

## KW 201 COMMUNICATIONS RECEIVER

### SECTION 1

#### GENERAL DESCRIPTION AND SPECIFICATION

##### 1.1 Introduction & General Description

The KW 201 has been designed for optimum performance on Single Sideband CW. All coverage of eleven 300 kc/s ranges in the amateur bands from 1.8 mc/s to 30 mc/s. The receiver uses eleven valves in a double conversion superhet circuit, plus 10 silicon diodes. The KW 201 has a built-in power supply operating from a 200-240 v. 50/60 c/s AC Supply. An export model is available for 115 volt 60 cycle operation.

An eight inch slide rule vernier scale is used, which is calibrated 0-200 kc/s and can be reset for maximum read out accuracy. A plug-in crystal calibrator provides marker signals every 100 kc/s for checking the dial calibration accuracy; (this is available as an optional extra).

The peaking of the RF stage is by means of a calibrated control at the front panel which is independent of the main tuning. This ensures maximum sensitivity and signal to noise ratio.

The amplified signal from the receiver RF stage is fed to the 1st mixer which is crystal controlled on all ranges. The output of this mixer lies between 2955 kc/s and 3155 kc/s. The signal is then applied to the 2nd mixer, the oscillator of which is variable between 2500 kc/s and 2700 kc/s (VFO). The output of the 1st mixer plus the Variable oscillator frequency produces 455 kc/s at the anode of the 2nd mixer. The 455 kc/s signal is then passed through a mechanical filter producing the ideal SSB selectivity. This signal is then amplified by two IF stages and applied to the product detector and also to the AM detector for demodulation. The crystal controlled oscillator injection to the product detector can be either on the upper or lower side of the mechanical filter passband, thus producing a selectable received sideband switchable at the front panel. The mode of operation is indicated on the illuminated panel lamps. The demodulated signal from the product detector or the AM detector is then amplified and applied to the internal 3 ohm loudspeaker.

An AVC voltage with fast attack and slow decay time on SSB slow attack on AM is applied to the RF stage and the IF amplifiers for automatic gain control.

Comparative 'S' meter readings are available on all modes of reception with the RF Gain control turned to Maximum. The 'S' meter is calibrated for 50 equal to 50uV input to the antenna socket.

Two stages of audio amplification are used ensuring adequate loudspeaker reception of even the weakest signal. The loudspeaker is muted automatically by plugging headphones into the jack socket. Low impedance headphones are recommended for use with the KW 201.

**SECTION 2**

**SPECIFICATION**

**RANGES COVERED:**

1.8 - 2.0, 3.5, -3.7, 3.7 - 3.9, 7.0 - 7.2,  
14.0 -14.2, 14.3 - 14.4, 21.0 - 21.2,  
21.3 -21.5, 28.0 - 28.2, 28.4 - 28.6,  
28.6.-28.6 mc/s.

**STABILITY:**

With constant input line voltage to receiver,  
better than 100 C.P.S. after warm-up period  
of 30 minutes.

**POWER REQUIREMENTS:**

200 - 240v. AC 50-60 C.P.S. 60 Watts  
(115 v. also available)

**DIMENSIONS OF CABINET:**

6 $\frac{1}{2}$ " height; 13 $\frac{3}{8}$ " width; 13 $\frac{1}{2}$ " depth

**WEIGHT:**

19 lbs.

**RECEPTION MODES:**

(i) SSB (either sideband selectable)  
(ii) AM  
(iii) CW

**VALVE LINE-UP:**

RF Amp	6X4	2nd IF Amp	6BA6
1st Mixer	6X4	Prod. Det	12AT7
Band Osc.	6X4	AVC/REC	3 x 6AV31
2nd Mix	6X4	'C' Meter Amp	12AT7
VFO/Isol <sup>r</sup>		AIDET	6N 4154
Amp	6U8	REC	12AT7
1st IF Amp	6BA6	AF Amp	6/2 6CL32
			7 x 6Y6

**POWER SUPPLY:**

7 x 6Y6

**ANTENNA INPUT  
TERMINATION**

Coaxial 50 - 75 ohms. Mono plug connector

**SENSITIVITY**

Better than 1 uV for 500 mw output

**SIGNAL/NOISE:**

1 uV for 20 db. S/N or better.

**IF SENSITIVITY:**

Nominal 3.1 kc/s at 6 db. 6 kc/s at 60db.  
(3.1 kcs - 200 cycles with 'Q' Multiplier)

**'C' METER:**

Calibrated for 50 uV input to antenna socket.  
to equal 39

**SPURS:**

less than 1 uV equivalent antenna signal

**AUDIO OUTPUT:**

Maximum 1.7 watts built in 3 ohm elliptical speaker.