

# TYPE TBS

## SUMMARY OF DATA

### PURPOSE

A V.H.F. low power (50 watts) transmitter-receiver fitted in corvettes and above for inter-ship communication.

### TYPE OF TRANSMISSION AND RECEPTION

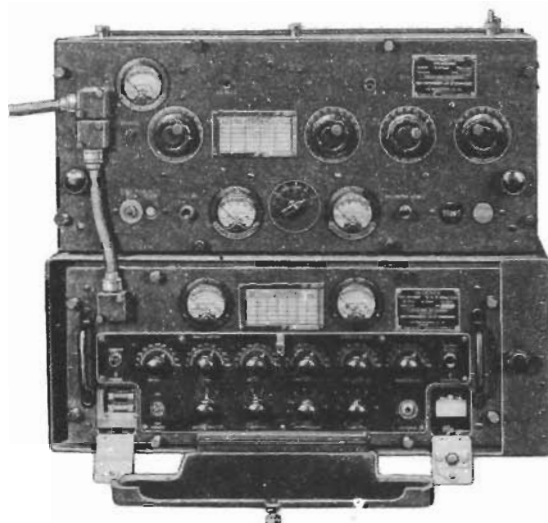
Voice and M.C.W.

### FREQUENCY RANGE

60 - 80 Mc/s.

### MAJOR UNITS

Type TBS comprises the following units:-



VIEW OF TRANSMITTER AND RECEIVER

U.S. REF.	DESCRIPTION	PHYSICAL DATA			
		Height	Width	Depth	Weight
CRV52093/A	Transmitter	10½"	23½"	17½"	170 lbs
CRV46068/A/B	Receiver	8½"	25⅞"	16⅞"	
CRV23135	Control Unit	6"	10½"	7½"	9 lb
CG21300 or CG21301	Motor Generator Unit, 115-120V D.C. supply	10⅞"	23⅞"	10⅞"	170 lb
CG21302 or A.P.59450	Motor Generator Unit, 220V A.C. supply	10⅞"	19⅞"	10⅞"	140 lb
CG21302 or A.P.59450	Motor Generator Unit, 440V A.C. supply	10⅞"	19⅞"	10⅞"	140 lb
A.P.59450	Motor Generator Unit, 220V D.C. supply	10⅞"	23⅞"	10⅞"	170 lb
CRV21319 or CRV21804	Starter Automatic, 110-120V D.C.	16½"	14½"	10⅞"	45 lb
CRV21804 or CRV21320	Starter Automatic, 230V D.C.	16½"	14½"	10⅞"	45 lb
CRV21320	Starter Automatic, 220 and 440V A.C.	14⅞"	10⅞"	9⅞"	34 lb
CRV49101	Loudspeaker	9⅞"	9⅞"	5"	21 lb
A.P.67428	Rectifier and Control Unit	219"	210"	116"	270 lb

\* Fitted in A.C. Ships only.

Note: There are four types of TBS equipments for use on following supply voltages, 115 volts, D.C., 230 volts, D.C., 220 volts 50/60 c/s 3 phase and 440 volts 50/60 c/s 3 phase.

### BRIEF DESCRIPTION

Type TBS is an American produced transmitter-receiver.

The transmitter employs four R.F. stages (Crystal Oscillator, 1st Doubler, 2nd Doubler and Power Amplifier) and a modulator consisting of three push-pull A.F. stages. The power output is 50 watts and the keying is by relay with a maximum of 40 words per minute.

The receiver is of the superheterodyne type and uses an Intermediate Frequency of 5.3 Mc/s. The oscillator stage is crystal controlled with two Doubler stages. The receiver gives an output of 2 watts into a 600 ohm load.

## CONTROL CIRCUITS

Type TBS can be operated locally or from a remote position up to 200 ft using the Control Unit or operated from any one of a number of control positions using Control Outfits KCQ, KCR, KCS, KCU and KHA series depending on class of ship.

## POWER REQUIREMENTS AND CONSUMPTION

The four types of TBS equipments require supply voltages as shown in table below.

Voltage of Type TBS equipment	Supply Voltage on which it is to be used	Power Required	Remarks
115 D.C.	100/110 D.C.	1 kW	
	220 D.C.	2 kW	Only when Patt. W7804A or 57908 voltage dropping resistance is fitted.
230 D.C.	220 D.C.	1 kW	
220 A.C. 50/60 c/s 3 phase	230 A.C. 50/60 c/s 3 phase	1 kW	
440 A.C. 50/60 c/s 3 phase	400/440 A.C. 50/60 c/s 3 phase	1 kW	

All equipments also require a 230 volts, 50 c/s single phase A.C. supply of 260 watts.

In A.C. Ships, Patt. 67428 Rectifier and Control Unit is fitted. This Unit operates from a 230 or 440V 50/60 c/s 3 phase supply and provides all output voltages necessary for the operation of Type TBS.

*AP 67398 Single Phase Rectifier in use on single & supplies.*

## AERIAL SYSTEM

Half-wave vertical dipole aerial designed for mounting on the mast of Aerial Outfit APU or ANG is used.

## REMARKS

The approximate range is 10 miles.

## HANDBOOK

U.S. Navy. B.R.1998

(Patt. 67428 Rectifier and Control Unit)

## ESTABLISHMENT LIST

AE8

## INSTALLATION SPECIFICATIONS

B.406, B.159, B.711 (A.C. Ships).