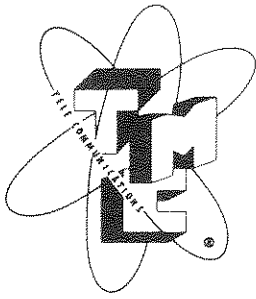
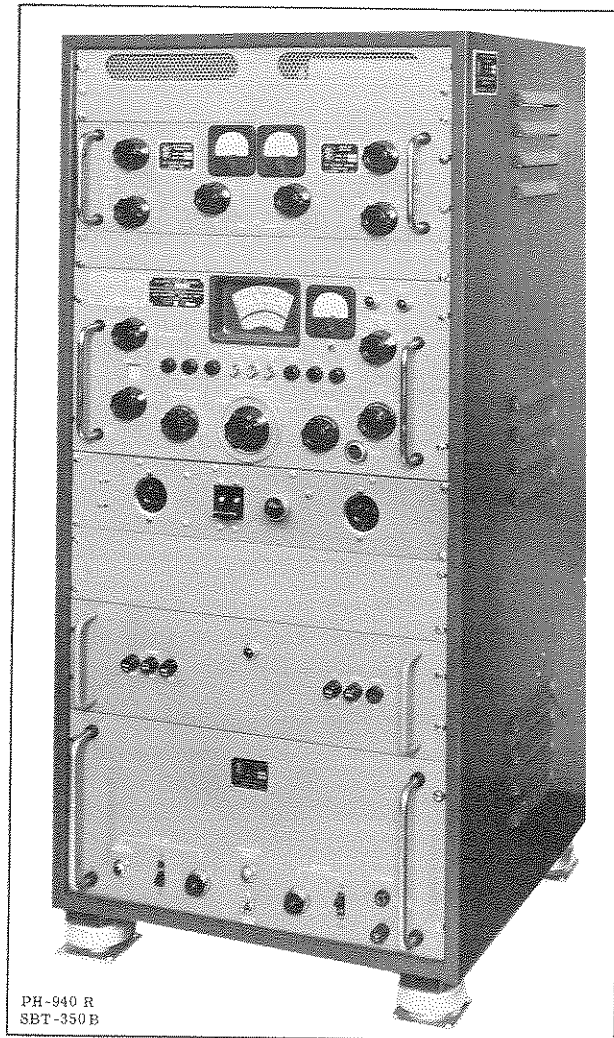


SALES SERVICE BULLETIN NUMBER 220

Single Sideband Transmitting System
TMC Model SBT-350()



NEW



PH-940 R
SBT-350 B

350 Watts PEP

Compact • Rugged • SSB • DSB • ISB • MCW • CW • FSK

The SBT-350 is a conservatively rated 350 Watt PEP radio transmitter providing Single Sideband, Radio Telephone, Telegraph and Frequency Shift operation in the continuous range of 2 - 32 mcs.

The SBT-350 series is completely bandswitched with all tuning done from the front panel. The final is tuned by a Pi network system which permits the matching of a wide range of impedances.

Built compact and rugged, the SBT-350 Transmitters are suitable for fixed plant, mobile and shipboard operation.

Each system is supplied with all the necessary cables, connectors, interconnectors and harnesses for instant operation.

TECHNICAL SPECIFICATIONS:

FREQUENCY RANGE: 2 to 32 megacycles continuously tunable. All tuning and bandswitching controls on front panel. (No plug-in components).

OPERATING MODES	EMISSION								
	AM	CW	MCW	FAX	RTTY		ISB	DSB	SSB
					tone	FS			
SBT-350 MODEL									
SBT-350A	*	*					*	*	*
SBT-350B	*	*					*	*	*
SBT-350C	*	*					*	*	*
SBT-350D	*	*	*		*		*	*	*
SBT-350E		*		*		*			

OUTPUT POWER: At least 350 watts PEP sideband and 200 watts CW and FS

OUTPUT IMPEDANCE: Will match any unbalanced load from 70 to 150 ohms at ± 20 degrees in the range 2 to 4 megacycles. Will match any unbalanced load from 50 to 600 ohms at ± 45 degrees in the range 4 to 32 megacycles.

SIGNAL/DISTORTION RATIO: 40 DB down from full PEP output.

HARMONIC SUPPRESSION:
 Second - at least 40 db from PEP output.
 Third - at least 50 db from PEP output.

STABILITY:
 VOX: Better than 20 PPM for 30 degrees change in ambient.
 SBE: Crystal controlled. 1 part in 10^6
 Synthesizer controlled available. 1 part in 10^8 .

OUTPUT CONNECTION: QDS

FREQUENCY CONTROL: Continuously tunable, direct reading Variable Frequency Oscillator (VOX). 10 oven controlled crystal positions in the SBE and 3 oven controlled crystals in the XFK.

TUNING: All tuning and bandswitching controls are on the front panels. (No plug-in components)

UNWANTED SIDEBAND REJECTION: 1000 cycle single tone, 60 db down.

CARRIER INSERTION: -55 db to full output.

AUDIO RESPONSE: (Each Sideband) A. Flat within plus or minus 1.5 db, 350 to 3300 cycles.*
 B. Flat within plus or minus 1.5 db, 350 to 7500 cycles.*

*depending upon Model SBE ordered.

VOX OPERATION: Voice control with anti trip features. Adjustable gain and squelch.

METERING: All critical circuits are metered.

OUTPUT NETWORK: Pi-tuned - a pair of 4CX250B ceramic type tubes in parallel.

AUDIO INPUT: 500 K. ohms for high impedance crystal or dynamic mike, -50 db for full RF output. Two independent 600 ohm channels, balanced or unbalanced, -20 db level for full RF output.

KEYING SPEED: XFK---1000 wpm
 TIS-2--1000 wpm

KEYING INPUTS: XFK: 1. Contact closing to ground.
 2. Polar or neutral positive.
 3. Linear input 30,000 ohms impedance.
 TIS: 1. Polar or neutral either side grounded.
 2. Contact keying to ground.

ALDC: An automatic load and drive control is provided to limit distortion during high drive peaks or load changes.

SAFETY: Full interlock protection. Full overload and fuse protection.

COOLING: Filtered, forced air blower system.

COMPONENTS AND CONSTRUCTION: Equipment is manufactured in accordance with JAN/MIL specifications wherever practicable.

TEMPERATURE AND HUMIDITY: Designed to operate in any ambient temperature between the limits of 0-50 degrees C for any value of humidity up to 90%.

POWER REQUIREMENTS	SBT-350A	SBT-350B	SBT-350C	SBT-350D	SBT-350E
115/230 60 cycle	750 W AV. 910 W Peak	750 W AV. 910 W Peak	670 W AV. 690 W Peak	840 W AV. 860 W Peak	720 W AV. 910 W Peak

	SBT-350A	SBT-350B	SBT-350C	SBT-350D	SBT-350E
. SIZE	21½x20½x72 TMC RAK-9	18 x 20½ x 41-3/4 TMC RAK-8	21½x20½x72 TMC RAK-9	21½x20½x72 TMC RAK-9	21½x20½x72 TMC RAK-9
WEIGHT	489 lbs.	394 lbs	645 lbs.	814 lbs.	624 lbs.

The SBT-350() Series contains the following TMC units:

SBT-350A	SBT-350B	SBT-350C	SBT-350D	SBT-350E
SWR-1K	PAL-350	ATS-2	SWR-1K	ATS-2 or SWR-1K
PAL-350	SBE-2 AN/URA-23A	PAL-350	PAL-350	PAL-350
SBE-2 AN/URA-23A	APP-2	SBE-2 AN/URA-23A	SBE-2 AN/URA-23A	VOX 0-330/FR
VOX 0-330/FR		VOX 0-330/FR	VOX 0-330/FR	APP-2
APP-2		APP-2	TIS-2	XFK C-2749/URT

Brief description of each unit:

ATS-2 (AN/URA-27)

The TMC Model ATS-2, Antenna Tuning System, is a remotely controlled antenna coupler designed to couple the output of any Transmitter, up to 1000 watts with an unbalanced output of 50 or 70 ohms, to a 35 foot whip antenna over the frequency range of 2 - 30 mcs.

SWR-1K

The TMC Model SWR-1K, Standing Wave Ratio Indicator, provides an accurate indication of the voltage standing wave ratio over the frequency range 2 - 30 megacycles. The SWR-1K permits simultaneous indications of incident R.F. Power, reflected R.F. Power and direct reading of Standing Wave Ratio. The SWR-1K may be used in 50 or 70 ohm unbalanced lines.

PAL-350

The PAL-350 is composed of two (2) units: A Linear Power Amplifier (Model RFA-1) and Power Supply (Model PSP-350). A pair of 4C x 250B Beam Power Amplifier tubes in parallel with a pi-network provide unbalanced output of from 50 to 600 ohms. Power output at least 350 watts PEP.

SBE-2 (AN/URA-23A)

The SBE-2, Mode Selector, Transmitting, is a universal exciter permitting the transmission of any intelligence on single or double sideband, with or without carrier. The SBE-2 is continuously tunable from 2 - 32 mcs. and is frequency controlled by means of temperature controlled crystals or external VFO. The SBE-2 has an audio bandwidth of 350 to 3300 cycles.

SBE-3 (AN/URA-28)

The Model SBE-3, Mode Selector, is the same as the SBE-2 but has an audio bandwidth of 350 - 7500 cycles.

VOX (0-330/FR)

The TMC Model VOX is a direct reading Variable Frequency Oscillator which provides continuously variable output from 2 to 64 mcs.

TIS-2

The TMC F/S and Tone Intelligence System, Model TIS-2, is a two channel system for use on wire lines, radio or microwave lines. The system comprises a Model TTU-1 CW channel at 1500 c/s, a Model TTU-2 Frequency Shift Channel with ± 425 cycles shift centered at 2550 c/s, a power supply model TST-2 and a tone transmit filter panel Model TTF-2.

TIS-3

The TIS-3 is a Tone Intelligence System such as the TIS-2 but has a center frequency of 2000 c/s resulting in compatible transmission of sideband, FS and conventional FS when utilized with transmitters with 1 KC increments.

XFK (C-2749/URT)

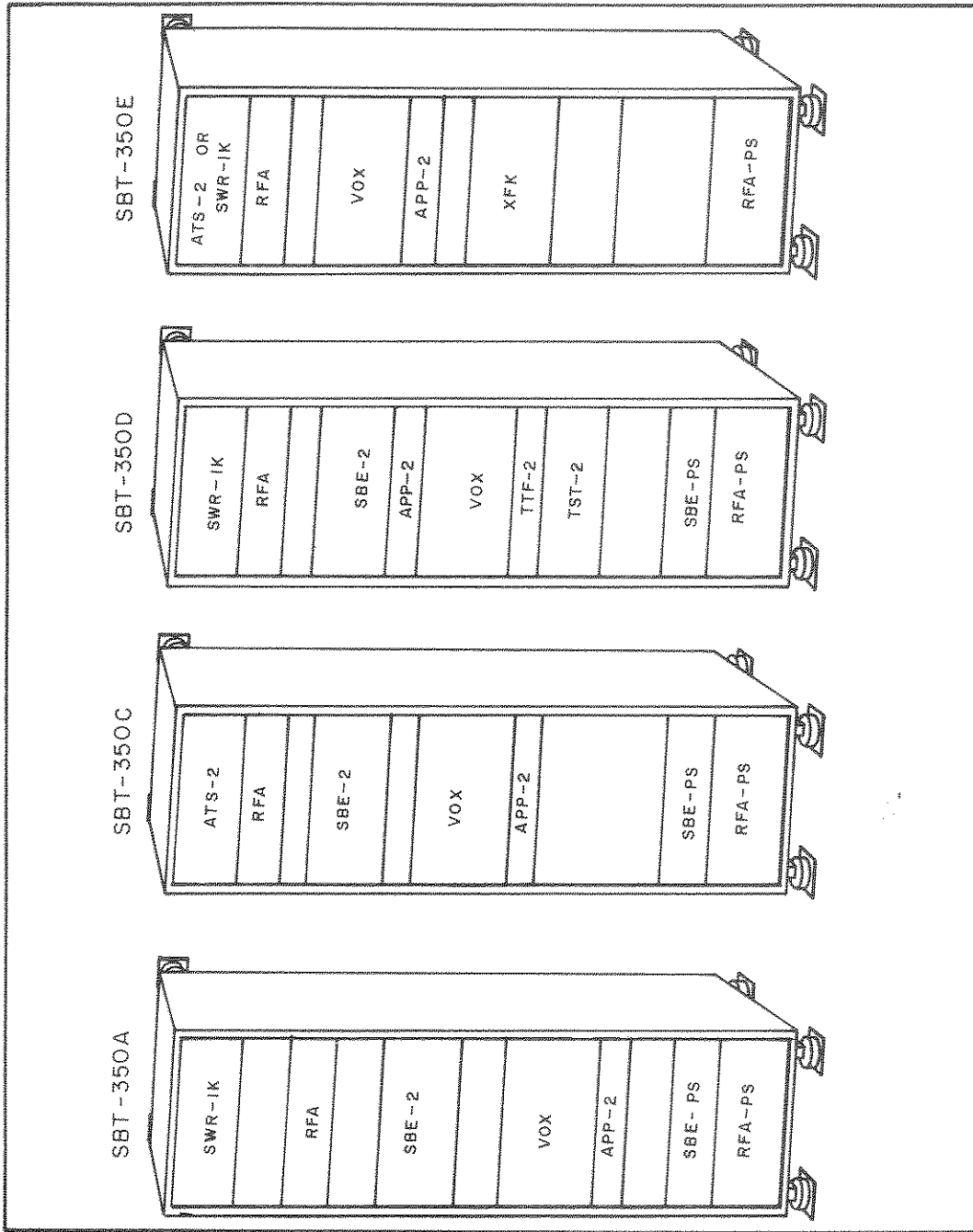
The Model XFK Frequency Shift Exciter is a high stability radio frequency oscillator which provides a means of shifting an RF carrier in accordance with the variations of an audio or pulse signal.

APP-2

All SBT-350 () Models are equipped with an auxiliary power panel, TMC Model APP-2. This panel includes a main circuit breaker with pilot light indicator and two convenience outlets.

For further technical information concerning TMC equipment used in the SBT-350 () series, please request the following Sales Service Bulletins:

SWR-1K	SSB 234	SBE-3	SSB 239		
ATS-2	SSB 235	VOX	SSB 134A	TIS-2	SSB 236
SBE-2	SSB 195C	XFK	SSB 163A	TIS-3	SSB 236



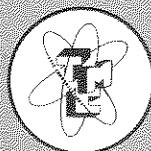
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