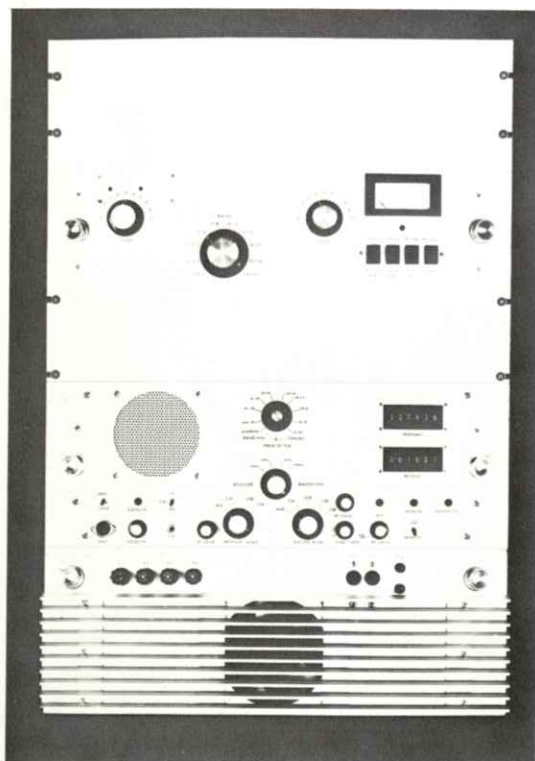


Transmitter/ Receiver System Model TRS-400MR



TMC
Technical
Bulletin

101050-1



Features

- 1.6 MHz to 26 MHz Transmitter
- 15 KHz to 30 MHz Receiver
- Solid State except final stage
- Synthesized 100 Hz steps
- Solid State PA tuning indicator
- Modular Construction
- Complete Front Access
- CW AME SSB

The TRS-400MR synthesized single sideband transmitter/receiver is a highly stable general purpose system. The receiver frequency coverage is 15 KHz to 29.9999 MHz in 100 Hz steps with clarifier control between steps. The transmitter coverage is 1.6 MHz to 26 MHz in 100 Hz steps. Two 6 - digit thumbwheels on the front panel allow separate settings of transmit and receive frequencies, switched by the push-to-talk switch. This permits half-duplex operation.

The system is solid state (including indicator lamps) except for the final amplifier.

The design including the linear amplifier is modular, which ensures minimum time to repair (MTTR).

The system is mounted in a table top cabinet which can be mounted against a wall or bulkhead. The individual units are mounted on track slides for maintenance access. 8-3/4" of rack space is available for installation of auxiliary equipment. Shock mounting of the cabinet is available as an option.

Technical Specifications

TRANSMITTER

FREQUENCY

1.6-26 MHz (100 Hz steps)

POWER OUTPUT

400 watts PEP

200 watts average (CW or FSK)

MODES

CW, AME (A3H)

SSB (A3A, A3J) Upper Sideband Standard

TUNING

Manual

OUTPUT IMPEDANCE

50 ohms unbalanced

INTERMODULATION

At full PEP output, 3rd order distortion products are at least 43db below PEP.

HARMONIC SUPPRESSION

Second: At least 43db below PEP output.

Third & Higher: At least 50 db below PEP output.

AUDIO RESPONSE

350-2700 Hz standard.

Other bandwidths optional.

RECEIVER

FREQUENCY

15 KHz to 29.9999 MHz (100 Hz steps plus fine tune)

BLOCKING

Less than 3db change in output for a wanted signal of 500uV when an unwanted signal of 50mV at least 10 KHz removed is applied.

BANDWIDTH

CW and AM: Selectable 400 Hz, 1 KHz,
2 KHz, 8 KHz

SSB: 350 Hz - 2700 Hz standard

SENSITIVITY

For 10db signal + noise/noise

| | |
|--------|--------|
| SSB | 0.4 uV |
| 400 Hz | 0.3 uV |
| 1 KHz | 0.3 uV |
| 2 KHz | 0.4 uV |
| 8 KHz | 0.8 uV |

IMAGE REJECTION

Greater than 70 db.

I.F. REJECTION

Greater than 70db.

CROSS MODULATION

With a wanted signal of 1 mV EMF, an unwanted signal of 10 mV 30% , 400 Hz modulation and separated 10 KHz or more, produces an output at least 30db below the output level due to the wanted signal.

AGC CHARACTERISTICS

Output rises 2db maximum for input 3 - 100,000 uV, and 11db maximum for input 1 - 100,000 uV.

MODES

CW (A1, A2), AM (A3, A3H), SSB (A3A, A3J)

Upper and Lower

AUDIO OUTPUT

Internal speaker 2 watts 3 ohms with squelch operation

External line +14dbm 600 ohms

PRESELECTOR

Broadband or tuned over frequency range.

GENERAL

FREQUENCY STABILITY

Temperature: 1 Hz per MHz
-20°C to 50°C

Long Term: 1 Hz per MHz per year after
calibration

PRIMARY POWER

115/230 volts \pm 10% , 48/63 Hz,
single phase, 1200 watts for 400 watt PEP output.

TEMPERATURE & HUMIDITY

-20°C to +50°C up to 95% RH

SAFETY FEATURES

Overload and interlocks.

COOLING

Filtered forced air.

SIZE & WEIGHT

31 1/2" (80cm) high, 24" (61cm) deep
22" (56cm) wide

370 lbs. (168 Kg) Domestic pack

440 lbs. (200 Kg) Export ocean pack

Specification subject to change without notice.

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Mamaroneck, New York

PRINTED IN CANADA -- JAN 73

