



**12-04-0000**  
**POCSAG**  
**Single Channel**  
**Relay Output Receiver**

PRODUCT INFORMATION

SEA AIR & LAND COMMUNICATIONS LTD, CHRISTCHURCH, NEW ZEALAND



## 12-04-0000

# POCSAG Relay Output Receiver

- GENERAL** The 12-04-0000 POCSAG Relay Output Receiver provides the ability to remote control relay outputs using SALCOM paging systems or telephone wide area paging networks.
- OPERATION** The unit receives and decodes a numeric or alphanumeric pager call. If the received *unit number* matches the 12-04-1000 *unit number*, the relay outputs are switched according to the ON/OFF fields of the message.
- INSTALLATION** Situate the 12-04-0000 away from direct sunlight, vibration and strong heat sources and avoid close proximity to radio transmission equipment. The unit is not certified as intrinsically safe.
- In good coverage areas fit the aerial to the aerial socket as shown on the cover. An external aerial may be needed where reception is poor.
- Connect a 12 volt DC power supply to the power terminals (see figure 1). The 12-04 is protected against reversed supply connection. The power source must be reasonably noise free.
- The connections to the relay contacts are made using the pairs of terminals, labelled "relay1". These are normally open contacts, but can be configured to be normally closed by special order.
- A second relay channel can be factory fitted on special order.
- CORRECT OPERATION** The operation of the unit is shown by the RED LED in the corner of the PCB. See figure 1. Correct operation is shown by this LED flashing. If the LED does not light, check the voltage on the supply terminal block. During the reception of a valid command with the correct RIC code, this LED will stay on for approximately one second. When a relay is commanded on, the corresponding LED will light next to the relay.

**UNIT NUMBER** Each unit will respond only to messages which contain a matching *Unit Number*. Up to 99 unique unit numbers are available. Any number of units can be programmed with the same unit number.

The *Unit Number* comprising of 2 digits is selected using the configuration software.

**MONOSHOT** Output mono-shot (momentary) operation can be enabled by using the configuration software. The Relay output can have its own Mono-shot time, ranging from 0 to 10 seconds in 40mS steps. Setting the value to 0 disables the mono-shot timer altogether, and the relay output is latched until commanded off.

#### RELAY RESTORATION

The 12-04-0000 has the ability to remember the state of the relay during a power down period. If this feature is turned on in the configuration software, the relay will be returned to their previous state at restoration of power.

#### RADIO CHANNEL FREQUENCY

The frequency of the radio channel is crystal controlled, and preset at the SALCOM factory.

The nominal tuning range is approximately 450-470MHZ.

#### SPECIFICATION

Enclosure.	115mm x 65mm x 40mm. ABS plastic case.
Supply Voltage	10v to 17v, Nominal 12V.
Current drain	Standby 7mA plus 18mA per energised relay.
Relay contacts	1Amp @24VDC (10A 240vAC optional)
Temperature limits	-10 to +50degC
Environmental protection	Weather proof. IP565
Frequency range	450-470MHz
Frequency selection method	Crystal.
RX sensitivity	Approx -120dBm
Aerial connection	BNC
Paging protocol	POCSAG 512 or 1200baud.

**COMMANDS**

The OUTPUT Relay of the 12-04-0000 is controlled by a series of numeric commands sent in the form of a numeric or alphanumeric pager message. *Note: For best sensitivity and range, it is better to send the command as a **numeric** paging message, as this uses the least number of characters.*

**Command Format: UUx..x0y..y9**

**UU Unit number**

This must be entered as 2 digits 00 - 99. *N.B. 00 is a group call and all 12-04-0000 units with the same RIC will receive the command.*

**x Relay to go ON.**

The standard relay in the 1204 is designated as channel 1. Therefore the command should carry "1" in this position. If a second relay is fitted to the unit, this digit can be 1 or 2 or both. Any combination of Digits 1 or 2 can be entered in any order. If none are entered then the function has no effect.

**0 End entry of Output ON values**

This terminates the list of outputs to turn on. This character is mandatory.

**y Relay to go OFF.**

As per "Relay to go ON" above, but this designates the relay to go OFF instead.

**9 End entry of Outputs OFF values & Ignore rest of entry.**

This terminates the list of outputs to turn OFF and informs the 12-04-0000 to ignore the rest of the message. This allows a text message to follow the command.

**Eg To control relays using the TELECOM Paging Network**

Message: 026PPPPPPPP UUx..x0x..x9  
 | | |  
 | | 12-04-0000 Command  
 | | the pager number[TELECOM PAGER No]  
 | the network access number

**Eg To control relays using a SALCOM 1131**

Message: NN[MESSAGE]UUx..x0x..x9  
 | | |  
 | | 12-04-0000 Command  
 | | the message button  
 | The quick dial number

**12-04 CONFIGURATION**

The programmable parameters of the 12-04 can be configured using the SALCOM 11-46 Programming Adaptor and the Product Support Software S1171WE1. Connect the 11-46 adaptor to S2 on the 12-04, and connect its 9pin connector to any PC comm port. (Note this interim software is designed for the SALCOM 1171 product and allows programming of up to eight relay channels. When programming an 12-04, use only channel 1, and ignore the frequency change parameter). The software can be downloaded from the SUPPORT area of the SALCOM web page ([www.salcom.co.nz](http://www.salcom.co.nz)). Programming of the 12-04 should be performed only by suitably qualified personnel.

**OPTIONS**

Some options are available for the 12-04 to extend its use to other situations. All these options can only be fitted by the SALCOM factory and must be requested at the initial order.

1. A 10A 240VAC relay can be fitted to allow the unit to switch mains operated equipment.
2. A second relay can be fitted making the 12-04 a two channel receiver. This relay can only be a 1A 24v type.
3. If an external aerial is required a BNC type aerial connection can be fitted.

**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.

**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.









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