

TECHNICAL BULLETIN NUMBER 3014

Sideband Strip Receiver
TMC Model STR-1



- 1.6 - 32 mcs
- LSB or USB, AME, CW, FSK and FAX
- Solid state
- Operates on 8 watts of power
- Squelch
- Provides audio to line and speaker
- 1 $\frac{3}{4}$ " \times 19" \times 15"

Model STR-1, a completely new solid state receiver, mounted in 1 $\frac{3}{4}$ " of rack space, incorporates high front end sensitivity with compact construction that offers many advantages to communicators. The low mass and low heat of the unit make it ideal for high density relay rack mounting without requiring 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-shore circuits
3. Harbor circuits
4. Pleasure craft
5. Tactical voice circuits
6. Amphibious control circuits
7. Transmission monitor service
8. Extended telephone service and many others.

Sideband Strip Receiver

Operation is intended for a single frequency, simple crystal or optionally oven controlled. Sidestep operation (i.e., operation on a closely adjoined frequency) is accomplished by a switch inside the tuning module. A second crystal no more than 0.5% removed from the operating frequency can be switched into the circuit by front panel control without realignment. In addition, with proper crystals, each module can be tuned to any other frequency within the octave of the tuning module by simple alignment procedures.

The modules are mechanically and electrically interchangeable with those in the TTR-10 Transmitter/Receiver, and all components are in the same general family for logistic support.

When ordering this unit, please specify: (1) frequency of operation, (2) oven or non-oven crystal control and (3) power source.

TECHNICAL SPECIFICATIONS, TMC MODEL STR-1

FREQUENCY RANGE:	1.6 to 32 mcs by crystal controlled plug-in RF modules. Modules provide coverage of 1.6-2, 2-4, 4-8, 8-16, 16-32 mcs. (In the 1.6 to 2 mcs range all operating modes except lower sideband are available.) When ordering TMC Model STR-1, please specify frequency of operation desired.
FREQUENCY CONTROL:	Crystal controlled. (For oven control see Options/-Accessories.)
MODES OF OPERATION:	SSB (upper or lower), AM, AM equivalent, CW, AFSK and AFAX.
INPUT IMPEDANCE:	Nominal 50 ohms unbalanced.
SENSITIVITY:	1 microvolt for 15 db signal + noise to noise ratio.
BANDWIDTH:	1. 3 kc \pm 2 db, or 300 to 3300 cps (crystal filter) 2. \pm 2 db, or 250 to 3000 cps (crystal filter)
IMAGE REJECTION:	Minimum 50 db from 1.6-28 mcs; minimum of 40 db, 28-32 mcs.
INTERMODULATION:	Intermodulation products are down a minimum of 40 db from PEP of a two tone test with 100 microvolts at the antenna.
SQUELCH:	Threshold adjustable squelch. AGC activated relay has contacts brought to rear panel for remote indication of receiver signal activity.
AF OUTPUT:	I milliwatt into 600 ohm line available for headset, extended service or telephone handset. 500 milliwatts for speaker or front panel phone jack.

TMC Model STR-1

SPEECH CLARIFIER:

Manually controlled front panel adjustment.

INSTALLATION DATA:

Size: 1¾" h. × 19" w. × 15" d.

Weight: 10 lbs.

POWER:

115/230v, ± 10%, 50/60 cps, single phase, 8 watts. (Oven requires 6 watts more.)

COMPONENTS AND CONSTRUCTION:

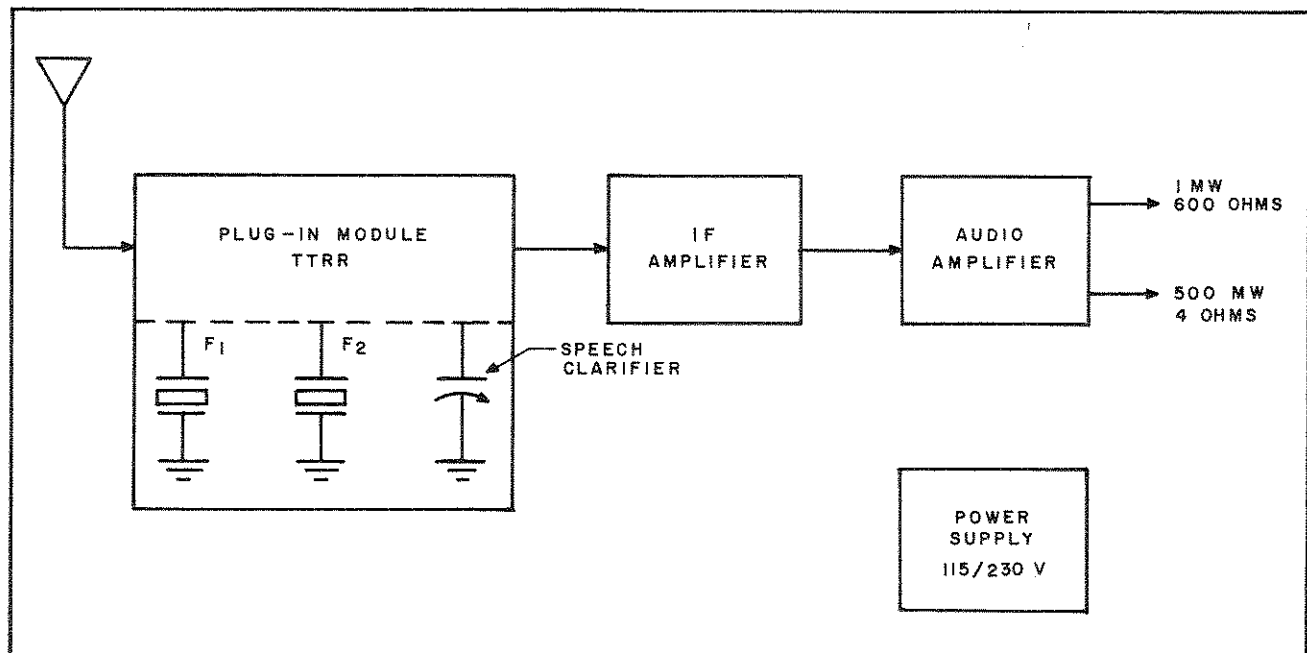
All equipment manufactured in accordance with JAN/MIL specifications wherever practicable.

OPTIONS/ACCESSORIES:

(Priced separately.)

1. Crystal ovens to provide stability of 1 part in 10^6 per day or better. (Specify oven operating voltage, such as 115 or 230 volts.)
2. Tuning Drawer Storage Panel, Model THRA-1, provides space for 3 tuning modules and heater voltage for maintaining crystal ovens at operating temperature. (Specify oven operating voltage, such as 115 or 230 volts.)

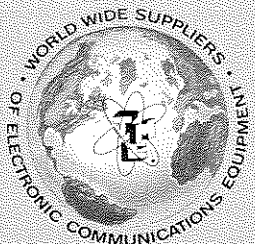
Size: 1¾" h. × 19" w. × 15" d.



MODEL STR-1, FUNCTIONAL BLOCK DIAGRAM

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