

# IFBT4-VHF

## TECHNICAL DATA

### Frequency-Agile Compact IFB Transmitter IFBT4-VHF, IFBT4/E01-VHF, IFBT4-VHF/X

- Digital Hybrid Wireless® technology\*
- Microprocessor controlled operation
- 50 mW power output for long range use
- Pilot tone squelch control
- Multi-use XLR input jack
- Built-in microphone preamp
- DIP switch programmable intercom input
- Tx mute for frequency scrolling
- Multi-function LCD display
- Rugged machined aluminum construction

The Lectrosonics IFBT4-VHF transmitter was designed for use in broadcast, motion picture, theater, and stage applications where extended operating range and high quality audio are essential. The transmitter can be used as a stand-alone device or patched directly into popular intercom systems.



The rear panel provides the audio input and programming DIP switches for intercom and audio input type along with power and antenna input jacks.

Microprocessor control provides user-friendly operation and eliminates transients at turn-on and turn-off. The transmitter output is muted in the TUNE mode to avoid generating interference in other wireless systems while scrolling up and down to change frequencies. In the XMIT mode, the output is turned on and the frequency cannot be changed.



A supersonic pilot tone signal controls the audio squelch on the IFBR1A-VHF receiver to eliminate noise when the transmitter is turned off and it prevents the receiver from locking onto false signals. The pilot tone also eliminates noise in the receiver at turn-on and turn-off.

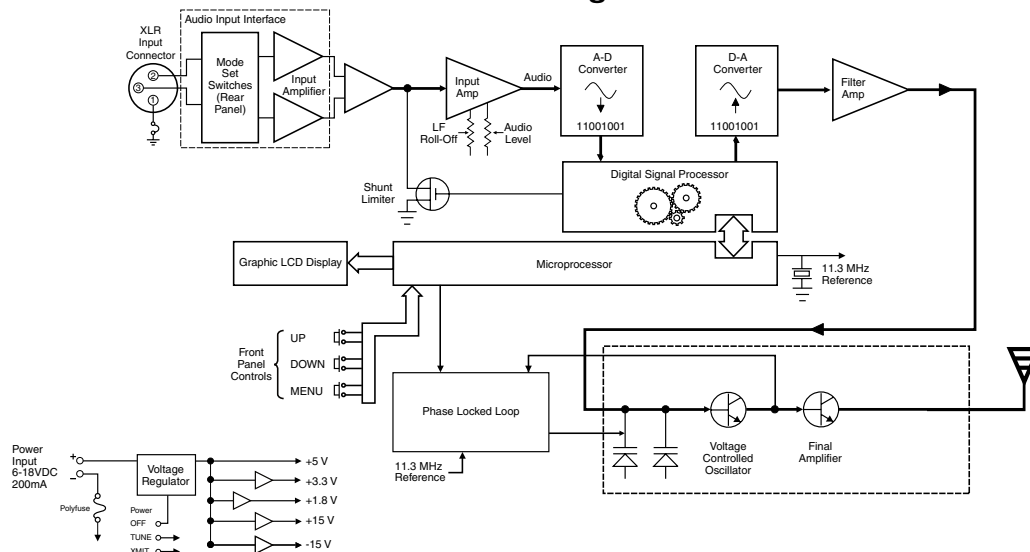
The LCD display is backlit for use in dimly lit conditions and is also highly visible in direct sunlight.

DIP switch settings on the rear panel provide direct compatibility with RTS and Clear Com intercom systems. A preamp stage is also included in the input stage to allow direct connection to dynamic microphones in "stand-alone" applications. Direct output at studio line level can also be fed directly into the transmitter.

The transmitter housing is rugged, machined aluminum with an electrostatic powder coating and an anodized finish. The unit is powered by 6 to 18 Volts DC via a locking connector. The supplied antenna is a detachable, 1/4 wavelength whip that connects to a locking 50 Ohm BNC connector on the rear panel.

\*US Patent 7,225,135

## IFBT4-VHF Transmitter Block Diagram



## Specifications

Operating Frequencies (MHz):	174.100 to 215.750 MHz	Audio Input Config:	Balanced and Unbalanced, rear panel selectable for Line, Mic, RTS 1, RTS 2, and Clear Comm
Available Frequencies:	239	Audio Input Impedance:	Greater than 2 K balanced, greater than 1 K unbalanced at any gain setting
Channel Spacing:	175 kHz	Gain Control Range:	-18 dB to +24 dB (0 dB nominal center), Menu selectable
RF Power Output:	50 mW	RF Output Impedance:	50 ohms
Pilot tone:	US: 25 to 32 kHz; 3.5 kHz deviation (in Nu Hybrid mode) E01, X: 29.997 kHz IFB & 400 mode; each frequency has a unique pilot tone	Audio Input Jack:	Standard XLR female connector
Spurious Radiation:	US: Compliant with ETSI EN 300 422-1 v1.4.2 E01: Digital Hybrid Mode Compliant with ETSI EN 300 422-2	Input Power:	12 to 14 VDC typical, 200 ma. max.; Max. Input Range 6 to 18 VDC
Modulation:	E01: <ul style="list-style-type: none"> <li>• IFB Mode: FM, <math>\pm 20</math> kHz deviation</li> </ul> X: <ul style="list-style-type: none"> <li>• IFB Mode: FM, <math>\pm 20</math> kHz deviation</li> <li>• Digital Hybrid Mode: <math>\pm 75</math> kHz</li> </ul>	Power Input Jack:	Coax type, locking LZR RL26AE
Frequency Stability:	$\pm 0.01\%$ (10 ppm) @ 25° C	Indicators:	Backlit Liquid Crystal Display. Displays modulation meter, frequencies, modes, roll-off and audio level
Temperature Stability:	$\pm 0.01\%$ (10 ppm) from -30° C to +50° C	Front panel controls:	<ul style="list-style-type: none"> <li>• MENU momentary pushbutton switch</li> <li>• Power OFF-TUNE-XMIT, 3 position slide switch</li> <li>• Select Up momentary pushbutton switch</li> <li>• Select down momentary pushbutton switch</li> </ul>
Channel Selection:	Momentary pushbutton switches, tune Up and Down	Rear panel controls:	Input Mode Select, 4 section DIP switch
Compatibility Modes:	US: IFB and Nu Hybrid E01, X: IFB and Digital Hybrid Wireless® (400 Series)	Weight:	9.6 ozs. (272 grams)
Audio Frequency Response:	US: <ul style="list-style-type: none"> <li>• IFB Mode: 100 Hz to 8 kHz, <math>\pm 1</math> dB</li> <li>• Nu Hybrid Mode: 30Hz to 20kHz <math>\pm 1</math>dB response (see Rolloff)</li> </ul> E01, X: <ul style="list-style-type: none"> <li>• IFB Mode: 100 Hz to 8 kHz, <math>\pm 1</math> dB</li> <li>• Digital Hybrid Mode: 30Hz to 20kHz <math>\pm 1</math>dB response (see Rolloff)</li> </ul>	Size:	5.25" L (including connectors) x 3.25" W x 1.25" H 133.35 L (including connectors) x 82.55 W x 31.75 H mm
Rolloff:	Low frequency audio rolloff is menu selectable for 3 dB down at 35 Hz or 50 Hz.	Emission designator:	US: 54K5F3E E01, X: 180KF3E
Output Impedance:	50 ohms		
Audio Input Levels:	<ul style="list-style-type: none"> <li>• 0 dBu for Line, RTS1 &amp; RTS2</li> <li>• -10 dBu for Clear Com</li> <li>• -42 dBu for mic dry inputs (no phantom power)</li> <li>• +/-50Vdc max</li> </ul>		

*Specifications subject to change without notice.*



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