

**TechnAspecs**

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**ASTATIC**

## TRANSISTORIZED Communications MICROPHONES

Quality performance Field Effect amplified microphones for amateur, citizens band, mobile, aircraft, marine, etc. applications.

### FEATURES and SPECIFICATIONS

- **OUTPUT LEVELS\*:** -38 dB @ 1000 Hz re 1 volt/microbar into 1 megohm load.  
-44 dB @ 1000 Hz re 1 volt/microbar into 5000 ohm load.  
\*At max. gain setting.
- **OUTPUT ADJUSTMENT:** Approx. 40dB range with screwdriver adjustment through hole in rear housing.
- **OUTPUT IMPEDANCE:** Below 5000 ohms.
- **RECOMMENDED LOAD:** 100 ohms and up; performs well over entire impedance range up to open circuit.
- **SOLID STATE:** Field effect transistor amplifier and ceramic element have good temperature and humidity tolerance.
- **FREQUENCY RESPONSE:** Tailored for voice transmission for maximum intelligibility and clarity (aves 200-3000 Hz—Refer to curves.)
- **POLAR PATTERN:** Semi-directional.
- **SWITCH:** Operated by press-to-talk lever. DPDT switch with spring return disconnects battery in "OFF" position. Operates control circuit and amplifier in "ON" position. Long life trouble-free switch has smooth feel when operated by either hand.
- **CONTROL CIRCUIT:** The TMD-107 is factory wired for "Relay" type operation. The TMD-107-E is factory wired for "Electronic" type operation. Switch can be readily converted to either "Relay" or "Electronic" as needed. (Refer to schematic.)
- **CABLE:** Three conductor (one conductor shielded) coiled cord that extends to 5 feet. Durable strain relief bushing protects against cable breakage at microphone housing.
- **HOUSING:** Attractive, durable high impact molded Cyclocac\*.
- **FINISH:** Front half is bright chrome plated; rear half is charcoal grey.
- **FULLY SHIELDED:** Reduces possibility of external interference and RF feedback.
- **BATTERY:** Uses 7 volt mercury battery (Mallory TR175 or equal).
- **MOUNTING BRACKET:** Design permits mounting on a vertical or horizontal surface.
- **SIZE:** 3-3/8" high x 2-3/8" wide x 1-5/16" deep. (See drawing)
- **WEIGHT:** 8-1/4 ounces.

\* Tradename of Borg Warner



Model TMD-107 (Relay switching)

Model TMD-107-E (Electronic switching)



**THE ASTATIC CORP.**

CONNEAUT, OHIO • U.S.A. 44030

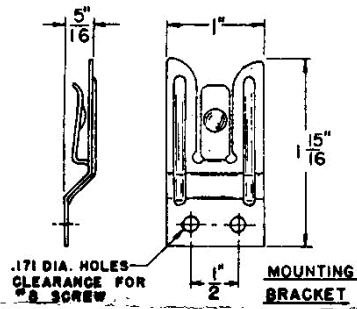
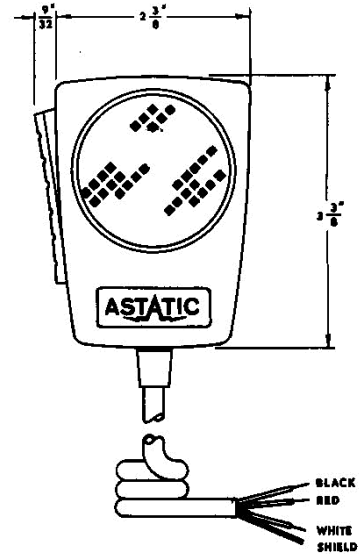
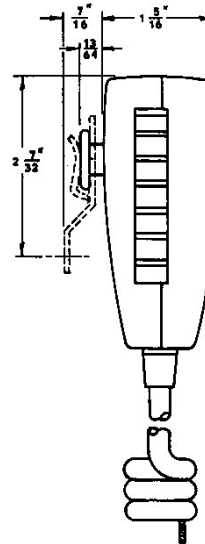
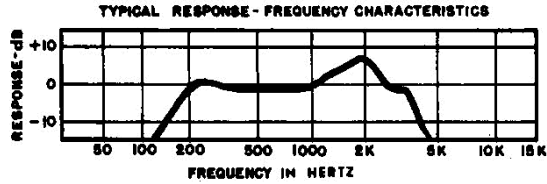
IN CANADA: Canadian Astatic, Ltd.,  
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MANUFACTURERS OF PHONOGRAPH CARTRIDGES  
NEEDLES • PICKUPS • MICROPHONES

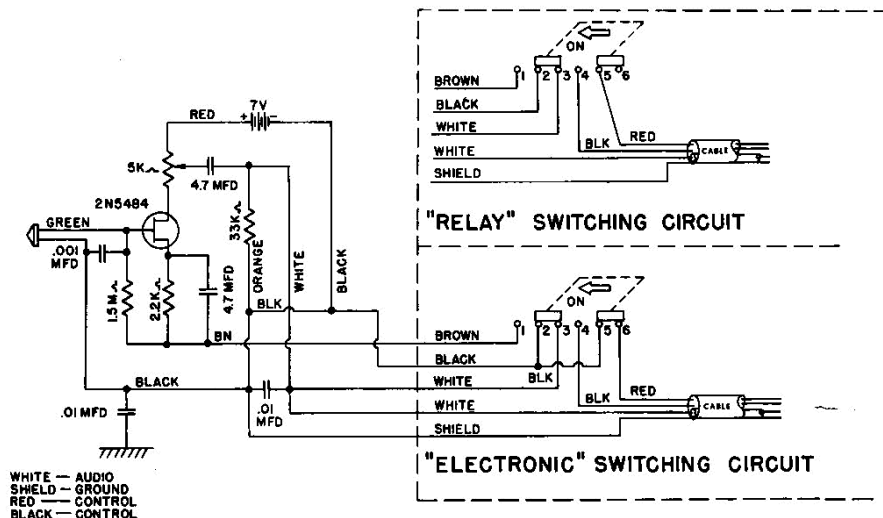
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270-78 Newtown Road, Plainview, New York 11803

# Specifications: Model TMD-107 Model TMD-107-E



BLACK  
RED  
WHITE  
SHIELD



**TMD-107 (RELAY) SCHEMATIC AND  
TMD-107-E (ELECTRONIC) SCHEMATIC**

**Service Note:** The Models TMD-107 and TMD-107-E are designed for easy, quick field replacement of battery, cartridge, cable and switch.

## MODELS TMD-107 and TMD-107-E INSTRUCTIONS

MODELS: The TMD-107 is factory wired for "RELAY" type switching. The TMD-107-E is factory wired for "ELECTRONIC" type switching.

TRANSMITTER CONNECTIONS: Due to the variety of transmitters with which the TMD-107 and TMD-107-E can be used (including directly wired units), no matching plug for the transmitter is supplied. Proper plugs are available from dealers and distributors.

Plug wiring data is shown on the schematic diagram as:

WHITE - AUDIO	RED - CONTROL
SHIELD - GROUND	BLACK - CONTROL

NOTE: The TMD-107 and TMD-107-E are supplied with a 7 volt long life mercury battery installed. Instructions for battery replacement and for control wiring changes are explained below.

ACTIVATING THE MICROPHONE: Observe the hole in the rear housing. Deep in this hole is the gain control adjustable with a flat blade (approximately 1/8") screwdriver. Set this control counter-clockwise to zero gain. Plug the microphone connector into the transmitter. Depress the press-to-talk lever. While talking into the microphone at normal talking distance, slowly turn the gain control until modulation is at desired level. Once properly set, the gain control should seldom require re-setting under equivalent operating conditions.

ACCESS TO INSIDE: Remove the rear housing by unscrewing the four screws in the rear. Carefully lift off the rear housing. When reassembling, depress the switch lever fully and hold while tightening screws.

BATTERY REPLACEMENT: Remove the battery from the battery case and install a new battery, observing proper polarity (+ end of battery to + end of case, small cap with red lead). Locate the battery case on the circuit board insulator and carefully replace the rear housing and fasten with the four screws previously removed. Depress the switch lever fully while tightening the screws.

REPLACEMENT BATTERIES: Any NEDA 1501, Mallory TR175, Burgess H175, Eveready E175 or Ray O Vac 1501.

APPLICATION: "RELAY" type operation wherein one side is switched with respect to ground can be performed with "ELECTRONIC" switch circuits without the need for "RELAY" type switch circuits.

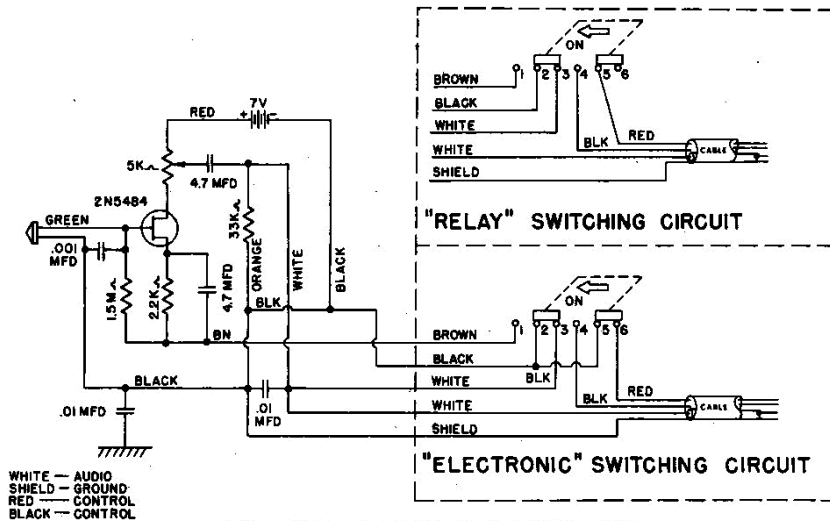
If required, conversion of switch circuits between "RELAY" and "ELECTRONIC" types can be readily performed in the field as follows:

TMD-107 to TMD-107-E: Move the RED lead from switch terminal 5 to terminal 6. Add an insulated jumper lead from terminal 5 to cartridge ground terminal.

TMD-107-E to TMD-107: Remove the jumper lead from switch terminal 5 to cartridge ground terminal. Move the RED lead from terminal 6 to terminal 5.

Reassemble the rear housing carefully by means of the four screws previously removed. Depress the switch lever fully while tightening screws.

**NOTE: Removable gain control adjustment knob is supplied as an accessory.**



TMD-107 (RELAY) SCHEMATIC AND  
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