



# TRANSMATCH

CONVERTS IMPEDANCE OF ANY 15 TO 500 OHM COAXIAL FED ANTENNA SYSTEM TO 50 OHMS

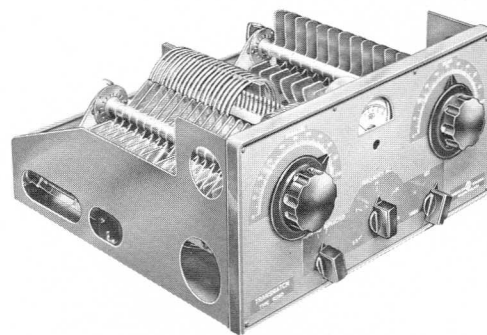


The **No. 92200 Transmatch** is a 2 KW band-switching, adjustable r.f. transformer with a reflectometer as the indicator. The **Transmatch**, inserted between a transmitter and a transmission line, will convert the impedance of any 15 to 500 ohm coaxial fed antenna system to 50 ohms so that the transmitter may, at all frequencies, work into the impedance for which it was designed.

Most transmitters have pi-network tank circuits designed to work into a 50 ohm load. If the actual transmitter load is other than 50 ohms the transmitter cannot be loaded properly for optimum operation.

Multi-band beam antennas or trap dipoles are fed with 50 ohm coaxial cable, however, no antenna designed to cover a band of frequencies will look like a pure resistance of 50 ohms across even a portion of the band. There will be a mismatch as frequency is changed within a band. The antenna height, proximity to nearby objects, and its impedance at resonance affect the match or mismatch between the antenna and the transmission line. The match or mismatch between the antenna and the transmission line determines the impedance the transmission line presents to the transmitter. When the antenna is not matched into the 50 ohm transmission line, the transmitter load will not be 50 ohms even though 50 ohm coaxial cable is used. This means the transmitter will not be working into 50 ohms and will not do the job for which it was designed. With the **Transmatch** this situation is corrected.

The **Transmatch** is a single-ended or unbalanced unit intended to match single-ended transmitters to coaxial transmission lines. It can match any antenna system between 15 and 500 ohms to a transmitter impedance of 50 to 70 ohms.



## TECHNICAL SPECIFICATIONS

**Input impedance** (transmitter) 50 to 70 ohms single-ended.  
**Output impedance** (transmission line) 15 to 500 ohms coaxial: 10 to 1000 ohms at most frequencies.  
**Frequency range** — 3.5, 7, 14, 21, 28 MC amateur bands band-switched.  
**Power handling capability** — 2 KW peak.  
**Indicator** — 50 ohm Reflectometer using a 200 micro-ampere meter.  
**Desk top cabinet size:** 7" H. x 14" W. x 13<sup>5</sup>/<sub>8</sub>" D.  
**Weight:** 17 lbs.

At most frequencies the antenna system impedance may be as low as 10 ohms or as high as 1000 ohms and still the **Transmatch** will match it to the 50 ohm transmitter output. It also has provisions for coupling the No. 90932 Modulation Monitor to the transmitter output.