

## FreeSpeech® Single-Channel Wireless Mic System Package

- > An easy-to-use, highly-reliable speech reinforcement solution
- > Ideal for K-12 primary education classrooms
- > A perfect complement to Crestron® IntelliClass™ systems<sup>(1)</sup>
- > Includes one wireless mic, charger, and receiver
- > One-piece wireless microphone is incredibly small and light
- > Includes an integral magnetic lapel clip and lanyard for unobtrusive wearability
- > Affords full operation via buttons built into the mic
- > "Alert" button allows for triggering an electronic or audible signal in case of an emergency
- > Advanced combined RF/IR wireless technology ensures trouble-free performance
- > IR "beacon" signal prevents interference with adjacent rooms, and mutes the mic automatically if the instructor leaves the room with the mic on
- > 2.4GHz RF technology with "error recovery" minimizes noise and feedback
- > Long-life Lithium-Ion battery lasts 6 hours on a single charge
- > Full frequency response delivers natural speech reinforcement for all users
- > "Automatic Gain Control" maintains consistent speech levels
- > Receiver with built-in 30 Watt stereo amplifier drives one or two pairs of speakers
- > Line output enables connection to an external amplifier or video projector
- > Two stereo line inputs provide amplification for a DVD player, laptop computer, or other program sources
- > Speech and program audio signals are independently adjustable via a control on the wireless mic
- > "Ducking" feature automatically turns down the program source whenever the instructor speaks
- > Built-in master volume, bass, and treble adjustment helps optimize the overall sound quality
- > High-efficiency, energy-saving design minimizes power consumption during operation and while idle



of noise or feedback. An infrared "beacon" signal prevents interference between multiple FreeSpeech systems in adjacent rooms, and even shuts the mic off automatically if the instructor leaves the room with the mic on.

Built-in amplification provides everything needed to drive a set of speakers<sup>(1)</sup>, and even allows for the connection of a DVD player, computer, or other program audio sources. Complete operation is afforded via buttons built into the wireless mic, including independent volume adjustment for the speech and program signals.

## SPECIFICATIONS

### Wireless Communications

**RF:** 2.4 GHz ISM Device; 79 Channels FHSS (2402 to 2480 MHz)  
**IR:** 38 kHz  
**Range (typical):** 50 ft (15 m) indoor, subject to site-specific conditions

### Wired Communications

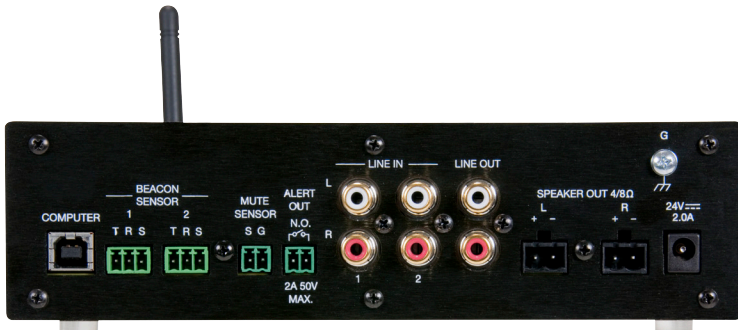
**USB:** USB host port for firmware update and configuration

### Audio

**A-D/D-A Conversion:** 16-bit, 44.1kHz  
**Master Volume Range:** -55dB to +20dB  
**Bass Gain Range:** ±15dB @ 100Hz  
**Treble Gain Range:** ±15dB @ 10kHz  
**Ducking Adjustment:** Software adjustable Threshold, Depth, Attack, and Release  
**Alert Tone:** Software configurable functionality  
**Frequency Response:** 20Hz to 20kHz ±0.5dB  
**S/N Ratio:** 75dB 20Hz to 20kHz A-weighted  
**THD+N:** 0.7% 20Hz to 20kHz  
**Output Power:** 15 Watts per channel at 8 or 4 Ohms  
**Amplifier Protection:** Electronic short-circuit and overload protection

Crestron® FreeSpeech® systems provide a very simple and affordable solution for adding speech reinforcement as part of a complete classroom media presentation system. The MP-FS100 PAK system includes a single wireless microphone. The microphone is compact and lightweight, affording reliable and hassle-free operation. Simply remove the mic from the tabletop charger, press the ON button, and go. It can be clipped to a lapel, hung around the neck, or placed in an optional tabletop stand (MP-FSTTS<sup>(1)</sup>).

Advanced FreeSpeech RF/IR wireless technology ensures consistent performance with complete freedom of movement — and minimized risk



**MP-FS-RX1 Receiver — Rear View**

### Connectors - MP-FS-RX1 Receiver

**COMPUTER:** (1) USB Type B female;  
USB service port

**BEACON SENSOR 1 – 2:** (2) 3-pin 3.5mm detachable terminal blocks;  
Interface for up to two MP-FSIR IR Beacon Sensors (1 included)

**MUTE SENSOR:** (1) 2-pin 3.5mm detachable terminal block;  
Contact closure sensing input, or interface for MP-FS-PAS PA Audio Sensor<sup>[1]</sup>;  
Mutes all audio outputs when a contact closure or PA audio signal is sensed

**ALERT OUT:** (1) 2-pin 3.5mm detachable terminal block;  
Normally open isolated relay, software configurable functionality;  
Rated 2 Amp, 50 Volts maximum

**LINE IN 1 – 2:** (4) RCA female comprising (2) unbalanced stereo line-level audio inputs;  
Maximum Input Level: 2 Vrms;  
Input Impedance: 47k Ohms nominal

**LINE OUT:** (2) RCA female, unbalanced stereo line-level audio output;  
Maximum Output Level: 2 Vrms;  
Output Impedance: 100 Ohms nominal

**SPEAKER OUT 4/8Ω:** (2) 2-pin 5mm detachable terminal blocks;  
Left & right channel speaker-level audio outputs;  
Wire Size: Connector accepts 14 AWG maximum;  
Output Power: 15 Watts per channel at 8 or 4 Ohms

**G:** (1) 6-32 screw, chassis ground lug

**24VDC 2.0A:** (1) 2.1 x 5.5 mm DC power connector;  
24 Volt DC power input (PW-2420RU power pack included)

**Antenna (front):** (1) Connection for supplied antenna

### Connectors - MP-FSIR IR Beacon Sensor

**T,R,S:** (1) 3-pin captive terminal block;  
Interface to MP-FS-RX1 Receiver



**MP-FSMIC Microphone — Left and Right Angle Views**

### Connectors - MP-FSMIC Microphone

**USB:** (1) 8-pin mini USB Type B female;  
For factory use only

### Connectors - MP-FSDS2 Docking Station

**5VDC 1.2A:** (1) 1.3 x 3.5 mm DC power connector;  
5 Volt DC power input (PW-0510WU power pack included)

### Controls & Indicators - MP-FS-RX1 Receiver

**PWR:** (1) green LED, indicates operating power supplied from external power pack

**BASS:** (1) rotary low frequency boost/cut adjustment

**TREBLE:** (1) rotary high frequency boost/cut adjustment

**MASTER VOLUME:** (1) rotary master level adjustment

### Controls & Indicators - MP-FSMIC Microphone

**IR Beacon:** (2) infrared LEDs, transmit operation data to MP-FSIR IR Beacon Sensor(s)

**Status:** (1) dual-color green/red LED, indicates operational status and battery/charging condition

**ON/MUTE:** (1) rocker button, turns wireless mic on and off, and mutes mic audio

**VOL:** (1) rocker button, adjusts mic volume when mic is unmuted, adjusts program (line) volume when mic is muted

**ALERT:** (1) pushbutton, triggers ALERT OUT relay and/or alert tone

### Controls & Indicators - MP-FSDS2 Docking Station

**Power:** (1) green LED, indicates operating power supplied from external power pack

### Power Requirements

**Power Pack for MP-FS-RX1 Receiver:** 2.0 Amps @ 24 Volts DC;  
100-240 Volts AC, 50/60 Hz power pack, model PW-2420RU included

# MP-FS100 PAK FreeSpeech® Single-Channel Wireless Mic System Package

Power Pack for MP-FSDS2 Docking Station: 1.2 Amps @ 5 Volts DC; 100-240 Volts AC, 50/60 Hz power pack, model PW-0510WU included

## Battery – MP-FSMIC Microphone

**Battery Type:** Lithium Ion Polymer, 3.7 Volt, 180 mAh

**Usage per Charge:** 6 hours

**Charging Time:** 2 hours

**Cycle Life:** >500 cycles (80% capacity)

## Environmental

**Temperature:** 41° to 104°F (5° to 40°C)

**Humidity:** 10% to 90% RH (non-condensing)

**Heat Dissipation:** 35 BTU/Hr

## Enclosure

**MP-FS-RX1 Receiver:** Aluminum chassis w/plastic faceplate and polycarbonate label overlay, freestanding

**MP-FSIR IR Beacon Sensor:** Plastic, white textured, mounts to ceiling or other flat surface

**MP-FSMIC Microphone:** Plastic, black textured, includes magnetic clip for lapel or lanyard attachment

**MP-FSDS2 Docking Station:** Plastic, black textured, weighted base

## Dimensions

**MP-FS-RX1 Receiver:** Height: 2.36 in (60 mm);  
Width: 8.12 in (207 mm);  
Depth: 5.95 in (151 mm)

**MP-FSIR IR Beacon Sensor:** Height: 1.25 in (32 mm);  
Diameter: 4.34 in (111 mm)

**MP-FSMIC Microphone:** Height: 2.09 in (54 mm);  
Width: 1.00 in (26 mm);  
Depth: 0.94 in (24 mm)

**MP-FSDS2 Docking Station:** Height: 0.90 in (23 mm);  
Width: 3.00 in (77 mm);  
Depth: 1.70 in (44 mm)

## Weight

**MP-FS-RX1 Receiver:** 2.30 lb (1.05 kg)

**MP-FSMIC Microphone:** 0.7 oz (20 g)

**MP-FSDS2 Docking Station:** 2.1 oz (60 g)

**MP-FSIR IR Beacon Sensor:** 3.3 oz (92 g)

## MODELS & ACCESSORIES

### Available Models

**MP-FS100\_PAK:** FreeSpeech® Single-Channel Wireless Mic System Package

### Included Accessories

**MP-FS-RX1-1:** FreeSpeech® Single-Channel Wireless Mic Receiver (Qty. 1 included)

**MP-FSMIC-B-T-1:** FreeSpeech® Wireless Microphone, Black Textured (Qty. 1 included)

**MP-FSDS2-B-T-1:** FreeSpeech® Dual Wireless Mic Docking Station/Charger, Black Textured (Qty. 1 included)

**MP-FSIR-W-T-1:** FreeSpeech® IR Beacon Sensor, White Textured (Qty. 1 included)

**MP-FS-LANYARD-B-T:** Lanyard for MP-FSMIC, Black Textured (Qty. 1 included)

**PW-2420RU:** Power Pack, Desktop, 24VDC, 2A (50 Watts), Regulated, US/International (Qty. 1 included)

**PW-0510WU:** Wall Mount Power Pack 5VDC, 1.2A, Universal (Qty. 1 included)

### Available Accessories

**MP-FSIR:** FreeSpeech® IR Beacon Sensor

**MP-FSTTS:** Tabletop Stand for MP-FSMIC

**MP-FS-PAS:** FreeSpeech® PA Audio Sensor

**FS6:** 6.5" 2-Way Surface Mount Media Presentation Speakers, Pair

**FSDI8:** 8" Drop-in Ceiling Speakers, Pair

**CBL Series:** Crestron® Certified Interface Cables

Notes:

1. Item(s) sold separately.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at [www.crestron.com/salesreps](http://www.crestron.com/salesreps) or by calling 800-237-2041.

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