



SALES SERVICE INFORMATION

Th Technical Materiel Corporation
Mamar neck New York

SALES SERVICE BULLETIN NUMBER 115

Model TAD Six Channel Tone Demodulator

The Model TAD is a highly versatile device for the demodulation of six standard tones, each of which has been amplitude modulated with intelligence. It consists of a 10 $\frac{1}{2}$ x 19 inch panel assembly 1 $\frac{1}{2}$ inches deep with six separate tone demodulation circuits, power supply, monitoring and relay facilities, plus a phantom circuit for use on telephone lines.

The TAD is used at a receiving terminal for the conversion of six separate keyed tones into six separate D.C. functions. The input is connected to a telephone line or radio telephone link and accepts six tone frequencies separated 340 cps with the lowest frequency at 765 cps.

The amplitude modulated intelligence pulses of the combined frequencies from the line are introduced through a 600 ohm input transformer and a bridging network into six separate band pass filter networks. Each band pass filter is centered on one of the six tone frequencies with a characteristic 100 cps wide at 3 db points with the crossover occurring 40 db down. Each individual band pass filter network is followed by two stages of amplification, a balanced full wave rectifier, diode clamping circuit, DC keying circuit and a sensitive high speed keying relay. All controls are accessible from the front.

Each of the demodulator circuits is constructed on a 2 $\frac{1}{2}$ " x 5" x 10" chassis which plugs into the shelf and panel assembly. Instantaneous removal of any of the six units is possible without impairing the operation of the remaining units. Guide strips on the shelf and guide pins on the plugs insure smooth and rapid installation. Tubes are accessible from the front. Jacks have been provided on the front panel for connection to each of the relays and the audio input circuit. Terminal strips have been provided on the rear of the chassis for the same purpose.

Technical Specifications:

Input Level:	Any amplitude between minus 20 and plus 30 dbm.
Tone Frequencies:	765, 1105, 1445, 1785, 2125 and 2465 cps.
Output:	Neutral relay contacts with sense reversal for either contacts closed on mark or open on mark, as desired.
Keying Speed:	100 wpm maximum Morse and 100 wpm maximum Teletype.

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Metering: VU meter indicating combined input level or individual channel levels.

Controls:

1. Input Attenuator
2. Individual Bias controls
3. Individual sense switches
4. Individual channel level controls
5. Meter selector switch
6. Individual test switches
7. Primary power switch

Power Requirements: 110/220 volts 50/60 cycle AC
Approximately 100 watts.

Dimensions: 10¹/₂" x 19" x 14".

Weight: Approximately 70 pounds.

Tube Complement:

12 each	6AU6	Amplifiers
3 each	6AL5	Tone Rectifiers
6 each	6AL5	Clamping Tubes
6 each	6J6	DC Keyer
2 each	5U4G	Rectifier
1 each	VR 90	Regulator
1 each	6SH7	DC Amplifier
1 each	6AS7	Control Tube
1 each	6X5	Bias Rectifier
1 each	VR 75	Bias Regulator

Components & Construction: Equipment is manufactured in accordance with JAN specifications wherever practicable.

We reserve the right to make engineering changes in these specifications when required.