Belt Pack Transmitter

- **Covers three standard frequency blocks**
- **Digital Hybrid Wireless® for compandor-free audio**
- **Selectable 50 or 100mW output power**
- **Compatibility modes for use with analog receivers**
- **25 or 100 kHz tuning steps for up to 3072 selectable frequencies**
- **Integrated multi-function switch for mute or talkback modes**
- **Wide range input gain control in 1 dB steps**
- **IR port for setup with IR enabled receivers**
- **USB port for firmware updates**
- **Menu selectable mic or instrument input**
- **Optional battery eliminator**
- **Detachable antenna**

The LT transmitter offers a full set of professional features in a compact, rugged package. The unit is compatible with all Digital Hybrid Wireless® receivers and even some from other manufacturers, making it comfortable in a wide variety of applications from video production to theater, stage and house of worship.

The LT can be configured to operate as a “one touch” device with a single power on/off switch on the top panel, or with full access to all operational parameters using the side panel membrane switches and LCD interface. The top panel switch can also be configured to provide a mute or ***talkback*** function.

Frequencies are selectable in 100 kHz or 25 kHz steps, yielding a total of up to 3072 available frequencies across three standard frequency blocks.* An IR port on the membrane panel enables automatic setup when coupled with an IR enabled receiver. A USB port on the side panel allows firmware updates to be made easily.

The servo bias input accepts mic or line level signals with a wide range of gain adjustment in 1 dB steps. A menu selectable instrument level input is available on the LCD. Accurate LED indications on the top panel and a bar graph indicator on the LCD allow precise gain adjustments to be made for the maximum signal to noise ratio and minimum distortion.

The limiter in the preamp can cleanly handle signal peaks over 30 dB above full modulation, allowing the input gain to be set high enough to achieve the maximum signal to noise ratio with no risk of overload distortion.

The unit is powered by two AA batteries or an optional battery eliminator that replaces the hinged battery door. A wire and a spring loaded belt are available.

The housing is machined from a solid aluminum billet, finished with an ultra hard, black electroless nickel finish called ***ebENi***.

*Total available frequencies varies slightly by block

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

Specifications

Operating Frequencies:
Block A1: 470.100 - 537.575
Block B1: 537.600 - 614.375
Block C1: 614.400 - 691.175
Block D1: 691.200 - 767.975 (export only)

Frequency Selection Steps:	Selectable; 100 kHz or 25 kHz
RF Power output:	Selectable: 50 or 100mW
Pilot tone:	25 to 32 kHz; 5 kHz deviation (Digital Hybrid mode)
Frequency Stability:	± 0.002%
Deviation:	± 75 kHz max. (Digital Hybrid mode)
Spurious radiation:	60 dB below carrier
Equivalent input noise:	–120 dBV (A-weighted)
Input level:	
Mic:	• Nominal 2 mV to 300 mV, before limiting Greater than 1V maximum, with limiting.
Instrument:	• 1M Ohm high level
Input impedance:	2k Ohm
Input limiter:	DSP controlled, dual envelope “soft” limiter with greater than 30 dB range
Gain control range:	44 dB; digital control
Modulation indicators:	• Dual bicolor LEDs indicate modulation of -20, -10, 0 and +10 dB referenced to full modulation • LCD bar graph

Audio Performance (Digital Hybrid mode)

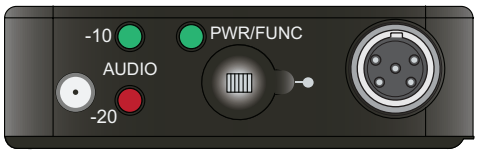
Frequency Response:	90 Hz to 20 kHz (+/-1dB)
Low frequency roll-off:	–12 dB/octave; 70 Hz
THD:	0.2% (typical)

SNR at receiver output:

SmartNR	No Limiting	w/Limiting
OFF	103.5	108.0
NORMAL	107.0	111.5
FULL	108.5	113.0

Note: The dual envelope “soft” limiter provides exceptionally good handling of transients using variable attack and release time constants. 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:	• Top panel slide switch; programmable as ***power***, ***mute***, ***talkback*** or ***no*** (off) function • Side panel membrane switches with LCD interface for power on/off and all setup and configuration controls
Audio Input Jack:	Switchcraft 5-pin locking (TA5F)
Antenna:	Galvanized steel, flexible wire
Battery:	Two AA; alkaline, lithium, NiMH rechargeable
Battery Life:	• Duracell Quantum: 4.75 hours • Eneloop 2400 mAH NiMH: 6 hours
Weight:	5.9 ounces (169 grams), with alkaline AA batteries
Dimensions:	2.85 x 2.45 x .75 in. (72 x 62 x 19 mm)
Emission Designator:	180KF3E



The top panel provides the antenna port, audio level LEDs, programmable switch and input jack.

A machined aluminum, hinged door maintains reliable battery contact.

A USB port on the side panel is used for firmware updates.

Digital Hybrid Wireless® is a patented design that combines 24-bit digital audio with an analog FM radio link to provide outstanding audio quality and the extended operating range of the finest analog wireless systems.

The design overcomes channel noise in a dramatically different way, digitally encoding the audio in the transmitter and decoding it in the receiver, yet still sending the encoded information via an analog FM wireless link.

This proprietary algorithm is not a digital implementation of an analog compandor. Instead, it is a technique which can be accomplished only in the digital domain, even though the audio inputs and outputs are analog signals.

*US Patent 7,225,135

LECTROSONICS®
581 Laser Road NE • Rio Rancho, NM 87124 USA • www.lectrosonics.com
(505) 892-4501 • (800) 821-1121 • fax (505) 892-6243 • sales@lectrosonics.com

12 August 2014
LTd.indd