

2.27. 100W HF POWER AMPLIFIER (MARCONI TYPE N1050) AND AERIAL MATCHING UNIT (MARCONI TYPE N7100)

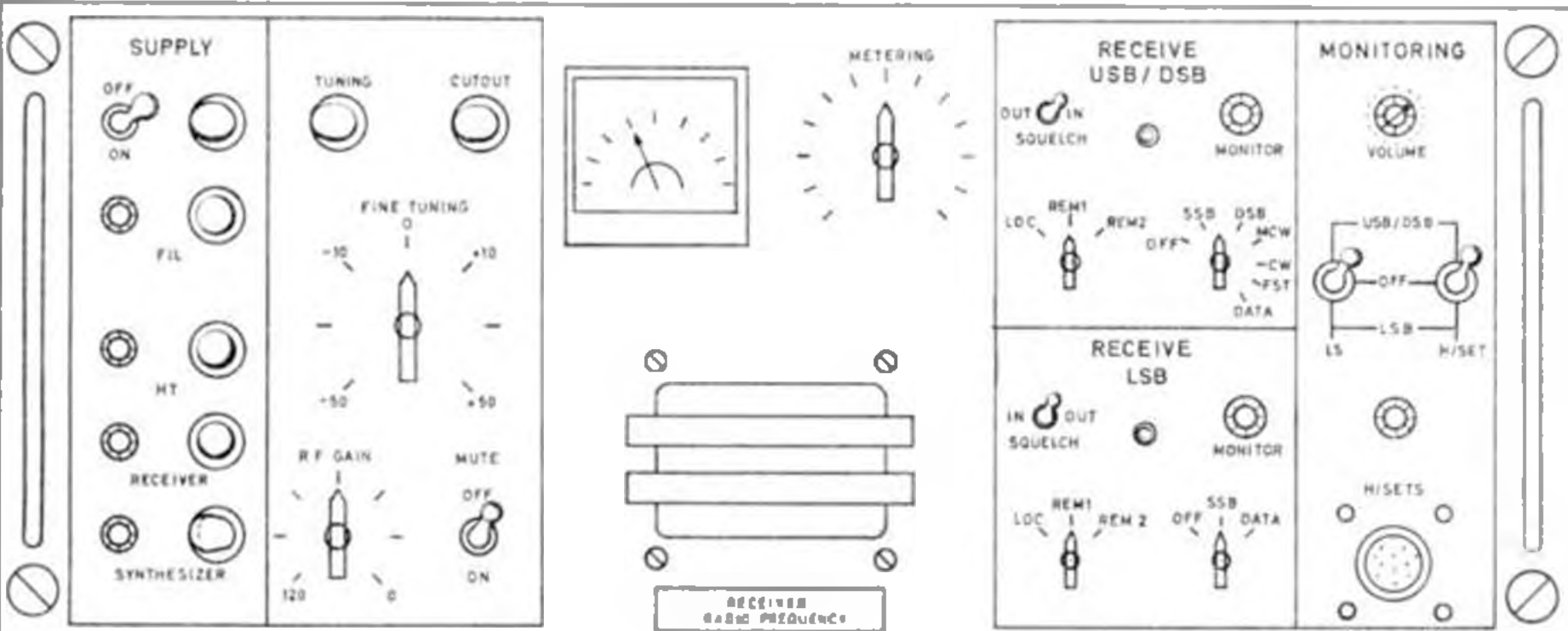
HANDBOOK

E LIST

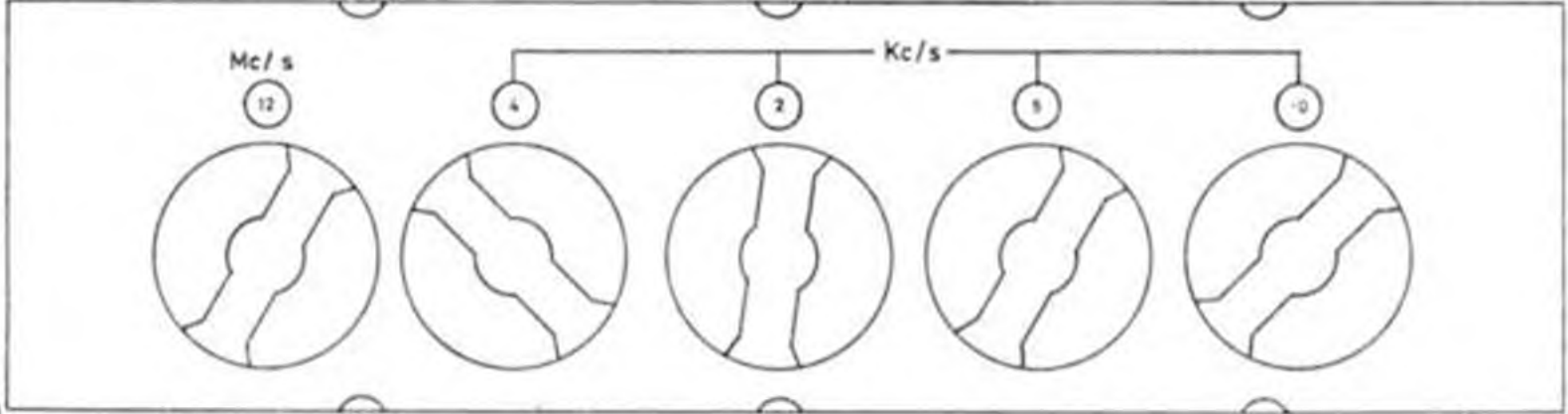
FREQUENCY RANGE	1.5 to 24 MHz	
POWER OUTPUT	1.5 to 20 MHz	120W p.e.p.
	20 to 24 MHz	Greater than 75W p.e.p.
POWER SUPPLY	115V or 230V	
	AC 50/60 Hz	

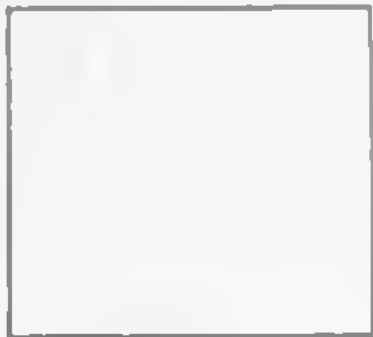
General

1. The 100W HF Power Amplifier and the Aerial Matching Unit have been designed for operation in all emission modes. When used in conjunction with Outfit TDC, they form a complete 100W ISB transmitting system (Type 642). The Power Amplifier accepts a drive of approximately 100mW from outfit TDC and produces an output of approximately 100W p.e.p. The equipment feeds back information to Outfit TDC when tuning has been carried out and the correct RF level established. Overload indication and resetting facilities are also fed back to outfit TDC.
2. The Aerial Matching Unit will operate with whip aerials of 16, 24 or 35 feet in length, but preset adjustments are required for any particular aerial. The aerial circuit is automatically set to resonance and the coupling optimized under the control of the frequency synthesiser and automatic monitoring circuits.
3. A change over aerial relay system is incorporated for simplex operation, e.g. as fitted in Type 641.



**SYNTHESIZER
ELECTRICAL FREQUENCY**





AMPLIFIER RF

FS₁ FS₂

-30V FS FEED

+30V AMP FEED

SG TEMP

HT LEDEX

TRIPCAL TEST TRIP RESET HT

CONTROL POWER - SUPPLY

MAINS SUPPLY

AF LINEAR AMPLIFIER N1050

CABINET RF AMP

ANTICONDENSATION HEATERS

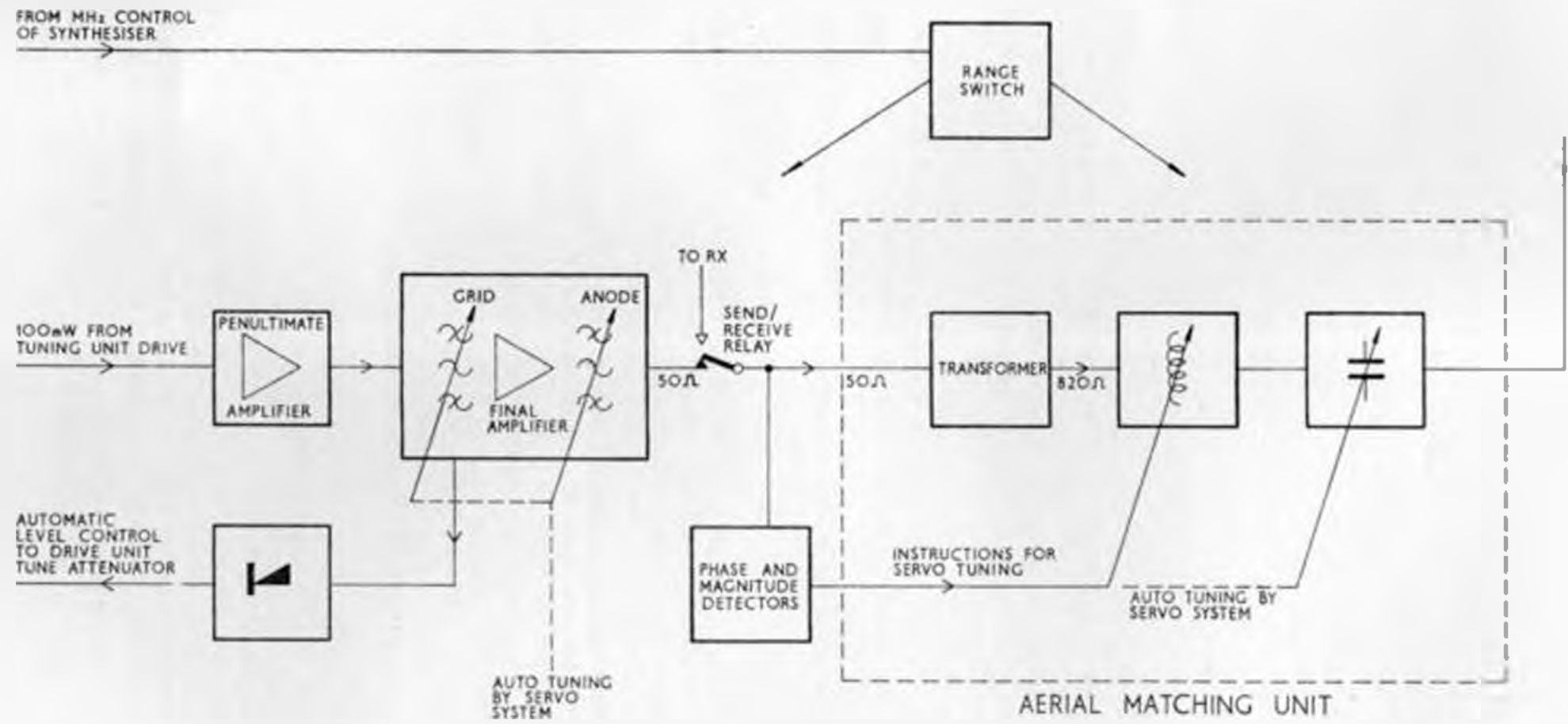


FIG. 1. HF POWER AMPLIFIER AND AERIAL MATCHING UNIT - BLOCK DIAGRAM

Tuning

28. Outfit TDC may be used as a drive for a variety of amplifiers. For this reason, instructions for the use of the controls in three arrangements to cover all possible applications will be shown. These arrangements are:

- a. When the associated amplifier is not designed for auto tuning (e.g. Outfit TDC only, auto tuning).
- b. When used in a transmitter with auto tuning capability (e.g. Type 642).
- c. When used in a transceiver with auto tuning capability (e.g. Type 641).

a. above of course refers to the TDC in outfit ICS2 with the modulated output of the drive unit being fed to a broadband amplifier (WBC for example) whose output, up to 1kW PEP, is fed to the transmitting aerial.