UT

TECHNICAL DATA

Digital Hybrid Wireless™ Handheld Transmitter

- 100 mW RF power for long range
- 256 synthesized frequencies
- Compatible with Digital Hybrid Wireless™ and analog receivers
- Power switch can be locked out or used as a mute switch
- VariMic™ capsule with attenuator and tone controls
- Rugged, ergonomically designed machined PVC housing
- 3 capsules available: Cardioid, Super Cardioid & Omni

The UT Digital Hybrid Wireless™ is a state-of-the-art 100mW handheld transmitter incorporating many advanced features to provide high-quality speech and vocal performance. The proprietary VariMic™ preamp allows custom tailoring of the microphone's frequency response, while a digitally-controlled input limiter ensures distortion-free audio over a very wide dynamic range. A stepped attenuator control gives the user a precise gain adjustment for optimum signal to noise performance.

Along with providing peerless audio quality in native 400 Series mode, the Digital Hybrid Wireless™ technology found in the UT includes compatibility modes for Lectrosonics 200 Series, 100 Series systems and IFB receivers, and some systems from other top manufacturers. (Contact Lectrosonics for details.)

At the heart of the UT is the VariMic™ preamp, included with each of the three different electret condenser capsules. The elements are mounted on a tuned suspension to reject handling noise, while a generously sized windscreen prevents popping and breath noise. The preamp board also includes three tone controls and one variable attenuator, allowing the user to tailor the microphone's audio without changing the capsule.

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.

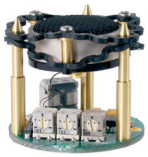
At the receiver, the signal is then decoded to restore the original digital audio. This process eliminates compandor artifacts and produces an audio frequency response flat to 20 kHz.

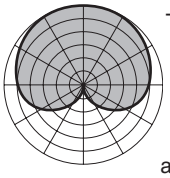
(US Patent 7,225,135)

Interchangeable Capsules

Any of these capsules may be included with the UT as a standard option, or they can be ordered separately.

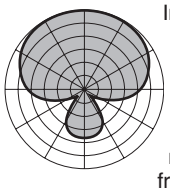
VMC cardioid condenser





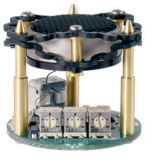
This element has excellent frequency and transient response rivaling the top condenser performance microphones on the market. The pickup pattern is a standard cardioid with exemplary off-axis response, allowing the talent to move around the microphone without a change in tone. The extended high-frequency response produces an open, clean sound with excellent intelligibility.

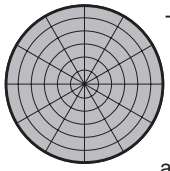
VMS super-cardioid condenser



In applications where maximum gain before feedback is required, the VMS capsule is the right choice. With its nearly perfect super-cardioid pattern, the AKG C5900 capsule rejects sounds from the rear and rear sides, while providing a generous frontal "live" area. The VMS is slightly lower in sensitivity when compared to the VMC.

VMO omnidirectional condenser





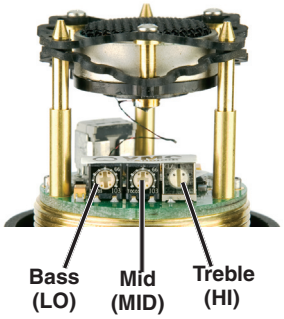
The omni capsule is perfect when the talent may need to be off-axis, such as in an interview situation. Also, omni capsules by nature are much more immune to handling, popping and wind noise than directional microphones. In addition, this capsule has slightly higher sensitivity than the VMC cardioid capsule.

LECTROSONICS®
Rio Rancho, NM, USA
www.lectrosonics.com

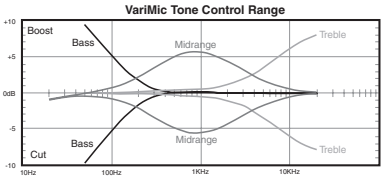
VariMic™ Controls

The VariMic™ head includes adjustments for Bass (LO), Midrange (MID) and Treble (HI) response. There is also an attenuation adjustment to provide up to 15 dB of additional headroom if needed.

Bass/Mid/Treble (LO/MID/HI)



The bass and treble controls will boost/cut by up to 8 dB while the Mid control will boost/cut up to 6 dB. These controls operate as standard tone controls: A counterclockwise adjustment cuts the response in that band whereas a clockwise adjustment boosts the response. These controls can be accessed by removing the windscreen. To remove the windscreen, grasp the body of the transmitter in one hand and the windscreen in the other hand. Carefully unscrew the windscreen in a counterclockwise direction until it comes off. Then, carefully slide the windscreen past the mic element.



Preamp Level Control

The VariMic™ head includes an attenuator to provide an additional 15 dB of headroom when needed. The attenuator should only be used when the normal Audio Level control is already turned down as far as it will go and the signal through the mic is still too high.

Subsonic Noise Filter

A front-end high-pass filter cuts signals below 75 Hz in order to prevent noise from breath sounds and microphone handling. Finally, a dual-release envelope, digitally-controlled limiter offers excellent overload protection while maintaining very low distortion.

The UT incorporates an internal dipole antenna to maximize RF transmission regardless of the microphone's position. This arrangement also reduces RF absorption due to the performer's hands contacting the antennas.

Battery Compartment

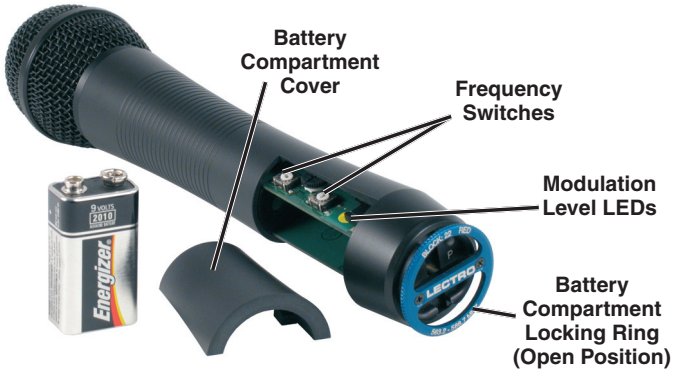
The innovative battery compartment cover is easily removed with the twist of a locking ring located at the base of the unit. This arrangement prevents accidental battery removal and integrates elegantly into the design of the transmitter. Also inside this compartment are the controls for frequency selection and the LEDs for monitoring audio signal levels while setting the audio gain.

Specifications

Operating frequencies:	Block 470: 470.100 - 495.600 Block 19: 486.400 - 511.900 Block 20: 512.000 - 537.500 Block 21: 537.600 - 563.100 Block 22: 563.200 - 588.700 Block 23: 588.800 - 607.900; 614.100 - 614.300 Block 24: 614.4 00 - 639.900 Block 25: 640.000 - 665.500 Block 26: 665.600 - 691.100 Block 27: 691.200 - 716.700 Block 28: 716.800 - 742.300 Block 29: 742.400 - 767.900 Block 944: 944.100 - 951.900
Frequency selection:	256 frequencies in 100 kHz steps
Channel Separation:	100 kHz
RF Power output:	100 mW (nominal)
Pilot tone:	25 to 32 kHz frequency (400 Series only); 5 kHz deviation
Frequency stability:	± 0.002%
Deviation:	± 75 kHz (max)
Spurious radiation:	90 dB below carrier
Input compressor:	Dual envelope compressor, >30 dB range
Gain control range:	43 dB; semi-log rotary control
Modulation indicators:	Dual bicolor LEDs indicate modulation of -20, -10, 0 and +10 dB referenced to full modulation.
Frequency response	80 Hz to 20 kHz (+/- 1dB)
Low frequency roll-off:	-3 dB @ 70 Hz, 36 dB/octave
Controls:	
External:	Power ON/OFF switch
Battery Compartment:	Variable Audio Level Control and rotary Frequency Select switches.
VariMic™:	Attenuator and Bass/Midrange/Treble tone controls
Battery:	Precision compartment auto-adjusts to accept any known alkaline 9 Volt battery. (We've tried 243 different ones!)
Battery Life:	3.5 hours (alkaline); 6.5 hours (lithium) (The UT transmits battery status to Lectrosonics 200 or 400 Series receivers.)
Weight:	12.4 ozs. with lithium battery
Dimensions:	9" long x 2.05" diameter at largest point

Emission Designator: 180KF3E

Specifications subject to change without notice.



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