



11-85 UHF POCKET PAGING TRANSMITTER



OPERATOR'S MANUAL

11-85 UHF POCKET PAGING TRANSMITTER

1.0 DESCRIPTION

The 11-85 is a UHF low power POCSAG paging transmitter with an in-built encoder. The buttons initiate transmissions to provide numeric, alpha-numeric and tone-only POCSAG paging, enabling a user to call a pager (approximately 2,000,000 codes), append a priority level (1 of 4), and add a numeric or alpha-numeric message.

In addition to the front panel buttons, four discrete inputs are supported with unique pre-programmed messages on low input transition. Provision to transmit a message more than once is catered for and the time between transmissions is programmable.

'Beep' Indicator: Audible 'beeps' accompany each key-push and all successful transmissions. There are different beeps for an 'out of lock' transmission failure and a distinctive beep for low battery accompanies each transmission.

Aerial: The 11-85 has an fixed external quarter wave helical aerial.

2.0 WARRANTY

Our Products are warranted for a period of 12 months from date of purchase against faulty materials and workmanship. Should any fault occur the unit should be returned to the vendor, freight pre-paid. Please include a description of the fault to assist with prompt return. Any unauthorized alterations or repairs will invalidate the warranty.

3.0 DISCLAIMER

All information provided in this document is carefully prepared and offered in good faith as a guide in the installation, use and servicing of our products. Installers must ensure that the final installation operates satisfactorily within the relevant regulatory requirements. We accept no responsibility for incorrect installation.

We reserve the right to change products, specifications, and installation data at any time, without notice.

Note: The 1185 should not be used for the control of industrial machinery where a fail-safe mode of operation is necessary for the purposes of safety. Please contact Salcom for advice where this is a requirement.

4.0 INSTALLATION

The unit can be attached to a wall or carried in a pocket. It is advisable to mount the unit away from sources of heat, damp or vibration. The power supply can be an internal 9volt battery, or an external power source. The supply input is protected against reversed connection damage. Wire connections can be made to the internal connectors, and the wires can pass through the battery access hole, or provision for a hole can be made in the side of the case.

5.0 OPERATION

To operate the unit press the front panel button until the LED indicates transmitter operation. The LED will flash rapidly if a low supply is detected.

A number of factors can influence the range of the unit. The range can be optimised by applying the following recommendations:

1. Ensure the path between 11-85 and receiver is as clear from obstructions as possible.
2. Replace batteries when the flashing LED indicates low battery.
3. If handheld, hold the unit in the open with one hand as far from the body as possible.
4. Do not fix the unit to metal surfaces so that it screens the radio signals. The aerial must be clear of metal obstruction.
5. Some pager receivers do not respond as well as fixed receivers with external aerials

6.0 OPERATING MODES

Sleep mode. This is the quiescent mode. In this state the unit consumes zero power except for any residual current flowing in the discrete inputs. The unit will stay in this mode until a button is pressed or a discrete input goes low.

Transmit mode. If an input is activated, the unit will enter the transmit mode to transmit the message(s). The unit will return to the sleep mode after the message has been sent.

7.0 TYPES OF PAGING MESSAGE

The 11-85 can transmit two types of POCSAG message, with any one of four function levels:

Alphanumeric transmissions

Messages can contain any alphanumeric character. The 11-85 will accept the standard ASCII 7 bit character set.

Numeric transmissions

Messages can contain numeric characters and some symbols. These can convey a telephone number, or other numerically coded information. The transmitted message is shorter, and therefore there is a smaller chance of errors received by the pager. The numeric character set is as follows:

0 1 2 3 4 5 6 7 8 9 [] - E U <space>

*Note. The E may be displayed as P or * on different pagers*

8.0 INITIATING TRANSMISSIONS

There are two ways of initiating a paging message transmission:

Button press: The 11-85 will remain in a sleep mode, with zero supply current, until a button is pressed. This action will initiate a transmission as per the configuration. Note that on single button units, only button 2 is used.

External Discrete Inputs: A transmission can be initiated from one of the four external inputs with an input transition to LOW (connection to GND).

The 11-85 will remain in a sleep mode with zero supply current until a discrete input is activated.

A low transition on any discrete input will wake the unit for approx one second. Once the unit is activated, a message related to the particular input is sent and the unit goes back to sleep.

9.0 BATTERY MAINTENANCE

A 9 volt alkaline battery should have capacity for 5 hours of transmission, or about 5000 messages of 3 seconds each.

If the battery voltage drops below 7 volts, the LED will flash rapidly when operated. No battery monitoring takes place in the sleep mode.

The internal 9 volt battery can be accessed by sliding back the battery cover on the rear of the unit.



RECOMMENDED BATTERY

PP3, MN1604, 6F22

9 Volt Alkaline

10.0 TROUBLE SHOOTING

If the 11-85 does not perform as required, the following points may lead to solving the problem.

Fault	Possible causes
No LED illumination when button pressed	Bad power supply connection
Unit activates but no transmission	Configuration incorrect. Input not present for the required debounce period.
Unit transmits but nothing received	Wrong RIC or POCSAG baud-rate. Supply too low. Too much vibration. RF interference at receiver.
LED flashes rapidly during transmission	Indicates low battery voltage

11.0 PROGRAMMING

The PSD software allows the user to configure the following characteristics: Input actions, POCSAG and transmission settings, Pre-defined messages, RF frequency.

Requirements: To change the programmable options connect the 11-85 via a SALCOM 11-46 serial programming adaptor from the programming plug P8 to the serial port of a computer running terminal software 9600,n,8,1.

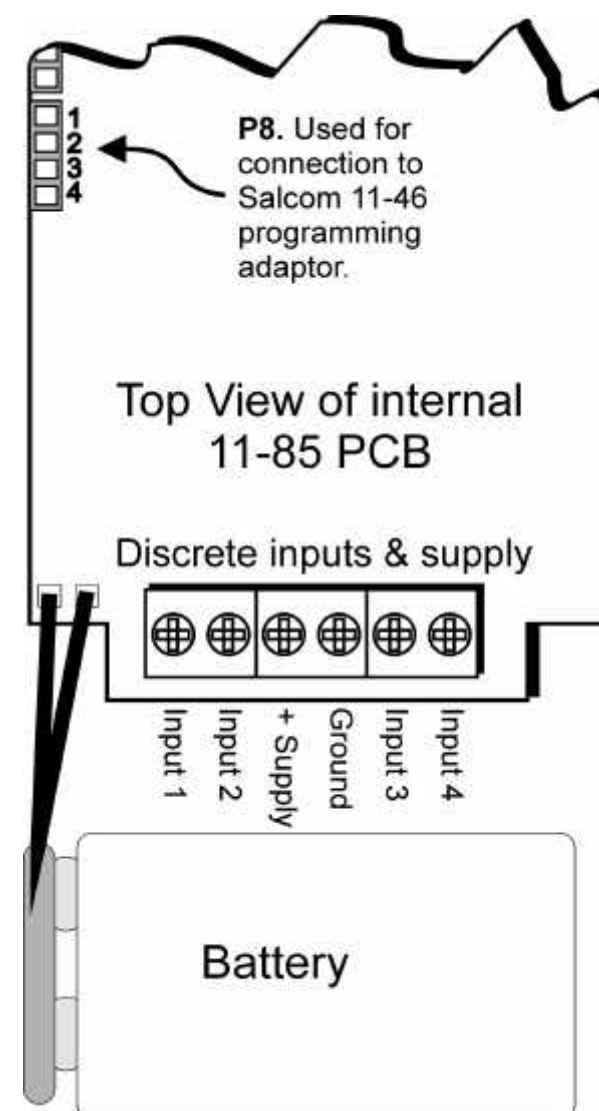
Preparations for using the Programming Software:

1. Remove the 4 case screws and the rear cover of the case.
2. Connect a good 9 volt battery to the 11-85 battery connector.
3. Insert the four pin socket of the Salcom 11-46 programming header into the 11-85 plug P8. (see photo and diagram overleaf).
4. Connect the Salcom 11-46 DB25 plug to the PC comport.
5. Using the terminal program e.g. Procomm the computer will display the options that can be edited.



Trouble Shooting Communication Problems.

If the program fails to indicate communications to the 11-85, check the battery and baud rate setting in your terminal software.



11.0 SPECIFICATIONS

Parameter	Specified value
Power Supply	9.0 V Battery
RF Frequency	450 -470 MHz Synthesizer control
Channel Spacing	12.5 KHz or 25 KHz
Output Power	100mW (+20dBm) 50mW EIRP, European Model
Modulation	Carrier FSK with NRZ data
Deviation	+/-4.5kHz or +/-2.25kHz
Transmit duty cycle	Up to 100%
Baud rate	512 Baud (1200 Baud to order)
Message format	POCSAG
Message length	200 characters total.
Spurious Outputs	Less than -36dBm
Power Consumption	Sleep : 0mA . Transmit: 100mA approx
Battery life	Approximately 5000 transmissions
Discrete inputs	Ground to activate
Current per input	-90uA at 9v supply
Type Approvals	
Case Dimensions	64 x 130 x 25mm
Weight	160grms
Temperature	-30 to +60 deg C

SEA AIR & LAND COMMUNICATIONS LTD

PO Box 22-621, 120 St.Asaph Street, Christchurch, New Zealand

Phone: (03) 379-2298 Fax: (03) 365-1580 Email: info@salcom.co.nz*Visit us at www.salcom.co.nz*