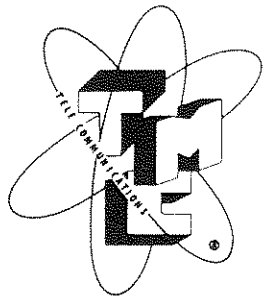
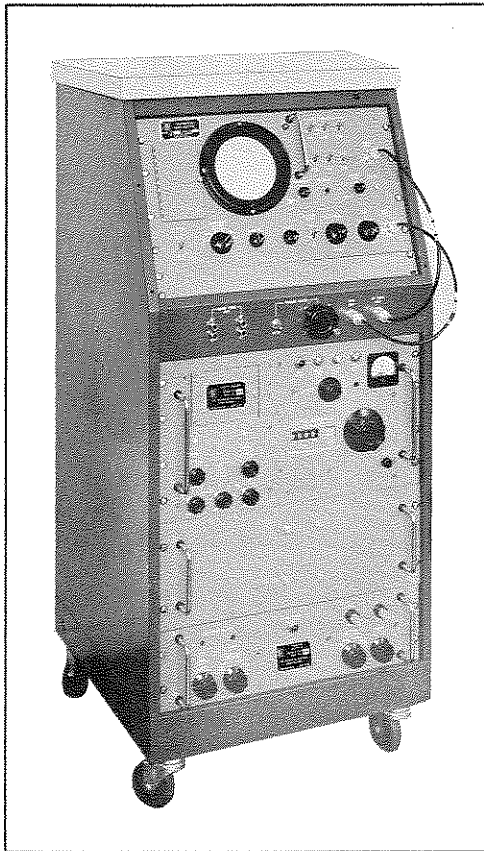


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SALES SERVICE BULLETIN NUMBER 260



Single Sideband Analyzer
TMC Model PTE-3
AN/GRM-33()



The PTE-3, Single Sideband Analyzer, was designed for the specific purpose of tuning and aligning single sideband exciters and transmitters permitting a visual analysis of intermodulation distortion products, hum and noise. The unit provides both automatic and manual sweep control. Use of the manual sweep control allows the operator to make a minute, detailed study of the entire sweep pattern or any portion thereof, thus making possible more precise adjustment for the minimizing of distortion; reduction of hum; suppression of carrier and the setting of tone and carrier levels. The manual sweep also permits closer scrutiny of the spectrum immediately adjacent to the carrier for hum, noise and spurious frequencies.

For example: A distortion "pip" may be "held" so that as adjustments are made to reduce this distortion the results may be continuously observed on the scope without waiting for recycling of the display.

The PTE-3 consists of three basic TMC units:

1. Spectrum Analyzer - TMC Model FSA (AN/URM-116)
2. Variable Frequency Oscillator - TMC Model VOX-5 (0-330 ()/FR)
3. Two-tone Generator - TMC Model TTG (C-579/URT)

The tone generator supplies two AF and two RF tones. The AF tones are chosen to permit visual analysis of the 3rd, 5th and 7th order products. The RF tones are gen-

erated for the purpose of checking the proper operation of the Spectrum Analyzer itself.

The TMC Model VOX, Variable Frequency Oscillator, is provided and because of its accuracy and stability permits easy tuning and long-term testing.

The PTE-3 rack is equipped with four heavy duty casters which permit the analyzer to be moved to the equipment to be tested. The front panel of the FSA is sloped for convenient visibility from either a standing or sitting position. All controls and test connections are made on the front panels. The system is supplied with all cables and connections necessary for instant operation.

TECHNICAL SPECIFICATIONS:

| | |
|---|--|
| SWEEP WIDTHS: | Fixed - 150, 500 cps, 2 kc, 10 kc, 30 kc Continuously variable - 0-100 kc, 0-2kc |
| INPUT CENTER FREQUENCY: | 500 Kc |
| BANDPASS REGION: (after input mixer) | 450 - 500Kc |
| IMAGE REJECTION: | Better than 130:1 at input center frequency |
| INPUT IMPEDANCE: | 50 ohms at each of the two terminals |
| INPUT ATTENUATOR: | 0 - 65 db attenuation of the input signal in 5 db steps. Accuracy $\pm 2\%$ to 30 mc. |
| AMPLITUDE SCALES: | Linear and 2 decade log selectable by front panel switch. A front panel 20 db. I. F. attenuation may be used to extend calibrated range to 60 db. |
| TWO-TONE TEST: | All in-band residual (odd order) intermodulation products better than 60 db below level of the two equal reference signals deflected 20 db above full scale log provided that reference signals are separated so that their intersection is at least 60 db down. |
| FREQUENCY RANGE: | 2 - 64 megacycles continuously tuned |
| AF TEST TONES: | 935 cps 2805 cps |
| RF TEST TONES: | 1999 Kc crystal controlled 2001 Kc crystal controlled |
| HARMONIC DISTORTION: TEST TONES | AF: more than 65 db down RF: more than 60 db down |
| AF OUTPUT IMPEDANCE: | 600 ohms unbalanced |
| AF OUTPUT LEVEL: | 0 - 0.5 volts continuously variable |
| POWER REQUIREMENTS: | 115/230 volts, 50/60 cps, Single Phase, |
| POWER CONSUMPTION: | Approximately 315 watts average or 465 watts peak depending upon cycling of oven heating element. |

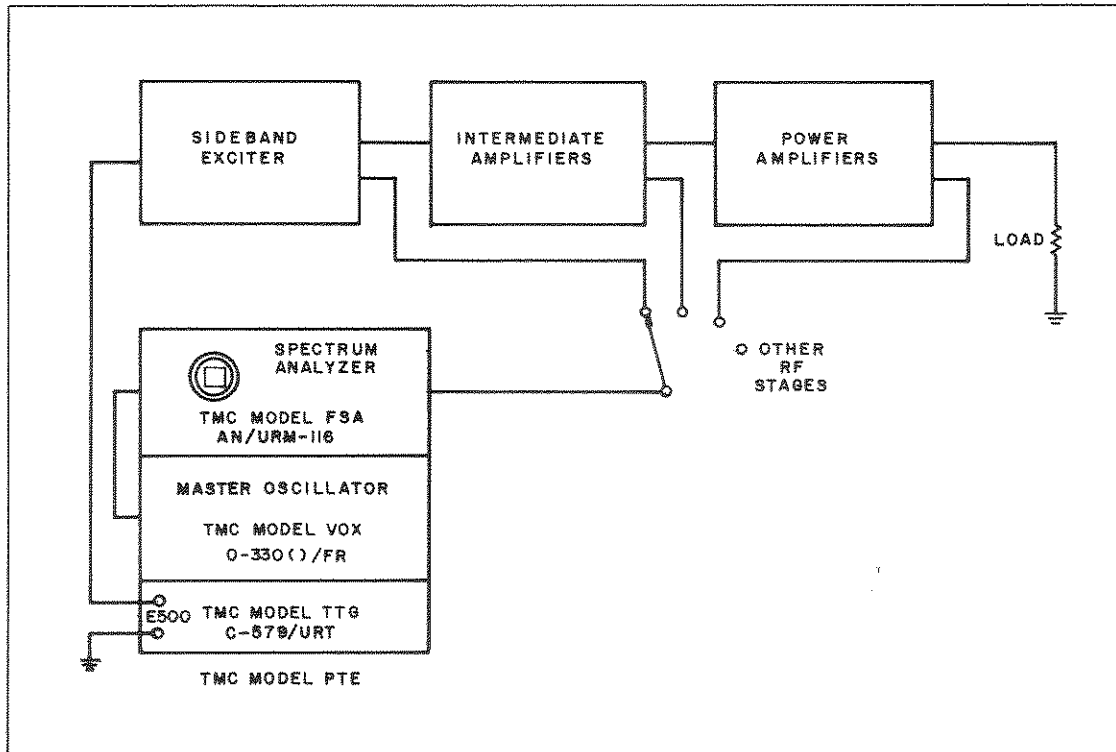
Line regulator supplied. Special regulators available for 220 volts or 50 cps operation.

SIZE: 23 1/2" x 24" x 51"

SHIPPING WEIGHT: 500 lbs.

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

TYPICAL INSTALLATION

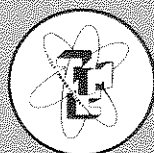


THE TECHNICAL MATERIEL CORPORATION

700 FENIMORE ROAD

MAMARONECK, NEW YORK

CABLE
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COMMUNICATION ENGINEERS

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