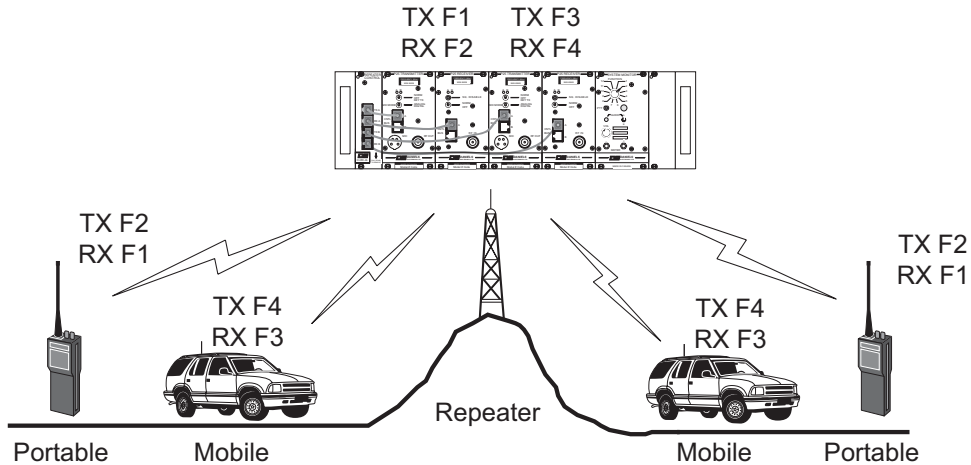


AN160 Dual P25 Repeater Systems

“Additional Repeater for Multiple Users”



Description

This system is configured as two independent P25 Repeater Systems capable of operating in analog, P25 digital or mixed mode configurations. This system operates the same as a single P25 Repeater, but adds a second repeater in the same subrack. The second repeater can be in the same frequency band or another frequency band and can be programmed completely independently from the first repeater.

ANALOG MODE

The repeater system can be programmed for either wideband analog or narrowband analog operation. CTCSS or DCS operation can be programmed into the receiver and transmitter modules as well as selectable de-and pre-emphasis or flat audio operation.

P25 DIGITAL MODE

The repeater will pass all clear and secure (encrypted) P25 digital information. NAC codes can be programmed into the receiver and transmitter modules or the system can be programmed to repeat any incoming signals with the NAC intact.

MIXED MODE

The repeater will operate in both ANALOG and P25 DIGITAL mode. The receiver will detect the incoming signal as either analog or P25 digital and pass the information to the transmitter.

Frequency Bands / RF Power Output

- 136 - 174 MHz / 8, 30, 60, 100 Watts
- 406 - 430 MHz / 2, 8, 30, 60, 100 Watts
- 450 - 470 MHz / 2, 8, 30, 60, 100 Watts

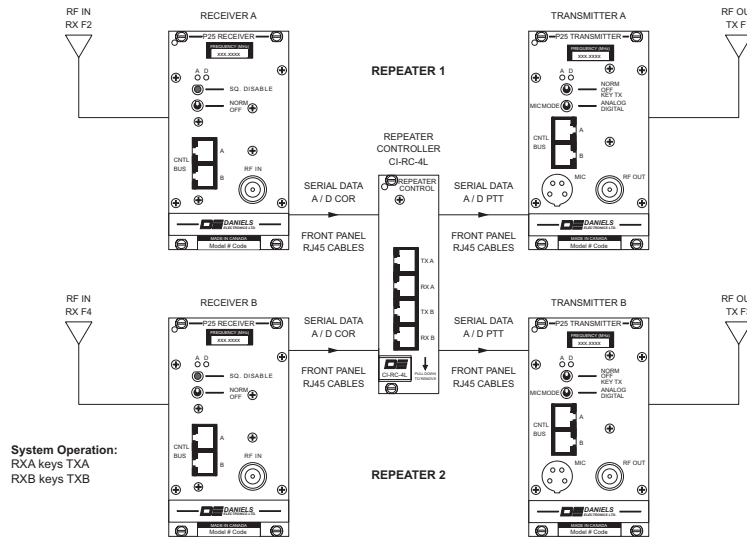
Related Applications

- AN150 Basic P25 Repeater System
- AN310 P25 Drop-Link Repeater System
- AN420 P25 Crossband Repeater System

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System Diagrams



Sample Block Diagram of a Dual P25 Repeater System

Connection

Both receiver and transmitter modules are connected to a repeater controller card that controls the connections between the separate modules. The modules are connected via cables that plug in to the RJ45 jacks on the front panel of the modules. The repeater controller also allows for different possible future system configurations.

Required Equipment

- **xT-4Dxxx-R0-800** Two P25 VHF or UHF Repeater Transmitter Modules
- **xR-4Dxxx-R0-000** Two P25 VHF or UHF Repeater Receiver Modules
- **SR-39-1** Subrack
- **SM-3-H0-014-00** System Monitor
- **A-MIC-01** Microphone
- **IMxx-xxxxxxx** Instruction manuals
- **CI-RC-4L** P25 Repeater Controller Card

Optional Equipment

- **AMP-2/xxx-30-00** 30 Watt Power Amplifier
- **SR-39-1** Additional Subrack for Power Amplifiers
- **PSA-12A09-P0-00** AC Power Supply
- **PSD-15/08-P0-xx** DC to DC Power Supply

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