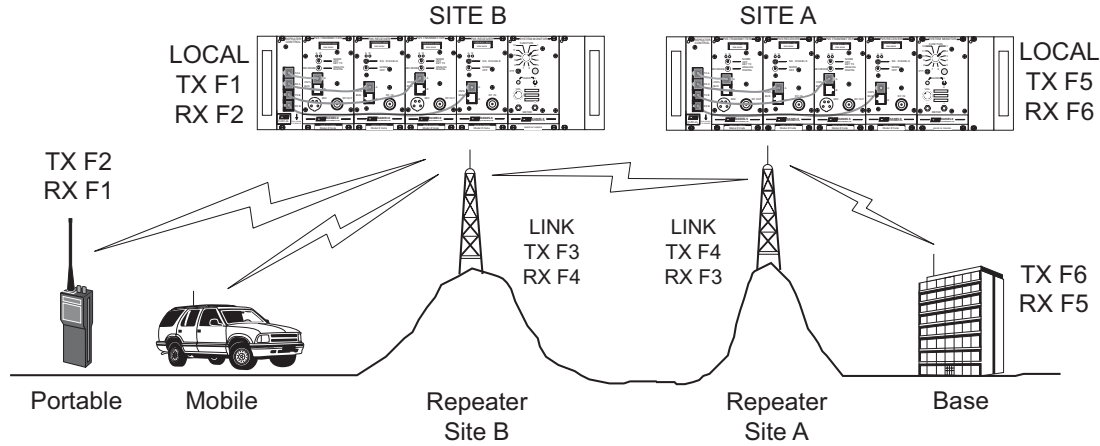


AN310 P25 Drop-Link Repeater System

“Linking Local Repeaters”



Description

This system is configured as a P25 repeater system with a P25 link to another P25 repeater. The repeaters and links are both capable of operating in analog, P25 digital or mixed mode configurations. This system is referred to as a Drop-Link repeater system, where the Drop is the local repeat function and the Link is the link to another repeater site. Drop-Links that do not repeat are also referred to as Drop-Switched Links.

ANALOG MODE

The radio 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
- AN315 P25 Drop-Repeating Link System
- AN420 P25 Crossband Repeater System

43 Erie Street  
Victoria, B.C.  
Canada V8V 1P8

Toll Free Canada & U.S.A.  
Phone: 1-800-664-4066  
Fax: 1-877-750-0004

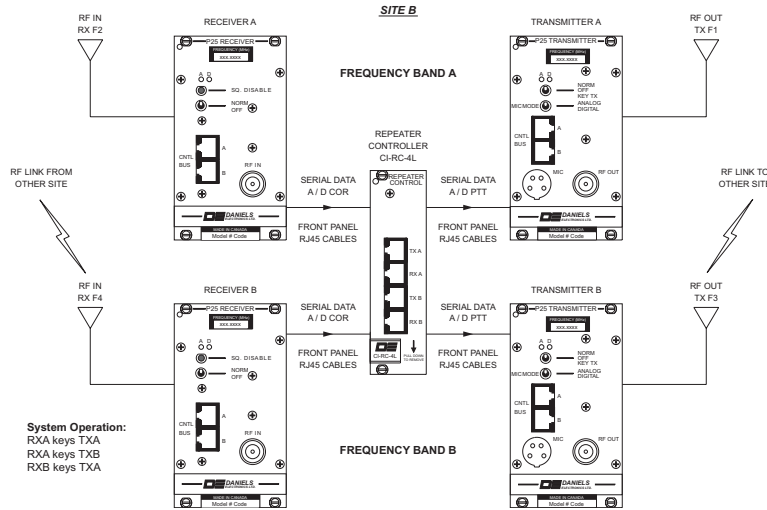
International  
Phone: 250-382-8268  
Fax: 250-382-6139

Internet  
e-mail: sales@danelec.com  
web: www.danelec.com

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System Diagrams



Sample Block Diagram of a P25 Drop-Link 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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web: www.danelec.com