

TELEX COMMUNICATIONS, INC.  
9600 Aldrich Ave. So., Minneapolis, MN 55420 U.S.A.

## MODEL HT-400 WIRELESS HANDHELD MICROPHONE/TRANSMITTER

### GENERAL DESCRIPTION

The Telex Model HT-400 Wireless Handheld Microphone/Transmitter, used with a Telex Wireless Microphone Receiver, is ideal for sound reinforcement applications in broadcast, theaters, auditoriums, and houses of worship. The two-channel, crystal-controlled transmitter operates on selected VHF frequencies from 150-216 MHz. Twenty stock frequencies are available for immediate delivery, and at least fifteen systems may be operated simultaneously on separate channels.

The HT-400 operates on a standard 9-volt alkaline battery. A nickel-cadmium battery may be used, provided it is at least an 8.4-volt type (such as the Varta or Saft products). Battery life varies depending on the situation; however, one can expect six to eight hours on an alkaline and two to three hours on a nickel-cadmium.

### DESIGN FEATURES

The unit is housed in a tubular case made of fiberglass-reinforced resin, providing outstanding durability and isolation from mechanical vibration. The battery is accessed by unscrewing the outer tube assembly and sliding it off the unit. The inner frame assembly which houses the battery mechanism and circuit boards is made of high-impact ABS plastic. Circuit boards are 0.062-inch (1.57 mm) thick, glass-epoxy composition with surface-mounted components. The HT-400 has a specially designed battery compartment that makes it nearly impossible to load the battery backwards and automatically adjusts for size differences in 9-volt batteries. The unit incorporates two independent transmitter boards selectable by an internal switch for easy frequency selection in the field. The Transmitter features a user-changeable microphone head assembly with three microphone options allowing head changes in the field. The HT-400 incorporates an efficient, internal transmit antenna which does away with protruding whips from the base of the unit.



### OPERATING FEATURES

The power on/off and microphone mute switches are located on the bottom of the unit. There is a low battery indicator that lights a red LED when battery power has reached critical condition. The microphone gain potentiometer is located on the outside of the unit at the base of the microphone cartridge. There is a compander in/out switch on the inside of the unit which allows the user to defeat the compander. The frequency selector switch is located inside the unit next to the compander defeat switch. The HT-400 Transmitter is available with three different microphone cartridges: the Telex TE-10 unidirectional studio quality condenser, the Shure SM-58 unidirectional dynamic, and the Shure SM-87 unidirectional condenser. These cartridges are fully interchangeable by simply unscrewing the head and unplugging the connector. Since each cartridge exhibits unique characteristics, the user should consult the specifications for more information. The Transmitter utilizes a defeatable, internal compander circuit that assures maximum dynamic range and noise reduction. All controls are clearly marked as to function. The HT-400 is fully compatible with all Telex receivers and is type-accepted under FCC rules, parts 74 and 90.

### SPECIFICATIONS

**RF Output Power:** 45 mW max

**Modulation:** 54F3, 12 kHz deviation, 50 microseconds pre-emphasis

**Radiated Harmonic & Spurious Emissions:**

Greater than 30 dB below carrier

**Modulation Limiter:** Internal compressor (defeatable)

**Antenna:** Internal

**Battery:** 9-volt alkaline or 8.4-volt nickel-cadmium

**Battery Life:** Typically 6-8 hours on alkaline, 2-3 hours on nickel-cadmium

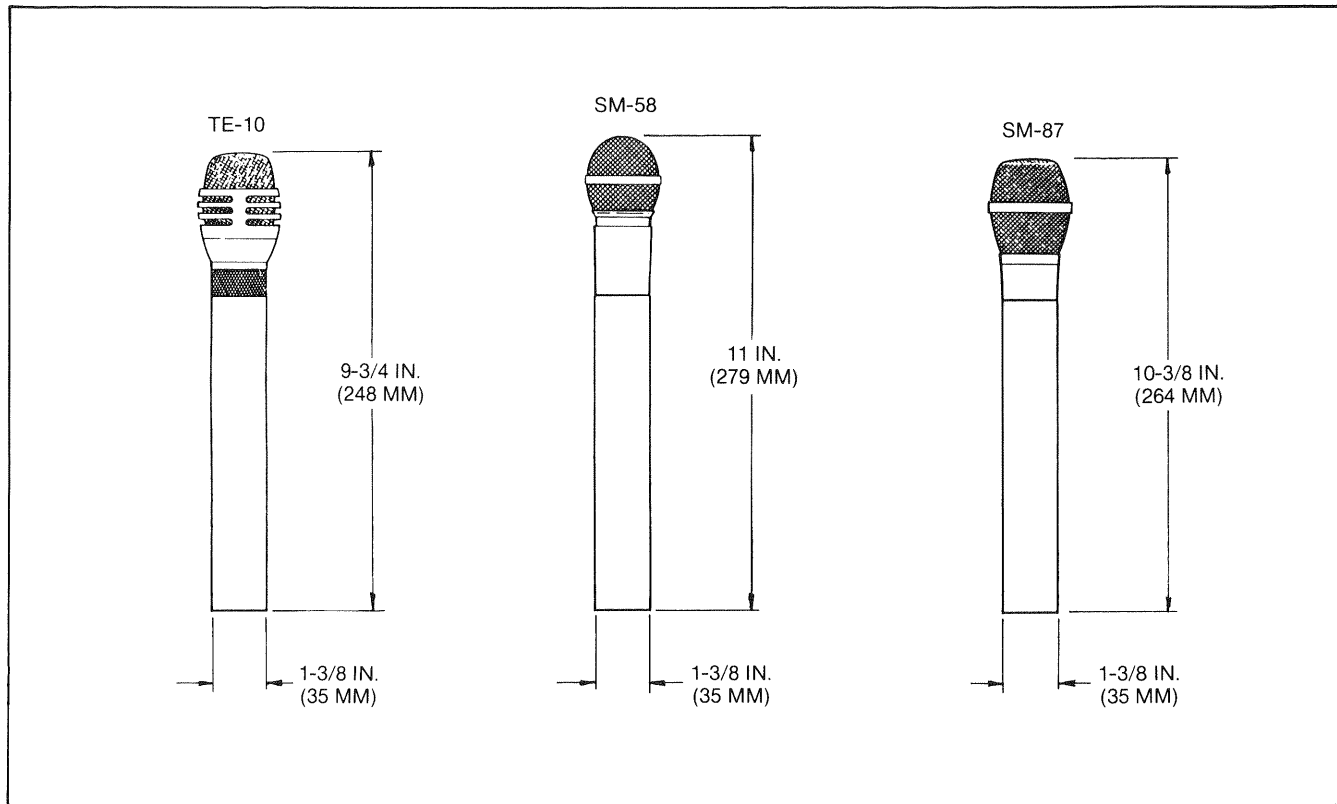
**Current Drain:** 35 mA

**Temperature Range:** -4° F to 130° F  
(-20° C to 55° C)

**Range:** 500 ft adverse, 1320 ft line of sight

Specification	TE-10	SM-58	SM-87
<b>Element Type:</b>	Condenser	Dynamic	Condenser
<b>Frequency Response ±1 dB:</b>	85-15,000 Hz	50-15,000 Hz	85-15,000 Hz
<b>Directional Pattern:</b>	Cardioid	Cardioid	Super Cardioid
<b>Max SPL:</b>	140 dB	140 dB	140 dB
<b>Dimensions:</b>	1 3/8 in. dia x 9 3/4 in. L	1 3/8 in. dia x 11 in. L	1 3/8 in. dia. x 10 3/8 in. L
<b>Weight:</b>	14.8 oz	16.4 oz	14.8 oz

## DIMENSIONS



## ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The Telex Model HT-400 Wireless Handheld Microphone/Transmitter shall be a two-channel, crystal-controlled oscillator design, with independent transmitter boards for each channel operating on selected VHF frequencies from 150-216 MHz. The Transmitter shall have separate power on/off and microphone mute switches located on the bottom of the unit. The Transmitter shall have a microphone gain control accessible from the outside of the unit. The Transmitter shall have an internal frequency selector switch for selection of either of the two transmit frequencies. The Transmitter shall use a standard 9-volt

battery, and the contacts shall be keyed for error-free loading. The Transmitter shall have a low battery LED. The Transmitter shall have user-changeable microphone heads. The Transmitter shall incorporate a compander circuit for maximum dynamic range and noise reduction. The compander shall be defeatable from an internal switch. The Transmitter shall use an internal transmit antenna. The Transmitter shall comply with FCC rules, parts 74 and 90. The Transmitter shall be a Telex Model HT-400 Wireless Handheld Microphone/Transmitter.

## ORDERING INFORMATION

Telex Model HT-400 Wireless Handheld Transmitter with TE-10 Microphone Head . . . . . Catalog No. 70331-XXX  
Telex Model HT-400 Wireless Handheld Transmitter with SM-58 Microphone Head . . . . . Catalog No. 70332-XXX  
Telex Model HT-400 Wireless Handheld Transmitter with SM-87 Microphone Head . . . . . Catalog No. 70333-XXX