IMPACT MK2
Integrated Mobile Personal Attack & Communications Transmitter

User Manual

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HHTXMK2   Issue 1

PREFACE

Important Installation Information

It is the purchasers' responsibility to determine the suitability of this equipment and its derivatives for any given application, Scope cannot give specific advice in this manual, as each use will require independent evaluation.

Scope has, wherever possible, employed extra safeguards to monitor the system's performance. Certain system installations, operational requirements or budgets may, however, limit the effectiveness of these safeguards. Again, the suitability of the system for any given application must therefore be decided by the installer and their customer, relative to the application and risk.

Good working practice dictates that a suitable system installation log must be generated, together with a record of the dates when the system has been manually checked, (with the aid of signal strength meters etc.) enabling the system performance to be compared with the original installation data.

For UK equipment, Scope has no control of the use and application of the frequencies issued by OFCOM. Some equipment that is licensed may have greater protection than other equipment which is operated on a WT Act License Exempt basis.

The supply of this equipment is governed by our standard terms and conditions of sale, which can be found on the reverse of all order acknowledgements*, proforma invoices*, delivery notes, price lists and invoices. Alternatively, these can be provided on request.

* Faxed proforma invoices and quotations refer to "conditions available upon request".

Important Safety Information

Scope products are designed to operate safely when installed and used according to general safety practices. The following requirements should be observed at all times.

Do NOT subject this equipment to:
Mechanical shock
Excessive humidity or moisture
Extremes of temperature
Corrosive liquids

This equipment is designed for indoor use, unless expressly stated otherwise, and must not be used in classified Hazardous Areas, including areas containing explosive or flammable vapours, unless express authorisation has been given in writing by the manufacturer. If in doubt, consult your local product dealer for further information.

Do not obstruct any slots or openings in the product. These are provided for ventilation to ensure reliable operation of the product and to protect it from overheating.

Only use a damp cloth for cleaning (not liquid or aerosol based cleaners), and ensure that any power is removed from the unit prior to beginning the cleaning operation.

Removal of covers from the equipment must only be undertaken by authorised service personnel, who must ensure that power is isolated prior to removal.

Battery Charging

The Nickel Metal Hydride batteries fitted in Scope portable transmitters are optimised for safety and performance and are NOT accessible or replaceable by the user. Where it is suspected that the batteries are faulty or if they refuse to maintain a charge, the equipment must be returned to Scope for servicing and battery replacement. The transmitter unit must only be re-charged using the charger receptacle and AC adaptor provided by Scope. Use of other adaptors or chargers will invalidate all warranties and may result in damage to the equipment and/or injury to the user. In all such cases, Scope expressly excludes liability for any damage or injury, howsoever caused.

No User Serviceable Parts

Alteration or modification to any part of this equipment, without the prior written consent of the manufacturer Scope, will invalidate all Approvals and Warranties attaching to the equipment. Further liability for the operation of the equipment, under the applicable law, will pass to the user, who will absolve the manufacturer of any further responsibility for it's correct operation and use.

Liability

Scope does not accept liability for any damage or injury, howsoever caused as the result of misuse of this equipment. It is the responsibility of the user to ensure that the equipment is operated in the manner for which it was intended and that it is the correct item of equipment for the required task.

Warranty

This product is warranted as free from defects of workmanship and materials for a period of one year from the original purchase date. During this time, if there is a defect or malfunction of this product, Scope will, with proof of purchase, repair or replace at it's discretion any defective parts, free of charge. This does not include where the adjustments, parts and repair are necessary due to circumstances beyond the control of Scope, including but not limited to fire or other casualty, accident, neglect, abuse, abnormal use or battery leakage damage.

WARNING ! No User Serviceable Parts
Celui-ci ne contient aucune piece pouvant etre reparee par l'utilisateur

Caution ! Risk of electric shock, do not open.
Attention ! Risque de choc electrique, ne pas ouvrir.

Alteration or modification to any part of this equipment, without the prior written consent of the manufacturer, will invalidate all manufacturer approvals and warranties. No adjustments can be undertaken except by qualified and licensed persons as authorised by Scope.

WARNING ! SAFETY

The AC adaptor provided with this equipment must only be used with an Approved mains cord set rated at 5A minimum which is fitted with an integral three prong, grounded mains plug and a moulded IEC320 style socket. The cord set must only be plugged into a grounded, fused outlet rated 5A minimum.

This product complies with the essential requirements of the R&TTE Directive 1999/5/EC, the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.
Copies of the Declaration of Conformity covering this product can be obtained from Scope at: Quantum House, Steamer Quay, Totnes TQ9 5AL United Kingdom.

Do not discard. At end of life this equipment must be sent to an authorised waste treatment centre.
Contact Scope at the above address for further details.

System Overview

The Scope IMPACT MK2 is a portable UHF transmitter used to signal various types of emergency alert to both fixed base station equipment and portable receivers.

Applications include straightforward security/panic alarm by simple button press; "lone worker" and "man down" alerter , where a motion sensor is utilised to signal a pre-programmed level of inactivity; and "snatch" alarm, whereby a lanyard is attached between the wearer and the IMPACT, removal of which will trigger a continuous alarm.

Modes of operation are selectable using two top plate buttons and a display, which also indicates battery charge and alarm status.

The IMPACT is provided with an intelligent "fast" charger, facilitating full charge of the nickel metal hydride cells in less than 1 hour (typically 40 minutes), together with an ac adaptor, leather carry case for the IMPACT and lanyard "snatch" pin.

Package Contents:

Scope IMPACT transmitter unit, with stud mounted aerial (fitted)
Leather carry case
AC Adaptor (output: 5V dc @ 2A)
Desktop Charger base unit
Lanyard snatch pin
Programming shoe with integral lead (optional)
Programming application disk (optional)

Getting Started

Remove the components from their packaging and check that all items are present.

Locate the AC adaptor and insert the power jack into the socket at the rear of the charger base unit. Fit the mains lead supplied between the adaptor and a 110V mains outlet. The green power light on the charger base should now be lit and the red status light should be off.

Switch on the IMPACT by pressing and holding the uppermost blue side button together with the uppermost scroll button. The display will show the current mode number setting and a "sign on" transmission will be sent, which may be received by suitably configured pagers or fixed receivers. Now place the IMPACT into the charger base, checking that the silver contacts on the side of the unit face the same way as the silver contacts in the charger base. A "sign off" transmission will be sent, after which the unit's normal operating functions will be disabled and the unit will lock into charging mode.

The display on the top face of the IMPACT will light and the words "FAST CHRG" will be displayed. "FAST" will flash on/off and the battery icon will pulse, indicating that rapid charging is in progress. The red light on the charger base will flash during the charging process.

When full charge is achieved, the red light on the charger base will glow steady and the transmitter display will now show "CHRG" with the battery icon filled. Upon removal from the charger, the unit will transmit a "sign on" message indicating that it is now available for operation.

Note: where cells are completely discharged, the unit should be placed in the charger and the uppermost side-mounted blue button (A) pressed together with the uppermost display scroll button until the display lights (usually a few seconds). Normal charging will then resume. If the display blanks when the buttons are released, press and hold the buttons for a further few seconds until normal charging resumes.

Precaution: to minimise any potential for malfunctioning of the unit in a severe static electricity environment, users should avoid touching the charger contacts and aerial mount collar. It is therefore recommended that the unit is placed in it's carry case immediately after charging.

Operation

Switching the Unit ON/OFF

To switch ON, press and hold the uppermost side-mounted blue button (A) and then press the uppermost display scroll button. The display will activate and show the current mode number and battery status.

To switch OFF, press and hold both the scroll buttons until the display flashes. Now scroll down until FF is displayed. After 2 seconds, the unit will switch off. Note: if the unit has been programmed in Mode 4, this prohibits user access and will bar the user from switching the unit off.

Modes of Operation

The IMPACT has three manual call types selectable from two blue buttons (A & B) located on the side of the unit, and a further two emergency alarms which consist of a "snatch" lanyard and a motion detector. Whilst the manual button-initiated alarms are always active, both the lanyard and the motion detector can be enabled or disabled by selection of the relevant mode on the unit's display.
This also allows different motion sensor countdown periods (short/medium/long) to be selected.

The display will indicate which mode is active at any time, and the mode can be changed by using the scroll keys located on the top of the unit (next to the display). Either key must be pressed and held for 2 seconds. This will cause the LCD display to flash the two digits, and the scroll buttons can then be used to select the required Mode number. After 2 seconds of no button activity, the displayed Mode will be set.

Mode 1 Buttons A & B   (motion sensor & lanyard Off)
Mode 2 Buttons A & B + lanyard   (motion sensor Off)
Mode 3 Buttons A & B + motion sensor   (lanyard Off)
Mode 4 Buttons A & B + lanyard + motion sensor   (preset countdown)*
Mode 5 Buttons A & B + lanyard + motion sensor   (count down Short)
Mode 6 Buttons A & B + lanyard + motion sensor   (count down Medium)
Mode 7 Buttons A & B + lanyard + motion sensor   (count down Long)
Mode 8 Buttons A & B + lanyard + motion sensor   (count down Short, sounder Off)

*In this Mode, User Access is denied, so no other Modes will be available to the User. Where User Access is allowed, Modes 1, 2, 3, 5, 6, 7 & 8 will be available.

Mode 1 – Manual Alarms Only

The uppermost side-mounted blue button (A) will send a zone 1 alarm when pressed and held for a predefined period of time (set during programming). The lower side-mounted blue button (B) sends a zone 2 alarm. Pressing both buttons together (A+B) and holding them for the trigger period will send a zone 3 alarm.

Mode 2 – Manual Alarms and Lanyard Active

The pin in the base of the unit is intended to be connected to a lanyard attached to the wearer. If the transmitter is pulled away from the wearer the pin will be released and an automatic Zone 4 alarm is immediately sent. This will continuously repeat for 500 transmissions or until the pin is replaced.

Mode 3 – Manual Alarms & Motion Sensor Active

This mode enables blue buttons A & B and the motion sensor. The motion sensor "no movement" and warning countdown periods are preset using the programming application software. If you do not have the programming software, refer to your distributor for all configuration settings. If the unit detects no motion for the preset time, it will pulse a sounder for a further preset time as a warning before transmitting a Zone 5 alarm. Any movement detected during these warning periods will reset the timers.

The motion detector is most sensitive with the unit vertical and less sensitive as the unit is rotated to the horizontal plane. It is intended that the user should wear the unit on a belt or sash as near to vertical as possible (with the antenna facing upwards).

Mode 4 Preset and Locked: all Alarms Active

In this mode, all alarms are active and preset at the factory. Refer to your distributor for the preset configuration. The user is barred from accessing any other modes and does not have the ability to switch the unit off.

Mode 5 All Alarms Active with Short Countdown

The motion sensor "no movement" period is preset to a short time (refer to your distributor for the actual time period set). All other alarms are active.

Mode 6 All Alarms Active with Medium Countdown

As above with medium preset motion sensor "no movement" period (refer to your distributor for the actual time period set). All other alarms are active.

Mode 7 All Alarms Active with Long Countdown

As above with long preset motion sensor "no movement" period (refer to your distributor for the actual time period set). All other alarms are active.

Mode 8 All Alarms Active with Short Countdown & Sounder off

As in Mode 5, but with the warning countdown beeper turned off.
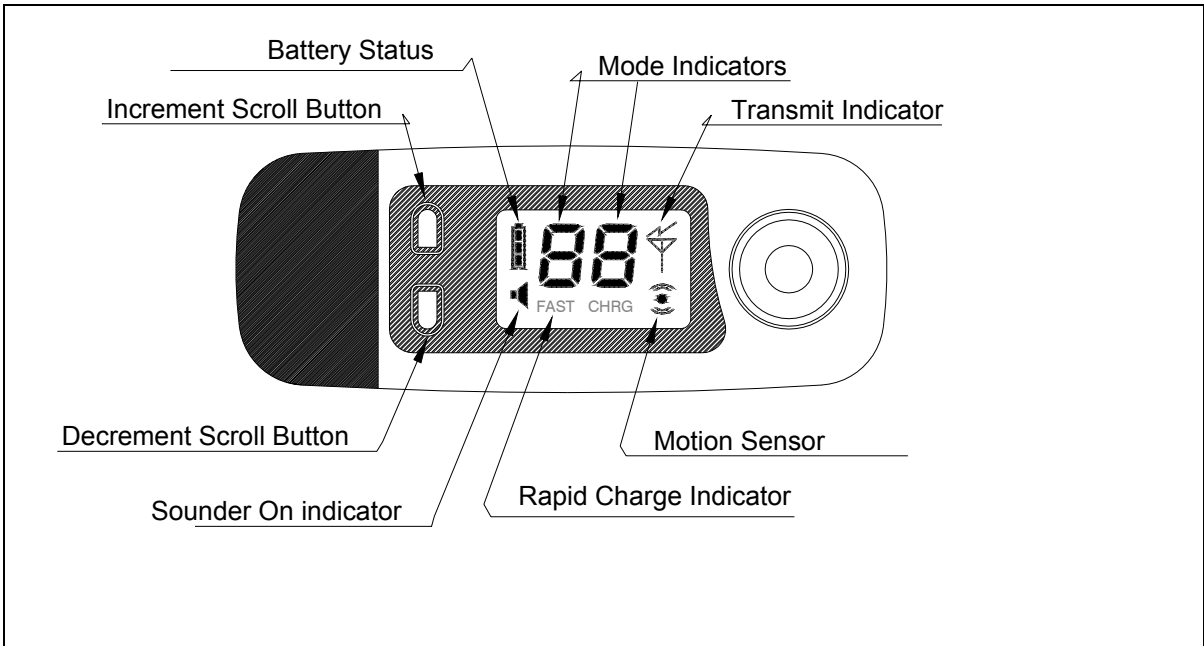
Programmed Variables

It is important that the user is provided with a Configuration sheet which details how all the various parameters have been programmed. The variable features are as follows:

a) Trigger time: this is the time that the A & B buttons need to be held in before the alarm is sent. The hold time for each button can be preset between 0.1 and 9.9 seconds.
b) Messages: unique text messages can be programmed for each alarm zone (up to 65 characters). In addition, a User name of up to 13 characters can be entered. This User name will precede the zone message when displayed on a pager e.g. "Fred Smith: Emergency Code Red"
c) Sounder: for each alarm zone, the sounder can be programmed as Off, Normal or Quiet.
d) Motion sensor sensitivity: this can be preset as Fine, Normal or Coarse.
e) Motion sensor "no movement" time: this can be preset as Short, Medium or Long. Short = 5-29 seconds. Medium = 30-120 seconds. Long = 3-30 minutes.
f) Motion sensor "warning" time: this is the beeper warning time before the alarm is transmitted, settable as 10, 20 or 30 seconds.
g) Repeat transmissions: for the A & B buttons, repeat calls can be preset between 1-999.
h) Test calls: the unit can be programmed to send Test calls at preset intervals between 10-50 minutes (with 10 minute increments) and 1-24 hours (with 1 hour increments).
i) Reset: both the lanyard & motion sensor can be programmed to send a Reset transmission upon de-activation (i.e. when the lanyard pin is replaced or when motion resumes).
J) Motion sensor Off warning: if the user selects a mode where the motion sensor is disabled, the unit can be programmed to beep every 5 minutes as a reminder that the sensor is disabled.
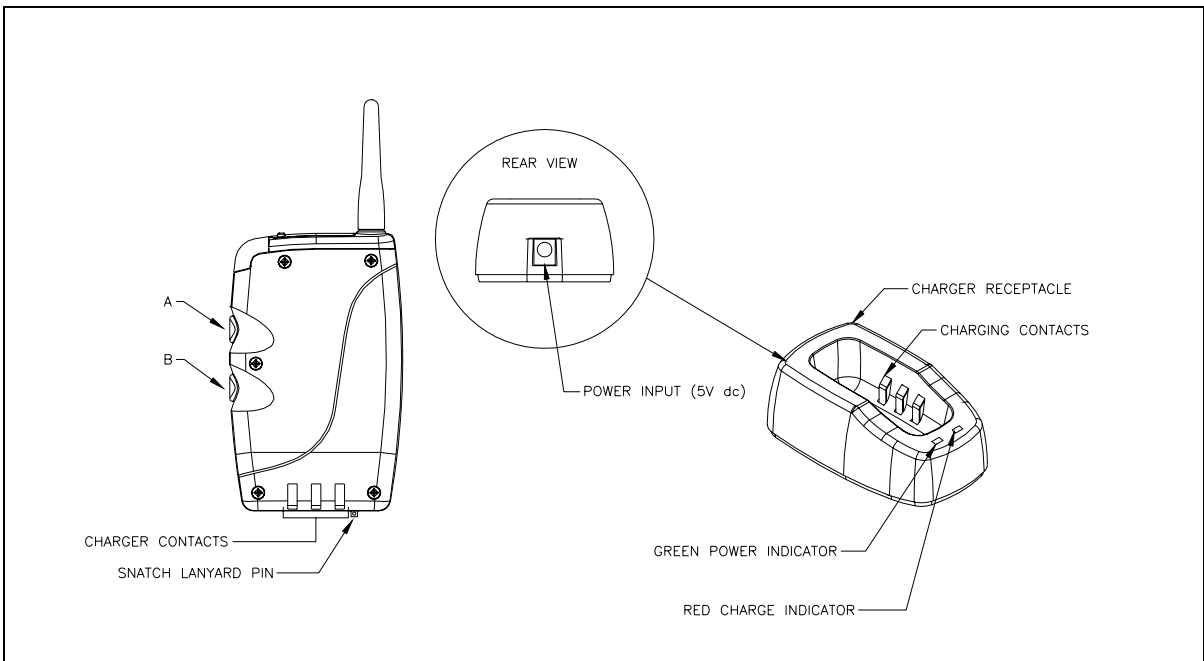
Please refer to your distributor for details of how these variables have been set on your unit(s). A sample Configuration Sheet is included in Appendix A of this manual.

IMPACT Top Control Panel

IMPACT & Charger Details

Battery Capacity

The batteries are 1.6Ah Nickel Metal Hydride cells. The number of hours operation on a full charge is totally dependant upon the type of use to which the unit is put. Transmissions use by far the greatest power, but with test calls set at 1 hour, the cells should last several days between charges. Turning off the unit between use is recommended, but it should be noted that long periods of no use will still reduce the battery charge.

The battery indicator on the display will show the approximate capacity left in the cells. At a preset point the unit will transmit a "Battery Low" message, flash the display backlight and beep (if selected). When the battery voltage falls below that required to run the transmitter, the unit will flash the display and the battery icon, then it will automatically switch itself off, since it cannot perform its intended function without a transmitter. It will then need recharging before it can be used again.

Specification

Power:	2.4V (1.2V x 2) NiMh cells, sealed pack
System Power Consumption:	less than 2mA (standby), 180mA (transmit)
Charger Input:	5 V dc @ 2A
Transmitter:	
Power output:	500mW max
Frequency Range:	450-470 MHz
Channel Spacing:	12.5 KHz
TX Baud Rate:	1200
RF Standards applied:	ETS 300 220
Type Designation:	MOBILINK
Notified Body Ref. No:	0891
EMC Standards applied:	EN 301 489-1 V1.4.1
LVD Standards Applied	EN 60950: 2000

Scope's policy is one of continuous development and specifications are subject to change without notice

Appendix A

System Configuration (Default Screen shown)