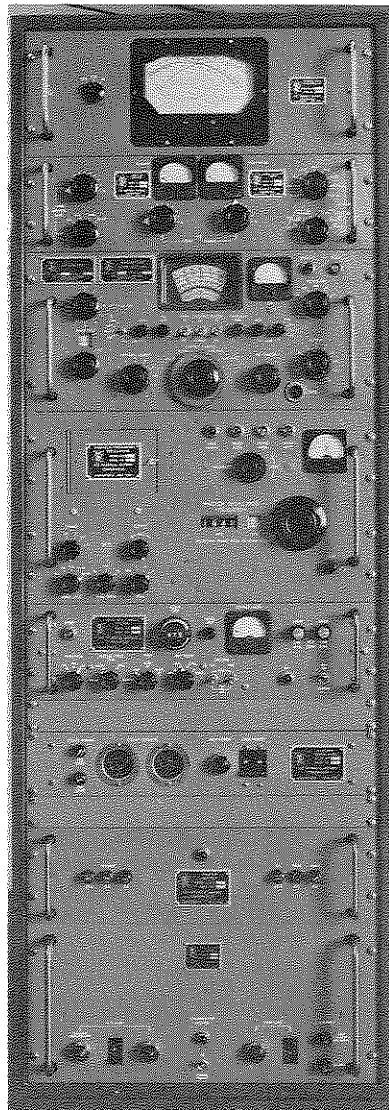


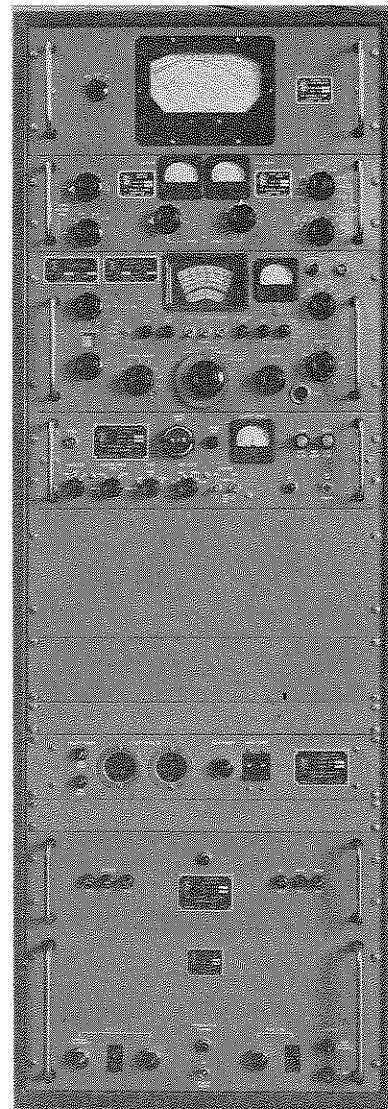
JAN 12 1962

TECHNICAL BULLETIN NUMBER 1003

Sideband Transmitting Series  
TMC Models SBT-350



SBT-350H



SBT-350M

The TMC Models SBT-350 are general purpose transmitters that provide SSB, ISB, AM, CW, FSK, and FAX over the frequency range of 2 to 32 megacycles at a conservative output rating of 350 watts peak envelope power.

Many configurations of the TMC SBT-350 series are available for various modes of operation and customer options regarding frequency control devices, wide or narrow band exciters, antenna couplers, and base or shock mounts.

## Sideband Transmitting Series

These transmitters feature building block versatility, which provides ease of installation, operation and maintenance. All units are completely bandswitched with front panel tuning. Pi-L network tuning of the final amplifier offers a wide range of impedance matching. ALDC (Automatic Load and Drive Control) is incorporated to improve linearity, limit distortion, and maintain a relatively constant RF output level during high peaks of modulation or load changes. Interlock protection and forced air cooling are standard features.

TMC SBT-350 transmitters have been thoroughly field proven in military and commercial installations afloat, ashore, and in mobile vans over world wide environmental conditions wherever the requirement exists for a hard working dependable 350 watt transmitter.

### TECHNICAL SPECIFICATIONS, MODEL SBT-350

FREQUENCY RANGE:	Continuously tunable, 2 to 32 megacycles, band-switched.
MODES OF OPERATION:	Refer to specifications on individual units.
POWER OUTPUT:	350 watts PEP 175 watts average CW and FSK.
OUTPUT IMPEDANCE:	Will match any unbalanced load from 70 to 150 ohms at $\pm 20$ degrees in the range of 2 to 4 megacycles and any unbalanced load from 50 to 600 ohms at $\pm 45$ degrees in the range of 4 to 32 mc.
STABILITY:	SBE — 1 part in $10^6$ per day. (Crystal Controlled) Variable Oscillator (VOX) — Better than 20 cycles per megacycle for any fixed temperature within the range 0 to 50° C. — When used in conjunction with the SBE, maximum error should not exceed 100 cycles at 32 mc.
TUNING:	All tuning and bandswitching controls on the front panel. (no plug-in components or mechanical adjustments)
SIGNAL/DISTORTION RATIO:	Distortion at least 40 db below either tone of a standard two tone test 2 to 32 mc.
UNWANTED SIDEBAND REJECTION:	500 cycle single tone, 60 db down from full PEP output.
SPURIOUS SIGNALS:	50 db down from full PEP output.
CARRIER INSERTION:	-55 db to full output.
HARMONIC SUPPRESSION:	Second — at least 45 db below PEP output. Third — at least 55 db below PEP output.

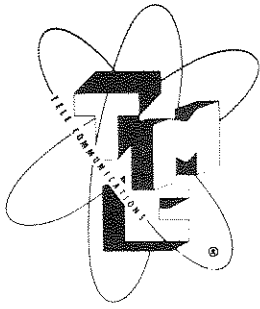
TMC MODEL NUMBER	MILITARY NOMENCLATURE	CAPABILITIES						COMPONENTS									INSTALLATION DATA					SHIPPING DATA (APPROX.)			LOGISTICS DATA	TMC MODEL NUMBER
		SSB	ISB	AM	CW	FSK	FAX	PAL-350 Linear R.F. Amplifier	SWR-1K Standing Wave Ratio Indicator	ATS-2 Antenna Tuning System	SBE-2 Transmitting Mode Selector (350-300 cps)	SBE-3 Transmitting Mode Selector (250-7500 cps)	VOX-5 Variable Frequency Oscillator	TIS-3 Tone Intelligence System	XFK Frequency Shift Exciter	APP-5 Auxiliary Power Panel	HEIGHT (in.)	WIDTH (in.)	DEPTH (in.)	WEIGHT (lbs.) (APPROX.)	PRIMARY POWER (watts)	WEIGHT (lbs.)	VOLUME (cu. ft.)	Size of largest container	A—FSN w/spares B—FSN w/o spares C—TMC Inst. Book D—MIL Inst. Book	
SBT-350-H		•	•	•	•	•	•	X	X			X	X	X		X	62½"	20¾"	24½"	586	950	1020	63	66" x 24" x 31"	A B C D	SBT-350-H
SBT-350-I		•	•	•	•	•	•	X		X	X		X	X		X	"	"	"	660	1050	1120	69	"	A B C D	SBT-350-I
SBT-350-J		•	•	•	•	•	•	X		X		X	X	X		X	"	"	"	660	"	1120	69	"	A B C D	SBT-350-J
SBT-350-K					•	•	•	X	X						X	X	"	"	"	450	850	817	51	"	A B C D	SBT-350-K
SBT-350-L					•	•	•	X		X					X	X	"	"	"	524	950	919	59	"	A B C D	SBT-350-L
SBT-350-M		•	•	•	•	•	•	X	X		X			X		X	"	"	"	519	830	910	58	"	A B C D	SBT-350-M
SBT-350-N		•	•	•	•	•	•	X	X			X		X		X	"	"	"	519	"	910	58	"	A B C D	SBT-350-N
SBT-350-O		•	•	•	•	•	•	X		X	X			X		X	"	"	"	593	930	1030	64	"	A B C D	SBT-350-O
SBT-350-P		•	•	•	•	•	•	X		X		X		X		X	"	"	"	593	"	1030	64	"	A B C D	SBT-350-P
SBT-350-Q		•	•	•	•	•	•	X	X		X		X	X		X	"	"	"	548	800	950	60	"	A B C D	SBT-350-Q
SBT-350-R		•	•	•	•			X	X		X		X		X	"	"	"	548	800	950	60	"	A B C D	SBT-350-R	
SBT-350-S		•	•	•	•			X	X			X	X		X	"	"	"	548	"	950	60	"	A B C D	SBT-350-S	
SBT-350-T		•	•	•	•			X		X	X		X		X	"	"	"	600	900	1035	65	"	A B C D	SBT-350-T	
SBT-350-U		•	•	•	•			X		X		X	X		X	"	"	"	600	"	1035	65	"	A B C D	SBT-350-U	
SBT-350-V		•	•	•	•			X	X		X				X	"	"	"	481	700	845	53	"	A B C D	SBT-350-V	
SBT-350-W		•	•	•	•			X		X	X				X	"	"	"	555	800	945	61	"	A B C D	SBT-350-W	
SBT-350-Y		•	•	•	•			X	X			X			X	"	"	"	481	700	845	53	"	A B C D	SBT-350-Y	
SBT-350-Z		•	•	•	•			X		X		X			X	"	"	"	555	800	945	61	"	A B C D	SBT-350-Z	

FOR ADDITIONAL INFORMATION ON COMPONENTS REFER TO TECHNICAL BULLETIN NUMBER:

2002 2014 2001 2008 2009 2018 2025 2020

## TMC Models SBT-350

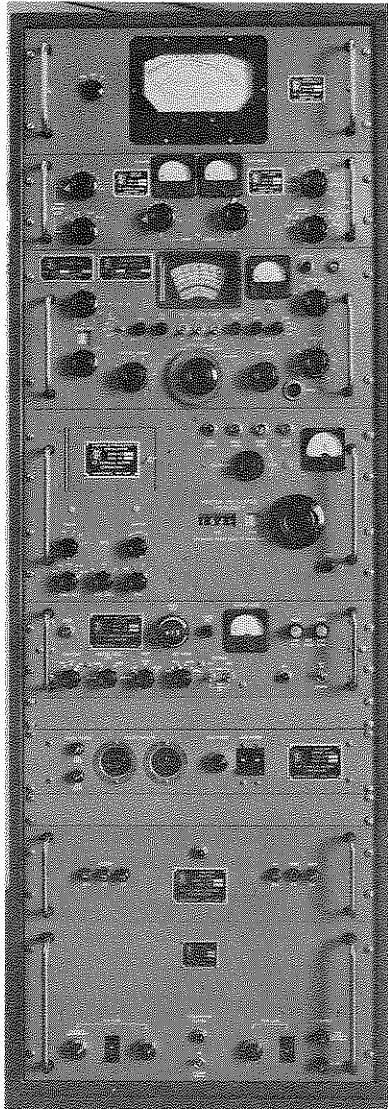
AUDIO RESPONSE:	SBE-2 Flat within $\pm 1.5$ db 350 to 3300 cps. SBE-3 Flat within $\pm 1.5$ db 250 to 7500 cps.
AUDIO INPUTS:	1) Two 600 ohm channels, balanced or unbalanced -20 dbm to +20 dbm. 2) One 500,000 ohm input for crystal or dynamic mike, -50 dbm for full PEP output.
HEAT DISSIPATION:	Dependent on unit selected — Average 700 watts.
ALDC:	An automatic load and drive control improves linearity, limits distortion and maintains a relatively constant RF output level during high peaks of modulation or load changes.
T/R FUNCTION:	A coaxial antenna relay and receiver muting circuit is provided to facilitate half duplex operation.
VOX OPERATION:	Voice control with anti-trip features adjustable gain and squelch.
FREQUENCY CONTROL:	Variable Oscillator (VOX) — Continuously tunable, direct reading variable frequency oscillator. SBE — 10 oven controlled crystal positions. XFK — 3 oven controlled crystal positions.
METERING:	Meters indicate operation of all critical circuits.
ENVIRONMENTAL:	Designed to operate in any ambient temperature between the limits of 0 to 50° C and for any value of humidity up to 90%.
COOLING:	Filtered forced air blower system for maximum heat dissipation.
SAFETY FEATURES:	1. Full interlock protection. 2. Full overload and fuse protection.
NOISE LEVEL:	60 db down from full PEP output.
KEYING METHODS AND SPEEDS:	XFK - Polar or neutral positive, linear input, 30,000 ohms impedance. 1000 wpm (750 bauds) TIS-3 - 50v, 100v, 20 ma, 60 ma inputs. All neutral, float- ing, or either side grounded. FAX — 400 bauds maximum -5 to +5 V or 0 to +20v for linear shift of 1200 cycles. FSK — 75 bauds (100 wpm) CW — 140 bauds (250 wpm)



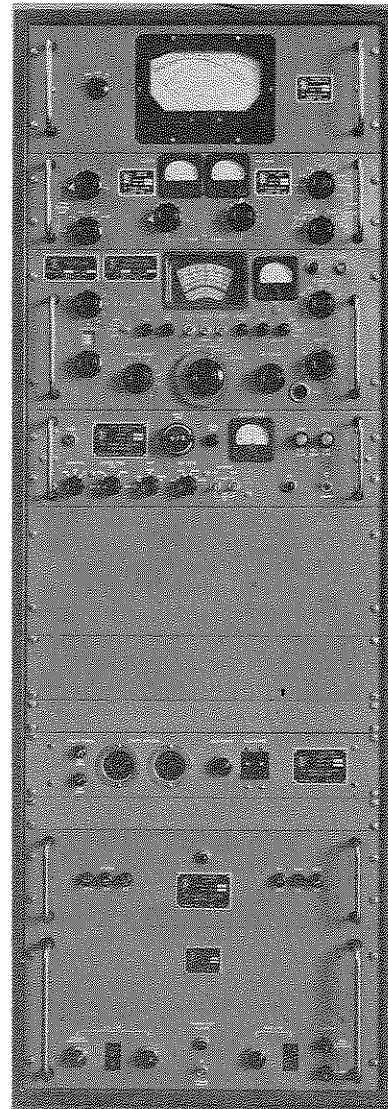
JAN 12 1962

TECHNICAL BULLETIN NUMBER 1003

Sideband Transmitting Series  
TMC Models SBT-350



SBT-350H



SBT-350M

The TMC Models SBT-350 are general purpose transmitters that provide SSB, ISB, AM, CW, FSK, and FAX over the frequency range of 2 to 32 megacycles at a conservative output rating of 350 watts peak envelope power.

Many configurations of the TMC SBT-350 series are available for various modes of operation and customer options regarding frequency control devices, wide or narrow band exciters, antenna couplers, and base or shock mounts.

## Sideband Transmitting Series

These transmitters feature building block versatility, which provides ease of installation, operation and maintenance. All units are completely bandswitched with front panel tuning. Pi-L network tuning of the final amplifier offers a wide range of impedance matching. ALDC (Automatic Load and Drive Control) is incorporated to improve linearity, limit distortion, and maintain a relatively constant RF output level during high peaks of modulation or load changes. Interlock protection and forced air cooling are standard features.

TMC SBT-350 transmitters have been thoroughly field proven in military and commercial installations afloat, ashore, and in mobile vans over world wide environmental conditions wherever the requirement exists for a hard working dependable 350 watt transmitter.

### TECHNICAL SPECIFICATIONS, MODEL SBT-350

FREQUENCY RANGE:	Continuously tunable, 2 to 32 megacycles, band-switched.
MODES OF OPERATION:	Refer to specifications on individual units.
POWER OUTPUT:	350 watts PEP 175 watts average CW and FSK.
OUTPUT IMPEDANCE:	Will match any unbalanced load from 70 to 150 ohms at $\pm 20$ degrees in the range of 2 to 4 megacycles and any unbalanced load from 50 to 600 ohms at $\pm 45$ degrees in the range of 4 to 32 mc.
STABILITY:	SBE — 1 part in $10^6$ per day. (Crystal Controlled) Variable Oscillator (VOX) — Better than 20 cycles per megacycle for any fixed temperature within the range 0 to 50° C. — When used in conjunction with the SBE, maximum error should not exceed 100 cycles at 32 mc.
TUNING:	All tuning and bandswitching controls on the front panel. (no plug-in components or mechanical adjustments)
SIGNAL/DISTORTION RATIO:	Distortion at least 40 db below either tone of a standard two tone test 2 to 32 mc.
UNWANTED SIDEBAND REJECTION:	500 cycle single tone, 60 db down from full PEP output.
SPURIOUS SIGNALS:	50 db down from full PEP output.
CARRIER INSERTION:	-55 db to full output.
HARMONIC SUPPRESSION:	Second — at least 45 db below PEP output. Third — at least 55 db below PEP output.

TMC MODEL NUMBER	MILITARY NOMENCLATURE	CAPABILITIES						COMPONENTS								INSTALLATION DATA					SHIPPING DATA (APPROX.)			LOGISTICS DATA	TMC MODEL NUMBER	
		SSB	ISB	AM	CW	FSK	FAX	PAL-350 Linear R.F. Amplifier	SWR-1K Standing Wave Ratio Indicator	ATS-2 Antenna Tuning System	SBE-2 Transmitting Mode Selector (350-3300 cps)	SBE-3 Transmitting Mode Selector (250-7500 cps)	VOX-5 Variable Frequency Oscillator	TIS-3 Tone Intelligence System	XFK Frequency Shift Exciter	APP-5 Auxiliary Power Panel	HEIGHT (in.)	WIDTH (in.)	DEPTH (in.)	WEIGHT (lbs.) (APPROX.)	PRIMARY POWER (watts)	WEIGHT (lbs.)	VOLUME (cu. ft.)	Size of largest container		A—FSN w/spares B—FSN w/o spares C—TMC Inst. Book D—MIL Inst. Book
SBT-350-H		•	•	•	•	•	•	X	X			X	X	X		X	62½"	20½"	24½"	586	950	1020	63	66" x 24" x 31"	A B C D	SBT-350-H
SBT-350-I		•	•	•	•	•	•	X		X	X		X	X		X	"	"	"	660	1050	1120	69	"	A B C D	SBT-350-I
SBT-350-J		•	•	•	•	•	•	X		X		X	X	X		X	"	"	"	660	"	1120	69	"	A B C D	SBT-350-J
SBT-350-K					•	•	•	X	X						X	X	"	"	"	450	850	817	51	"	A B C D	SBT-350-K
SBT-350-L					•	•	•	X		X					X	X	"	"	"	524	950	919	59	"	A B C D	SBT-350-L
SBT-350-M		•	•	•	•	•	•	X	X		X			X		X	"	"	"	519	830	910	58	"	A B C D	SBT-350-M
SBT-350-N		•	•	•	•	•	•	X	X			X		X		X	"	"	"	519	"	910	58	"	A B C D	SBT-350-N
SBT-350-O		•	•	•	•	•	•	X		X	X			X		X	"	"	"	593	930	1030	64	"	A B C D	SBT-350-O
SBT-350-P		•	•	•	•	•	•	X		X		X		X		X	"	"	"	593	"	1030	64	"	A B C D	SBT-350-P
SBT-350-Q		•	•	•	•	•	•	X	X		X		X	X		X	"	"	"	548	800	950	60	"	A B C D	SBT-350-Q
SBT-350-R		•	•	•	•			X	X		X		X		X	"	"	"	548	800	950	60	"	A B C D	SBT-350-R	
SBT-350-S		•	•	•	•			X	X			X	X		X	"	"	"	548	"	950	60	"	A B C D	SBT-350-S	
SBT-350-T		•	•	•	•			X		X	X		X		X	"	"	"	600	900	1035	65	"	A B C D	SBT-350-T	
SBT-350-U		•	•	•	•			X		X		X	X		X	"	"	"	600	"	1035	65	"	A B C D	SBT-350-U	
SBT-350-V		•	•	•	•			X	X		X				X	"	"	"	481	700	845	53	"	A B C D	SBT-350-V	
SBT-350-W		•	•	•	•			X		X	X				X	"	"	"	555	800	945	61	"	A B C D	SBT-350-W	
SBT-350-Y		•	•	•	•			X	X			X			X	"	"	"	481	700	845	53	"	A B C D	SBT-350-Y	
SBT-350-Z		•	•	•	•			X		X		X			X	"	"	"	555	800	945	61	"	A B C D	SBT-350-Z	

FOR ADDITIONAL INFORMATION ON COMPONENTS REFER TO TECHNICAL BULLETIN NUMBER:

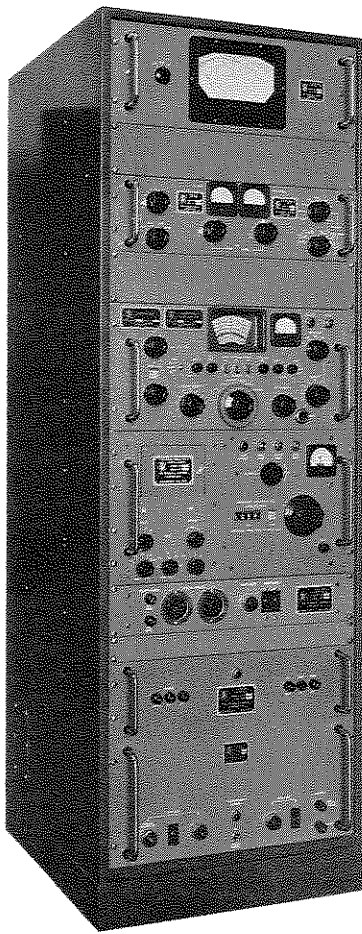
2002	2014	2001	2008	2009	2018	2025	2020
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AUDIO RESPONSE:	SBE-2 Flat within $\pm 1.5$ db 350 to 3300 cps. SBE-3 Flat within $\pm 1.5$ db 250 to 7500 cps.
AUDIO INPUTS:	1) Two 600 ohm channels, balanced or unbalanced -20 dbm to +20 dbm. 2) One 500,000 ohm input for crystal or dynamic mike, -50 dbm for full PEP output.
HEAT DISSIPATION:	Dependent on unit selected — Average 700 watts.
ALDC:	An automatic load and drive control improves linearity, limits distortion and maintains a relatively constant RF output level during high peaks of modulation or load changes.
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VOX OPERATION:	Voice control with anti-trip features adjustable gain and squelch.
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METERING:	Meters indicate operation of all critical circuits.
ENVIRONMENTAL:	Designed to operate in any ambient temperature between the limits of 0 to 50° C and for any value of humidity up to 90%.
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KEYING METHODS AND SPEEDS:	XFK - Polar or neutral positive, linear input, 30,000 ohms impedance. 1000 wpm (750 bauds) TIS-3 - 50v, 100v, 20 ma, 60 ma inputs. All neutral, float- ing, or either side grounded. FAX — 400 bauds maximum -5 to +5 V or 0 to +20v for linear shift of 1200 cycles. FSK — 75 bauds (100 wpm) CW — 140 bauds (250 wpm)

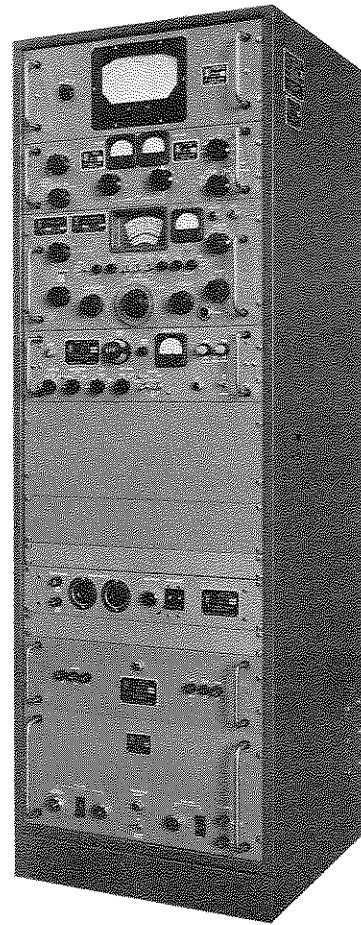


## TMC Models SBT-350

INSTALLATION DATA:	Refer to specifications on individual units.
PRIMARY POWER:	115v 50/60 cycles 1 Phase
POWER CONSUMPTION:	Refer to chart.
SHIPPING DATA:	Refer to Chart.
COMPONENTS AND CONSTRUCTION:	All equipment is manufactured in accordance with JAN/MIL specifications wherever practicable.

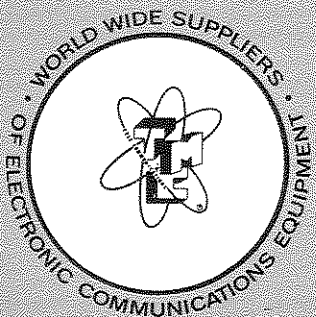


SBT-350R



SBT-350N

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TECHNICAL MATERIEL CORPORATION



# The TECHNICAL MATERIEL CORPORATION

700 FENIMORE ROAD MAMARONECK, NEW YORK

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