IFBR1B

UHF Multi-Frequency Belt-Pack IFB Receiver

IFBR1B, IFBR1B-941, IFBR1B-VHF

IFBR1B-VHF

IFBR1B-941

IFBR1B

NOTE: The IFBR1B does not ship standard with the single battery charger. To order this unit with a charger, order as IFBR1B-WITH-CHARGER.

CE UKCA

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Fill in for your records:

Serial Number:

Purchase Date:

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

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Introduction

Wireless IFB (interruptible fold back) systems are used for talent cueing and crew communications in broadcast and motion picture production. In other cases, the IFB system is used by directors and other management to monitor program audio during a production. The IFBR1B receiver provides simplicity and flexibility in a package that is intuitive for untrained users to operate. In spite of its tiny size, the new IFBR1B receiver offers excellent performance on par with all of Lectrosonics' IFB products.

The design uses +/-20 kHz FM deviation for efficient use of the bandwidth, with compandor noise reduction circuitry for an excellent signal to noise ratio. A supersonic Pilot Tone signal controls the audio output squelch to keep the receiver silent when no transmitter signal is received. The incoming RF signal is filtered and amplified, then mixed down to the IF frequency with a microprocessor controlled synthesizer.

If a monaural earpiece is connected, this condition is automatically accommodated, with no loss of audio output power or battery life. Full output power is available with either type of connector, without the power losses that result from a resistive circuit design. The headphone cable doubles as the receiving antenna.

The receiver will drive a wide variety of earbuds, headphones and induction neck loops at substantial levels, with loads from 16 Ohms to 600 Ohms.

The IFBR1B operates on a single 3.6 V rechargeable LB-50 Li-ion battery that will provide about eight hours of operation per charge. The LED indicator changes color from green to red as the battery voltage declines to provide plenty of warning before operation ceases. Inside the battery door is a USB port for firmware updates in the field.

The IFBR1B is housed in a rugged machined aluminum package. A wire belt clip is included and provides a secure mounting on a wide variety of belts, pockets and fabrics.

General Technical Description

Frequency Agility

The frequency agile IFBR1B Receiver is designed to operate with the Lectrosonics IFB transmitters and compatible Digital Hybrid transmitters. Microprocessor control of frequencies within each frequency block provides the ability to work around interference problems quickly and simply.

Frequency Presets

There are 10 presets available for programming in the IFBR1B. The stored frequencies remain in memory during power OFF and even with the battery removed. Use the **UP** and **DOWN** arrows to scroll through the previously selected frequencies stored in the IFBR1B and quickly change frequencies for quick communication.

Simplicity

The unique design in this receiver is not only tiny, but provides simple one knob operation for on/off and audio level and easy on-the-fly programming with simple frequency adjustments and 10 preset slots available. Basic operation is simply a matter of rotating the knob to turn power on and adjust the volume level.

IFBR1B Features

Headphone output

On/Off and volume knob

USB port

LINK LED

Battery status LED

On/Off and Volume Knob

Turns unit on or off and controls headphone audio level. When the IFBR1B is first turned on, the firmware version will display briefly.

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Battery Status LED

When the battery status LED glows green, the batteries are good. The color changes to red at a midpoint during the runtime. When the LED begins to *blink* red, only a few minutes remain.

The exact point at which the LED turns red will vary with battery brand and condition, temperature and power consumption. The LED is intended to simply catch your attention, not to be an exact indicator of remaining time.

> NOTE: The LCD will also alert when the battery is critically low.

Lo bAt

RF Link LED

When a valid RF signal from a transmitter is received, this LED will light up blue.

Headphone Output

A 3.5 mm mini phone jack accommodates a standard mono or stereo type 3.5 mm plug. The unit will drive low or high impedance earphones. The jack is also the receiver antenna input with the earphone cord acting as the antenna. The cord length is not critical but must be at least 6 inches minimum.

USB Port

Firmware updates via Wireless Designer are made easy with the USB port in the battery compartment.

Installing the Battery

USB port

An attached latching door makes battery installation easy. The USB port is located in the battery compartment.

The battery door was designed to latch, providing extra security. To open, press at the lower right corner as shown.

Slide the battery compartment door open, drop the battery in so that the connectors match and slide the battery door closed.

The battery door will now "lock" when fully closed. To "unlock," press down actuator and slide battery door open.

Battery Charging

The receiver operates on a 3.6 V rechargeable battery that will provide about eight hours of operation per charge.

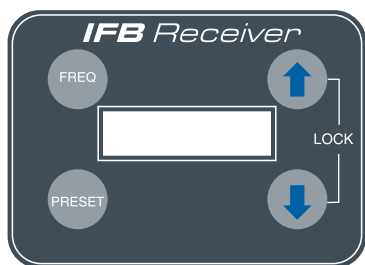> *CAUTION: Use only Lectrosonics LB-50 supplied battery (P/N 40106-1).*

The optional battery charger kit provides a USB terminating plug (standard and microUSB) on the charger. The LED glows red during charging and turns green when the battery is fully charged.

**Battery charger kit
P/N 40117**

IFBR1B Functions

Frequency Selection

Press the **FREQ** button to select receiver frequency. Frequency is shown in MHz. The **UP** and **DOWN** arrow buttons adjust the frequency in 25 0r 100 kHz steps (VHF: 125 kHz steps). Simultaneous press of **FREQ** + **UP** or **FREQ** + **DOWN** adjusts the frequency in 1 MHz steps.

NOTE: Holding down the **UP** or **DOWN** arrow button, as opposed to a quick press, will scroll through the frequency steps at an accelerated pace.

Preset Selection

Press the **PRESET** button to select preset frequencies for future use. Presets are displayed as:

P on the left and the current preset number (1-10) on the right **OR**

If the current preset slot is empty, an E also appears on the right. Use the **UP** and **DOWN** arrow buttons to navigate among any programmed presets, tuning the receiver to each.

NOTE: If the preset number is blinking, the receiver IS NOT currently tuned to that preset.

There are two options available for setting presets:

Choosing the preset slot first:

1. Press **PRESET** to display the preset menu.

2. Use **PRESET** + **UP** and **PRESET** + **DOWN** to choose the desired slot. When navigating among the preset slots in this way, all slots are accessible, even the empty ones, and the receiver's tuning is not affected.

3. If the desired preset slot is occupied, you can reprogram by pressing **PRESET** + **DOWN** to clear the slot.

4. Press **FREQ** to display the frequency, then use the **UP** and **DOWN** arrow buttons adjust the frequency in 25 kHz steps.

5. Press **PRESET** again to return to the presets menu. You should see an E next to the blinking preset number.

6. Press and hold **PRESET** + **UP** to program the preset. The E will disappear and the preset number will stop blinking, indicating that this slot has now been programmed with the current frequency.

Choosing the frequency first:

1. Press **FREQ** to display the frequency, then use the **UP** and **DOWN** arrow buttons adjust the frequency in 25 kHz steps.

2. Press **PRESET** to display the preset menu.

3. Use **PRESET** + **UP** and **PRESET** + **DOWN** to choose the desired slot. When navigating among the preset slots in this way, all slots are accessible, even the empty ones, and the receiver's tuning is not affected.

4. If the desired preset slot is occupied, you can reprogram by pressing **PRESET** + **DOWN** to clear the slot.

5. Press and hold **PRESET** + **UP** to program the preset. The E will disappear and the preset number will stop blinking, indicating that this slot has now been programmed with the current frequency.

Clear a Preset Selection

1. Press **PRESET** to display the preset menu.

2. Press either **UP** or **DOWN** arrow buttons (tuning as you scroll) or **PRESET** + **UP** and **PRESET** + **DOWN** (selecting the preset without tuning) to select the preset number you wish to clear.

NOTE: If there is an E next to the preset number, the slot is already clear.

3. Press and hold **PRESET** + **DOWN** to clear the slot. The E will appear and the preset number will blink, indicating the slot is now empty.

Backlight Settings

Press the **UP** arrow button while powering on the receiver to display the backlight time out menu. Use the **UP** and **DOWN** arrow buttons to scroll through the options:

bL: Backlight always on; default setting

bL 30: Backlight times out after 30 seconds

bL 5: Backlight times out after 5 seconds

Press the **FREQ** button to exit and save settings.

LED On/Off

Press the **UP** arrow button while powering on the receiver. From the backlight time out menu, press the **FREQ** button to access the LED on/off menu. Use the **UP** and **DOWN** arrow buttons to scroll through the options.

Press the **FREQ** button to exit and save settings.

Locale Menu

On block 941 receivers ONLY, from the LED On/Off menu, press the FREQ button to access the LOCALE menu. Use the **UP** and **DOWN** arrow buttons to scroll through the options:

LC CA: Use with SMV/E07-941, SMQV/E07-941, HMA/E07-941, HHA/E07-941, SMWB/E07-941 and SMDWB/E07-941

LC --: Use with all other Block 941 transmitters

Press the **FREQ** button to exit and save settings.

Locking the Settings

To lock or unlock the IFBR1B settings, press and hold the **UP** and **DOWN** arrow buttons simultaneously until the countdown completes.

There are two options available for locked settings:

Locking Frequency: If frequency is displayed when the receiver is locked, the frequency remains displayed, and the **UP** or **DOWN** arrow buttons will not alter the frequency.

Locking Preset: If preset is displayed when the receiver is locked, preset remains displayed, and the **UP** or **DOWN** arrow buttons can be used to scroll through previously programmed presets; however, the presets may not be programmed or deleted.

Firmware Update Instructions

Use the Lectrosonics wireless Designer program to install firmware updates. Firmware update files and change notes are available from the Lectrosonics website.

Remove the battery and connect the IFBR1B to your Windows or macOS computer with a USB cable. The cable must have a micro-B male connector to mate with the USB jack in the IFBR1B. When updating firmware, the IFBR1B is powered by the USB cable. Use the "Firmware Update" Wizard in Wireless Designer to open the firmware file and install the new firmware version.

Specifications and Features

Specifications

Operating Frequencies (MHz):

Band A1:	470.100 - 537.575	
Band B1:	537.600 - 614.375	
Band C1:	614.400 - 691.175	
Block 941:	Local --	Local CA
	941.525 - 951.975	941.525 -951.975
	952.875 - 956.225	953.025 - 956.225
	956.475 - 959.825	956.475 - 959.825
VHF:	174.100 - 215.750	

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 or 100 kHz, selectable; VHF: 175 kHz
Sensitivity:	1 uv (20 dB SINAD)
Signal/Noise ratio:	95 dB A-weighted
Squelch quieting:	90 dB
AM rejection:	50 dB, 10 uV to 100 mV
Modulation acceptance:	±20 kHz
Spurious rejection:	Greater than 70 dB
Operating temperature range:	-20 to 45 degrees C.
Third order intercept:	0 dBm
Frequency response:	100 Hz to 10 kHz, (+/-1 dB)
Audio output:	1V RMS into 50 ohms minimum
Antenna: Headphone cable	
Min. headphone impedance:	16.0 Ohms
Programmable memory:	10 frequencies can be stored as presets
Controls:	
Top Panel:	Single knob controls Audio Output Level and Power On
Side Panel:	Membrane switches with LCD interface for Frequency Selection and Preset function
Indicators:	Multi-color LED indicator for power on and battery status
Battery:	LB-50 Li-ion 3.6 V 1000 mAH
Battery Life:	8 hours per charge with LB-50 Li-ion battery
Current consumption:	120 mA
Weight:	3.4 oz (with battery and wire belt clip)
Size:	2.8 x 2.4 x 0.8 in.
	71.1 x 70.0 x 20.3 mm

Specifications subject to change without notice.

Supplied Parts and Accessories

27258
Wire belt clip.

40106-1
LB-50. 3.6V lithium-ion battery pack

VSR-1
Self-adhesive Velcro strip. Helps to alleviate cord stress at the jack.

Optional Parts and Accessories

40117

USB-powered IFBR1B Receiver battery charging station; charges two batteries at once.

CHSIFBR1B

Ideal for large studio or performance installations.
A convenient and organized means of recharging 4 LB-50 batteries and IFBR1B receivers with numerous batteries in regular use. Each charging module may be daisy-chained to 3 additional modules using a single AC-DC power supply for a total of 16 units charging at once (LB50s and/or IFBR1Bs). Requires DCR5/9AU power supply.

DCR5/9AU

Power supply for the CHSIFBR1B. Includes AC cord. Can power up to 4 CHSIFBR1Bs at once.

IFBR1BBCSL

Spring loaded beltclip for IFBR1B

Troubleshooting

Symptom	Possible Cause

LED NOT LIT
- Battery not installed or depleted.
- Power not turned on.

NO SOUND IN HEADPHONE
- AUDIO LEVEL turned all the way down.
- Headphone plug not inserted fully.
- Defective headphone or connector
- Transmitter not operating. (See separate transmitter manual.)
- Receiver not on the same frequency as the transmitter. See page 5.

DISTORTED SOUND
- Transmitter gain (audio level) is far too high. Refer to the operating instructions section in the transmitter manual for details on gain adjustment.
- Receiver output may be mismatched with the headset or earphone. Adjust audio level on receiver to the correct level for the headset or earphone.

HISS AND NOISE, AUDIBLE DROPOUTS
- Transmitter gain far too low.
- Receiver antenna missing or obstructed. (Headphone cable is the antenna.)
- Transmitter antenna missing or obstructed.
- Operating range too great.
- Transmitter antenna obstructed. Move transmitter antenna and/or receiver to a position with a line of sight between the transmitter antenna and the receiver.
- Receiver antenna (headset cord) may need to be repositioned for a line of sight to transmitter antenna

SHORT RANGE
- Receiver headphone cable is also the antenna. Make sure the cable is not coiled or wound up or wrapped around the receiver case.

DECIMAL POINT IS BLINKING ON FREQUENCY
- It is normal to see the decimal point blink briefly when making large changes to frequency, as when wrapping around the band edges.
- Can also mean the receiver is currently tuned to an invalid frequency.
- Otherwise, a blinking decimal point is a sign that something is wrong with the hardware.

Service and Repair

If your system malfunctions, you should attempt to correct or isolate the trouble before concluding that the equipment needs repair. Make sure you have followed the setup procedure and operating instructions. Check the interconnecting cables and then go through the **Troubleshooting** section in this manual.

We strongly recommend that you **do not** try to repair the equipment yourself and **do not** have the local repair shop attempt anything other than the simplest repair. If the repair is more complicated than a broken wire or loose connection, send the unit to the factory for repair and service. Don't attempt to adjust any controls inside the units. Once set at the factory, the various controls and trimmers do not drift with age or vibration and never require readjustment. **There are no adjustments inside that will make a malfunctioning unit start working**.

LECTROSONICS' Service Department is equipped and staffed to quickly repair your equipment. In warranty repairs are made at no charge in accordance with the terms of the warranty. Out-of-warranty repairs are charged at a modest flat rate plus parts and shipping. Since it takes almost as much time and effort to determine what is wrong as it does to make the repair, there is a charge for an exact quotation. We will be happy to quote approximate charges by phone for out-of-warranty repairs.

Returning Units for Repair

For timely service, please follow the steps below:

A. DO NOT return equipment to the factory for repair without first contacting us by e-mail or by phone. We need to know the nature of the problem, the model number and the serial number of the equipment. We also need a phone number where you can be reached 8 A.M. to 4 P.M. (U.S. Mountain Standard Time).

B. After receiving your request, we will issue you a return authorization number (R.A.). This number will help speed your repair through our receiving and repair departments. The return authorization number must be clearly shown on the **outside** of the shipping container.

C. Pack the equipment carefully and ship to us, shipping costs prepaid. If necessary, we can provide you with the proper packing materials. UPS is usually the best way to ship the units. Heavy units should be "double-boxed" for safe transport.

D. We also strongly recommend that you insure the equipment, since we cannot be responsible for loss of or damage to equipment that you ship. Of course, we insure the equipment when we ship it back to you.

Lectrosonics USA:

Mailing address:	**Shipping address:**	**Telephone:**
Lectrosonics, Inc.	Lectrosonics, Inc.	(505) 892-4501
PO Box 15900	586 Laser Rd NE, Suite 102	(800) 821-1121 Toll-free
Rio Rancho, NM 87174	Rio Rancho, NM 87124	(505) 892-6243 Fax
USA	USA	

Web:	**E-mail:**
www.lectrosonics.com	sales@lectrosonics.com

Lectrosonics Canada:

Mailing Address:	**Telephone:**	**E-mail:**
720 Spadina Avenue,	(416) 596-2202	Sales: colinb@lectrosonics.com
Suite 600	(877) 753-2876 Toll-free	Service: joeb@lectrosonics.com
Toronto, Ontario M5S 2T9	(877-7LECTRO)	
	(416) 596-6648 Fax	

LIMITED ONE YEAR WARRANTY

The equipment is warranted for one year from date of purchase against defects in materials or workmanship provided it was purchased from an authorized dealer. This warranty does not cover equipment which has been abused or damaged by careless handling or shipping. This warranty does not apply to used or demonstrator equipment.

Should any defect develop, Lectrosonics, Inc. will, at our option, repair or replace any defective parts without charge for either parts or labor. If Lectrosonics, Inc. cannot correct the defect in your equipment, it will be replaced at no charge with a similar new item. Lectrosonics, Inc. will pay for the cost of returning your equipment to you.

This warranty applies only to items returned to Lectrosonics, Inc. or an authorized dealer, shipping costs prepaid, within one year from the date of purchase.

This Limited Warranty is governed by the laws of the State of New Mexico. It states the entire liablility of Lectrosonics Inc. and the entire remedy of the purchaser for any breach of warranty as outlined above. NEITHER LECTROSONICS, INC. NOR ANYONE INVOLVED IN THE PRODUCTION OR DELIVERY OF THE EQUIPMENT SHALL BE LIABLE FOR ANY INDIRECT, SPECIAL, PUNITIVE, CONSEQUENTIAL, OR INCIDENTAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THIS EQUIPMENT EVEN IF LECTROSONICS, INC. HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL THE LIABILITY OF LECTROSONICS, INC. EXCEED THE PURCHASE PRICE OF ANY DEFECTIVE EQUIPMENT.

This warranty gives you specific legal rights. You may have additional legal rights which vary from state to state.

9 July 2021