

The TR1-6T is a 19" rack mountable 1RU module, 6 channel VHF FM Stereo rebroadcast repeater with audio break-in facility on all channels. Internal splitter and combiner simplifies the connection with only one RF input BNC and RF output one BNC making installation simple. Transmit and Receive channel frequency selection is performed on each channel PCB via 1 DIL switch with off-set for the receive frequency. This ensures simple frequency programming for each FM Channel.

Audio Break-in input for each channel is provided via BNC on the rear of the unit, with associated audio loop-back connector option, enabling daisy chain break-in audio connectivity to more than one TR1-6T module. Front mounted LED's provide visual indication of each channel PCB's status.

The TR1-6T can be used in combination with other associated modules to provide a complete multi-channel tunnel rebroadcast system. from 6 to 24 Channels, using the following additional modules; RMC-1 (6 Way Receiver splitter), TL1-6T (6 channel rebroadcast Frequency Translator), LPSP2 / 4 (2 and 4 way low power combiner/splitter), LA-100LD (25W and 100W Linear amplifier), RFoF (RF over Fiber distribution system)

FEATURES

- 6 channel VHF FM Stereo on-frequency rebroadcast unit
- Single BNC RF input and single BNC RF output for all six channels.
- Additional TR1-6T units combined to expand the number of frequencies.
- Audio Break-in on all 6 channels from one audio input.
- Compact 1RU 19" rack mountable module with depth 470mm.
- Summary Alarm and telemetry control via rear mounted D9 connector.
- Full Range of filtering, combining and splitting modules are available for larger systems.
- RF over Fiber signal distribution system is available as an option.



TR1-6T REPEATER SPECIFICATIONS (6 channels)

Frequency range	87.5MHz to 108 MHz (F3E/F8E)
RF output power	-3dBm to -15dBm per channel (adjustable)
Harmonics and Intermods	≤ -60dBc
Dual Synthesizers	Tx (modulator) and Rx (local oscillator)
Frequency increments	50 kHz (via DIL switches)
Frequency deviation	+/- 75 kHz peak
RF input connector	BNC (female) 50 Ohm (unbalanced)
RF output connector	BNC (female) 50 Ohm (unbalanced)
BIF Audio input	10dBm maximum (adjustable)
BIF connector	BNC (female) 40k ohms (balanced)
BIF frequency response	30Hz to 8 kHz pre-emphasised
BIF audio distortion	≤ 0.25%
Operating RF input level	-60dBm to -20dBm (per channel)
Stereo S/N ratio	≥ 65dB (50uS de-emphasis)
Stereo Distortion	≤ 0.5% (40Hz to 15 kHz)
Stereo separation	≥ 45dB (40Hz to 15 kHz)

POWER SUPPLY

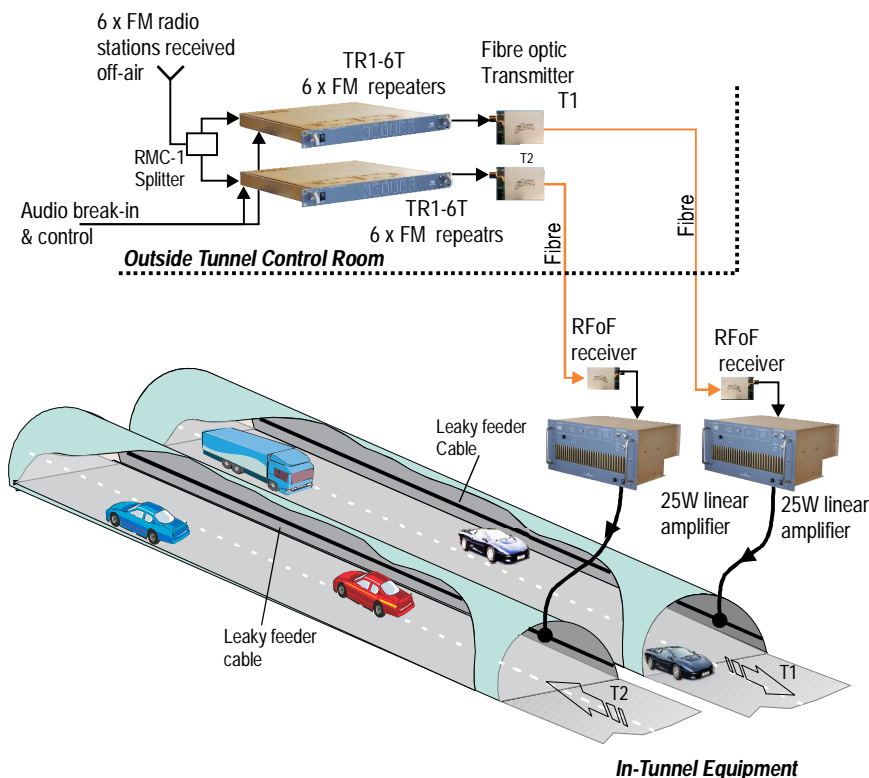
AC power input	110V to 230V full range 50/60Hz
EMC rating	Compliant with CISPR 22 class B
Mains consumption	25VA nominal

PHYSICAL / ENVIRONMENTAL

Operating temperature	-5°C to +45°C <90% Humidity
Altitude max	2000m
Dimensions (mm)	485W x 420D x 44H (1U)
Weight	3kg (approximately)

TELEMETRY

Summary alarm	Voltage free, with s/c or o/c contact
BIF command	s/c to ground to enable BIF



Typical 6 Channel, Dual tube tunnel FM repeater system