

Tech Tips October 2020

Broadcast Your Choir While they Sing from their cars as an alternative to in person choral music.

Is your choir longing to get back together so they can sing beautiful music?

Try singing on the radio. Literally.

When our local community choir was considering how they could continue to sing amid COVID-19 concerns, we ran across this idea. Buy an FM transmitter and broadcast your choir short range as they sing into wireless mics. Each choir member would stay in their car where they would be safe and listen to the broadcast on their FM radio. At the same time, they would sing along with other choir members who would also be in their cars. The choir director would be situated in the church parking lot standing on a podium while directing. The director would also be equipped with a wireless mic and boom box that would contain an FM radio so they could hear everyone. In short, everyone hears every other member in the choir and the director live.

Here is how it works. First you will need an FM transmitter such as the [ACC100 Part 15 FM Transmitters](#). You will also need wireless mics such as the [FIFINE 20-Channel UHF Wireless](#). Any good wireless mic would do but I suggest this one because of the low price and the fact that it has 20 channels. You will probably need a wireless mic system that allows you to change frequency channels so that multiple mics do not interfere with one another. If you have more than 20 people in the choir you may have to purchase more mics with different frequencies. You will also need a sound mixer with as many channels as you will need for your choir. Each wireless mic receiver will be plugged into a separate channel on your mixer. Then the FM receiver will be connected to the mixer's output. (mixer output to FM transmitter input.) Choose an open FM frequency that has no broadcasts on it and gives a clear signal. (probably in the high 80's: 87.5, 87.7, 87.9, etc.) Each choir member stays in their car and tunes to the FM frequency that you have chosen. Then they turn on their mics and the sound engineer listens for balance between all the mics and adjusts the sound mixer accordingly. Now you have a live choir. **Note: You must use a part 15 Fm Transmitter certified by the FCC that trasmits no more than 200 feet. Be careful when you buy or you could incur a hefty fine from the FCC.**

Options:

1. **You can record the choir singing** by connecting a digital recorder or camcorder connected to another sound output of the mixer.
2. **You can also be recording the choir with the video camera and live streaming the choir number at the same time.**
3. **If you do not like the idea of watching a video of the choir singing in their cars, other options would be to place them in separate rooms** of your church and point the video camera at the sanctuary front instead of the choir director, or mix several cameras together showing individuals performing. You could even mix multiple cameras together (quite a bit more complicated.) Note: If you place choir members in separate rooms, they will each need their own portable FM radio and will not be able to see the director unless you have a video monitoring system in place or they are looking out a window where in cold weather the director is bundled up like a dog sledder. If you use a video monitoring system, a video delay may occur. (this setup could be quite a bit more expensive.)
4. Another idea is to **superimpose pictures and/or lyrics** onto the video with worship scenes of your choice.
5. **For Winter:** Place the choir director in a window of the church where members in the parking lot can clearly see them. If choir members become cold they can run their vehicles and heaters without the sound of the motor disturbing other choir members.
6. **For a concert.** You can place choir members outside while they use their wireless mics and space them 15 to 20 ft. apart, however, you will need to devise a system where they can hear one another. This might be accomplished by using a portable sounds system (feedback might be a possibility if the sound isn't kept at a lower level). An in ear monitor system could be employed (rather expensive.) A daisy chain of wired earphones connected to the mixer could be employed (lots of long cables but much less expensive than an in ear monitoring system). Perhaps a better solution would be to have several sound monitors for choir members and have the main speakers facing the audience. The concert could be performed live outside, recorded, or done live and streamed at the same time.
7. **Live worship.** Have people come to the parking lot and tune into the broadcast where they can see you and hear you at the same time. Give wireless mics to choir members or worship team who lead the people in singing and provide special worship music. Liturgists would also have mics. A wireless mic could be taken to vehicles for prayer concerns. People might

indicate they have a prayer concern by flashing their lights. In the winter you may need a tent or patio and a heat lamp or have access to a window where people from the parking lot can see you. You could also live stream the worship for people who stay home and have someone monitoring a live chat for people who want to send in their prayer concerns.

For information on how to accomplish these options, we may publish another article for a future issue.