

QDR-50SFR



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QDR-50SFR

SIMPLEX FREQUENCY REPEATER

FEATURES

- ETSI TDMA DMR Protocol
- Built-in Power Supply
- No Duplexer Required
- Base Radio Configuration Analogue/Digital
- Standby Current Draw 320mA on 13.8V
- Utilising Time Slot 1 and Time Slot 2 on Simplex Enabling Repeater Functionality



APPLICATIONS

- Transportation
- Industry
- Emergency Services
- Tunnel Communication
- Prison Communication
- Disaster Rescue
- Hotels
- Shopping Centres
- Airport Communication
- Sports Event
- Basement Coverage
- Building Coverage

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GENERAL SPECIFICATIONS

| | |
|----------------------|---|
| Frequency | VHF: 136-174MHz / UHF: 400-470MHz / UHF: 450-520MHz |
| Number of Zones | 100 |
| Channel Capacity | 1600 |
| Channel Spacing | 12.5KHz/25KHz |
| Working Method | Semi-duplex or simplex relay |
| Operating Voltage | DC 13.8V ($\pm 20\%$); AC 100-240V |
| Standby Current Draw | 320mAmp |
| Frequency Stability | ± 0.5 ppm |
| Antenna Impedance | 50 Ω |
| Dimensions | 282mm x 241mm x 56mm |
| Weight | 3.2kg (without battery) |

TRANSMITTER

| | |
|-------------------------|---|
| Output Power | High: 20W Low: 5W |
| 4FSK Digital Modulation | Only data: 7K60FX Data and voice: 7K60FXE |
| FM Modulation | 12.5KHz: 8K50F3E; 25KHz: 16K ϕ F3E |
| Modulation Limitation | ± 2.5 KHz@12.5KHz; ± 5.0 KHz@25KHz |
| FM Modulation | -40dB@12.5 KHz, -45dB@25KHz |
| Emission Spurious | -36dBm \leq 1GHz/-30dBm \geq 1GHz |
| Adjacent Channel Power | ≤ -60 dB/12.5KHz, ≤ -70 dB/25KHz |
| Frequency Response | +1/-3dB |
| Rated Audio Distortion | $\leq 3\%$ |
| Digital Speech Coder | AMBE+2TM |

RECEIVER

| | |
|------------------------------|--|
| Digital Sensitivity | 5% BER: 0.225 μ V |
| Analog Sensitivity | 0.225 μ V (12dB SINAD) |
| Intermodulation | ≥ 65 dB |
| Adjacent Channel Selectivity | ≥ 60 dB/12.5KHz, ≥ 70 dB/25KHz |
| Spurious Suppression | ≥ 70 dB |
| FM Noise | -40dB@12.25KHz, -45dB@25KHz |
| Frequency Response | +1/-3dB |
| Rated Audio Output Power | 3W (speaker) |
| Audio Distortion | 3% (typical) |
| Conducted Spurs | -57dBm |

ENVIRONMENTAL INDICATORS

| | |
|------------------------------|--------------------------------|
| Range of Working Temperature | -30 ~ +60°C |
| Storage Temperature Range | -40 ~ +85°C |
| Moisture Proof | MIL-STD-810 C/D/E/F/G standard |
| Shock and Vibration | MIL-STD-810 C/D/E/F/G standard |

- All specifications are subject to change without notice due to continuous development
- Complies with Australia / New Zealand RF standards



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QDR-50SFR

FEATURES

Light Weight, Super Portable Design

Only a quarter size of regular repeater, 3.2kg light weight.

Increase Communication Distance

Unlike traditional repeaters, the QDR-50SFR provides 5-20W of output power without Tx power loss through the duplexer, and the improved Rx sensitivity ensures communication over greater distances.

Easy Installation

QCOM provides an easy-to-install wall bracket for the QDR-50SFR. Repeater requires external antenna only, no duplexer needed.

Support Single Frequency Repeater Mode and Save Frequency Resources

Only a digital simplex frequency is required to operate and no need to apply for duplex frequencies as in the case of normal repeater.

Support Base Station Mode

The QDR-50SFR supports a fist microphone as an optional accessory to support base station operation

With Temperature Power Control to Achieve Super Stability

When the repeater temperature reaches 40 degrees, the built-in fan will automatically turn on. When the repeater temperature reaches 70 degrees, the power will automatically be reduced. Once the temperature decreases, the repeater will revert back to high power. This ensures high reliability of QDR-50SFR.

QDR-50SFR

FEATURES



Support Voice Encryption and Authentication

The QDR-50SFR supports fixed key digital encryption technology, as well as authentication with QCOM encryption protocol. These features can improve and prevent interference and ensure the information is secured during communication.

2.0 Inch HD Large Screen Display

Using 2.0 inch high-definition full-view IPS screen, the display is clear and visible even in sunlight.

1600 Channels, 100 Areas Supported

Using large-capacity memory unit, 1600 channels can be restored, 100 zones to meet the needs of different users.

Data and Audio Signal Transmit Simultaneously

QCOM has developed the digital simultaneous interpretation function for professional users. During the communication, it supports simultaneous data and audio signal transmission.

Signal Adaptation

In the single frequency repeater mode, the terminal adopts an adaptive protocol to receive the transferred signal or the terminal's signal automatically.

Individual Call and Group Call Supported

Support individual calls and groups calls.

QDR-50SFR

ACCESSORIES

INCLUDED IN THE BOX



Microphone



DC Power Cable



Programming Cable



Wall Panel