Linking People Together

FSE-BP50

Key Features and Benefits

Beltpack
- Functions with FreeSpeak Edge Base, Arcadia Central Station and Eclipse HX via E-IPA cards
- 1.9, 2.4 and 5.0 GHz beltpacks operate on a single system
- Supports up to 200 beltpacks on a single system (see Capacity Chart for details)
- TFT color display
- 4 top buttons with individual level control
- 5 additional programmable buttons
- Rotary controls on both sides and up/down level controls
- Master volume control on bottom
- Built-in mic and speaker
- Built-in flashlight
- Drop-in and USB-C charging

Connectivity
- 5 GHz radio frequency
- 20 - 27 radio channels (region specific)
- Robust radio link works in high multipath or reflective environments
- Dual redundant radios
- 2.4GHz radio; beltpack pairing and firmware updates over the air
- Low latency audio: < 35ms (60ms beltpack to beltpack)
- Wi-Fi coexistence
- 5 GHz Scanner Mode - built in scanning tool for selecting channels
- AES256 shared key encryption

Mechanical
- Curved shape fits to body
- IP54 rating for wet and dusty conditions

FreeSpeak Edge® is a multi-channel, duplex digital wireless intercom system operating in the 5 GHz band and is part of the FreeSpeak® family of products.

Description
The FSE-BP50 is a rugged, water-resistant multi-channel beltpack that operates in the 5 GHz frequency range, coupled with a dedicated modulation scheme to use signal reflection and multipath to deliver low-latency, best-in-class 12 kHz audio and data for a premier high-density wireless solution. The beltpack has an ergonomic design with nine programmable keys, large color screen, dedicated A & B encoders, individual level controls for C & D, a dedicated master volume control, and a built-in mic and speaker station mode.

Operation
FreeSpeak Edge beltpacks can be supported by a range of options, including the FreeSpeak Edge Base Station, the Arcadia® Central Station, and the Eclipse® HX digital matrix, all of which support the FSE-BP50 via the FSE-TCVR-50-IP transceiver (region specific). FSE-BP50 users can roam seamlessly between FSE-TCVR-50-IP transceivers over wide areas. When configured by an Eclipse matrix, the system can scale up to meet the needs of even the very largest productions.

Increase System Size
The FSE-BP50 can be mixed with FSII-BP19 and FSII-BP24 beltpacks on the same system, increasing the quantity of beltpack users in a single deployment. Eclipse supports 64 FSE-BP50 beltpacks on one E-IPA-HX IP card, however systems utilizing multiple E-IPA cards within a single Eclipse HX frame can support up to 200 beltpacks (see Capacity Chart for details).

Durability
The FSE-BP50 is IP54 rated for wet weather or dusty conditions, making it ideal for outdoor productions. For better grip and protection, the beltpack has a rubberized over-mold to protect from the most rugged environments.

Battery
Using the BAT80 Li-Ion battery, the FSE-BP50 has 12+ hours of battery. Housed within the beltpack is a USB-C charging port (cable included with package) for recharging or for continuous powered transmissions. The BAT80 can be charged within the AC80 battery charger.

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Capacity Chart

	Max Beltpacks	Max TCVRs	Max BPs per TCVR
FreeSpeak Edge Base	16	6 (IP)	10 (IP)
Arcadia Central Station	64	32 (IP)	10 (IP)
Eclipse HX (via E-IPA Cards)	192 Delta 200 Median/Omega	192 Delta (IP) 256 Median (IP) 320 Omega (IP)	10 (IP)

*Note: Each E-IPA Card can support up to 64 BPs and 64 TCVRs (IP)

Technical Specifications

Audio
Audio Bandwidth: 200 - 12kHz
No. of Full-Duplex Audio Paths: 9
Mode of Operation: Full-duplex on all routes
Level/Talk Controls: 9 pushbuttons, 5 level controls (2 rotary and 2 button level controls, with 1 master level control)
Menu Button: 1
Headset Connector: 4-pin male, Clear-Com standard, options for 5-pin female and 7-pin male with PTT
Microphone Type: Electret and Dynamic, selectable in beltpack menu
Headset Limiter: Selectable from beltpack menu

Radio
Frequency Spectrum: 5170 - 5875MHz
(20MHz channels set by country)
Output Power: Adjustable from 1 - 24dBm (Maximum output power is determined by selected channel and country)
Modulation: OFDM
Range: Typical indoor range 250ft (80m), outdoor range 750ft (230m)

Battery
Battery: 4400mAh
Power: 16Wh
Typical Voltage: 3.6V
Battery Life: 12 hours

Environmental
IP54 water and dust resistance
Operating: 32 to 113°F (0 to 45°C)
Storage: -22 to 158°F (-30 to 70°C)
Humidity: 20 - 90%, Non-Condensing

Dimensions
5.31 x 4.07 x 1.92in (WxHxD)
(134.87 x 103.34 x 48.77mm)

Weight
Without Battery: 0.72lbs (0.37kg)
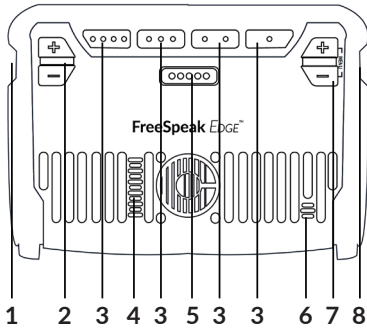**With Battery:** 0.96lbs (0.44kg)

Regulatory
Regulatory Model: 1409
FCC ID: BYM1409
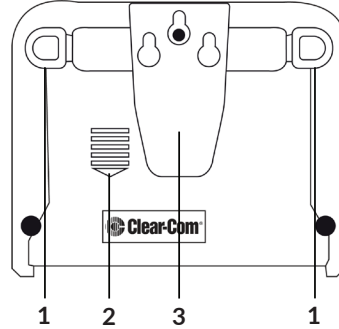**Israel Indoor Restriction:** Indoor use only 5470-5725MHz

Front

1 2 3 4 3 5 3 3 6 7 8

Back

1   2   3   1

Bottom

1   2   3   4   5   6

Top

1   1   2   3   3

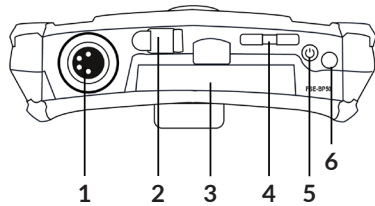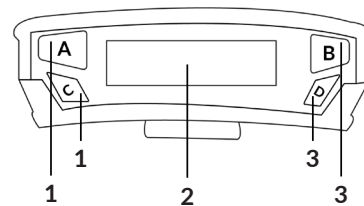## Legend

Front
1. Rotary volume for Channel B
2. Channel D volume
3. 1 - 4 assignable keys
4. Speaker
5. 5th assignable key - Haptic Touch
6. Mic
7. Channel C volume
8. Rotary volume for Channel A

Back
1. D ring loop
2. Battery Door Grip
3. Beltclip

Bottom
1. Headset connector
2. Door for USB-C port
3. Battery
4. Master volume
5. Power button
6. Flashlight

Top
1. Buttons for A/C Channels
2. Display screen
3. Buttons for B/D Channels

Order Codes

FSE-BP50-X4
FSE-BP50-X5
FSE-BP50-X7