

RECEPTION SET R5233

DATA SUMMARY

NOTE: - This equipment was previously catalogued as "Receiver, Dual Diversity, FSK, AWA Type C95180."

1. This equipment is a Signal Project store designed for radio teleprinter service using FSK or on/off keying on a pre-selected carrier frequency.
2. It consists of two standard racks, RF and AF respectively, each mounting a number of sub-units indicated in table 1
3. **Weight:** AF rack : 462 lb; RF rack : 484 lb.

4. Frequency:

(a) RF range: 1.6 to 30 Mc/s in four ranges:-
1,6 to 3.2 Mc/s
3.2 to 6.8 Mc/s
6.8 to 14 Mc/s
14 to 30 Mc/s

(b) IF passbands: Output 1st Mixer : 2.5 to 3.5 Mc/s
Output 2nd Mixer : 7.2 to 7.3 Mc/s
Output 3rd Mixer : 990 to 1,020 kc/s
Output 4th Mixer : 100 kc/s plus sidebands

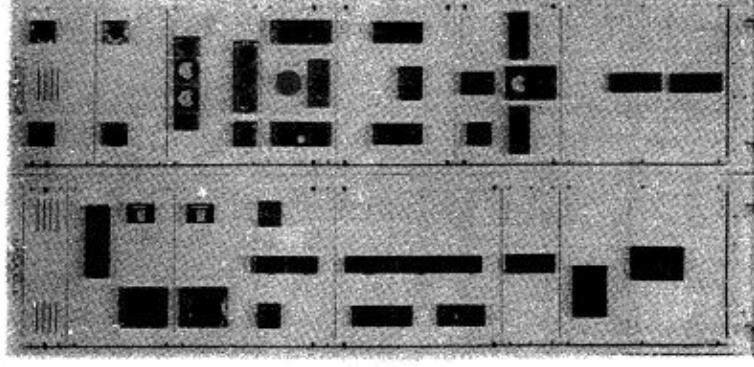


TABLE 1

RF Rack Type 095188		AF Rack Type 095189	
Unit	Type No	Qty	Unit
Noise generator	R95172	1	IF amplifier
Rejection filter unit	Q95179	1	Metering panel
RF amplifier	J95166	2	Path selector and AGC unit
Megacycle oscillator	J95165	1	Monitor unit
containing crystal oscillator	J95177	1	Discriminator and dc output unit
Frequency changer	1J95167	1	AFC unit
Power supply	5H95164	1	Printer and undulator output unit
Voltage regulator (STABILAC)	3SR1000	1	EHT unit
			Power supply
			Power supply

5.(a) Sensitivity: CW/ON-OFF; signal to noise ratio 18 dB at 0.3 uV input with 1 kc/s bandwidth.

(b) Selectivity; (100 kc/s crystal filter)

(i) 1 kc/s bandwidth : 1 kc/s wide at 4 dB attenuation; 3 kc/s wide at 70 dB attenuation.

(ii) 2 kc/s bandwidth : 2 kc/s wide at 4 dB attenuation; 4 kc/s wide at 70 dB attenuation.

(c) Spurious Responses: attenuated by at least 60 dB.

(d) Noise Factor: \blacktriangleright 6 dB up to 14 Mc/s; \blacktriangleright 8 dB above 14 Mc/s.

5. (e) Maximum signalling speed: 240 bauds.
(f) AFC: Frequency drifts up to at least ± 1 kc/s are followed, with a residual error not exceeding 10 c/s.
(g) AGC: A change of 80 dB on an input of 1 μ V does not increase the level at the detectors by more than 10 dB. The AGC time constant can be varied in 6 steps from approx 50 msec to 0.5 sec.
(h) Frequency shift: Minimum 400 c/s; Maximum 1.2 kc/s.
(j) Input impedance: 75 Ω .
(k) Outputs: Printer : 30 mA into a load of not more than 2 k Ω .
Undulator : To operate a 20 + 20 Ω undulator coil.
Tone Keyer: 600 Ω line.
- (1) Diversity signal output: Operates on a minimum signal difference of 3 dB.
Initiating time : 500 usec.
Transit time : 50 usec.

Neon pilots provide visual indication of the path in operation at any instant.

6. Power Requirements:

200 to 260 V ac single phase, 50 c/s; provided by a regulator giving the required output within 1% for variations of input between -40 V and +20 V, over a range of from 45 to 55 c/s.

7. Valves:

Value	Qty	Value	Qty	Value	Qty	Value	Qty
CV2524(6AU6) (6AE8)	4	CV454(6BA6) (6BV7)	11	CV455(12AT7) CV492(12AX7)	10	CV216(OD3/VR150) CV686(OC3/VR105)	2
CV283(6AL5)	7	CV138(6AM6/Z77) CV575(5U4G) (5AS4)	5	CV491(12AU7) CV124(807) CV287(QS150/15)	1	CV3798(OA3/VR75) (A2087) (AV36A)	3
CV1862(6AQ5)	5		19		3		1
CV511(6V6GT)	1		6		1		1
CV493(6XL4)	3	CV2302(1CP1)	1		1		1
	3		1				

8. Cat No: Z1/AWA/C95180.

9. Associated Publications: RAEME Maintenance Scale AUST/TC/408.
Complete Equipment Schedule 3053
7610-66-010-8903 Instruction Book, Dual Diversity FSK
Receiver, Ser-20, AWA Type C95180.

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