file.
- **Save As:**
Saves the parameters currently being displayed to a location of the User's choice.

- **Exit:**
Shuts the program down.

ComPort Menu

Displays a list of available communication ports on the PC/Laptop and will indicate the currently selected port by means of a tick next to that port's entry on the menu. The User can select another available port from this menu if desired.

About Menu

Contains version information and copyright notice for the software.

7.4.2 Main Display Tabs

Navigation between the four main displays is achieved by selecting the appropriate tab, as follows:

- **Program BU**
Allows the pre-programmed parameters of a subject BU to be read. This screen is automatically displayed when the software program is opened.
- **Program EMU**
Permits the pre-programmed parameters of a subject EMU to be read.
- **Event Logs**
Provides the facility for event logs of the subject BU or EMU to be downloaded and saved to a destination of the User's choice on the PC/Laptop; and the event log file on the BU or EMU to be cleared (purged).
- **Other Functions**
Allows synchronisation of the current date and time stored in the unit's memory with that of the host PC/Laptop, establishes the identification (*Checksum*) of the software and verifies that the unit's parameters are correctly defined.

7.5 PREPARATION READY FOR USE

1. Plug the 9-Pin connector on the serial port data lead into the chosen serial port on the PC/Laptop.
2. Remove the protective cap from the cable port on the BU.
3. Plug the 6-Pin connector on the serial port data lead into the cable port on the BU, taking care to ensure that the indicator mark on the cable is aligned with that on the BU port.

CAUTION:

Ensure that the pins on the data lead connections are correctly aligned with the serial ports during fitment.

4. Place the BU into Command Mode:
 - i) Press and hold the Evacuate Button.
 - ii) Momentarily press the Power ON/OFF Button whilst continuing to hold the Evacuate Button until the display shows '*Command Mode*'.

7.6 READ PRE-PROGRAMMED PARAMETERS

1. Prepare the BU and PC/Laptop as described in *Section 7.5*.
2. Double-click on the software icon.
3. The *Program BU* tab is automatically displayed.
4. The pre-programmed parameters for the subject BU are displayed.

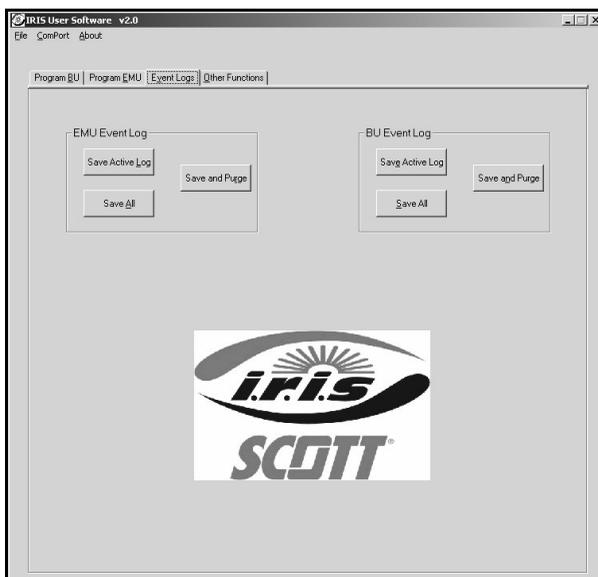
7.7 DOWNLOAD EVENT LOG

1. Prepare the BU and PC/Laptop as described in *Section 7.5*.
2. Double-click on the software icon.
3. Click on the *Event Logs* tab.
4. There are three possible methods of saving data given in the *BU Event Log* field:

- **Save Active Log**
Saves the active data recorded since the event log was last reset, but does not clear any data from the BU's event log.
- **Save and Purge**
Saves and purges all data from the BU's event log.
- **Save All**
Saves all data contained within the log, including any remaining historical data. No data from the BU's event log is cleared.

Note:

The event log is set up as a scrolling file which means that when the file memory becomes full, the log will revert to the beginning of the file, thereby recording new events over existing entries. It is therefore recommended that each time the event log is to be downloaded and saved the data within the log is cleared by using the *Save and Purge* method.



A Typical Event Logs Screen

7.8 SAVE EVENT LOG DATA

Click on one of the save buttons as described above (*Save and Purge* recommended) and a window will open prompting the User to specify the file name and destination.

The file is automatically given a default name which includes the date and time when the event log was selected for downloading.

Note:

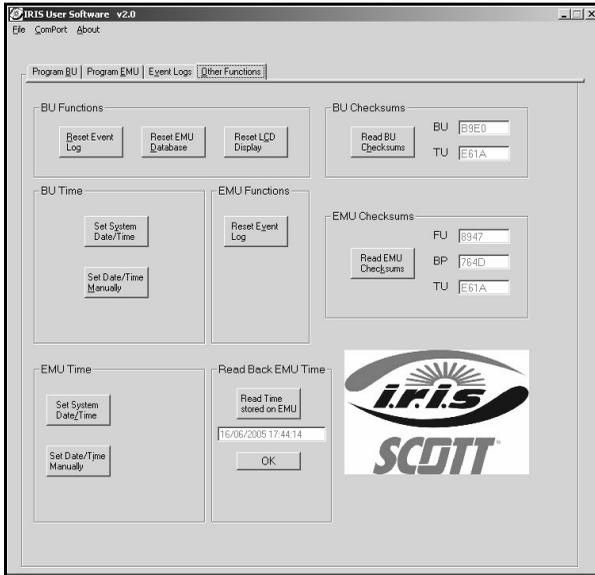
Scott Health and Safety Limited strongly recommends that:

- The file name is modified to include some form of unique BU/EMU identification details.
- The '*CSV Files*' option is selected in the *Save as Type* window. These files can then easily be read using the Microsoft Excel program.
- The Windows Explorer program is used in order to make this file read only, to prevent accidental deletion or corruption.

7.9 OTHER FUNCTIONS

It is possible for the User to synchronise the current date and time stored in the unit's memory with that of the host PC/Laptop, establish the identification (*Checksum*) of the software currently being used by the BU and verify that certain internal parameters are set to defined values. (See overleaf for sample screen).

1. Prepare the BU and PC/Laptop as described in *Section 7.5*.
2. Double-click on the software icon.
3. Click on the *Other Functions* tab.
4. To view/access the contents:
 - The current software *Checksum* details of the subject BU are automatically displayed on-screen.
 - Certain internal parameters can be verified using the appropriate *BU Functions* Button.
 - The current date and time settings are displayed on the BU's LCD screen and can be reset either manually or automatically by using the relevant *BU Time* Button.



A Typical *Other Functions* Screen

7.10 ERROR MESSAGES

The following describes error messages which may be encountered by the User when working with the software. Likely reason(s) for the error message and suggested corrective action(s) is/are provided as a guide to the User.

Error Message	Probable Cause	Corrective Action
	Com. Port already in use by another device or application	Shut down and re-start IRIS software Shut down/disconnect unnecessary devices or applications and re-start IRIS software
	BU not in Command Mode No Serial Port connection between BU and PC/Laptop Incorrect Com. Port selected on PC/Laptop	Place BU into Command Mode Check to ensure that Serial Port Data Lead is properly connected Select suitable Com. Port on PC/Laptop
	User has attempted to read or reset EMU parameters to a BU	Select correct display tab and press the correct function button

Table 5: Error Messages when using the Software

8. MAINTENANCE

8.1 REPLACEMENT PARTS

The only user-serviceable items on the BU are the batteries and antenna.

Replacement batteries are available from **Scott Health and Safety Limited** under Article Number 2015921 (Pack of 10) and a replacement antenna may be obtained under Article Number 2016204.

CAUTIONS:

- **DO NOT** fit batteries of a similar or incorrect type as this may adversely affect the operational performance of the equipment.
- **DO NOT** attempt to re-charge batteries.
- **DO NOT** leave the BU without batteries fitted for any longer than 24 hours or the time clock memory will be lost. Should memory loss occur, the date and time will need to be reset either by using the *Set Date & Time* menu on the BU (see *Section 5.4.2*) or with the User Software.

8.2 REPLACING THE BATTERIES



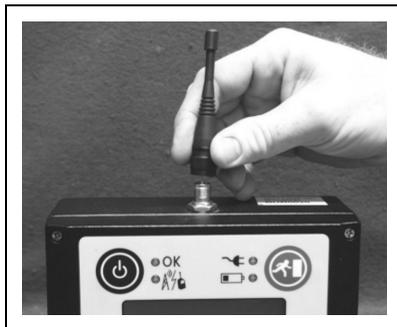
1. Using finger-pressure only, unscrew and remove battery compartment cover by turning in an anti-clockwise direction.
2. Remove existing batteries and discard in accordance with local disposal regulations.

3. Fit replacement batteries, taking care to ensure the polarities are correctly aligned.

4. Refit battery compartment cover, turning in a clockwise direction until finger-tight. **DO NOT** over-tighten.

5. Repeat above operations for the remaining battery compartments.

8.3 REPLACING THE ANTENNA



1. Using finger-pressure only, unscrew and remove antenna by turning in an anti-clockwise direction. Discard antenna.

2. Fit replacement antenna by turning in a clockwise direction until finger-tight. **DO NOT** over-tighten.

8.4 EQUIPMENT REPAIRS AND RETURNS

Should it become necessary for major repair work to be carried out or in the unlikely event of a warranty claim, the following procedure should be adopted:

1. Call the **Customer Services** Department at **Scott Health and Safety Limited** on +44 (0) 1695 711711, stating your reason for wishing to return the equipment.

2. The **Customer Services** staff will ask a series of questions intended to establish the circumstances surrounding the need for the return and to determine the condition of the equipment to be returned.

3. Your contact in **Customer Services** will provide you with an SR (Sales Return) number, which is your reference number and **MUST** accompany the returned goods.

Note:

DO NOT attempt to return goods without an SR number.

4. Send the equipment to **Scott Health and Safety Limited** at the address quoted on the rear cover of this manual. The returned goods should be securely packaged, have the SR number clearly visible on the exterior packaging and **MUST** be accompanied by a decontamination certificate (where applicable).



Scott Health and Safety Limited

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