

RDL LINKS

RF TRANSMITTERS AND RECEIVERS

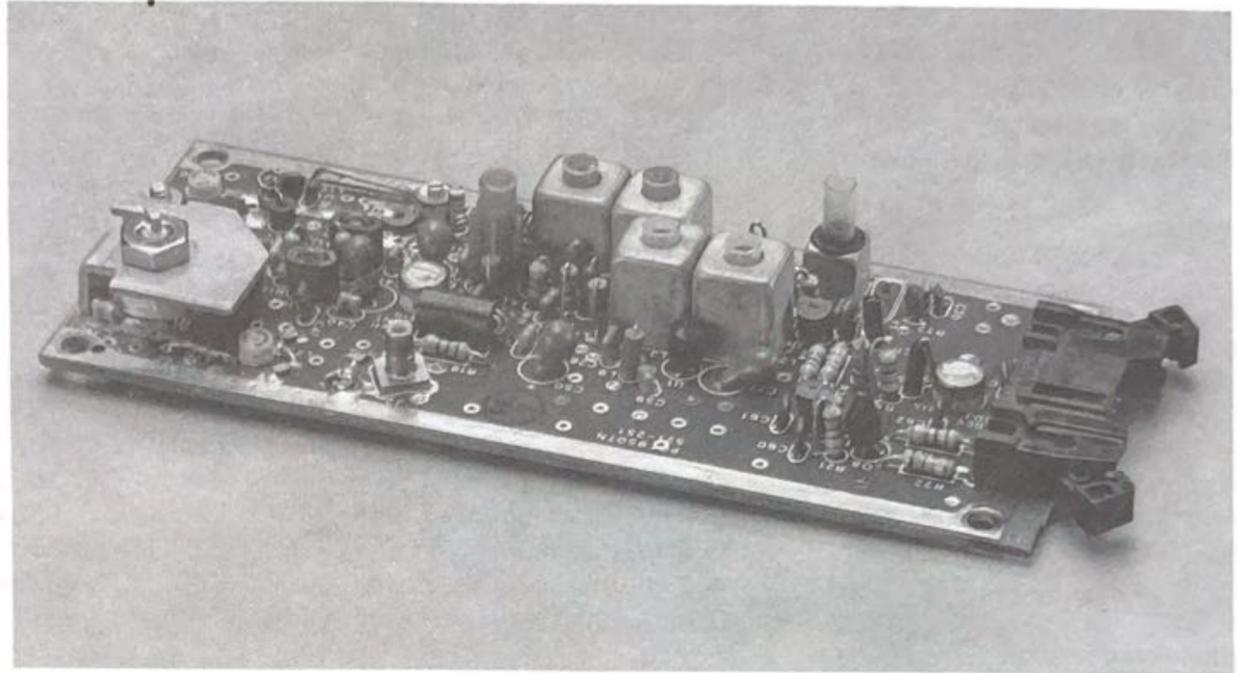
138-174 MHz; 406-430 MHz; 450-512 MHz; 928-960 MHz • 1.0-2.0 watts or 4.0 watts

Repco's RF telemetry equipment provides wireless communications for a wide variety of data and voice applications. Typical applications include supervisory control and data acquisition systems (SCADA), irrigation control, wastewater treatment systems, traffic assistance, alarm systems, energy management and ecological and environmental control systems, and voice link communications.

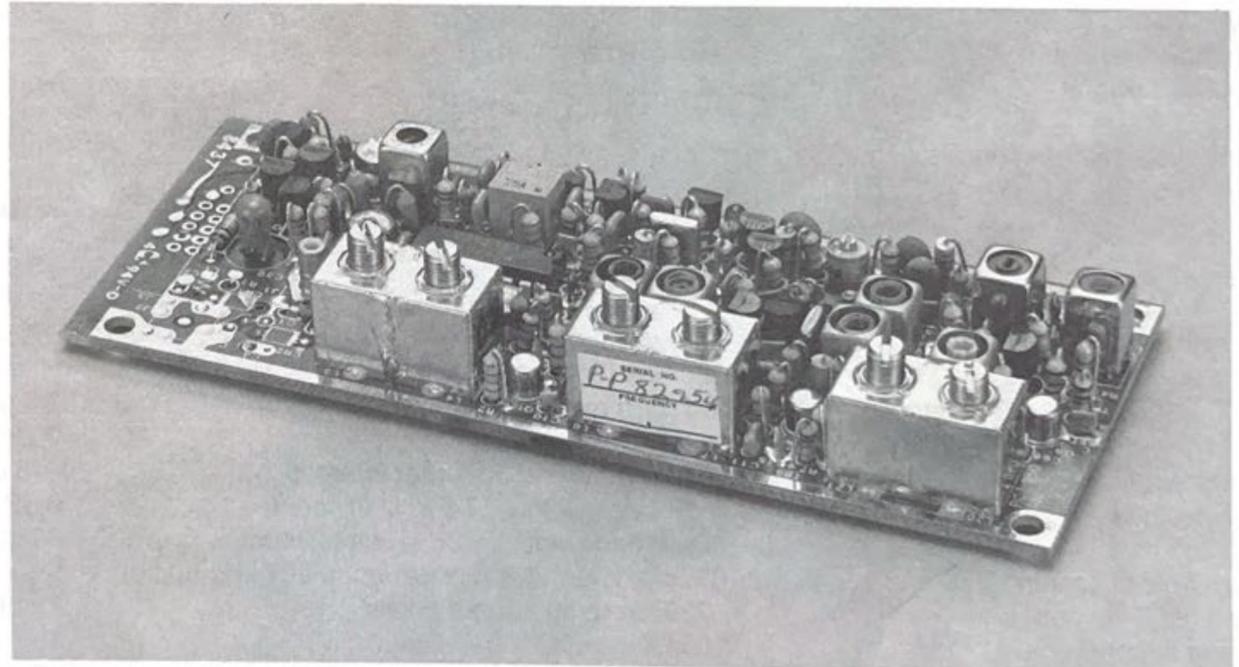
RDL links can be used to replace most hard wire systems currently in operation. This eliminates lease line costs as well as the need for a middle dispatcher.

The RDL Series of transmitter and receiver modules can be purchased separately or as a part of one of Repco's complete line of radio modems and data repeaters. The compact size of the RDL links (5.1" x 2.1" x .78") makes them ideal for meeting the tight packaging requirements for your particular communications system.

Repco's RDL Series links are designed to provide you with maximum performance at minimum expense. RF signal input and output connections are made via SMB 50-ohm coaxial cable connectors installed on the p.c. board. All other connections are made using the plated-through holes on the p.c. board or the optional ribbon-cable connector.



Transmitter (shown with ribbon-cable connector)



Receiver

MAJOR FEATURES INCLUDE:

- Available in VHF, UHF, or 900 MHz
- Small, compact size
- Adjustable RF power levels
- Low current drain
- High performance specifications
- Can be used in a wide variety of applications
- Made in USA



SPECIFICATIONS

RDL SERIES TRANSMITTERS & RECEIVERS

GENERAL

| | <u>VHF and UHF Models</u> | <u>900 MHz Models</u> |
|--------------------------------|--|---|
| Frequency ranges | 138-162, 162-174 MHz 406-430, 450-470, 470-490, 490-512 MHz | 928-944, 944-960 MHz |
| Number of channels | 1 | 1 |
| Operating temperature | -30° to +60°C | -30° to +60°C |
| Dimensions (without connector) | 5.10" x 2.10" x 0.78" (12.95 cm x 5.33 cm x 1.96 cm) | 5.10" x 2.10" x 0.78" (12.95 cm x 5.33 cm x 1.96 cm) |
| Power supply | +12.5 VDC ±10% | +12.5 VDC ±10% |

TRANSMITTER

| | | |
|--------------------------------|--|--|
| Frequency stability | ±0.0005% | ±0.0005% |
| RF power output | ±0.0010% (406-430 MHz) 1.0-2.0 watts (adjustable) 4.0 watts (406-430 MHz, 450-490 MHz only) | ±0.00015% (optional for 928-960 MHz only) 1.0-2.0 watts (adjustable) |
| Emission type | 16F3, 16F9, 15F2 | 16F3, 16F9, 15F2 |
| Power supply current | 950 mA maximum at 4.0 watts 550 mA maximum at 2.0 watts 400 mA maximum at 1.0 watt 0.1 mA maximum with Tx unkeyed | 650 mA max. at 2.0 watts (850 mA for 1.5 ppm option) 550 mA max. at 1.0 watt (700 mA for 1.5 ppm option) 0.1 mA max. with Tx unkeyed (350 mA for 1.5 ppm opt.) |
| Modulation deviation | ±5 kHz | ±5 kHz |
| Frequency response | Within ±2.0 dB from 50 Hz-10 kHz (ref. 1.0 kHz) | Within ±2.0 dB from 50 Hz-10 kHz (ref. 1.0 kHz) |
| Harmonic distortion | 5% maximum | 3% maximum |
| FM hum and noise | -50 dB maximum | -50 dB maximum |
| Harmonic output | -50 dB maximum | -50 dB maximum |
| Spurious output | -50 dB maximum | -50 dB maximum at 1.0 watt -60 dB maximum at 2.0 watts |
| Duty cycle without degradation | 100% | 100% |

RECEIVER

| | | |
|--------------------------|--|--|
| Frequency stability | ±0.0010% | ±0.0005% |
| Sensitivity: 10 dB S+N/N | 0.25 µV maximum (300 Hz baseband filter centered at 1.0 kHz) | ±0.00015% (optional) 0.35 µV maximum (300 Hz baseband filter centered at 1.0 kHz) |
| 20 dB quieting | 1.5 µV maximum (6.5 kHz baseband) | 2.1 µV maximum (6.5 kHz baseband) |
| Signal present indicator | 0.2 µV maximum | 0.28 µV maximum |
| Intermodulation | -18 dBm typical 3rd order intercept | -18 dBm typical 3rd order intercept |
| IF selectivity | 6 dB bandwidth = ±7.5 kHz minimum 60 dB bandwidth = ±25 kHz maximum | 6 dB bandwidth = ±7.5 kHz minimum 60 dB bandwidth = ±25 kHz maximum |
| Harmonic distortion | 5% maximum (±3 kHz deviation at 1 kHz audio) | 5% maximum (±3 kHz deviation at 1 kHz audio) |
| Frequency response | ±2 dB from 50 Hz to 4.5 kHz | ±2 dB from 50 Hz to 4.5 kHz |
| Power supply current | 20 mA maximum (receive) (VHF) 18 mA maximum (receive) (UHF) 15 mA maximum (standby) (VHF) 13 mA maximum (standby) (UHF) | 18 mA maximum (receive) 13 mA maximum (standby) |

OPTIONS

Solid-state transmit/receive switch (located on the receiver p.c. board)
10-pin power and control connector (includes mating connector and ribbon cable)

ACCESSORIES

SMB 50-ohm coax cable connector (mates with the antenna port or Tx signal port on the receiver or with the RF output connector on the transmitter)

FCC Compliance: When installed in a system employing suitable modulation limiting and filtering along with proper RF cabling and mounting techniques, transmitter performance complies with FCC parts 21 and 90; receiver performance complies with part 15.

Specifications are subject to change without notice.



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