IFBT20

TECHNICAL DATA

UHF Dual-Channel IFB Rack Transmitter

IFBT20-A1, IFBT20-B1, IFBT20/E01-A1, IFBT20/E01-B1, IFBT20/E01-C1

Designed as a successor to the IFBT4, the IFBT20 offers two transmitter channels, enhanced connectivity, updated interface, new form factor, and convenience features to the IFB product family. It has been designed to work with the new IFBR1B and IFBR1C receivers and is ideal for Broadcast TV News & Production, Location Sound, and backstage communication. The IFBT20 is also an ideal transmit base station for Point-to-Point audio using the full-fidelity Digital Hybrid Wireless® mode and compatible receivers.

The IFBT20 includes a USB-C port for firmware updates and an IR port for fast setup with compatible receivers. A large, high resolution, backlit LCD and tactile push buttons provide an intuitive interface that is highly visible in daylight or dimly lit conditions.

The half-rack transmitter provides two audio inputs which can be individually configured to be analog or digital. The input connectors are full size XLR/TRS combo types for balanced mic, line level analog or AES3 signals, and are protected from DC on the signal lines.

Input preamp circuits use a special balanced amplifier with very high common mode rejection to minimize hum and noise. The modulated RF signal is filtered before and after amplification to suppress out-of-band noise and spurious signals. Dante inputs are included for installations with audio over IP.

The system is designed and developed with the rugged, durable packaging you've come to rely on. The transmitter chassis is all-metal. The front panel is an aluminum extrusion with a durable powder coat finish.

The IFBT20 half-rack transmitter features user-selectable transmission power to cover a wide varity of applications.

- IFB and Point-to-Point applications
- 2 independent audio transmissions per 1/2 RU enclosure
- Digital Hybrid Wireless® and IFB compatibility modes
- USB-C port for firmware updates
- Dante™ compatible
- IR (infrared) port for fast setup with compatible receivers
- User-selectable RF carrier per channel
- Durable aluminum housing
- Input configurations for Mic, Line, ClearCom, RTS1, RTS2, and AES digital
- USB-C and Ethernet data connections
- Compatible with Wireless Designer™ Software

Firmware updates are made via the USB-C port on the front panel of the housing via Wireless Designer software. The procedure is very simple using a standard USB-C cable connected to a Mac or PC.

Setup and adjustment are enabled through a backlit LCD, tactile buttons and an intuitive menu structure. Input gain is adjustable over a wide range in 1 dB steps to optimize modulation and limiting for maximum signal to noise ratio and minimum distortion.

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Features and Specifications

RF Power Output:
- Two carriers; one audio channel each
- IFBT20: Power adjustable on each carrier to 10, 25, 50, 100 or 250mW
- IFBT20/E01: Power adjustable on each carrier to 10, 25 or 50mW

Antenna Output: 2 x BNC jacks

Operating Frequencies:

IFBT20
Band A1: 470.100 – 537.575 MHz
Band B1: 537.600 – 607.950 MHz

IFBT20/E01
Band A1: 470.100 – 537.575 MHz
Band B1: 537.600 – 614.375 MHz
Band C1: 614.400 – 691.175 MHz

NOTE: It's the user's responsibility to select the approved frequencies for the region where the transmitter is operating

Frequency Selection Steps: 25 kHz

Frequency Stability: ± 0.002%

Modulation: FM

Emission Designator: 110KF3E

Spurious Radiation: Compliant with ETSI EN 300 422-1

Equivalent input Noise: –128 dBV

Latency:

Digital Source:
2.3 mS to analog receivers (IFBR1B, IFBR1C)
3.6 mS to digital receiver in IFB mode (M2Ra)
3.6 mS to Hybrid receiver in NU Hybr mode (Venue 2, LR)

Analog Source:
1.2 mS to analog receivers (IFBR1B, IFBR1C)
2.5 mS to digital receiver in IFB mode (M2Ra)
2.6 mS to Hybrid receiver in NU Hybr mode (Venue 2, LR)

Audio Frequency Response

IFB mode: 100 Hz – 8 kHz, ±1 dB

NU/EU Hybrid Mode: 40 Hz – 20 kHz, ±1 dB

Audio Input Levels:
- 0 dBu for Line, RTS1 & RTS
- -10 dBu for ClearCom
- - 42 dBu for mic dry inputs (no phanton power)
- +/- 50VDC max

Audio Input Config: Balanced and unbalanced, selectable for Line, Mic, RTS1, RTS2 and ClearComm, or AES Digital (Dante selectable for RJ45 inputs)

Audio Input Jack: 2 x combo XLR/TRS/AES3 connectors

Audio Input impedance: Greater than 2K balanced; >1K unbalanced at any gain setting

Dante Connection: 2 x RJ45, 4 audio RX channels, internally routable

Ethernet Connection: RJ45

USB Connection: USB-C on front panel for firmware updates via Wireless Designer

IRDA: IR transceiver for receiver setup

Headphone jack 3.5 mm stereo jack

Power Requirements: 9-18 VDC via Hirose 4-pin connector

Power Consumption: <10 Watts

Weight: 2.2 lbs (997.903 grams)

Dimensions:
Height: 1.750 in. / 44.45 mm
Width: 8.375 in. / 212.7 mm
Depth: 7.750 in. / 196.8 mm

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