

RESTRICTED

TYPES 89M, 89P, and 89Q

SUMMARY OF DATA

PURPOSE

A H.F. medium power (350 watts C.W. 250 watts Voice) transmitter fitted in light craft as the main set and in cruisers and above as a fighter direction set.

TYPE OF TRANSMISSION

C.W. and Voice.

FREQUENCY RANGE

1.5 - 20 Mc/s.

MAJOR UNITS

Pat. No. or U.S. Ref.	DESCRIPTION	PHYSICAL DATA			
		Height	Width	Depth	Weight
<u>Type 89M</u>					
W9453A	Transmitter 8B	5' 0"	1' 11"	1' 10"	585 lb
W9467	Crystal Multiplier and Variable Frequency Unit	Plugs into front of Transmitter			
67818	Speech Amplifier	11"	1' 8½"	1' 1½"	26 lb
W7134A	Control Unit Design C	11½"	1' 9½"	1' 1½"	56 lb
<u>Type 89P</u>					
55374A	Transmitter 8E (230V)	4' 11"	1' 5½"	2' 1"	550 lb
67818	Speech Amplifier (230V)	9"	1' 5½"	11½"	38 lb
W9467	Crystal Multiplier and Variable Frequency Unit	Plugs into front of Transmitter			
W7134A	Control Unit Design C	11½"	1' 9½"	1' 1½"	56 lb
<u>Type 89Q</u>					
59593/A	Transmitter 8M	4' 11"	1' 5½"	2' 1"	550 lb
67818	Speech Amplifier	9"	1' 5½"	11½"	38 lb
59594	Crystal Oscillator for Transmitter 8M	Plugs into front of Transmitter			
59595	Master Oscillator for Transmitter 8M	Plugs into front of Transmitter			
W7134A	Control Unit Design C	11½"	1' 9½"	1' 1½"	56 lb

BRIEF TECHNICAL DESCRIPTION

Transmitters 8B, 8E, 8M

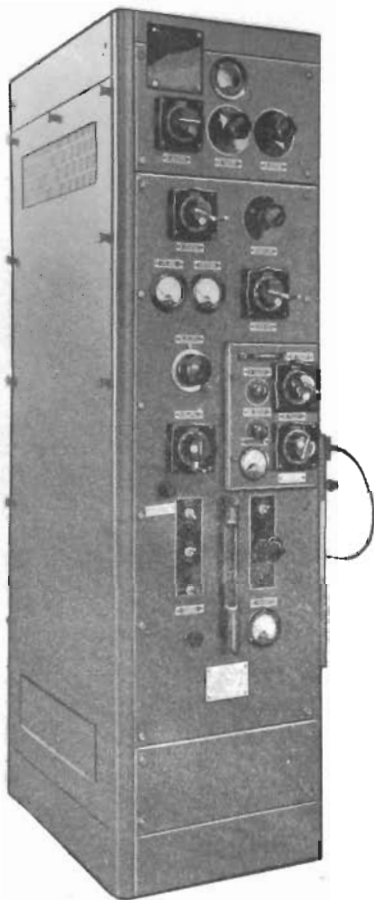
Frequency 1.5 - 20 Mc/s

Frequency Control (a) Crystal with provision for doubling or trebling the fundamental frequency.
(b) Variable Frequency Oscillator.

Output 250 watts (Voice) 350 watts (C.W.)

Keying Up to 100 words per minute

The transmitter consists of an oscillator stage followed by a Power Amplifier. Both stages are anode tuned. For Voice high level anode modulation is employed. Transmitter 8M has an additional intermediate stage.



TRANSMITTER 8M

CONTROL UNIT DESIGN C

The primary function of this unit is to enable the American transmitters to work into British Control Systems and secondly to prevent the H.T. contactor making until about 60 seconds after the filament voltage has been applied to the mercury vapour rectifier valves.

CONTROL CIRCUITS

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

POWER SUPPLY ARRANGEMENTS

Transmitters 8B, 8E and 8M require - 230 volts 50 c/s single phase supply at 2 kW

The 230V 50 c/s supply is obtained from A.C. Supply Outfit DTC, DTD or DRD when a suitable supply cannot be obtained from existing sources.

HEAT DISSIPATION

600 watts.

AERIAL SYSTEM

Single wire.

REMARKS

The approximate range, 150 miles on Voice and C.W. is world wide at times.

The basic transmitters for Types 89M, P and Q are American produced sets as follows:- Type 89M - R.C.A. ET4332B Type 89P - R.C.A. ET4336B and H Type 89Q - R.C.A. ET4336K.

Types 89M and 89P are essentially the same electrically. In Type 89Q, in place of the External Crystal Multiplier and Variable Frequency Unit, a Master Oscillator Unit and a Crystal Unit have been incorporated. Either of these may be plugged in depending on which type of control, crystal or variable frequency oscillator is required. Type 89Q has an additional intermediate stage.

HANDBOOK

U.S. Navy, B.R.1374 (Type 89M),
B.R.1411 (Type 89P), B.R.1426 (Type 89Q)

ESTABLISHMENT LIST

E559 (Type 89M/P), E875 (Type 89Q)

INSTALLATION SPECIFICATION

B381