

RPT503 UHF transmitters

Supplementary information

Time critical messaging



The RPT503 UHF series paging transmitter has been designed specifically to interface with Multitone's Access 3000 and Access 3000 Compact paging systems. With up to five watts of output power, supporting master and slave line synchronisation, it ensures robust and resilient paging communications.

Connection

A single pair line cable is all that is required to connect the encoder to the transmitter. This allows local operation via a twisted cable pair, or remote operation via a PTT line. DTMF tones switch the transmitter into different modes, allowing both analogue and digital data and speech to share the same pair line cable.

Multiple code formats supported

The RPT503 series transmitters can be used for Multitone analogue and digital formats, transmitting any analogue, digital or Frequency Modulation (FM) code formats. The RPT503 transmitters are also able to transmit Frequency Shift Keyed (FSK) formats such as POCSAG (CCIR Radio Paging Code No. 1).

Integral line synchronisation

The RPT503 series transmitter can be synchronised to other RPT503 transmitters on the same frequency, without the requirement for a separate synchronisation unit. The RPT503 transmitters are linked via an audio-pair line and use 20kHz tone signalling to synchronise the transmitter frequencies.

Status indication and fault monitoring

LEDs provide visual indication of the transmitter status. These include Tx keyed, power and fault. Internal fault conditions are also monitored, such as high reverse power and oscillator fail. Further features include a failsafe timer to key down the transmitter automatically after 256 seconds and a phase locked local loop oscillator for consistent performance and reliability.

Key benefits

- Easy selectable power output from one to five watts
- Fully synthesised transmitter from 430MHz to 470MHz
- Up to 100 percent duty cycle
- Multiple code formats: Multitone Mk6, Mk7 and POCSAG
- Easy to install and configure using a standard PC or laptop
- Small footprint

Easier installation and support

Transmitter set-up is configured via a standard PC or laptop, making the RPT503 UHF transmitter easy to install and configure on-site. With a small footprint and extremely lightweight design this product is much easier to handle. Supplied with both mounting brackets and feet, it can be easily wall or desktop mounted.

Technical specification

Characteristics

- Radio performance: RPT503 UHF (PLL Synthesised Radio)
- Frequency range: 430-470MHz
- Frequency stability: +/-2.5ppm, -20°C to +60°C
- Output power: up to 5W
- Duty cycle: up to 100%
- Normal load impedance: 50 Ohms
- Channel spacing: 12.5/20/25kHz
- VSWR protection: protection against short-term removal of the antenna (maximum of five calls with the antenna disconnected)
- Antenna options: end-fed dipole or stand alone UHF whip with 4m cable

Inputs

- Line input: -33 to -13dBm, 600 Ohms balanced line
- AC mains input: 100 to 240V 50/60Hz (separate power supply unit)
- DC input: 13.6V at 2.1A

Ancillary connections

- Line input: 8-Way RJ45 connector, -33 to 13dBm, 600 Ohms balanced line
- RF output: 50W N-type connector
- Auxiliary transmitter control: 15-way high density D-type connector, -13dBm into 600 Ohms (speech and data)
- Line synchronisation: 8-Way RJ45 connector, -13dBm into 600 Ohms
- Line synchronisation frequency: 20kHz

Displays & alarms

- LED indicators: standby, transmitter keyed and transmitter failed
- Alarm outputs: open collector logic fault indication

Environmental

- Operating temperature: -20°C to +60°C
- Storage temperature: -20°C to +70°C
- Code format: Multitone Mk6, Mk7 & POCSAG (CCIR No.1)

Physical characteristics

- Size: 60mm (h) x 168mm (w) x 104mm (d)
- Weight: 650g

Multitone Electronics plc, Geddes House, Kirkton North, Livingston, West Lothian, EH54 6GU

Tel: +44 (0)1506 418198 Fax: +44 (0)1506 411711 Email: info@multitone.com Web: www.multitone.com

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