

# HHa-941

## Handheld Transmitter

### TECHNICAL DATA



- Digital Hybrid Wireless® Technology
- Standard thread-on capsules
- Membrane switch and LCD interface
- AA battery power
- Selectable RF power at 50 and 100 mW
- Talkback feature
- IR (Infrared) Port for fast setup
- USB port for firmware updates
- Compatibility mode for use with Lectrosonics IFB receivers

The HHa-941 Digital Hybrid Wireless handheld transmitter represents an elegant solution for a variety of wireless microphone applications including live performance, broadcast, AV rental and houses of worship. The design incorporates many advanced features to provide high-quality speech and vocal reinforcement. In addition to providing peerless audio quality with wide frequency response and dynamic range in native Digital Hybrid mode, the technology includes a DSP based compatibility mode for Lectrosonics IFB receivers.

### Interchangeable Capsules

Lectrosonics offers the HHC cardioid condenser capsule. Thread-on capsules from other manufacturers using a 1.25" opening and 28 thread pitch can also be used, including those from manufacturers such as EV, Shure®, Heil Sound™, Earthworks®, Telefunken® and others.\*

### Digital Hybrid Wireless®

Digital Hybrid Wireless® is a revolutionary design that combines digital audio with an analog FM radio link to provide both outstanding audio quality and exemplary, noise-free RF performance. Using a patented algorithm to encode 24-bit digital audio information in the transmitter into an analog format, the encoded signal is then transmitted over an analog FM wireless link. At the receiver, the signal is then decoded to restore the original digital audio. This process eliminates compandor artifacts and produces an audio frequency response flat to 20 kHz.

(US Patent 7,225,135)



Supplied wrench is used to remove windscreen



\* Shure, Earthworks and Telefunken are registered trademarks of their respective companies and have no association with Lectrosonics. Heil Sound is a trademark of Heil Sound Ltd.



## Selectable RF Transmission Power

The transmitter allows the user to select between two power settings depending on the needs of the situation. The lower RF power setting uses slightly less current, thus battery life is enhanced. The higher power setting provides greater range and resistance to dropouts. Selecting the RF power is accomplished using the control menu.

## IR Sync

An IR port is provided on the control panel to transport settings from a receiver to the transmitter. Settings include frequency and compatibility mode.



## Mute and Talkback Functions

The button on the back of transmitter next to the battery compartment can be configured as:

- Power switch
- Mute switch
- Talkback switch\*
- Disabled

\*Talkback is a feature used for crew communications where the transmitter sends a signal to the receiver to divert its output from the main PA to a different channel.

## Specifications

### Operating Frequency Range:

941.525 - 951.975 MHz  
952.875 - 956.225 MHz  
956.475 - 959.825 MHz

For FCC Part 74 licensed operators

### Frequency selection steps:

Selectable; 100 kHz or 25 kHz

### RF Power output:

Selectable at 50 or 100 mW

### Pilot tone:

27 to 32 kHz frequency (Digital Hybrid mode);  
3.5 kHz deviation

### Frequency stability:

± 0.002%

### Spurious radiation:

Compliant with ETSI EN 300 422-1 v1.4.2

### Operating temperature range:

-20° C to +50° C

### Input limiter:

Dual envelope limiter, >30 dB range

### Gain control range:

45 dB; semi-log menu-driven control; 1 dB steps

### Modulation indicators:

Dual bicolor LEDs indicate modulation of -20, -10, 0 and +10 dB referenced to full modulation, LCD bar-graph indicator

### Audio Performance (overall system):

#### Frequency response

40 Hz to 20 kHz (+/- 1dB)

#### Low frequency roll-off:

-3 dB @35, 50 and 70 Hz;  
selectable; 36 dB/octave

#### System Dynamic Range:

Note: The dual envelope "soft" limiter provides exceptionally good handling of transients using variable attack and release time constants.

SmartNR	no limiting	w/limiting
OFF	103.5	108.0
NORMAL	107.0	111.5
FULL	108.5	113.0

Once activated, the limiter compresses 30+ dB of transmitter input range into 4.5 dB of receiver output range, thus reducing the measured figure for SNR without limiting by 4.5 dB.

### Controls:

#### External:

Programmable power/mute/talkback button

#### Internal:

Keypad with membrane switches under battery compartment cover

### Battery:

2x AA with polarity protection and battery ejector

### Battery life at 100 mW:

5.5 hours (Duracell Quantum alkaline)  
(Battery status is sent to Lectrosomics Digital Hybrid receivers)

### Microphone Capsule Interface:

1.25" opening and 28 thread pitch  
Power available: 5V, 25 mA max  
Input impedance: 1000 Ohms

### Weight:

12.1 oz. with batteries and HHC capsule

### Dimensions:

9.5" long x 1.97" diameter at largest point

### Emission Designator:

180KF3E

Specifications subject to change without notice.

HHC capsule  
cardioid pickup  
pattern

