

Live Streaming Events with Minimal Resources

The options for live streaming events has become easier and less expensive and can be done with minimal requirements at the venue. Someone, such as a volunteer, can set things up and produce the live stream. This document focuses on low-cost, easy to setup and use solutions. It is not a ‘professional’ setup with its complexity and higher cost.

The methods that One Voice Mixed Chorus uses to live stream events (concerts, seminars and rehearsals) are shared in this document as well as some tips and suggestions from our experiences.

What you need:

- **A broadcasting platform.** There are a number of options which are either free or at low cost. You may already have one of these setup as part of your social media marketing. Leveraging what you already have will be easiest for you and also familiar to your audience and members. These are some more well known video streaming platforms:
 - YouTube
 - Facebook Live
 - Twitter
 - Periscope
 - Vimeo
- **Video source.** This can be a ‘webcam’ or other camera connected to a laptop computer or an app on an iPhone/iPad/Android. Some options:
 - iPhone/iPad/Android camera
 - MeVo (through an iPhone/iPad/Android app)
 - Logitech cameras (USB to a computer)
 - Microsoft Lifecam Studio camera (USB to a computer)
 - GoPro Hero series (can stream directly to Facebook Live or USB to a computer)
- **Audio source.** Audio quality is one of the most important and most overlooked items in live streaming. Some options (preferred first):
 - Connect to the venue’s sound system and microphones. The venue connection may require an adapter (which the venue may already have). Typically it is a monitor output from the sound system or tapping into the same source that is used for audio recording the event. Be sure to test for audio level and balance beforehand!
 - Separate microphone(s). Place these in the house to achieve good sound quality and balance. If multiple microphones are use an audio mixer is also needed.
 - The microphone on the camera. Basic but can be effective. While it is probably the least desired option, it is the most portable and straightforward.
- **Internet connection.** Most venues provide Internet access either as part of the agreement or at a small additional cost. Beware that the “guest” Internet may have

bandwidth limitations. A dedicated connection would be preferred. A wired Ethernet is better than a Wi-Fi connection for reliability and speed.

Putting it all together (One Voice Mixed Chorus):

One Voice Mixed Chorus invested in a MeVo camera (about \$400 retail).

The camera requires its app on a Smartphone/pad (IOS 10 and later or Android 6.0 and later).

We use an Apple iPad with the MeVo application for the live streaming.

The MeVo app turns the iPad into a tiny production studio. It will live stream to one or more broadcasting platforms. Some of the features of this camera include (not necessarily a sales pitch, but it is a nifty device):

- Very small and easy to setup on a microphone stand.
- Ability to pan, zoom, and cut to up to 9 different camera angles. It looks like there are multiple cameras being used – with some limitations (no fading, for example).
- Multiple audio sources.
- Broadcast to Facebook Live, YouTube and other services.

The venue needs to be aware that the event will be broadcast as there are a few things that should be discussed and agreements made:

1. The placement of the camera(s),
2. A connection to the Internet,
3. Options for connecting to the audio system.

The MeVo camera mounts on a mic stand. We have a mic stand that has a boom that can be adjusted and extended to get a good viewing angle.

Mevo also needs a power source (taped down extension cord to a nearby outlet) as the battery will not usually last through an entire event. You don't want to lose your camera!

The camera connects to the Internet using Wi-Fi. The best approach is to obtain a wired Internet connection from the venue and bring a Wi-Fi router for a 'private' Wi-Fi connection for the camera and iPad to stream to the Internet. Test this beforehand – during tech setup.

We used the house Wi-Fi at an event and found it to be slow and unreliable- this doesn't mean it won't work at other venues, it just didn't work for this particular one. Another option would be to stream to the iPhone wireless provider. Again, this may be unreliable or slow and should be tested beforehand.

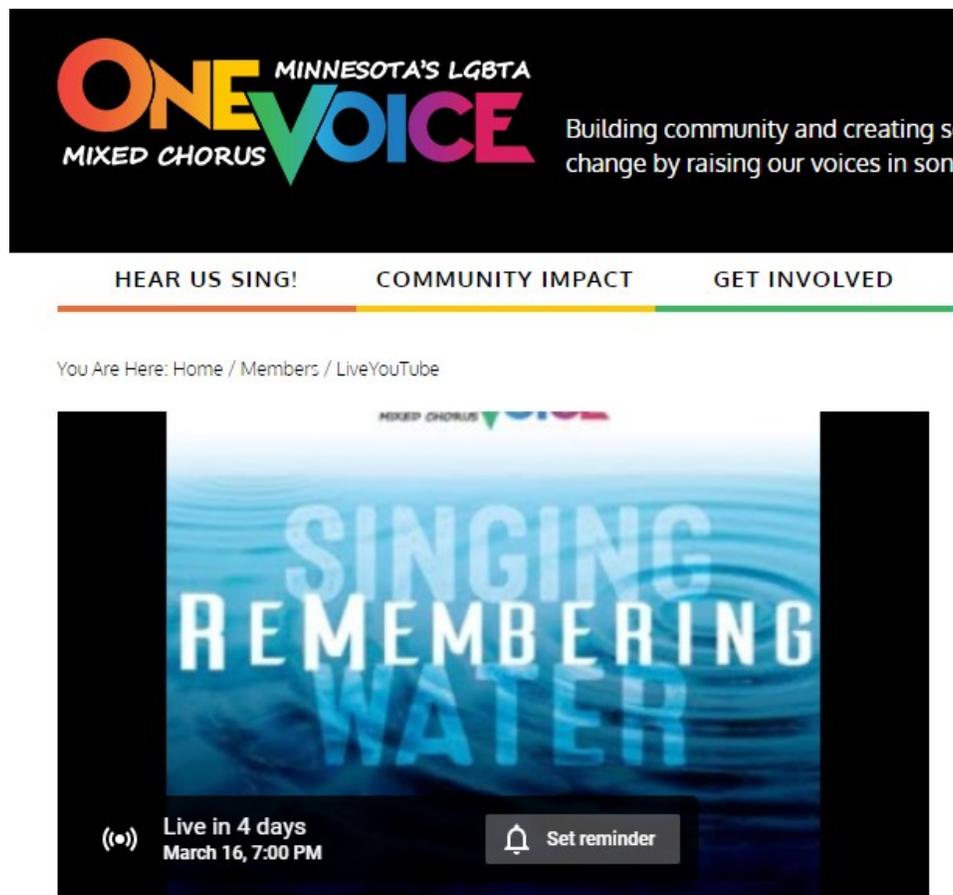
Work with the venue technical person to connect to and test the audio if their system is used. This doesn't always work and a recent concert seemed to be setup to the house monitor but when the concerts started the sound coming in was distorted (gain was too high) and it was too late to correct it. The MeVo has stereo mic's, which turned out to provide adequate audio for the broadcast.

The MeVo app also allows additional remote microphones to be mixed with it using other iPhones. We haven't tried this yet but it would be another option to provide some additional audio sources that could be mixed and improve the audio quality.

One Voice used Facebook Live for an initial concert as it is very easy to do. The downside is that the audience all need to have Facebook accounts (not everyone uses Facebook). Facebook live is very easy to startup and it can be done directly from the iPhone or iPad using its camera and microphone (or attached to an audio source). To provide a stable picture the iPhone/iPad should be mounted and not hand held.

YouTube has proven to be reliable and does not require the audience to have a YouTube account. Live events are scheduled on YouTube and the link is then sent to the audience via email blasts. The link can also be embedded or placed on the web site so that visitors to the web site can view the event directly.

This is an example web page for One Voice Mixed Chorus rehearsals that embeds the YouTube event. The same setup can be used to provide a web page for concerts and other events.



This is the rehearsal live broadcast/recent recording.

Other Considerations:

- Legal, copyright and licensing. Make sure that you are compliant with the legal aspects for broadcasting and/or recording the event. If it is a live streaming only agreement, make sure that the recording is not available following the event. Some platforms, such as YouTube will continue to make it available even after the event is complete.
- To be sure, the Mevo does not produce the kind of slick editing that you'd associate with broadcast footage. If you're in the habit of hiring a video crew for your events, you'll need to manage your expectations if you decide to shift to the Mevo. But the price is right!

Additional Information:

For some alternatives that are more sophisticated and higher quality (and cost) these links might provide some useful information:

- Cameras for streaming: <https://www.creatorbeat.com/cameras/best-cameras-streaming-facebook-live-youtube-live/>
- Mevo camera review: <https://havecamerawilltravel.com/photographer/mevo-camera-review/>

Feel free to contact me with any questions or comments you might have about setting up for live streaming events.

Brad Hanson
One Voice Mixed Chorus, 5th Section/Production
Pronouns: he/him/his
bhovmc@norsepol.com