



# 12-90-0000 PAGING TRANSCEIVER & STORE & FORWARD REPEATER



The 12-90 is a simple to configure paging transceiver with high sensitivity receiver combined with a 60mW transmitter. It operates over the frequency range of 440-470MHz decoding and encoding 512 or 1200 baud, alphanumeric or numeric messages.

## WHAT CAN I DO WITH THE 12-90?

The 12-90 can be used as....

- A full paging transceiver, allowing both the encoding and decoding of paging messages.
- A stand alone receiver.
- A stand alone transmitter with channel busy check function before transmissions.
- An autonomous paging store and forward repeater with duplicate message reject.
- A point to point raw serial link.
- A simple telemetry solution.

The 12-90 can be controlled via a serial interface to provide numeric, alphanumeric and tone-only encoding. This enables a user to call a pager, append a priority level (1 of 4), and add a numeric or alphanumeric message.

The unit supports multiple message queuing of up to four 80 character messages, or as many smaller messages that will fit into the memory buffer. Full batching of serially queued and input messages, ensures that messages are transmitted with minimal transmit time. Pre-defined input messages limited to a length of 40 characters can be configured using any serial terminal application.

Two discrete inputs are supported with different pre-programmed messages on high and/or low transition. Provision to transmit a message more than once and variable time between transmissions are catered for.

Frequency Bands	UHF: 440 - 470MHz
Enclosure	Aluminium - 77mm x 101mm x 30mm
Supply Voltage	10v to 17v, Nominal 12V
Inputs and Outputs	One relay output and 2 inputs.
Current drain	Receive average 30mA plus 18mA when relay energised. Transmit average (into matched 50 ohm aerial) 90mA.
Temperature limits	-10°C to +50°C
Environmental Protection	Needs protection from weather
Frequency selection method	Synthesized, user selectable.
RX sensitivity	Approximately -125dBm
Transmit Power	+19dBm
Receive Bandwidth	10kHz (suitable for 12.5kHz channel operation)
Serial Connection	9600 Baud N:8:1 (for changing unit parameters and message output)
Paging Protocol	POCSAG 512 or 1200baud

The 12-90 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. Using a virtual output, it can transmit the received signal strength of the last received message allowing receiver positioning and system health to be monitored. It can be configured to respond with checksum information of the last received message.

Expansion of the 12-90 is possible using the 12-34 relay module and 12-32 input module, allowing any number of outputs or inputs to be supported.

An intelligent self adjusting channel busy check is used to prevent message collision or corruption - reducing the need to re-transmit messages.

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