

**TECHNICAL SPECIFICATIONS**  
**TRA3755/TRA3756 HF TRANSCEIVER**

**GENERAL**

Frequency range: 1.6 MHz to 30 MHz in 100 Hz steps, configured for full frequency access.

Channels: Up to 100 programmable channels.

Scanning: Multiple scan groups. Operator selectable scan rates.

Tuning: By numeric keypad, single spinwheel tuning knob with 10 Hz resolution, or automatically with ALE (Option).

Frequency stability (TCX0): Typically better than 1 ppm over the temperature range -40°C to +70°C compared with that at +25°C; +/-1.5 ppm maximum.

Frequency Ageing (TCX0) +/-1 ppm/year maximum.

Frequency Accuracy (TCX0) +/-4 ppm +/-2 Hz.

Operating modes: Voice LSB; J3E.  
Voice USB; J3E.  
  
Data LSB; J3D.  
Data USB; J3D.  
  
Compatible AM (Rx); H3E.  
Full AM (Tx); A3E.  
  
FSK; F2B.  
  
Key LSB; J2A.  
Key USB; J2A.  
  
FSK, Multi-tone Data, FAX and Encryption, with specific operational ancillaries connected externally.

ALE (Option) To FED STAN 1045/ MIL STD 188-141A giving telephone (with LINCOMPEX), fax and PC operation.

BITE: Diagnostic to Module level. LCD shows (Built-in Test Equipment) faulty module number.

Supply input: Nominal 28 Volts DC (TRA3755 only), and (with AC mains option) 115/230 V AC at 50/60 Hz with automatic range selection.

Temperature, operating to full specification: -10°C to +55°C.

Temperature, storage: -40°C to +70°C.

Dimensions: Width - 310 mm (Table Top DC Version),  
483 mm (Rack Mounted Version),  
Height - 133 mm,  
Depth - 450 mm.

Weight (Approximately): 12 kg approximately (DC Version),  
15 kg approximately (AC Version).

### TRANSMITTER

NOTE: Outputs measured into 50 Ohms, with AC mains supply or 28V DC supply.

Output Power (PEP/CW):

High Power - 125 W +/-1.5 dB. ) TRA3755  
Medium Power - 20 W +/-2dB. ) only  
Low Power - 2 W +3.5dB/-0.5dB. )  
Exciter Output - 200 mW +/-2dB.

Duty Cycle: Continuous transmission to +55°C.

Harmonic Emissions: Better than -60dB relative to PEP.

Non-Harmonic Spurious Outputs: Better than -55dB relative to PEP.

Intermodulation (in-band levels): Better than -30dB relative to PEP output for inputs below audio compression level.

Intermodulation (out-of-band levels): Better than -30dB relative to PEP.

Carrier Suppression: Better than -70dB relative to PEP.

Unwanted Sideband: Better than -70dB relative to wanted sideband at 1 kHz.

Current Consumption, DC: 20 A maximum at 28 V using High Power, (TRA3755 only).

Power Consumption, AC: 890 W maximum (TRA3755),  
140 W maximum (TRA3756).

## RECEIVER

NOTE: Specification figures are based on measurements from 50 Ohms source, in SSB Mode, unless otherwise stated.

Sensitivity: SSB/AM: Not less than 10db SINAD for 0.5uV pd I/P (-113dBm) producing AF output power of not less than 0.2 W into 8 Ohms, at 25<sup>0</sup>C in 2.2 kHz bandwidth.

Sensitivity: CW: Not less than 19db SINAD for 0.5uV pd I/P (-113dBm) producing AF output power of not less than 0.2 W into 8 Ohms, at 25<sup>0</sup>C in 200 Hz bandwidth.

External Spurious Rejection, including IF and Image: Not less than +70dB referred to the wanted signal response.

AF Power Output (variable): 0.5 W minimum into an 8 Ohms load at maximum volume setting, (Internal loudspeaker).

0.2 W minimum into a 16 Ohms load at maximum volume setting (Headphone O/P).

1 mW minimum into a 600 Ohms load at maximum volume setting (Headphone O/P).

Fixed Level Audio: -6dBm into 600 Ohms balanced load (rear panel).

AF Distortion: Not more than 5% total harmonic distortion at stated audio output power.

AGC Range: AF output changes by less than 6dB for up to 100dB increase in the wanted signal level above 1.0 uV pd.