

# MP-FS200 PAK

## FreeSpeech® Dual-Channel Wireless Mic System



### 1 System Components

The following items are included in the MP-FS200 PAK kit:

- One dual-channel receiver, MP-FS-RX2
- One dual docking station/charger, MP-FSDS2
- One IR beacon sensor, MP-FSIR
- Two antennas with attached cables
- Two wireless microphones, MP-FSMIC, with lanyards and LED code chart
- One tabletop mic stand, MP-FSTTS
- One power pack: 2.0 Amps @ 24 Volts DC, 100-240 Volts AC, 50/60 Hz (for MP-FS-RX2)
- One power pack: 1.2 Amps @ 5 Volts DC, 100-240 Volts AC, 50/60 Hz (for MP-FSDS2)

The following items are available separately:

- PA audio sensor, MP-FS-PAS
- Ceiling-mount speakers, FSDI8 (Pair)
- Surface-mount speakers, FS6 (Pair)
- Speaker wire, CBL-SPK-P-35 (Pair)
- CBL-PWR-CTRL-P-TL-50

### 2 Install MP-FSDS2 Dual Docking Station/Charger

Install the dual docking station/charger as follows:

1. Select an appropriate location (tabletop, desk, shelf).
2. Connect the supplied power pack to the docking station and then to line power.
3. The green LED on the docking station indicates power is applied.



### 3 Install MP-FSMIC Wireless Microphones

Install the wireless microphones (mics) as follows:

1. Make sure power is applied to the docking station/charger (the green LED is on).
2. Place the MP-FSMICs in either position of the docking station, and allow them to charge for at least two hours. When the batteries are fully charged, the mic Status LEDs blink green.

**NOTE:** The mics are “keyed” and only fit into the charger in the orientation shown in the following illustration.

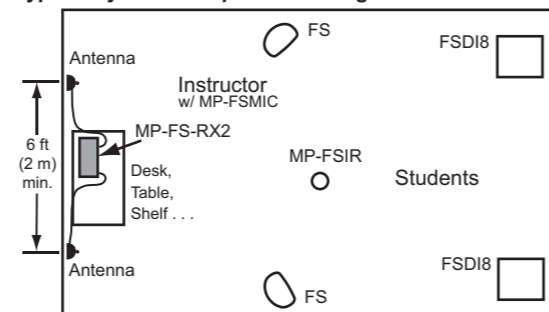


3. Use the included magnetic clip for lapel or lanyard attachment, or place the mic in the tabletop stand accessory. During use, the mic should be approximately four inches (100 mm) below the speaker's chin.

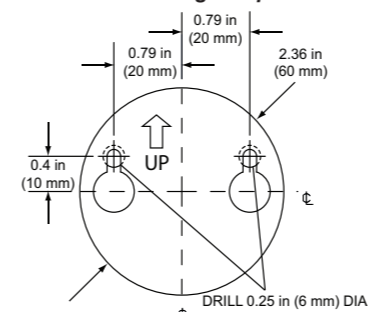
### 4 Room Setup and Speaker Placement

Use the diagram below as a guide for placing the FreeSpeech® system components in the classroom. The illustration of the supplied antenna mounting template is not full scale and should be used for reference only.

Typical System Component Arrangement



Antenna Mounting Template



1. Locate the MP-FS-RX2 receiver on any flat surface such as a desk, table, or shelf.
2.
  - a. To mount the antennas to a wall, use the supplied antenna mounting template to mark mounting and drilling locations. The antennas should be mounted at least 6 feet (2 meters) apart for proper channel separation. Drill 0.25 in (6 mm) holes for the supplied screw anchors; install the anchors (if required) and supplied screws leaving a 0.12 - 0.16 in (3 - 4 mm) gap between the screw heads and the wall.
  - b. If the antennas are to be placed on a shelf or table, be certain to observe the minimum spacing requirement.
3. Crestron® recommends using FS6 surface mount speakers **OR** FSDI8 ceiling mount speakers. Place FS6 speakers on the walls between the instructor's usual location and the students, aimed toward the students; place FSDI8 ceiling mount speakers at the rear of the room behind the students.
4. The MP-FSIR IR beacon sensor(s) should be centrally located on the ceiling or wall, away from fluorescent lighting and windows, with direct line of sight to the MP-FSMIC wireless microphones.

### 5 System Hookup

Install all accessory hardware and all required interconnecting cables.

1. Install 2-conductor cables between the MP-FS-RX2 receiver and the speaker locations. Crestron recommends its plenum rated 16 AWG speaker cable CBL-SPK-P-35. Use the supplied connectors at the receiver end, and connect to the speakers following their included instructions.
2. Install any optional devices, such as the MP-FS-PAS audio sensor, following their included instructions.
  - a. For applications where the antennas are placed on a table or shelf, simply connect the cables to the front of the receiver.
  - b. For applications where the antennas are to be mounted to a wall, remove the felt backing from the antenna bases and mount the antennas to the screw heads protruding from the wall. (It may be necessary to adjust the screws to ensure a snug fit.) Connect the attached cables to the front of the receiver.
4. Install a 3- or 4-conductor cable (minimum 24 AWG) up to 50 feet (~15 meters) maximum, between the MP-FSIR location and the receiver. Refer to the illustration below for mounting and hookup details.

As an alternative, use Crestron's CBL-PWR-CTRL-P-TL-50 or equivalent cable.

**NOTE:** Up to two MP-FSIR units can be connected in parallel to each of the two MP-FS-RX2 BEACON SENSOR ports, allowing for a total of four MP-FSIRs.

5. Connect the included power supply to the receiver and then to line power.

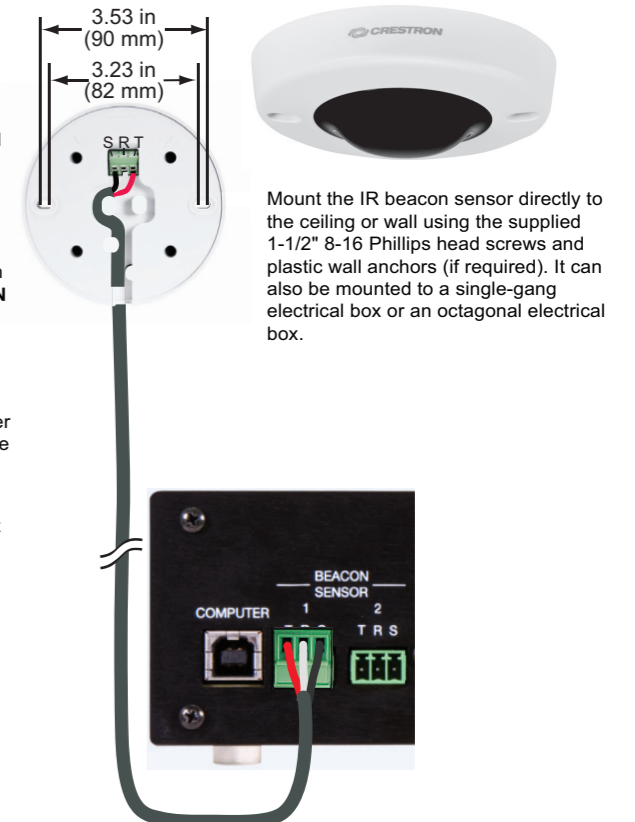
#### MP-FSIR Hookup & Mounting

The outer jacket of the cable must extend into the molded plastic channel of the MP-FSIR and under the wire retaining guides, as shown.

Connect the **T**, **R**, and **S** terminals of the MP-FSIR to the **T**, **R**, and **S** terminal positions of the supplied 3-pin detachable connector for the **BEACON SENSOR T, R, and S** terminals of the MP-FS-RX2 receiver, and plug in the connector.

If using the CBL-PWR-CTRL-P-TL-50 cable, connect drain and black together to the **S** pin, connect red to **T** and white to **R**. Blunt cut both ends of the blue conductor and do not use.

If using a shielded cable, also connect the shield to the **S** pin at the receiver end only.

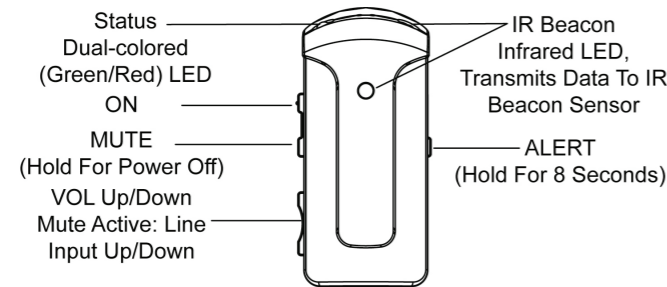


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### 6 Basic Operation

Ensure that the MP-FS-RX2 receiver is installed and connected as instructed on page 1, that power is on (the green LED is on), that line level audio is supplied from a DVD player, a laptop computer, or other device, and that the MP-FSMIC microphones have been fully charged.



During the following procedures, refer to the above illustration and to the included Microphone LED Code Reference Guide (Doc. 7165).

#### A. Pair Microphones with Receiver

1. Hold the MP-FSMIC **ON** button until the mic Status LED rapidly flashes green.
2. The mic begins pairing with the receiver. Make sure the mic has line of sight to the MP-FSIR. When pairing is complete, the Status LED slowly blinks green. Time to pair is typically between 5 and 10 seconds.  
The mic must be turned off and turned on again to pair to another receiver.
3. Repeat steps 1 and 2 for the second mic.

#### B. Mute and Volume Adjustments

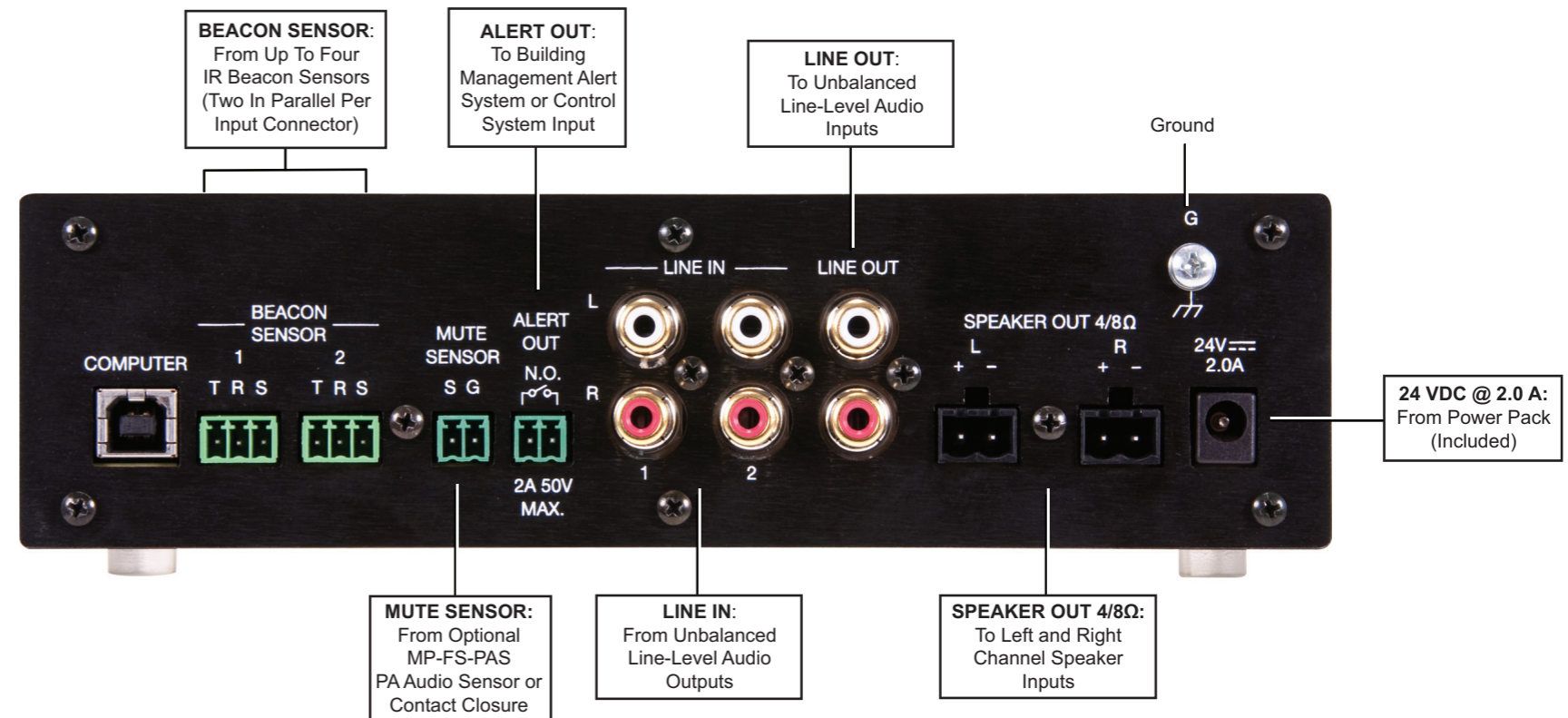
1. Press the **MUTE** button to mute the mic (observe the blink pattern); press it again to un-mute. When muted, the mic automatically turns off after 2 minutes.
2. When the mic is not muted, the **VOL** button can be used to adjust the mic volume.
3. When the mic is muted, the **VOL** button adjusts the line level audio volume.
4. Line volume is automatically “ducked” (reduced) when the user talks into the mic.
5. Hold the **MUTE** button for 5 seconds to turn off the mic (turns off automatically if muted for 2 minutes, or when placed in the charger.)
6. If the mic loses sight of the MP-FSIR for 7 seconds, the mic automatically mutes (turns off automatically if muted for 2 minutes).
7. If the RF link is lost for 10 seconds, the mic turns off.

#### C. Emergency Trigger

Hold the **ALERT** button for 8 seconds to generate two beeps from the speakers and close the alert relay contacts until the button is released.

#### D. Receiver Controls - Default Settings

1. **BASS** and **TREBLE**: Typically, set these controls to their center detent positions. Slightly reducing treble can help to reduce feedback.
2. **MASTER VOLUME**: With the control in its center detent position, have the instructor speak from the most likely position in the room and adjust this control clockwise so that the speakers just begin to exhibit feedback, and then reduce the setting by turning counterclockwise.



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