

STATUS: Limited Standard	AN/FRT-TYPE
CLASSIFICATION OF EQUIPMENT: Unclassified	
USING SERVICE: Navy	SERVICE TYPE NUMBER: TBC-2 through -5
DATE OF THIS SHEET: 9 Jun 52	RADIO TRANSMITTING EQUIPMENT

NO PHOTOGRAPH AVAILABLE

Radio Transmitting Equipments TBC-2 through -5 are fixed, a-m (cw), radiotelegraph transmitters for h-f shore-to-ship communication. Provision is made for three types of keying; relay keying at speeds up to 200 wpm, and facsimile, or vacuum tube keying at speeds up to 1,000 wpm.

Crystal control of twelve preset frequencies is provided, as well as master oscillator control, to permit continuously variable tuning throughout the frequency range.

In addition to the exciter, power amplifier, and rectifier units, each equipment contains a contactor unit for control and voltage regulation of the filament and plate circuits; a main plate transformer for providing plate voltage to the power amplifier tubes, and a water cooling system.

The TBC-3 (25 cyc equipment) has a plate transformer for supplying plate voltage to the 1 kw exciter tubes, and a step-down transformer for reducing 440-v ac to the 230-v ac required for operation of all units (except the exciter, power amplifier, rectifier, and the main plate rectifier, which operate at 440-v ac).

AN/FRT-TYPE

INSTRUCTION LITERATURE: NavShips
95614; 900,853; 900,854
CLASSIFICATION OF EQUIPMENT: Unclassified
USING SERVICE: Navy
DATE OF THIS SHEET: 9 Jun 52

TBC-2 through -5 :SERVICE TYPE NUMBER
RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QUANT	NAME OF COMPONENT	DIMENSIONS (IN) INSTALLED	WEIGHT (LBS)
1	Exciter Unit CG-52101, -52168, -52168A, -52155, or CG-52177	93-1/2 x 50 x 36-3/4	1,255
1	Power Amplifier CG-50056, -50111, -50111-A, -50071 or CG-50074	100-5/16 x 54 x 64	2,490
1	Main Rectifier CG-20077, -20152, -20260, 20115 or CG-20111*	100-5/16 x 74 x 49-1/4	2,635

*Used with 25-cyc source.

OPERATIONAL CHARACTERISTICS

TACTICAL USE: Shore stations.

INSTALLATION: Ground, fixed.

APPROXIMATE RANGE (IN MILES): Extended.

CAN COMMUNICATE WITH: AN/ARC-2, -5, -8, -9, -21, -25, -26; AN/ARR-15; AN/FRC-10; AN/FRR-3, -4, -12, -28, -32; AN/GRC-3, -4, -9, -13, -26; AN/GRR-2, -3, -5; AN/MRC-2, -6, -16, -22; AN/PRC-7, -8, -19, -20; AN/SRR-3, -8, -12, -13; AN/TRQ-1; AN/URR-10, -22, -23; AN/VRC-1, -5, -8, -13, -16, -20; AN/VRO-1; BC-312, -342, -348, -779, -794, -1004; MBS; OA-58/FRC, -59/FRC; R-62/PR, -80/PR, -96/SR, -129/U, -203/SR, -205/SR, -206/PR, -208/FR, -209/FR, -210/U, -211/U, -213/SR, -274/FRR, -320/FRC, -388/URR; RAL; RAO; RAS; RBB; RBC; RBG; RBH; RBM; RBO; RBP; RBS; RCF; RCG; RCH; RDE; RDM; REA; SCR-177, -188, -193, -244, -274, -293, -294, -298, -399, -499, -506, -508, -509, -510, -528, -536, -543, -585, -593, -694, -704; TBO; TBX; TCH; TCO; TCS; AR-98 (RCA); Collins 18S-4 (AF Model); Collins 75A-2; Hammarlund sp-600-JX; National HRO-50.

TECHNICAL CHARACTERISTICS

FREQUENCY RANGE IN MEGACYCLES: 4.0 - 26.0.

TYPE MODULATION: Am.

TYPE OF SIGNAL: Cw.

POWER OUTPUT: 50 kw.

POWER REQUIREMENTS: TBC-2: *108 kw, 230 v, 60 cyc, 3 phase, ac.

TBC-3: *108 kw, 230 v, 60 cyc, 3 phase or 440 v, 25 cyc, 3 phase, ac.

TBC-4 and -5: *108 kw, 230 v, 60 cyc, 3 phase, ac.

*Does not include power required for water cooling system.

PHYSICAL CHARACTERISTICS

Radio Transmitting Equipments TBC-2 through -5 net volume 842.3 cu ft, 21 ship tons. Packed for domestic shipment: total weight 45,549 pounds, total volume 2,697 cu ft, 67.4 ship tons. Shipped in 84 packages.