

# ISOMAX 2-H Application Guide for Church Installations

Practically every church could benefit from proper installation of high-quality microphones. This application guide details simple, proven techniques that you can implement.

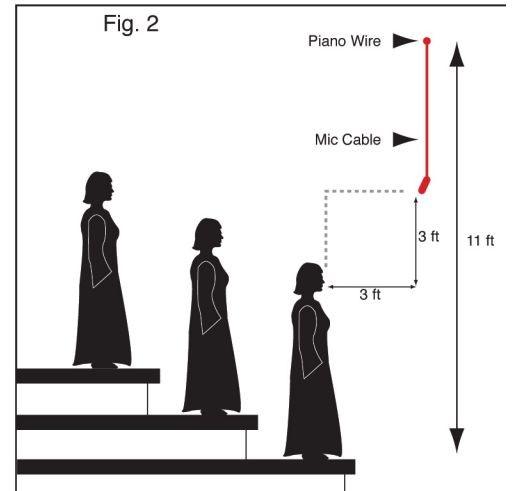
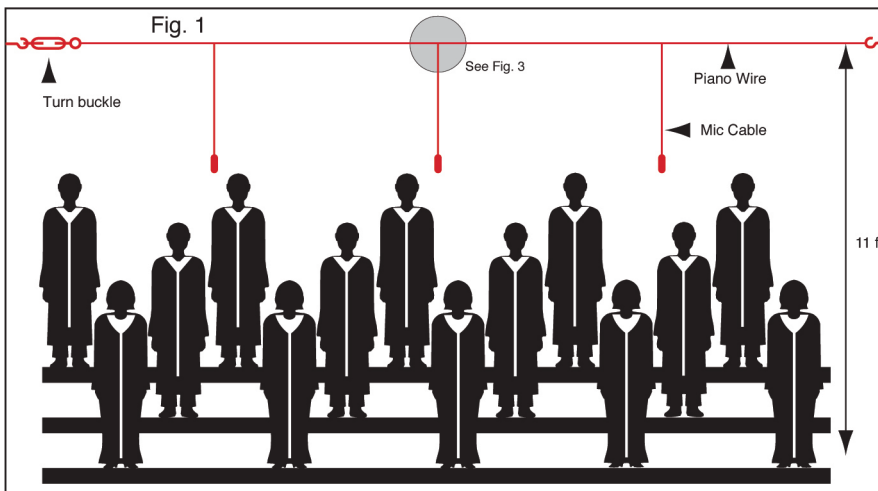
## Choir Microphones

Successfully installing a microphone system for the choir can be difficult and expensive. Countryman Associates has developed a simple, sure-fire approach—using the countryman ISOMAX 2-H hypercardioid choir microphone—that does not require access to the ceiling and results in truly superior performance using the fewest possible microphones.

The solution is twofold:

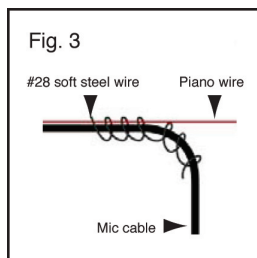
- 1) The Countryman ISOMAX 2-H hypercardioid microphone, which weighs only 1/25 ounce, is light enough to hang safely from a stretched horizontal wire instead of from the ceiling.
- 2) The directional pattern of the ISOMAX 2-H is so uniform that it allows balance between the front and back of the choir to be achieved simply by adjusting the angle at which the mics are secured.

Best of all, every item needed to complete the Countryman choir mic installation can be purchased from the local hardware store. One person following the guidelines below can easily complete this installation in half a day.



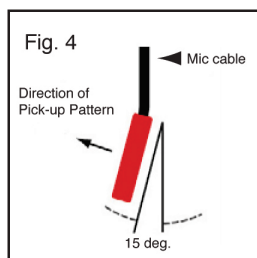
## Installation

- Begin by rigging a piece of .010" Dia. piano wire horizontally across choir's front row and 11 feet above the feet of the front row. Rig the wire between two screw hooks with a turn buckle to tension the wire on one end. (See Figures 1 and 2.) Tighten piano wire until all slack is taken up and the wire makes a "ping" sound when plucked. Do not over-tighten! This placement should allow banners, flags and other tall items to pass safely under the piano wire.



- Tie the cable of each ISOMAX 2-H microphone to the piano wire spaced 6 feet apart with each mic hanging 2 feet below the piano wire. The microphone will be 3 feet in front of and 3 feet above the heads of the front row singers. (See Figures 1, 2 and 3.)

- Placing the microphones in front response, but the front rows are picked up more strongly because they are closer to the mics. The cable of each microphone is wrapped with soft steel wire that allows you to adjust the direction of the mics. Tilt the mics up approximately 15 degrees from vertical (see Figure 4). This will reduce the pickup of the front rows by putting them farther around the side of the pickup pattern until they balance with the back rows.



- After completing the mic cable run a rehearsal to fine-tune the balance of the choir's various sections. If you need less gain for the front rows, then increase the angle of the microphones from 15 degrees to 20 degrees. If you wish to raise the level of the front rows, relative to the rest of the choir, then reduce the angle of the mics from 15 degrees to 10 degrees. All you need is a step stool to adjust the angle and fine-tune the balance from front to back.

This installation has worked successfully for a wide variety of churches and it can work for you. If you have any questions, please don't hesitate to call Countryman Associates at (650) 364-9988. Specification sheets for these microphones and other Countryman products are available online at [countryman.com](http://countryman.com).