

RECEPTION SET R 5222 MK 2

DATA SUMMARY

PURPOSE

1. The R5222 is a dual diversity receiver designed for use on radio telegraph services using frequency shift keying in a system where the frequency shift from "mark" to "space" is 850 c/s.

DESCRIPTION

2. The equipment consists of a single vertical cabinet rack mounting a number of removable units, each assembled on a standard 19 inch front panel. Receiver and limiter-detector units are provided in duplicate to give the two channels for diversity reception and are served by a common HF oscillator (normally crystal controlled for three pre-tuned frequencies) for deriving the intermediate frequency from the carrier, and the beat oscillator for producing the mark and space audio output frequencies from the second detector.

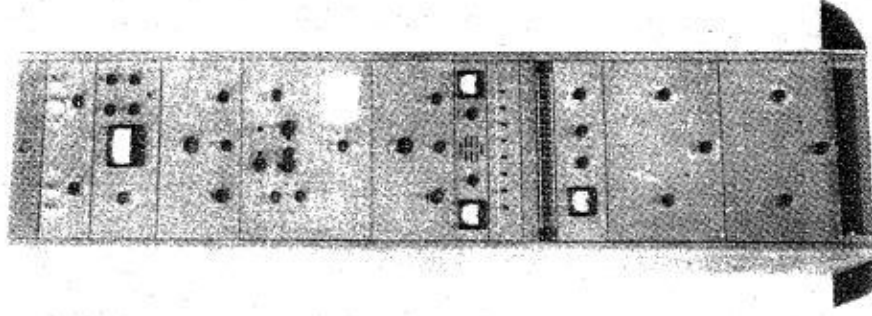


FIG. 1 - GENERAL
VIEW OF EQUIPMENT

TELECOMMUNICATIONS
E 500

ELECTRICAL AND MECHANICAL
ENGINEERING INSTRUCTIONS (AUST)

PHYSICAL DATA

3. (a) Weight	:	488 lb.
(b) Height	:	7 ft. 7 in.
(c) Width	:	1 ft. 10 in.
(d) Depth	:	1 ft. 5 in.

FREQUENCY COVERAGE

4. (a) The total frequency coverage is 1.5Mc/s to 30Mc/s in four bands as follows:-

Coil set 1	:	1.5Mc/s - 4Mc/s
" 2	:	3.5Mc/s - 8Mc/s
" 3	:	7Mc/s - 16Mc/s
" 4	:	15Mc/s - 30Mc/s

(b) Intermediate frequency : 455 kc/s.

(c) Output frequencies:-

(i) Mark 2,125 c/s. }
(ii) Space 2,975 c/s. } when f_c is 2,550 c/s.

SENSITIVITY

5. On all bands a signal of 0.5uV is required to give a 3db signal/noise ratio.

AERIAL INPUT SYSTEM

6. An aerial coupling unit on the rack provides terminations for two aerial feeders (balanced or coaxial), and coaxial connectors for input to the receivers. Where balanced aerials are used, switches enable the selection of coupling transformers providing 200 ohms/75 ohms matching and balance to balance connections required. Two coupling transformers for each receiver are fitted, covering the frequency ranges 1.5 to 6.7Mc/s and 6.7Mc/s to 30Mc/s.

The two receivers are arranged for an unbalanced 75 ohms input circuit. When the feeders are 75 ohms coaxial cables, the aerial coupling unit switch provides a direct connection to the receiver input circuits.

POLAR OUTPUT

7. The polar output is 60-0-60mA in 500 ohms.

8. Valves

TABLE 1 - SCHEDULE OF VALVES

Panel	CV 1856 (5Y3GT)	CV 283 (6AL5)	CV 2524 (6AU6)	CV 2526 (6AV6)	CV 454 (6BA6)	CV 453 (6BE6)	CV 133 (6C4)	CV 511 (6V6GT)	CV 216 (OD3/ VR150)
Receiver A	1	1	2	2	4	1			
Receiver B	1	1	2	2	4	1			
Limiter-Detector A	1	1	6					2	
Limiter-Detector B	1	1	6					2	
HF Oscillator and Beat Oscillator	1		7	1	1		2		1
Relay Unit	2								
Deviation Indicator & VF Keying Unit	1		5			1			
Total Complement	8	4	28	5	9	3	2	4	1

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