

## TYPES 87M and 87MS

## SUMMARY OF DATA

## PURPOSE

A low power (50 watts) V.H.F. transmitting and receiving equipment fitted in light craft and above (Type 87M) and at Royal Naval Air Stations (Type 87MS) for Fighter Aircraft communication.

## TYPE OF TRANSMISSION

Voice and M.C.W.

## FREQUENCY RANGE

100 - 146 Mc/s.

## MAJOR UNITS

Type 87M/MS comprises essentially Transmitter 8C. The associated receiver is Receiver Outfit CDU (see separate data sheet).

Patt. 53087 Transmitter 8C comprises the following units:-

- Patt. 53088 R.F. Power Amplifier Unit
- Patt. 53089 R.F. Driver Unit
- Patt. 53090 Modulator Unit
- Patt. 53091 Control Unit
- Patt. 53092 Modulator Power Unit
- Patt. 53093 R.F. Power Unit

The above six units are mounted in a rack forming the front panel of a cabinet standing 6 ft high, 1' 8" wide and 1' 4" deep. The total weight is 700 lb.

## BRIEF TECHNICAL DESCRIPTION

Patt. 53087 Transmitter 8C

Frequency	- 100 - 146 Mc/s
Frequency Control	- Crystal
Output	- 50 watts

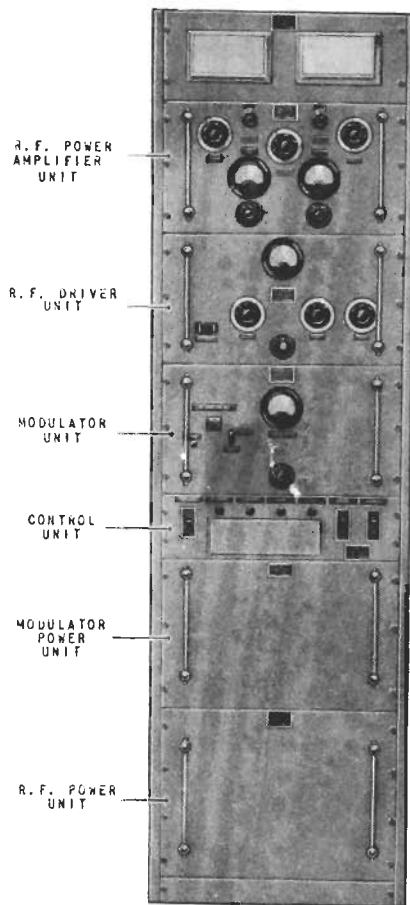
The transmitter is crystal controlled with two stages of frequency trebling and one of frequency doubling, thus the output frequency is eighteen times that of the crystal. Anode modulation is applied to the R.F. output amplifiers. M.C.W. is obtained by keying a tone source of approximately 1000 cycles. The carrier is not suppressed during keying and there are no arrangements for listening through.

## CONTROL CIRCUITS

The equipment can be operated locally or remotely using any of W/T and Voice Control Outfits KHA-Z or Fighter Direction Control Outfits KFA-E.

## POWER REQUIREMENTS AND CONSUMPTION

Transmitter 8C requires - 230 volts, 50 c/s single phase at 1.2 kW. This supply is obtained from A.C. Supply Outfit DRD, DTQ or DTD when a suitable supply cannot be obtained from existing sources.



TRANSMITTER 8C

## AERIAL SYSTEM

- Aerial Outfit ARU - Aircraft Carriers
- Aerial Outfit APH - Ships other than Aircraft Carriers
- Aerial Outfit ANC - Masthead fitting when Aerial Outfits AQB and AQD are fitted.
- Aerial Outfit ANZ - Masthead fitting when Aerial Outfits AQB, ADD are not fitted.
- Aerial Outfits AGR - Royal Naval Air Stations  
AGS and AGT

In ships, common aerial working is employed - see Summary of Data Sheet on Common Aerial Outfits EAA-EAF

## REMARKS

The set may be tuned without breaking wireless silence by using Patt. 57818 Dummy Load for Transmitter 8C.

## HANDBOOK

B.R.1399, B.R.1953(A)(B).

## ESTABLISHMENT LISTS

E.679 (Type 87M) E.968 (Type 87MS)  
E.607 (Aerial Outfits APH and ARU) E.884 (Aerial Outfit ANC)  
E.659 (Aerial Outfit AQR) E.921 (Aerial Outfit ANZ)

## INSTALLATION SPECIFICATIONS

B.394 (Type 87M) B.315 (Type 87MS)  
B.337 (Aerial Outfits APH, ARU and AJA)  
B.635 (Aerial Outfits ANC and ANZ)