

KW 2-20 TWO-METRE TRANSCEIVER

For S.S.B.-A.M.-C.W.

The KW 2-20 is a complete transceiver covering 144 MC to 148 MC, and incorporating all facilities for operation on A.M., S.S.B. and C.W.

Modern techniques are used in the KW 2-20 consistent with low cost to the customer, while its small size and attractive styling make it suitable for home or mobile use.

FEATURES INCLUDE:

- * Solid state
- * Noise blanker
- * Integrated circuitry
- * Solid state transmitter, except signal circuits
- * Extensive use of diode switching
- * Field effect transistors in receiver front end
- * Full push to talk operation
- * Separate A.M. and S.S.B. detectors
- * 'S' meter and RF output meter
- * Choice of transceive, or separate transmitter frequency
- * Small Size, only 11" x 7 $\frac{1}{2}$ " x 4 $\frac{1}{2}$ ".
- * Printed circuitry on glass fibre boards.

RECEIVER SECTION

Two field effect transistor (FET) are used in cascade in the RF stage which is inductively coupled to a further field effect transistor used as the first mixer. This mixer obtains its oscillator injection from one of four front panel selected crystals.

The output of the first mixer is fed via a bandpass coupler to the second mixer, which obtains its oscillator injection from the variable frequency oscillator. Preceding the second IF amplifier is a very effective 'noise blanker' circuit which is controlled from the front panel.

Selectivity is obtained from a crystal lattice filter, and additional amplification, from a silicon epitaxial monolithic integrated circuit. An AGC/DC amplifier controls the IF amplifier and 'S' meter and provides a convenient variable RF gain facility.

Either an A.M., or S.S.B. detector may be selected to provide audio to the AF amplifier and output circuits.

TRANSMITTER SECTION

A high impedance microphone feeds the microphone amplifier, which in turn drives a four diode balanced modulator. The balance control is adjustable from the front panel. Carrier oscillator voltage is obtained from a crystal oscillator which functions as the beat frequency oscillator on receive.

After amplification, the signal is shaped by the same crystal lattice filter as used on receive. A VFO controlled mixer then converts the signal to the first transmitter IF frequency, which, after amplification, is fed to the crystal controlled second mixer. This mixer converts the signal to the output frequency. Two stages of output frequency amplification precede the power amplifier, the output of which is sampled, rectified and indicated on the panel mounted meter.

SPECIFICATION RECEIVER

Frequency range	144 MC to 148 MC
Types of reception	A.M., S.S.B., C.W.
Selectivity	2.5 Kc @ -6db, 4.3 Kc -50db
Image rejection	-50db

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SPECIFICATION RECEIVER CONTINUED

Audio output 1.75 wts.
 Antenna impedance 50 ohms unbalanced
 Nominal frequency stability (after 30 minute warm-up) 50 c/s per 15 min. period
 Sensitivity 0.5 μ v for 10db $\frac{S+N}{N}$

SPECIFICATION TRANSMITTER

Frequency range 144 to 148 mc/s
 Emission A.M., S.S.B., C.W.
 Nominal frequency stability (after 30 minute warm-up) 50 c/s per 15 min. period
 Final amplifier 92V03-10
 Power input to final amplifier S.S.B.: 20 Wts., A.M.: 6 Wts., C.W.: 20 Wts.
 Spurious suppression -60db
 Unwanted sideband suppression Better than -45db
 Carrier suppression -50db
 Output impedance 52 ohms unbalanced

A matching A.C. power supply unit is available, which includes the loudspeaker. Input voltages of 230v and 117v A.C. are selected by choice of A.C. connector. All power and control connections are available on a single twenty way chassis mounted plug, at the rear of the transceiver. For operation on a car battery an inverter is used. This is designed to be mounted at a convenient place on the vehicle. The complete equipment may be used on vehicles of either polarity without change.

SIZE	A.C. P.S.U.	6 $\frac{1}{2}$ " x 7 $\frac{1}{4}$ " x 4 $\frac{1}{4}$ "	Price	£ 25. 0. Od.
	D.C. Inverter	5" x 3 $\frac{5}{8}$ " x 2 $\frac{7}{8}$ "		£ 12. 10. Od.
	KW 2-20	11" wide x 7 $\frac{1}{4}$ " deep x 4 $\frac{1}{4}$ " high.		£105. 0. Od.
			(Crystal	£2. 10. Od. extra.)

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 England.