

R. L. DRAKE



MODEL **TR-44B**

Communications Station

The TR-44B consists of an R-4B Receiver and T-4B Transmitter in the same cabinet with built-in speaker

This package was conceived to satisfy the communications requirement of a government contractor in the southeast Asia area.



\$975⁰⁰

Less Power Supply and Crystals

Basically the station is a 120 watt output AM-SSB-CW transceiver with provision for ten crystal controlled channels and ten 500 kc tuneable ranges with 1 kc dial accuracy. Receiving frequency can be different from transmitting frequency by using crystal controlled transmit and tuneable receive. Receiving and transmitting on same frequency is offered, either crystal controlled or tuneable.

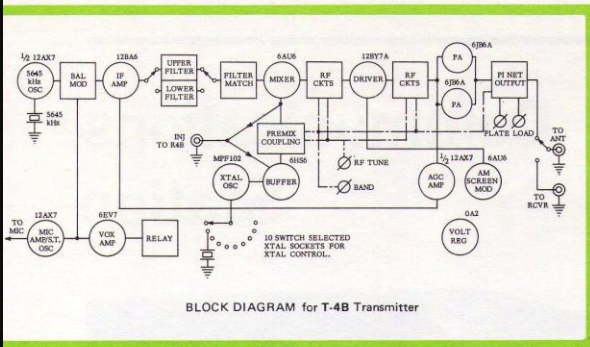
Station may be operated on frequencies from 3.0 to 30 MHz except no transmitting 5.0 to 6.0 MHz and no tuneable range for transmitting 11.0 to 11.5 MHz (crystal control in this range is permitted). In addition either 1.8 to 2.3 MHz or 2.0 to 3.0 MHz may be ordered. The receiver

section of TR-44B may be operated 1.5 to 30 Mc with the exception of 5.0 to 6.0 MHz. Crystals for fixed frequency channels and for tuneable ranges may be ordered from R. L. Drake Company.

Two power supply units are available to power the TR-44B. Model AC-4 which operates from 120 240 V 50/60 cps source and Model DC-4 which operates from 12 V DC. Both these supplies are designed to operate the transceiver on any mode continuous duty.

Model TR-44B Transceiver is housed in a perforated metal cabinet 11 1/2 H x 10 3/4 W x 12 1/4 D. Unit less power supply weighs 30 lbs.

MODEL **TR-44B** SPECIFICATIONS



BLOCK DIAGRAM for T-4B Transmitter

TRANSMITTER SECTION

Frequency coverage: 3.0 to 30 MHz except 5.0 to 6.0 MHz. 11.0 to 11.5 MHz used crystal control only. In addition either 1.8 to 2.3 or 2.0 to 3.0 MHz may be ordered.

Frequency control: By tuneable oscillator and range crystals in receiver section or by one of the ten crystals available by front panel switch. Crystals must be ordered separately specify frequency desired.

A frequency control switch is provided on front panel to select tuneable transceive, crystal control transceive, or tuneable receive with crystal control transmit.

Modes of Operation:

SSB: Upper or lower sideband on all ranges. Vox or push-to-talk.

CW: Grid-block keying. Sidetone oscillator for monitoring.

AM: Controlled carrier AM modulation. This system is compatible with SSB linear amplifiers. Vox or push-to-talk.

RTTY: VFO easily adaptable to FSK. Signal frequency shifts same direction on all bands and same amount on all bands with a given dial setting.

Carrier and Undesired Sideband Suppression: 60 dB or better

Average Distortion Products: in excess of 30 dB down.

Audio Frequency Response: thru filter 350 to 2750 Hz at 6 dB.

RF Power Output: SSB and AM — 120 watts PEP or more, CW — 120 watts or more.

Output Impedance: Nominal 52 ohms adjustable with pi-network.

Microphone Input: High impedance.

AGC: Operates on SSB to prevent flat-topping due to over drive.

Controls and Jacks:

Front: Sideband Selector Band Switch, RF Tune, Gain, Plate Tuning, Plate Loading, Frequency Control Selector Crystal Switch, Plate Current/Relative Output Meter Switch, and Crystal Control Warning Light.

Side: Vox Gain, Anti-Vox/Sidetone Gain, Microphone Jack and Crystal Access. Door with Frequency Chart.

Rear: Antenna Connector Power Supply Connector Vox Delay Adj. and Key Jack. Also inter-connecting cables to receiver section (Mute, Receiver ant., Anti-Vox/Sidetone, Injection, and Speaker).

Inside: Carrier Balance Adj.

11 Tubes and 11 Transistors.

Power Requirements: AC-4 Power Supply — Operates on 120 or 240 volts 50/60 Hz. DC-4 Power Supply — Operates on 12 volts DC negative grounded. DC-24 Power Supply — Operates on 24 volts DC negative grounded.

(AC-4 \$99.95; DC-4 \$125.00; DC-24 \$210.00)

RECEIVER SECTION

Frequency Coverage: 1.5 to 30 MHz except 5.0 to 6.0 MHz.

Frequency Control: By a tuneable control with 1 kc accuracy dial divisions and 500 kc range. One of ten range crystals (selected by front panel switch) heterodynes this range to the 500 kc signal range. Crystals for tuneable ranges must be ordered separately specifying the 500 kc ranges to be tuned. Fixed frequency channels are available from channel crystals located in transmitter section.

Selectivity: Four bandwidths are provided: .4 KHz @ 6 dB — 2.6 KHz @ 60 dB, 1.2 KHz @ 6 dB — 4.8 KHz @ 60 dB, 2.4 KHz @ 6 dB — 8.2 KHz @ 60 dB, 4.8 KHz @ 6 dB — 20.0 KHz @ 60 dB.

Stability: After warm-up frequency will not drift more than ± 100 Hz. Line voltage variation of ± 10% will not cause frequency shift in excess of 100 Hz.

Sensitivity: Signal to noise ratio varies with frequency coverage of each band switch position. Center frequency of each bandswitch position gives 10 dB signal plus noise to noise ratio with less than 1/2 microvolt on antenna.

Modes of Operation: SSB, CW, AM, RTTY

AVC: Amplified-delayed AVC with slow (750 millisecond) or fast (25 millisecond) discharge and less than 100 microsecond charge time. 60 dB change in RF input causes less than 3 dB change in audio output.

Input Impedance: 52 ohms nominal.

Output Impedance: 4 ohms to speaker

Audio output: .5 watts at AVC threshold, 1.5 watts max.

Controls and Jacks:

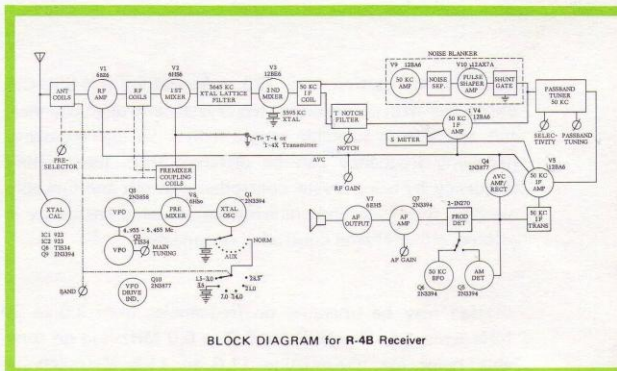
Front: Function Switch (with Noise Blanker and 25 kc calibrator positions) Passband Selector/Tuner Tuneable Frequency Knobs and Dial, AF Gain, RF Gain, AM-SSB/CW switch with Fast AVC, Slow AVC, and AVC Off. Notch Tune, Preselector Tune, Range Crystal Switch, Band Switch, S-Meter

Side: Head Phone Jack, Notch Adj., S-Meter Zero, Fixed Freq. Receive Crystal Socket and Switch.

Rear: Power Cord, Ten Range Crystal Sockets, Inter-connecting cables to transmitter section (Mute, RCVR ANT Anti-Vox, Injection, Speaker).

10 Tubes, 10 Transistors, 2 Integrated Circuits and 17 Diodes.

Power Requirements: 120/240 volts 50-400 Hz 60 watts. Can be powered by AC output receptacle on DC-4 Power Supply operating on 12 volts DC, or DC-24 Power Supply operating on 24 volts DC. (DC-4 \$125.00; DC-24 \$210.00)



BLOCK DIAGRAM for R-4B Receiver

See other Drake products at your distributor or write

R. L. DRAKE COMPANY • 540 Richard St. • Miamisburg, Ohio 45342

www.radiopharos.it