SUMMARY OF DATA

PURPOSE

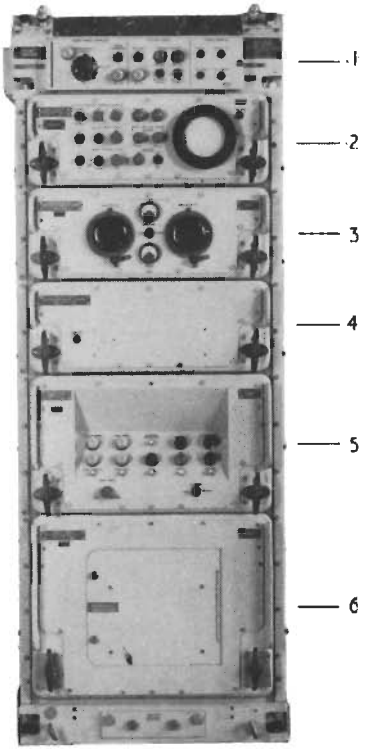
Reception of telemetry signals transmitted from an Inter Service 24-channel Telemetry Sender fitted in a Seaslug missile and the recording of the sub-carrier waveform on magnetic tape for post flight analysis in Outfit MBN. A 24-channel test signal and monitoring facilities are also provided for system checking.

BRIEF TECHNICAL DESCRIPTION

24-channel telemetry signals, time division multiplex (T.D.M.) modulated on a carrier in the band 432.5-460 MHz are received by the associated aerial (Outfit AJH) and fed to a superheterodyne receiver which extracts the F.M. sub-carrier waveform. A.F.C. and A.G.C. circuits ensure a stabilised output.

The sub-carrier waveform is reduced in frequency for recording purposes and amplitude modulation is suppressed. Recorded signals may be monitored during recording or by playing back, the reduced waveform being converted into a d.c. waveform (histogram) by a discriminator and filter circuit.

A timing ruler and drone timing signal are generated and fed to frequency modulators for recording on two of the seven tracks of the magnetic tape recorder. Discriminator and filter circuits permit monitoring during recording or playback. Tape protection and tension controlling circuits ensure consistent recording and replay speeds, with automatic stop when the end of the tape is reached. Pod camera timing signals transmitted to the drone target aircraft are also recorded and monitored.



CABINET, TELEMETRY RECEIVING AND RECORDING

MAJOR UNITS

Item No.	Pattern No.	Description	Physical Data			
			Height	Width	Depth	Weight
1	5820-AP 164367	Cabinet, Telemetry, Receiving and Recording	5 ft 5 in.	2 ft	2 ft 3 in.	835 lb
2	5820-AP 164368	Monitor, Telemetric Data				
3	5820-AP 164369	Receiver, Telemetric Data				
4	5820-AP 164371	Amplifier Modulator Assembly				
5	5820-AP 164372	Power Supply				
6	5820-AP 164370	Recorder, Telemetric Data				
7	5820-AP 186266	Aerial, UHF				
8	5985-AP 186264	Aerial, UHF				
9	5985-AP 186265	Pedestal, Aerial				

Items 2-6 are contained in Item 1; the weight of Item 1 is inclusive.
Items 8 and 9 are part of Aerial Outfit AJH.

POWER REQUIREMENTS

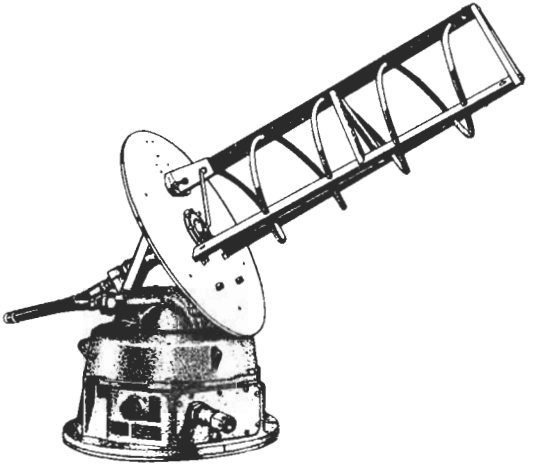
115 V 60 Hz 1 Ø 1 kW (Receiver and Timing Generator)
115 V 60 Hz 1 Ø 125 W (Anti-condensation Heater)

HEAT DISSIPATION

1 kW

ASSOCIATED AERIAL OUTFIT

Aerial Outfit AJH. This comprises a 4-turn helix mounted on a pedestal which can be remotely trained through 360° in azimuth (but not continuously) at a fixed elevation of 30° or 45°. The aerial has a power gain of 8 dB and is circularly polarised with a 60° beamwidth which makes stabilisation unnecessary. The helical array gives a wide bandwidth viz 432.5–460 MHz, ie the frequency coverage of the receiver.



AERIAL OUTFIT AJH

HANDBOOK

BR 2219(1) and (2) Handbook for Shipborne Telemetry Receiver and Recording Outfit MBA and Aerial Outfit AJH.

ESTABLISHMENT LIST

E1264

INSTALLATION SPECIFICATION

Preliminary information contained in ASWE Publication M.5145/60/IX3 Appendix E.