

**INSTRUCTIONS**  
**MODEL 705/705-A ELECTRET MICROPHONE**

**GENERAL**

The TEN-TEC Model 705 is an Electret desk microphone designed for use as a station microphone in Commercial and Amateur Radio communications and in public address and paging installations. The microphone consists of a base section and flexible gooseneck mounted microphone. The Model 705 incorporates a momentary type Push-To-Talk (PTT) button (gray), a Push-On, Push-Off locking type button (black), electronic circuitry to switch the microphone on, a signal amplifier that adds 13 dB of gain to the output level, an attached output cable and a battery compartment for a 9 volt alkaline battery. The PTT circuitry allows switching transmitters and/or transceivers, that have low voltage positive T/R lines, into the transmit mode. A light emitting diode in the base signals the transmit mode.

The Model 705 comes in two versions. The standard unit includes a four pin standard locking type cable connector which is pin compatible with TEN-TEC Models 560 and 561 Corsairs and the Model 585 Paragon. With a minor resistor change in the Corsairs (described below), the standard unit may be powered from the transceiver without the need for a 9 volt battery. The Model 705-A comes with a stereo type 1/4" phone plug. This unit is compatible with TEN-TEC Model 525 Argosy, Models 540 and 544 Tritons, Model 515 Argonaut and other early models. A 9 volt battery is required for the Model 705-A.

**SPECIFICATIONS**

**TYPE:** Electret Condenser Microphone.

**SENSITIVITY:** -52 dBV (0 dBV=1V/ $\mu$ Bar @ 1 kHz).

**OUTPUT IMPEDANCE:** Works into any circuit of 100 ohms or more.

**MAXIMUM SOUND PRESSURE LEVEL:** 130 dB.

**BATTERY TYPE:** 9 volt Alkaline transistor battery.

**ELECTRONICS:** C-Mos PTT switch, C-Mos signal amplifier, NPN T/R transistor.

**CURRENT REQUIRED:** Receive mode: Less than 2 microamperes.

Transmit mode: 2 milliamperes typical, with 9 volt battery.

**SEMICONDUCTORS:** 2 ICs; 1 Transistor; 7 Diodes.

**WEIGHT:** 12 oz. including battery.

## INSTALLATION

The standard Model 705 may be externally powered if desired. A source of 7 to 14 volts DC capable of delivering at least 5 milliamperes is required. If no external power source is contemplated, or when Model 705-A is used, a 9 volt alkaline type battery (not supplied) must be installed. The compartment, located in the base, is accessed by removing the two small screws holding the battery cover. A spring clip holds the battery and a standard connector is accessible through the opening. Proper battery installation can be checked by pushing the PTT button and observing the LED indicator. The gray button is a momentary Push-To-Talk type and the black button is a Push On-Push Off type.

The four pin connector wiring is:

Pin 1	—	White - Signal
Pin 2	—	Shield - Ground
Pin 3	—	Black - PTT Line
Pin 4	—	Plus Electret Voltage (7 to 14 VDC)

The stereo 1/4" phone connections are:

Tip	—	Black - PTT Line
Band	—	White - Signal
Sleeve	—	Shield - Ground

The internal NPN power transistor in the PTT circuitry has an open collector connection to the PTT lead in the output cable. Whenever the PTT button places the microphone in "Talk" mode as indicated by the LED, the transistor is turned on and the PTT lead is effectively grounded. This function can be used to key transistor transceivers "on" automatically, or may be used to close a relay that switches other types of transmitters "on", such as grid block keyed units.

## CORSAIR MODIFICATION

Standard Model 705 microphones may be powered from Corsair transceivers with a resistor change in the polarizing voltage circuit. All Corsair I and those Corsair II transceivers with serial numbers below 580-1970 will require this modification to eliminate use of a 9 volt battery. (These transceivers may be used without modification with the battery installed.) A 10 kohm resistor close to the terminal pin with the yellow wire, on the IF/AF assembly (see sketch), should be bridged with a 470 ohm, 1/2 watt resistor. Unfortunately, this resistor was left off of the IF/AF schematic, so it does not show up in the Corsair manual. However, it is electrically in series with the M+ (or +V) lead from Pin 4 of the Mic connector which appears in the chassis wiring diagram.

