

Single Sideband Transmitter  
TMC Model SBT-1KJ  
AN/FRT-53

**1000 WATTS PEP**

**COMPLETELY BANDSWITCHED**

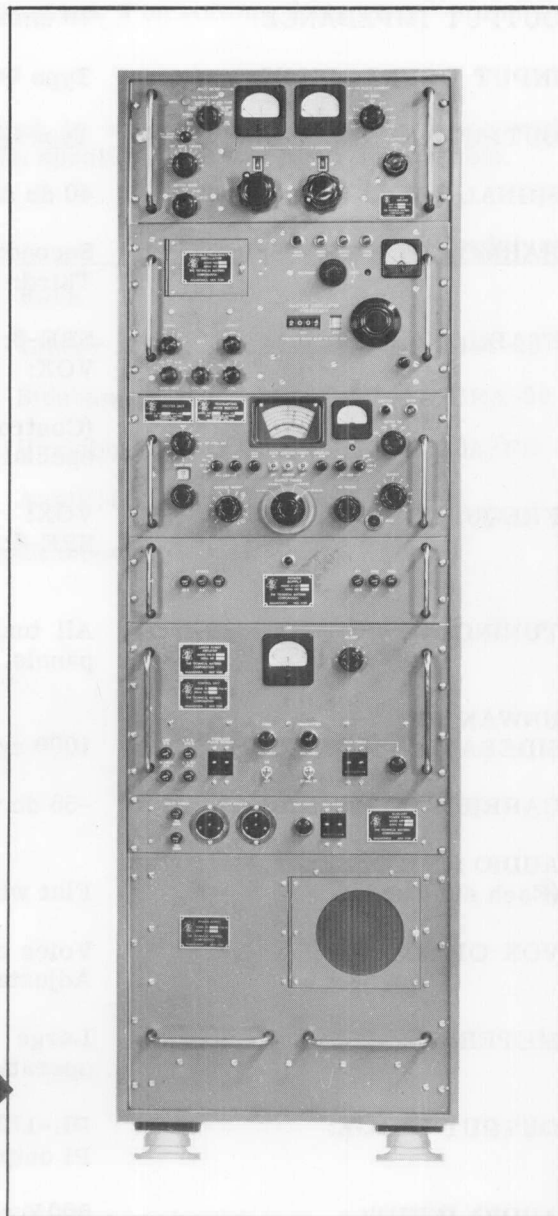
**CONTINUOUSLY TUNEABLE  
(2-32 MC)**

**COMPACT**

**RUGGED**

**SERVICEABLE**

Model SBT-1KJ as used in Signal Corps  
Transportable Communications Central,  
AN/TSC-20(v)



The TMC Model SBT-1KJ is a general purpose radio transmitter providing SSB, ISB, DSB, AM, CW and FS operation throughout the frequency range of 2 to 32 megacycles.

This transmitter is versatile, easy to install, operate and maintain. It is completely bandswitched with all tuning done from the front panel. Drawers slide out and tilt over for quick and easy replacement of components and repairs. A filtered forced air system is used to provide maximum heat dissipation.

The SBT-1KJ is compact and rugged. Its sturdy mechanical and electrical construction make it suitable for fixed plant, mobile and marine operation.

## TECHNICAL SPECIFICATIONS:

**FREQUENCY RANGE:** 2 to 32 megacycles, continuously tuneable.

**OUTPUT POWER:** 1000 watts PEP, 1000 watts CW, FS.

**OPERATING MODES:** SSB, ISB, DSB, AM, CW and FS.

**OUTPUT IMPEDANCE:** 70 ohms nominal.

**INPUT CONNECTIONS:** Type UHF coaxial.

**OUTPUT CONNECTIONS:** Type QDS coaxial.

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

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

**STABILITY:**  
SBE-3: Crystal controlled, 1 part in  $10^6$  per day.  
VOX: Better than 20 PPM for 30 degree change in ambient.  
(Control of 1 part in  $10^8$  per day available on special request.)

**FREQUENCY CONTROL:**  
VOX: Continuously tuneable direct reading VFO.  
SBE-3: 10 oven controlled crystal positions plus provision for external VFO.

**TUNING:** All tuning and bandswitching controls are on 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) Flat within  $\pm 1.5$  db from 350 to 7500 cycles.

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

**METERING:** Large size meters accurately indicate operation of all circuits.

**OUTPUT STAGE:** PL-172 ceramic tube.  
Pi output network.

**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.

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

**COOLING:** Forced filtered air system for maximum heat dissipation.

**TEMPERATURE  
AND HUMIDITY:**

Designed to operate in any ambient temperature between the limits of 0 to 50 degrees C and for any value of humidity up to 90%.

**SAFETY FEATURES:**

Full interlock protection.  
Full overload and fuse protection.

**SIZE:**

66-3/4" high x 20-5/8" wide x 23" deep o/a.

**MOUNTING:**

Shock Mounted. 4 on bottom, 2 top rear.

**WEIGHT:**

920 lbs.

**COMPONENTS AND  
CONSTRUCTION:**

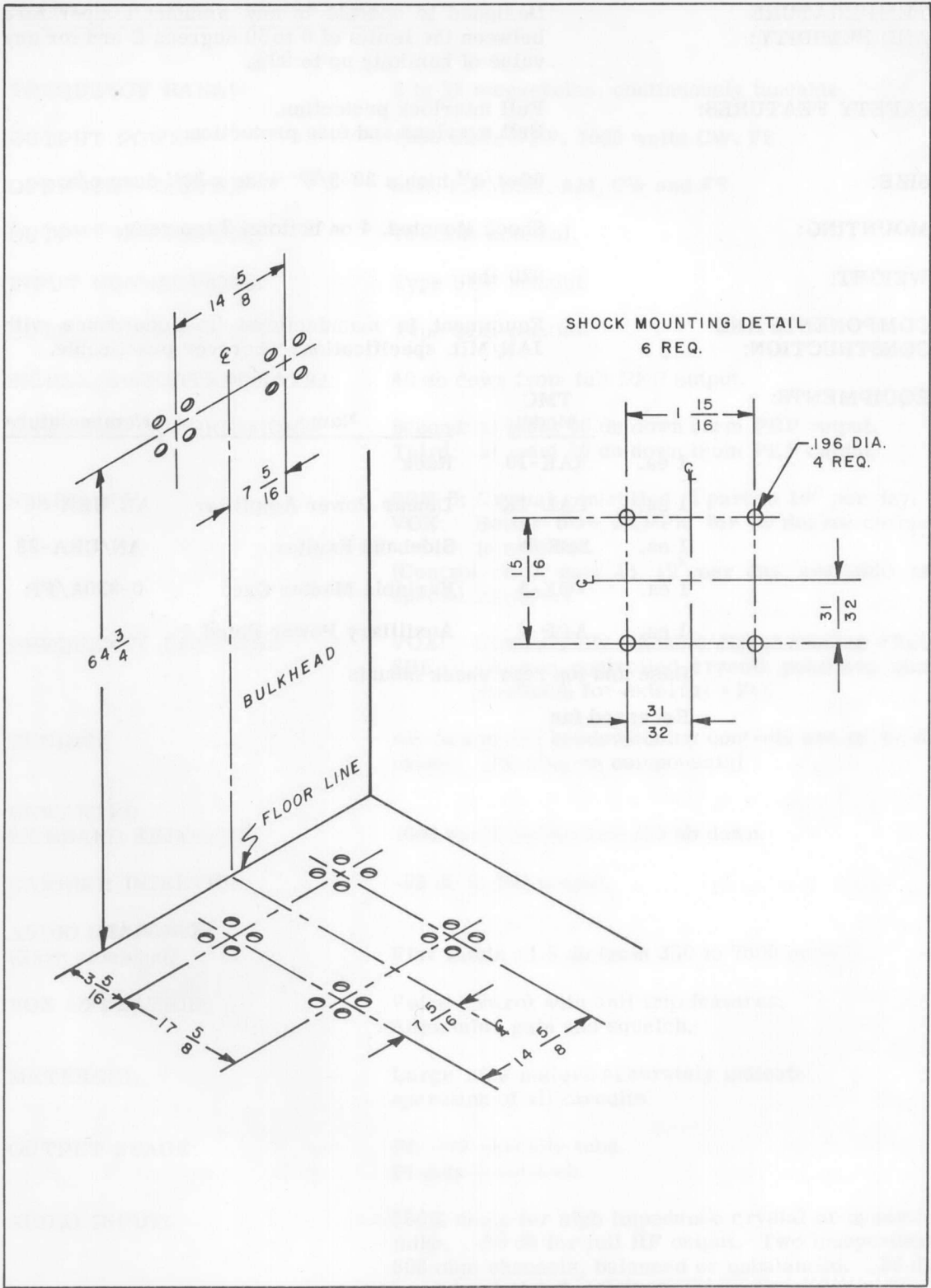
Equipment is manufactured in accordance with JAN/MIL specifications wherever practicable.

**EQUIPMENTS:**

	<u>TMC Model</u>	<u>Name</u>	<u>Nomenclature</u>
1 ea.	RAK-10	Rack	
1 ea.	PAL-1K	Linear Power Amplifier	AN/URA-36
1 ea.	SBE-3	Sideband Exciter	AN/URA-28
1 ea.	VOX-3	Variable Master Osc.	0-330A/FR
1 ea.	APP-4	Auxilliary Power Panel	

Base and top rear shock mounts

Recessed fan



INSTALLATION DRILLING PLAN, MODEL SBT-1KJ

THE TECHNICAL MATERIEL CORPORATION

700 FENIMORE ROAD

MAMARONECK, NEW YORK

CABLE  
TEPEI  
MAMARONECK, N.Y.



COMMUNICATION ENGINEERS

IN CANADA:  
TMC (CANADA) LTD.  
OTTAWA, ONTARIO