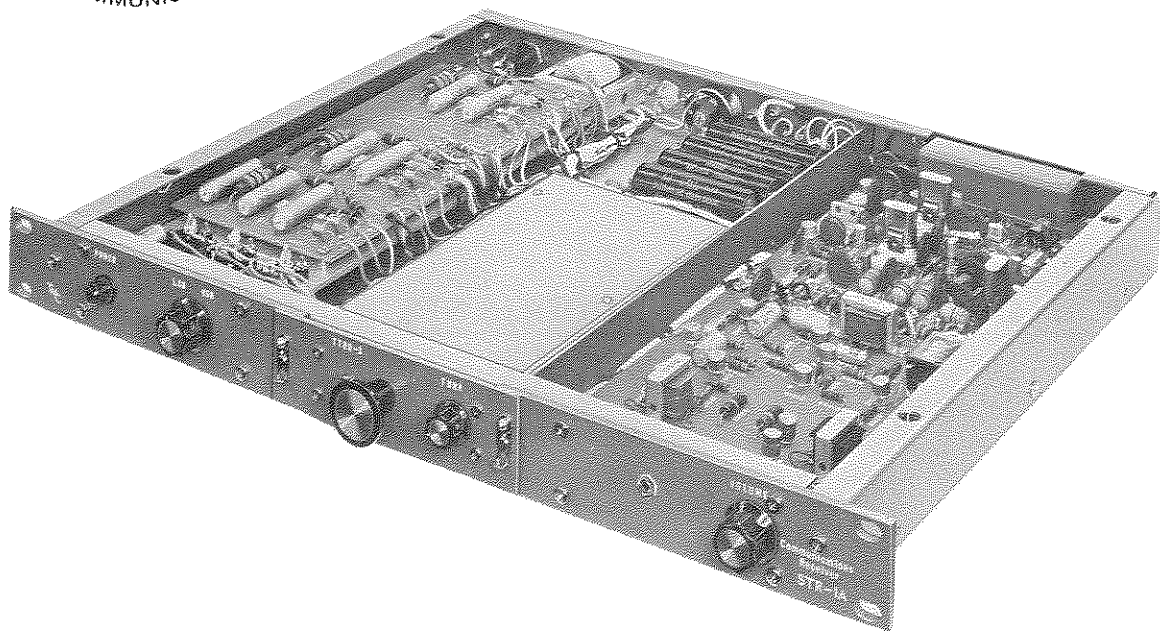
TECHNICAL BULLETIN NUMBER 3014A

Sideband Strip Receivers
TMC Models STR-1
STR-2B



- 2 to 32 mcs
- LSB or USB, AM, CW, and MCW.
- Solid State
- Operates on 8 watts of power
- Squelch
- Provides audio to line and speaker
- 1¾″ × 19″ × 15″

The Technical Materiel Corporation's Model STR Solid State Receivers are compactly constructed and offer all the advantages of modern voice communications, either in standard AM mode or SSB modes. The low mass and low heat of the unit make it ideal for high density relay rack mounting without requirement of shock mounts or forced air cooling.

With this receiver, it is possible to reduce space requirements drastically for:

1. Ground-to-air service.
2. Ship-to-shore circuits.
3. Harbor circuits.
4. Pleasure craft.
5. Tactical command circuits.
6. Amphibious control circuits.
7. Transmission monitor service.
8. Extended telephone service and many others.

Sideband Strip Receivers

The tuning module within this receiver has two crystals which are selectable from the front panel that allows side step operation within 0.5% of the operating frequency without the need for alignment.

Elimination of all receiver noise, except when the circuit is active with a suitable signal, is possible in the STR receivers by the addition of a CODAN unit. TMC Model CDN-3, described in Bulletin 4013A is well suited for this purpose and is used in the Bell Telephone System.

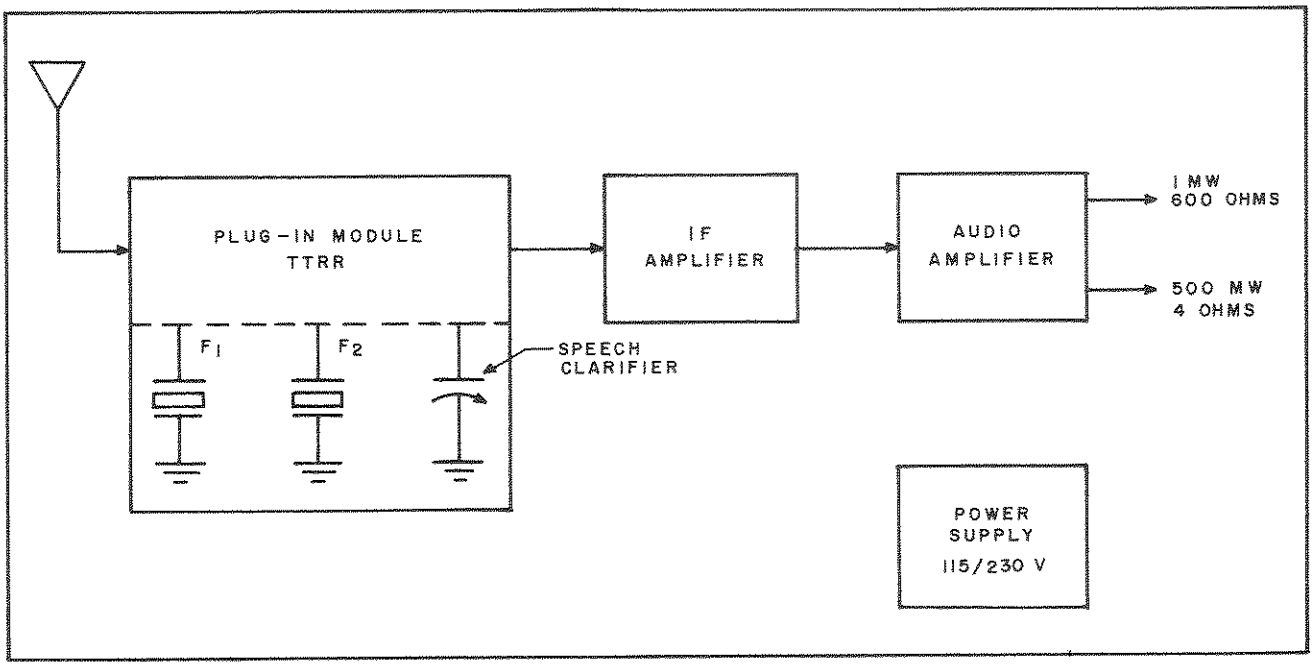
The modules are mechanically and electrically interchangeable with those in the TTR-10 Transmitter/Receiver, and the SMR-1/2 multi-channel receiver.

When ordering this unit, please specify the frequency(ies) of operation.

TECHNICAL SPECIFICATIONS, TMC MODELS STR

FREQUENCY RANGE:	2 to 32 mcs by crystal controlled plug-in RF modules. Modules provide coverage of 2-4, 4-8, 8-16, 16-32 mcs. When ordering TMC Model STR, please specify frequency of operation desired.
MODES OF OPERATION:	STR-1: SSB (Upper or lower) and CW. STR-2B: AM, MCW.
FREQUENCY STABILITY:	Crystal controlled.
SPEECH CLARIFIER:	Manually controlled front panel adjustments allow "rubbering" of the HFO cyrstal.
INPUT IMPEDANCE:	50 ohms nominal unbalanced.
SENSITIVITY:	STR-1: 1 microvolt input for 15 db signal plus noise to noise ratio. STR-2B: 3 microvolts input modulated 30% for 10 db signal plus noise to noise ratio.
INTERMODULATION:	Intermodulation products are down a minimum of 40 db from PEP of a two tone test with 100 microvolts at the antenna.
IMAGE REJECTION:	Minimum 50 db from 2 to 28 mcs; minimum of 40 db, 28 to 32 mcs.
IF SELECTIVITY:	STR-1: 3 kc ±2 db, or 350 to 3350 cps. (SSB) STR-2B: 6 kc ±2 db symmetrical. (AM)

AGC CHARACTERISTICS:	With 100 db change in input signal from 1 microvolt (3 microvolts for STR-2B) the output will not vary more than 10 db. AGC time constant has fast attack and slow decay characteristics.
IF FREQUENCY:	1.75 mc first IF; 250 kc second IF.
SQUELCH:	Threshold adjustable squelch. AGC activated relay has contacts brought to rear panel for remote indication of receiver signal activity.
AUDIO AMPLIFIER RESPONSE:	250 cps to 10,000 cps.
AF OUTPUTS:	1. 500 milliwatts for speaker or front panel phone jack. 2. 1 milliwatt into 600 ohm line available for extended service or telephone handset.
HUM AND NOISE LEVEL:	At least 40 db down from full output.
POWER:	104/115/208/230 volts, ± 10%, 47 to 400 cps, single phase, 8 watts.
ENVIRONMENTAL CONDITIONS:	Designed to operate in any ambient temperature from 0°C to 50°C and any value of humidity up to 90%.
STORAGE CONDITIONS:	Equipment is not materially affected under storage conditions at −40°C to +85°C and humidity up to 95%.
INSTALLATION DATA:	Size: 1¾" h × 19" w × 15" d. Weight: 10 lbs.
COMPONENTS AND CONSTRUCTION:	All equipment manufactured in accordance with JAN/MIL specifications wherever practicable.
OPTIONS/ACCESSORIES:	(Priced separately.) Tuning Drawer Storage Panel, Model THRA-1, provides space for 3 tuning modules. Size: 1¾" h × 19" w × 15" d.



MODEL STR-I, FUNCTIONAL BLOCK DIAGRAM

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