

# Virtual Music Recording Guide

More important than the details that follow is how we approach the challenge of singing together, while safely physically apart. St. Andrew's is a community that loves making music together. Choir practice is as much a social event as it is a practice session. Folk Group gatherings are informal and invite everyone to have fun together.

This guide enables and empowers a new, socially distanced online kind of singing together.

Let the spirit of innovation, experimentation and an absolute trust in the Holy Spirit shine through us all as we play and sing (and geek out) for the glory of God - Soli Deo gloria!

## Background

A virtual musical piece is only as good as the individual recordings that go into it; if everyone isn't hitting the notes exactly ON the beat, the result is ragged and hard to listen to. With a "live" choir, the conductor's body language helps everyone follow the musical pulse of the piece, and the other choir members voices help reinforce a common metrical rhythm.

How do we do this at home without a conductor to watch and performers next to us we can hear?

The preferred (expensive & complex) mechanism for making synchronized multi-track recordings in movies and radio is to use software that interprets the score to record a MIDI metronome as a percussive *click track* along with a video of an actual conductor conducting. Performers then sing to that direction with the video's clicking audio track playing through their headphones.

In the absence of a real conductor and click track, one might assume that performers can just sing along with an instrumental accompaniment. However, in practice, performer's individual interpretations of a piece will result in *drift* in the metrical rhythm as large as plus or minus whole beats in a verse! This may be acceptable for a Hymn solo/duet, but the sound muddies quickly when combining several out-of-tempo voices.

The solution we have adopted for Choral and Folk Group efforts is to have performers record to a *click track* that has both an instrument and someone singing. Having an accompanied melody line in headphones, while watching the guitar or piano player's body movements gives multi-sensory metrical clues to the performer and keeps the rhythm tight.

For simple Hymns, the whole click track effort is largely unnecessary, and performers can sing along with the organ track directly, even with descants and embellishments.

Here's how we are making music.

## Roles and Assumptions

1. **Director:** chooses music, timeframe and performers, arranges and records initial tracks
2. **Producer:** combines these tracks into an Instructional Video
3. **Performers:** record themselves
4. **Producer:** combines everything into a combined piece and uploads it

## To Do

Select music & record initial tracks <b>Director</b>	The Director records four videos: <ol style="list-style-type: none"> <li>1. A "<b>Director's Directions</b>" video with instructions for the performers</li> <li>2. An "<b>Instrumental</b>" video - provides the underlying musical structure for the performance. Include several bars of lead-in to demonstrate the time signature. Feel free to play through a cappella verses - the sound can be muted later...</li> <li>3. A "<b>Rosetta Stone</b>" video - record melody with the <i>Instrumental</i> video playing on speakers.</li> <li>4. A "<b>Solo</b>" video - record the melody again, this time with the "<i>Rosetta</i>" video playing in headphones.</li> </ol> Share them all with the Producer
Create Instructional Video: <b>Producer</b>	(see below for details) Create a Video that includes a title, the directions and both the instrumental and vocal tracks.
Upload the Instructional Video <b>Producer</b>	Best tool: Vimeo Name it "Instructions for <i>piece</i> " Email link to the Director
Send instructions to performers <b>Director</b>	Send an email to the Performers. Provide due date, shared drive or upload details and set expectations on lighting, voicing, dress etc.
Record Solo tracks <b>Performers</b>	Best tools: iPhone, Android Phone, Photo or, Camera App Record yourself with the Instructional video playing in your headphones. Your phone will probably do a better job than your computer - mount it landscape orientation in a tripod. Upload your recordings to the shared folder with a name in the form: " <i>Piece YourName YourVoice.m4v</i> " Repeat as desired for other voices and instruments.
Create Finished Video <b>Producer</b>	(see below for details) Create a Video that includes all the submitted tracks, credits and end matter.
Upload final Video <b>Producer</b>	Upload the complete project to Vimeo as " <i>piece</i> " Fill in the Description and Tag it as "St Andrew's Sings" and "St Andrew's Channel" Send email to the Director and Performers with the link.

Technical Details: How to align solo tracks

<p>Create Instructional Video: <b>Producer</b></p>	<p>Tool: a multi-track Video Editor</p> <ul style="list-style-type: none"> <li>• Import the 4 videos:             <ul style="list-style-type: none"> <li>D - Director's Directions,</li> <li>I - Instrument solo track</li> <li>R - Rosetta track (with instrument and vocal)</li> <li>V - Vocal solo track</li> </ul> </li> <li>• Create a new timeline Project named "Instructions for piece"</li> <li>• Add a TITLE block to the timeline</li> <li>• Import and Append D (the Director's Directions) to the timeline</li> <li>• Clean up its entry and exit</li> <li>• Import, Append and Clean up I (the Instrumental clip)</li> <li>• The instrument audio on R (Rosetta) is the same as on I             <ul style="list-style-type: none"> <li>Import, Clean and Stack R on top of I</li> <li>Visually and audibly align R with I in time using the instrumental audio waveforms.</li> </ul> </li> <li>• The vocal audio on R <i>should be</i> similar to V             <ul style="list-style-type: none"> <li>Import, Clean and Stack V (Vocal clip) on top of R (Rosetta)</li> <li>Visually and audibly align V with R in time using the vocal audio waveforms.</li> </ul> </li> <li>• Once all three tracks are in good audible time-alignment with each other, delete R - its role in helping line up I and V is done..</li> <li>• Adjust the relative volume levels so that the instrument and vocal tracks are both clear and distinct</li> <li>• Adjust the video properties (transform &amp; clip) of the I and V clips to have both show at the same time: Picture-In-Picture or Side-by-Side.</li> <li>• Export the video as a 720p .m4v or .mov file</li> </ul>
<p>Create Final Video <b>Producer</b></p>	<p>Tool: a multi-track Video Editor</p> <ul style="list-style-type: none"> <li>• Duplicate the instructional video project, call it simply "<i>piece</i>".</li> <li>• Update the a title clip.</li> <li>• Delete the director's directions clip.</li> <li>• You should be left with a timeline that has a title and two stacked/aligned clips - the original instrumental and vocal tracks.</li> <li>• For each additional submitted clip:             <ul style="list-style-type: none"> <li>Import and stack the new clip on top of the existing clips,</li> <li>Clean up its intro and exit as needed,</li> <li>Time-align it with the existing clips.</li> </ul> </li> <li>• Adjust the volume levels of all the clips</li> <li>• Use the video editor's various video effects, transitions (etc) to develop a pleasing and non-distracting visual experience.</li> <li>• Add the boilerplate St Andrew's trailer, credits for the work itself, etc</li> <li>• Export the video as a 720p .m4v or .mov file</li> </ul>