

Description

The IED 500HH, 501HH, 510HH and 500G microphones are designed exclusively for use with IED announcement control systems. The 501HH is designed for use with versions of the 528 and 524 series microphone stations in which hand held microphones are used. The 500G is used for specific desktop versions of the 528 series microphone station where a gooseneck microphone is needed.

Each model utilizes an electret condenser cartridge that is positioned in the housing such that its frequency response is enhanced. The microphone element location provides the mechanism for good acoustical coupling to provide a full-bodied, highly intelligible voice signal. The built-in preamplifier and line driver circuitry provide a line level audio signal which can drive long cable lengths without high frequency roll off and minimize the susceptibility to interference.

The electret condenser microphone cartridge consists of a high voltage internal membrane, metal electrode and a Field Effect Transistor (FET). The requirement for a high voltage bias is not necessary as with ordinary condenser microphone elements. The cartridge features include a highly efficient electrical specification, pressure type operating principle, low impedance (2.2 kΩ), and high reliability under adverse shock, vibration and other environmental conditions.

IEDA501HH / IEDA500HH

The hand held microphone assembly contains an omnidirectional electret condenser microphone cartridge integrated with a microphone preamplifier and an audio line driver. The microphone element and preamplifier are mounted in a teardrop shaped molded black textured Cyclolac™ housing. The use of an omnidirectional element eliminates the proximity effect which creates a boomy sound when a user speaks close to a microphone.



IEDA501HH

The 501HH utilizes a magnet for attachment to the 528/524 series microphone station base assembly and is supplied with a circular coiled cable which is built into the housing assembly. A strain relief is built into the housing end of the cable and locks into the housing. The terminations at each end are molded, 6 wire, RJ11 connectors which provide extra strength and resistance to failure by pull-out. Cords are easily replaced by ordering an IED500HHCA-10 in the event that a failure occurs. The supplied cable is extendable to a maximum of 10'. A optional cable is available for purchase that has a maximum extended length of 20' (IED-500HHCA-20).

The 500HH is identical to the 501HH with the exception that it does not have the mounting magnet on the back of the housing. The 500HH is used for replacing microphones used in legacy 500 and 508 series analog microphone stations.

IEDA500G

The gooseneck microphone contains an omnidirectional electret condenser microphone cartridge integrated with a microphone preamplifier and an audio line driver. The microphone element is mounted in the metal windscreen portion of the gooseneck. The preamplifier and line driver are on a PC board mounted inside the base of the gooseneck on an XLR connector. The microphone assembly is a 17" gooseneck with a hard metal windscreen at the top and a 5-pin XLR connector in the base for mounting.

The 500G interfaces with the 528 Series microphone stations with a 5 pin male XLR connector. The mating connector for the gooseneck versions of the microphone stations are furnished with the corresponding 5 pin female XLR connector to interface with the 500G.

The 500G is also compatible with legacy 500 and 508 series desktop microphones that have a 5-pin XLR connector.



IEDA500G

510HH

The 510HH is a derivative of the 500HH/501HH that is used in critical installations where the integrity of the microphone must be monitored. The 510HH includes a small transducer in the housing that emits a 20kHz test tone at a low level. Due to the proximity to the microphone element, this test tone is detected by the microphone while remaining inaudible to people. The system supervision feature of the announcement control system is then used to periodically measure the signal and report a fault if a failure is detected.

SPECIFICATIONS

Acoustic

Transducer Type Electret Condenser Cartridge
Operating Principle Pressure Receiver
Pattern Omnidirectional

Electrical, Analog

Frequency Response..... See Figure 1
20 Hz - 20 kHz
Input Sensitivity..... -64 dB, ± 3 dB
0 dB = 1 V/mbar, 1 kHz
Noise Referred to the Input (NRI) < -90 dB
20 Hz - 20 kHz, referred to +4 dBu output
Output Impedance, Z_{OUT} < 1 Ω
Maximum Output +4 dBu
Normal Output -20 dBu
Power Supply Voltage Range 14.25 VDC to 15.75 VDC
Power Supply Current (V = +15 VDC) 3 mA

Controls (500HH/501HH/510HH)

Push-to-Talk Switch..... 2-pole, Double Throw, Spring Return

Cable (500HH/501HH/510HH)

Connecting Cable (Included) IED500HHCA-10
6 conductor coiled cord, round cross section with molded RJ11 connectors and strain relief
Cable Length
Retracted..... 24"
Extended..... 120"
Connecting Cable (Optional)..... IED500HHCA-20
240" cord is available as a separately purchased item

Connector (500G)

Connector (1) 5 pin male XLR

Mechanical

500HH/501HH/510HH
Housing Material..... Molded black Cyclolac™
Height..... (100 mm) 3.938"
Width..... (75.4 mm) 2.656"
Depth (54.8 mm) 2.156"
500G
Length (431.8 mm) 17.00"
Diameter..... (35.3 mm) 1.39"

Environmental

Operating Temperature Range (+32 °F – +104 °F) 0 °C – +40 °C
Storage Temperature Range (-40 °F – +158 °F) -40 °C – +70 °C

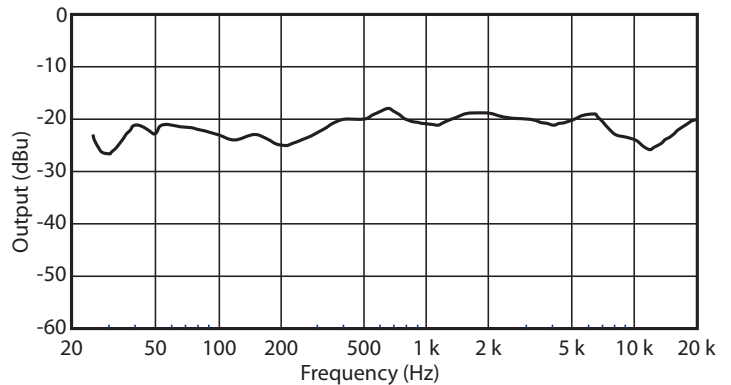


Figure 1 - Frequency Response

Wire Color	Function
White	+15 VDC
Black	Switch
Yellow	Ground
Red	Audio Out +
Blue	Audio Out -

Table 1 - 500HH/501HH/510HH RJ11 Connector Wiring

Pin	Function
1	Audio Out -
2	Audio Out +
3	No Connection
4	+15 VDC
5	Ground

Table 2 - 500G XLR Pin connections