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**TUNABLE DEMODULATOR
TYPE DMS-105****FEATURES**

The Type DMS-105 Tunable Demodulator is designed to demodulate AM, FM, SSB, CW, MCW, and FSK signals in the 1-kHz to 1600-kHz frequency range. The DMS-105 tunes this range in two bands: 1 kHz to 600 kHz and 540 kHz to 1600 kHz. A single RF tuner is used to cover this range. Band selection is by means of a front-panel switch which activates the desired local oscillator in the tuner and selects one of two inputs impedances, either 50 or 1000 ohms. The tuned frequency is displayed by a 5-digit neon readout located on the front panel. By using the display's decimal shift feature, the indicated frequency is within 10 Hz of the received frequency throughout the tuning range. The dynamic range of the DMS-105 is expanded by means of a six-position, front-panel controlled attenuator which provides up to 50 dB of attenuation in 10-dB steps.

There are four IF bandwidths available for use during the reception of upper or lower sideband signals: 2.5, 3.5, 4, and 8 kHz. Five additional bandwidths are provided for use when the remaining operating modes are selected: 150 Hz, 1, 5, 7, 8, and 16 kHz. A translated IF output with selectable center frequencies of 15, 50, or 100 kHz is also available. Provisions are made to utilize an external local oscillator in lieu of internal circuitry. A front-panel switch selects the desired oscillator.

A digital automatic frequency control (DAFC) circuit in the DMS-105 permits locking the tuner's selected local oscillator to the electronic counter circuits for the frequency display. In addition to counteracting local oscillator drift, the DAFC circuit, in effect, acts as a frequency synthesizer to provide the equivalent of 160,000 crystal-controlled frequencies, each separated by 10 Hz, when used in the decimal shift mode. Thus the DMS-105 can be locked to a particular frequency whether or not a signal is present. A beat frequency oscillator is included for use during the reception of CW, MCW, FSK, and SSB signals. The BFO has three operating modes: zero beat, 1 kHz offset, and variable. In the variable mode the frequency may be changed by as much as ± 8 kHz.

The DMS-105 is constructed in a standard 19-inch panel size and occupies only 5.25 inches of vertical space.

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SPECIFICATIONS

Frequency Range	1 kHz to 1600 kHz in two bands: Band 1: 1 kHz to 600 kHz Band 2: 540 kHz to 1600 kHz
Types of Reception	AM, FM, SSB, CW, MCW, and FSK
Input Impedance	50 ohms or 1000 ohms, selectable by front-panel switch
Sensitivity (at 50-ohm input impedance and 1-kHz IF bandwidth)	30 μ V, minimum, for 20 dB (s plus n)/n, all modes
Input Attenuator	0 dB to 50 dB; 10 dB/step
IF Center Frequency	2.0 MHz
IF Bandwidths for AM, FM, CW, MCW, or FSK	150 Hz, 1, 5, 7, 8, and 16 kHz
IF Bandwidths for SSB	2.5, 3.5, 4, and 8 kHz upper or lower sideband
BFO	Disabled in FM and AM. Fixed at center of IF in upper and lower sideband. Controllable in BFO position as follows: 1. Zero beat (crystal-controlled) 2. 1-kHz offset (crystal-controlled) 3. Variable \pm 8 kHz
Image Rejection	70 dB, minimum
IF Rejection	60 dB, minimum
Digital AFC	Holds demodulator tuning within \pm 100 Hz of the indicated frequency in the normal AFC mode, and within \pm 10 Hz in the decimal shift AFC mode.
Input Monitor Switch	In the normal mode the unit functions as a normal demodulator; in the bypass mode the input is connected directly to the audio amplifier through the audio gain control.
Outputs	9: Front-panel phone jack (2000 ohms nominal), Rear-apron Audio (600-ohms ungrounded), 2-MHz IF output, SM Output, Video Output, FM Detector Output, AM Detector Output, Local Oscillator Output, Translated IF Output (2V p-p into 50-ohm load; 100, 50, or 15 kHz output front-panel selected).
Audio Amplifier Bandwidth	50 Hz to 16 kHz, minimum
Video Output Level	2 volts peak-to-peak into 50-ohm load
External LO input	0 dBm, minimum
Dimensions	5.25 inches high, 19 inches wide, and 18 inches deep, maximum
Power	115/230 Vac, 50-400 Hz, approximately 30 watts

Please contact us or our representative in your area for further information. Specifications subject to change without notice.