

MODEL TRL-1

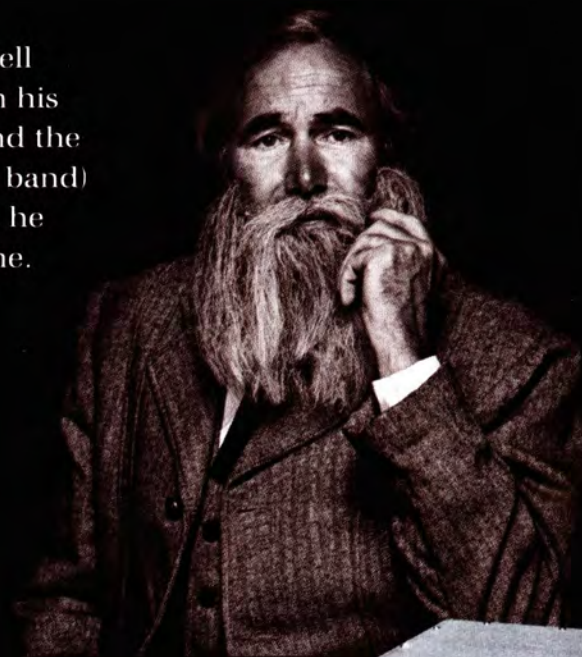
Telemetry Return Link



TM

Bulletin 266

If Alexander Graham Bell had to choose between his own great invention and the Model TRL-1 (450 MHz band) Telemetry Return Link, he might have a tough time.



Installation with Moseley Associates, Inc. Aural Studio Transmitter Links, Microprocessor, Digital or Analog Remote Control Systems provides an unbeatable, totally wireless combination.



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MOSELEY ASSOCIATES, INC.

A Flow General Company

TRL-1 Telemetry Return Link

Alexander Graham Bell, like many great inventors, was always open to new ideas. Moseley's reputation is built on new ideas and the TRL-1 is a good example.

Even if you are currently using an STL with a remote control system, you may still depend on either a phone line or your transmitter carrier for return telemetry.

The Model TRL-1, allows you to transmit telemetry (or control) data to

(or from) your control point on the 450 MHz band. Operation under FCC jurisdiction is per Part 74, subpart D, group P channels, Remote Pick-up and Low Power Auxiliary Broadcast Stations. Other frequencies on request.

The TRL-1 receiver and transmitter characteristics have been optimally selected for this particular continuous duty, unattended service. An optional battery pack to survive loss of AC power and a separate MIC input for voice communication are also provided.

SPECIFICATIONS

Systems

RF Frequency Range (Crystal Controlled)	FCC Type accepted per part 74.402 (a) (7), 450-456 MHz Exact channels: (Group P) 450.01 MHz 450.98 MHz 450.02 MHz 450.99 MHz 455.01 MHz 455.98 MHz 455.02 MHz 455.99 MHz Other frequencies on request
Data (Audio) Response	20-3000 Hz, ± 3 dB
Distortion (THD)	3% nominal
Signal-to-Noise Ratio	45 dB nominal
Automatic Transfer	Moseley models TPT-2, TPR-2 (Optional)

Transmitter

Emission Designator(s)	9F2, 9F3
RF Output	1 watt nominal, 50 Ω , Type N female chassis connector.
Deviation	± 1.5 kHz (100% modulation)
Frequency Stability	$\pm 0.00025\%$
Spurious, Harmonic Output	Minimum 50 dB below carrier
Data (Audio) Inputs	0 dBm, 600 Ω , unbalanced (2). High impedance microphone
Power Requirements	
AC	120/240 VAC, $\pm 10\%$, 50-60 Hz, 20 watts nominal
DC	13.5 VDC, $\pm 10\%$, negative ground, 1.3 amps nominal
Size	1.75" H X 19" W X 9" D (4.5 cm X 48.4 cm X 22.9 cm) Net Weight 10 lbs (4.5 Kg) less battery

Receiver

Sensitivity	1 μ V nominal for 20 dB quieting (proper remote control system operation)
Selectivity	6 dB = ± 6.5 KHz 60 dB = ± 13 KHz 80 dB = ± 17.5 KHz
Frequency Stability	$\pm 0.00025\%$, AFC
RF Input	50 Ω , unbalanced, Type N female chassis connector
Data (Audio) Output	0 dBm, 600 Ω , unbalanced (100% modulation)
Squelch	Automatic and adjustable, electronic. Carrier-operated relay output (SPDT)
Power Requirements	
AC	120/240 VAC, $\pm 10\%$, 50-60 Hz, 2 watts nominal
DC	13.5 VDC, $\pm 10\%$, negative ground, 125 MA nominal
Size	1.75" H X 19" W X 9" D (4.5 cm X 48.4 cm X 22.9 cm) Net weight 10 lbs (4.5 kg) less battery

Options

1. MCW (Modulated Continuous Wave) Identifier. Preprogrammed with alpha/numeric ID. Provides indication in conjunction with Battery Option of AC power failure. Specify "ID". Internally mounted.
2. Battery backup. Self-contained battery pack automatically switched upon AC power failure. Provides nominal 20 minute transmitter standby operation. Keys MCW continuously for AC power failure. Internal, maintenance free.

Suggested Antennas, Transmission Line and Connectors

CA5-450 Antenna, Scala 5-element Yagi, 10 dBd gain; PR-450U, Scala Paraflector, 15dBd gain.

LDF4-50, Andrew Heliax, 1/2" low loss foam dielectric coaxial cable (1.5 dB attenuation per 100 feet at 450 MHz).

KTL-6 Connector Kit, for LDF4-50 cable, includes two Type N female connectors and two 3' RG-8/U pigtail assemblies.

ICU-2 Isocoupler, facilitates mounting TRL antenna(s) on ungrounded AM broadcast tower.

Contact any Moseley Associates Sales Representative for further details

Specifications subject to change without notice.



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