

The 12-90 is a simple to configure POCSAG paging transceiver with high sensitivity receiver combined with a 60mW transmitter. It operates over the frequency range of 440-479MHz decoding and encoding 512 or 1200 baud, alphanumeric or numeric messages. The 12-90 supports multiple message queueing and will queue upto four 73 character messages or multiple smaller messages.



## 12-90-0000 UHF Transceiver

- Can be controlled via an RS232 serial interface to provide numeric, alphanumeric and tone only POCSAG encoding;
- Enables a user to call a pager (over 2,000,000 codes), append an appropriate priority level (1 of 4) and add an alpha or numeric message;
- Supports full batching of serially queued and input messages;
- Can be configured to automatically respond with checksum information of the last received message.
- Uses an intelligent self-adjusting channel busy check to prevent message collision or corruption.



### Key Features:

- Supports Salcom relay control protocol to control one on-board relay plus several "virtual outputs".
- Virtual outputs can be used to remotely trigger input or periodic messages and provide a mechanism to acknowledge reception of messages.
- 2 discrete inputs with different pre-programmed messages on high and/or low transition.
- Baud 512, 1200
- Can transmit the received signal strength of the last received message allowing the receiver positioning and system health to be monitored.
- FSK with NRZ Data
- 440-479 MHz—UHF (433MHz model available upon request).
- 60mW Output

### Applications:

- **Paging Transceiver:** allowing both the encoding and decoding of paging messages.
- **Standalone Receiver.**
- **Standalone Transmitter:** With channel busy check function before transmissions.
- **Autonomous Store & Forward Paging Repeater** with duplicate message reject.
- **Point to Point raw serial link**
- **Simple Telemetry solution**

## Technical Specification



### 12-90-0000 - UHF Transceiver and Store & Forward Repeater

Frequency Range	440-479MHz - UHF <i>Note: Custom 433MHz model available on request</i>
Frequency Selection	User configurable
Power Supply	+13.8V typical (11 to 15 VDC range)
Power Consumption	Standby: 33mA Transmit: 150mA
Transmit Power	60mW
Channel Spacing	10kHz, 12.5kHz
Modulation	FSK with NRZ data
Deviation	±4.5kHz
Receiver Sensitivity	Approx -125 dBm
Receive Bandwidth	10kHz (suitable for 12.5kHz channel operation)
Baud Rates	512, 1200
Message Format	POCSAG
Configuration Application	Salcom Configuration Tool
Programming Cable	12-45-0000 (RJ12 to DB9) Can be used with a USB to RS232 DB9 Serial Adapter Cable
Serial Port	9600 , N, 8, 1; RS232
Serial Protocols	Salcom
Discrete Inputs	2 (Ground activated)
Discrete Outputs	1 Relay Contact (1A @ 24VDC) <i>Note: Not suitable for 240VAC Connections</i>
Connectors	Serial Port (RS232) = RJ12 (6P6C) Inputs / Relay Output = RJ45 (8C)
Power Connector	2-way plug & socket, screw connections (supplied)
RF Connector	50Ω BNC
Environmental Protection	Not suitable for outdoor use and should be protected from adverse environmental conditions
Operating Temperature	-10°C to +50°C (+14°F to +122°F)
Indicators	Power LED (Green) - Flashing (1s Freq) = Normal Operation Status LED (Red) - On = Transmitting - Flashing = Error Condition
Weight	178g
Enclosure Dimensions	70mm x 100mm x 30mm (WxDxH)
Enclosure Material	Extruded aluminium
Colour	Matt black
Type Approvals	AS/NZS 4769.1:2000 + Amendment 1:2002 (RF) EN 300-224-2 (RF) FCC CFR47 Part 90 (RF) FCC CFR47 Part 15 (EMC) EN 301 489-2 V2.1.0 (EMC) EN 60950-1:2006 (Safety)

Programming software available for free download at: [www.salcom.com/products/page/12-90-0000](http://www.salcom.com/products/page/12-90-0000)

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