



Hybrid (Live & Virtual) Rotary Meetings Technical Considerations

Overview

It may be some time until all Rotarians are comfortable with attending "in-person" Rotary meetings like we have always had. In the meantime, clubs are considering "hybrid" meetings where some members meet in person and others join virtually via real-time conferencing apps such as Zoom or GoToMeeting. Several clubs have created an "E-Member" type of membership for people who cannot get away to attend the meeting and/or want to avoid the cost of a meal. Consider such hybrid membership strategies to go along with your hybrid meeting strategy.

This guide will provide some suggestions, ideas and best practices to help get your club online without a lot of invention or experimentation.

What are the challenges of adding a "virtual conference" audience to a live meeting?

First, consider your competition -- broadcast TV. People are used to clear video images, good sound, good graphics, etc. You want to do everything you can to approach that standard while at the same time getting in the game - do not let one or two technical hurdles keep you from getting started.

Examples:

- Video - A remote Webcam, DSLR or video camera with some zoom capability makes a big difference. Zoom out to give a sense of the crowd and zoom in on the presenter. Also provides flexibility in camera location. A tripod to get the camera near the height of the presenter is highly preferable.
- Sound -- Don't count on an onboard microphone. The presenter will sound as if he/she's in a well. A small remote microphone, either wireless or wired, on the podium or a lavalier on the presenter will work much better and not pick up crowd noise, rattling dishes, etc. If there is a PA microphone on the podium just set your remote microphone to the side of it or tape it to the podium mic. Better yet, connect directly into the house sound system if possible.
- Graphics/presentations - Don't shoot a projection screen with your camera. Instead, run the slides and projector from a machine that is participating in the virtual meeting and share the screen (full screen mode). You may have to use "Duplicate" mode in PowerPoint to do this - otherwise the remote audience may see your "Presenter View" (check out in advance). Better yet, split the duties up between two operators on two machines. Your virtual audience will see both the slides in a big window and the presenter's image in a small thumbnail alongside.

Best Practices

Today's market offers countless product alternatives in each category. If you have some experience in these areas, go with your favorite tools or products. If not, here are some suggestions:

1. **Laptops** -- A laptop is a basic component of most configurations, although not essential. Simpler configurations exist (see "Best Configurations/Products " below).

Better yet, use a separate laptop for hosting the meeting for the remote audience. This requires a second "operator", focused only on the virtual audience's experience. If the live presenter has a video, slides or graphics, run those on a separate A/V machine operated by someone else and connected to the projector.

To provide an "in-room" experience for those at the live meeting when slides or videos are not running, this "local A/V presentation" machine can switch to the virtual feed (Zoom, etc.) to show the audience in "Gallery View" and project the virtual audience on the screen.

2. **Meeting Hosting Setup** -- Set up the meeting in advance so participants join **muted** and the meeting records automatically. If you want to allow some "chat" among members before the meeting starts, be sure you know how to mute everyone when the President opens the meeting except the machine you're running the virtual meeting on (connected to a remote microphone or mixer/house sound).
3. **Slides/videos/graphics** -- Make certain the machine running videos is set up to share sound (like music or a video) to the virtual audience (practice in advance) and its headphone output to the PA system, powered speaker or mixer. Require presenters to provide their files in advance to avoid surprises.
 - a. For Slides, keep the presenter **unmuted** so the virtual audience hears the presentation. **Share your Screen** and run the slides in Slide Show mode (full screen) so the virtual audience sees the slide either full screen or with the presenter in a thumbnail alongside (their choice).
Stop Screen Sharing when the slides stop, which will switch back to the presenter on camera.
 - b. For Videos, **Share your Screen, mute** the presenter and run the video for the virtual audience while projecting for the live audience. When the video is over, **Stop Screen Sharing** and **unmute** the presenter.

Better Idea: Hosting the meeting on the same laptop with the same operator also running the local presentations and videos is an immense load on the operator. It is unlikely you can deliver both a great local experience and a great virtual experience from a single machine. A quirk of Zoom is that once you begin screen sharing, you lose most of the meeting controls, which can be retrieved by mousing to the top of the screen. Local viewers will see those controls on the projection screen. Other platforms may handle that situation better. If there's on-screen AV for the meeting, it works better if the virtual audience's screen share is coming off the "live" meeting computer that's being projected (including sound, if a video) and a second operator on a second machine can still manage the virtual meeting (mute people, spotlight people, run the camera, etc.).

When there's no AV running in screen share, the A/V operator can switch to the Gallery View, projected on the "live" screen while the virtual meeting host operator is broadcasting the speaker's image full screen to the virtual audience. A 2-machine setup provides far higher likelihood of a professional outcome with far less wear and tear on the operator.

Recommendations: Sometimes, swapping screen shares between presenters can be difficult. Clubs may want to consider assembling and running all presentations and videos from the same machine. Remote presenters can pull up their own presentations locally on their own computers and run them as a "prompter" and the operator of the A/V laptop can follow them.

A simple method for advance organization and simplification of the host screen sharing is to assemble a 'template' for weekly meetings, including slides of the flag (maybe an animated .gif of a waving flag), 4 Way Test, etc. Each week, simply insert the items which are needed for that particular meeting into the template. Add a blank (black) screen between each item for transitions. Then, after the host opens the meeting, and ideally before admitting attendees, go into screen share mode, open the PowerPoint into play mode and have it on the first slide, maybe a welcome slide, etc. When finished with that slide, simply advance to the next blank slide and stop screen share. The next time you share the screen, you're at that blank slide and simply advance to your next item. Repeat the process through the end of the meeting. It makes for a very clean presentation, while at the same time easing a lot of workload for the operator.

The #2 glitch is presenters forgetting to unmute themselves. To avoid this, the Meeting Host can use chat to cue and remind remote presenters to unmute 10-15 seconds in advance of the start of their segments.

4. **Sound** -- Good sound is perhaps the top priority in a good virtual meeting. You will likely not be satisfied with the sound pickup of a laptop's onboard microphone in a room of any size. Use a remote microphone mounted on the podium (or taped to the podium microphone) and connected to the mic input on the virtual meeting laptop. Wireless mics are available, or a wired mic with an extension cable will work. If running cables across the floor, be sure they are taped or covered with a mat for safety. Max extension for a USB is about 10', but a more expensive "repeater" cable can be used if more length is needed. A phone plug type microphone can be extended up to 50 feet, and wireless mic setups are an option, as well, although dead batteries are a show stopper (always use a known fresh battery).
5. **Internet Connection** -- Hopefully, your meeting venue can provide a reliable Internet connection. Impediments to that would include other users of bandwidth during your meeting, such as another streaming meeting held simultaneously or a local user doing a huge upload or download. Make sure in advance that you know how to get on their network.

A backup plan is a good idea. If you do not have a Wi-Fi hotspot on your Smartphone, find a member who does, and make sure you know how to quickly switch to that network in case of meltdown of the facility's Internet connection. 2 laptops would need 2 hotspots to avoid bandwidth overload.

TIP: In the case of remote speakers breaking up, having them turn off their webcam reduces load on their own (upload) bandwidth. Another good reason to avoid them screen sharing.

6. **Virtual Meeting Platform** -- Some choices include:
 - a. Facebook Live - Simple vehicle for broadcasting a meeting. Does not support audience members seeing each other or switching off as remote presenters.
 - b. **TIP:** In the setup of a Zoom meeting, you can choose to simultaneously stream to Facebook Live. Those viewers are not part your Zoom license seat count.
 - c. Zoom - A "go-to" favorite among Rotary groups for a "2-way" meeting experience (discounts are available through Rotary Global Rewards and Tech Soup)
 - d. GoToMeeting - An alternative to Zoom with some slightly different features, based on preferences of the group
 - e. RingCentral - Another alternative to Zoom with more flexibility (for a bit more money)
7. **Posting** - You'll want to post your recordings where members can find them, and you can link from your club's Facebook page or web page. A YouTube Channel can be set up for free, which provides a "bucket" that you can link to and only your club's videos will be there. Vimeo is another popular choice. Use video editing software to add a title slide, perhaps some transition slides and touch up the recording before posting. For Apple users, the resident iMovie editor is a good basic option.
8. **Drip Marketing** -- You'll want to include both members and potential members in a post-event EMail with a link to the posted meeting video or the Channel where you're posting all meetings.

Resources

Here are some highly informative overview videos. We suggest you have a look at these to get the "big picture" of what is available and what's possible before you begin selecting products:

- [Going Hybrid: Small Meeting Hybrid Tech Setup – from Rotary District 5950](#)
- [Going Hybrid: Large Meeting Hybrid Tech Setup – from Rotary District 5950](#)
- [Hybrid Rotary Meetings Panel Discussion – “How-to” from Rotary District 7670](#)
- <https://prochurchtools.com/the-dummies-guide-to-live-streaming-for-churches-2020-edition/>
- [CHEAPEST Live Stream Setup For Churches \(That Still Looks Awesome\)](#)

Best Configurations/Products

We are providing recommendations at several levels of cost and complexity, depending on your budget, available volunteer time and expertise. Pick a place to start, see if you are satisfied with the result and move up the technology ladder from there. Examples are based on Zoom - other platforms may work slightly differently.

Level 0 -- Super Simple

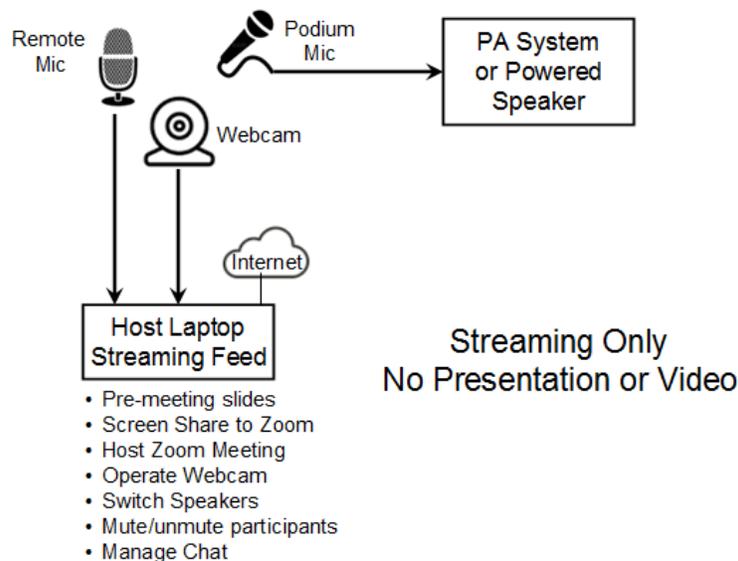
At its simplest, smaller clubs have found success with only a Smart Phone or Tablet, hand held, running a streaming application such as Facebook Live. This can be improved greatly with a small investment in two accessories:

- Tripod with a clamp mount for the phone or tablet - should be tall enough to get the camera height roughly at the presenter's eye level
- Remote Microphone & extension cable

Level 1 -- Simple - no local presentations or video

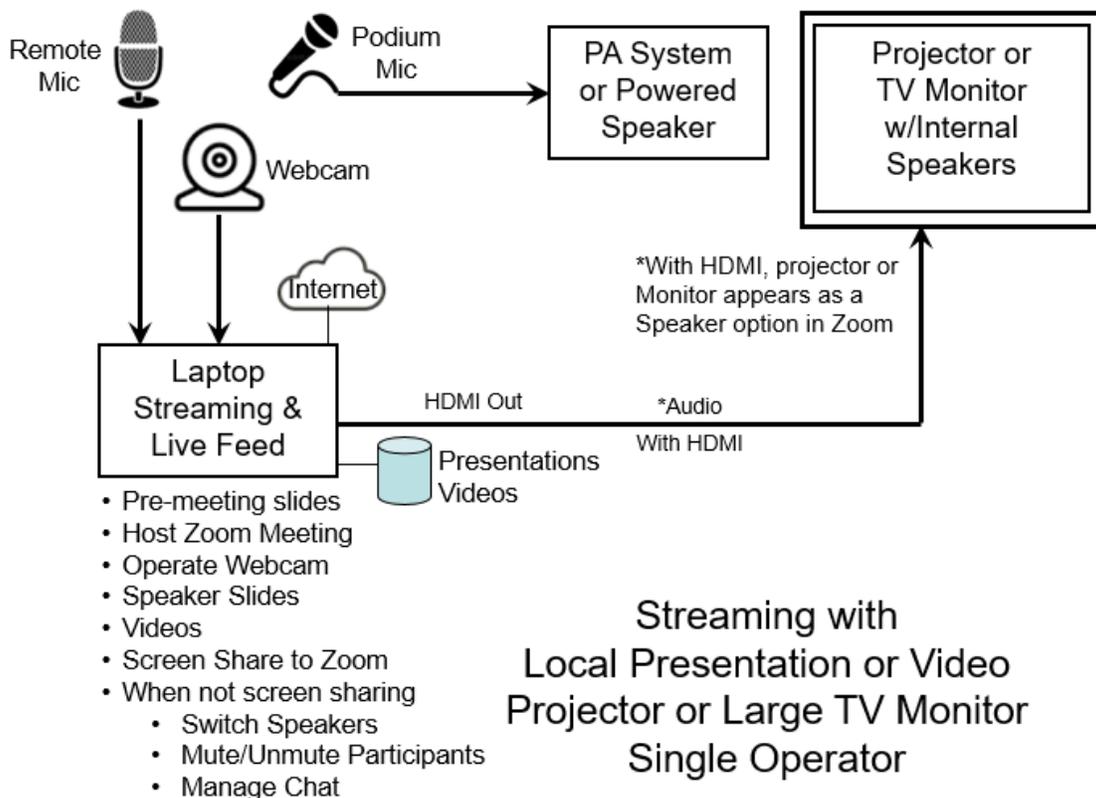
A laptop plus a tripod-mounted Webcam and remote microphone. Extension cables may be needed for both. A remote microphone with a hardware "mute" switch is a handy upgrade - good brands include Blue (Yeti), Shure, Audio-Technica. Google: "PC Microphone". A good wired lapel mic is available from Wal-Mart for about \$12.

This scheme can be further upgraded by choosing a Webcam with some zoom capability. Good brands include Logitech, Avaya, D-Link, Creative. Google: "best webcam"



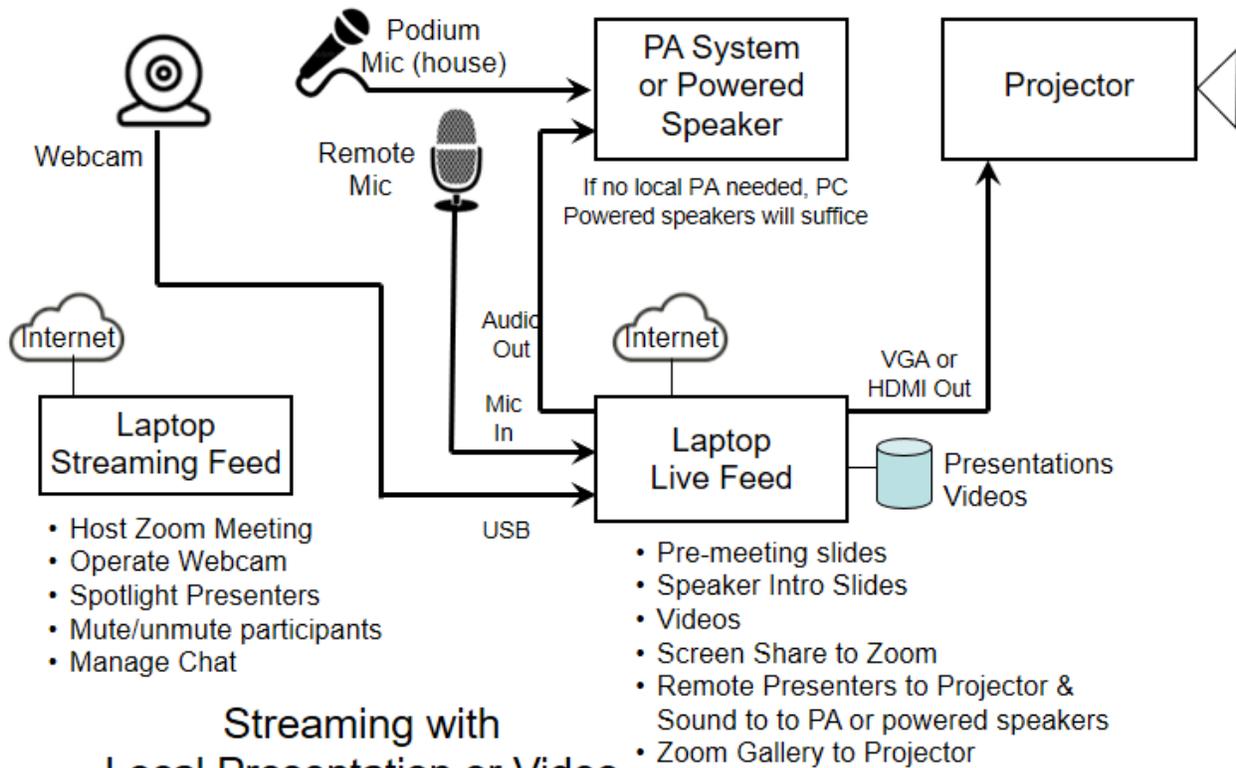
Level 2 -- Basic - with local presentation or video

Simple configuration, plus local projection. Same laptop feeds media to the projector and can switch to "gallery view" so the live audience can see the virtual audience. Remote presenters can be seen on the projector and heard through the meeting PA system.



Note: While simple in appearance, the load on the operator of managing the camera, meeting feed to the virtual audience, sound and local visuals (presentations/videos) is overwhelming. See Level 3 for a better alternative, if a second laptop and operator are available.

Level 3 -- Intermediate - With local presentation or video - 2 operators



Streaming with Local Presentation or Video

Two Operators

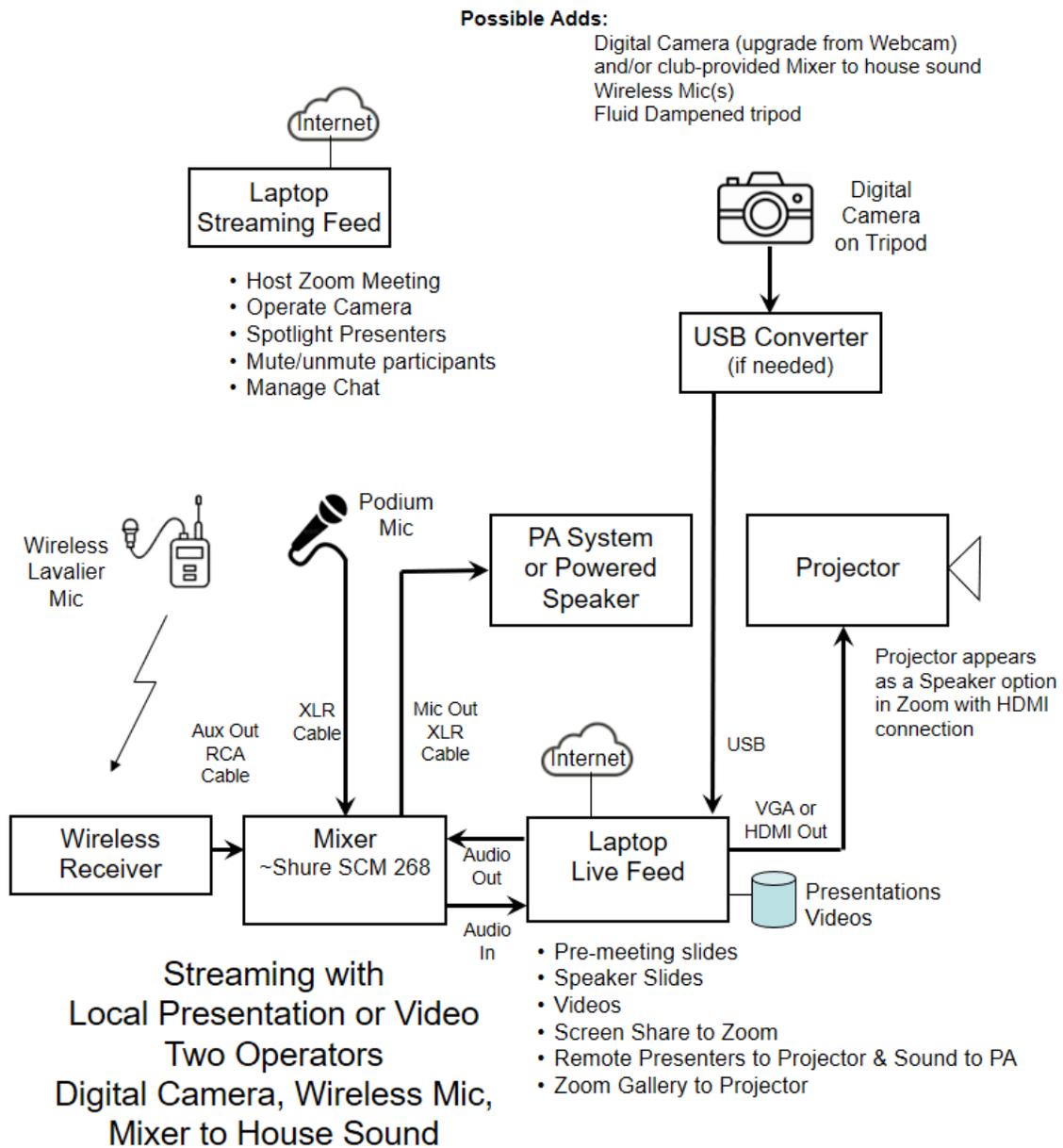
This option has huge advantages over the "single operator" strategy when visuals come into play. There is simply too much to do - too many balls to juggle, for one person to make everything work, especially if anything at all goes wrong. **IMPORTANT:** Run all audio (in and out) through the SAME laptop. Zoom automatically mutes output when it "hears" input, eliminating feedback problems.

1. **The meeting host operator** can chat with remote presenters with directions and cues, keep the webcam on the presenter or others being introduced in the live audience, spotlight virtual participants being introduced or recognized, mute people after they've spoken, and generally keep the meeting running without problems. That is all incredibly hard to do if you add to it managing and screen sharing of visual media. In this configuration, while the A/V operator is screen sharing a presentation or video with **both** the local and virtual audiences, the meeting host operator still has 100% visibility and control of all meeting management & camera functions.
2. **The AV laptop operator** can focus on getting media cued up, covering in case of a slide clicker problem, manage audio levels for the live audience, share the screen with the virtual audience for presentations or videos and fill the live meeting screen with a "gallery" of virtual participants when there's no media on screen. That gallery view can also be shared with the virtual audience or unshared, so the live presenter's image goes full screen (from the host machine's webcam).

Possible upgrades: Dampened Tripod for smoother pans/tilts of camera
 Digital or video camera vs. webcam

Level 4 -- Advanced - - With local presentation or video - 2 operators

This is a more integrated approach to sound: **Highly recommended** – **excellent** audio for both live and remote audiences. If you get the sound right, a lot of other things are forgiven.



- More than one microphone/wireless lavalier for a "moving" presenter
- Mixer provides control of all levels - mics & sound from video. Available used for \$60
- Mixer provides composite audio signal (mics + videos) for remote streaming audience
- Mixer provides path to house sound from remote audience, in case of Q/A or remote presenter

Most digital cameras have analog, HDMI or USB video outputs. Inexpensive (\$15) converters are available to convert to USB, which looks like a webcam to the laptop. A digital camera has better optics, onboard zoom capabilities and provides a much higher quality image than a webcam. Available used for \$50. **Note:** A "clean HDMI output" that hides the viewfinder status and icons is required. Recommended: Canon hf r800 or DSLR.

Another level: Add a Video Mixer for integrating multiple cameras, multiple audio feeds, etc.

Meeting Production Best Practices

- Secure all slides/videos the day before the meeting and run them in slide show mode for quality assurance. Touch up if needed (typos, font sizes, etc.)
- Set up meeting to open with all participants muted (cannot unmute) and in waiting room with recording on (prevents forgetting to start recording)
- Open meeting for checkout ½ hour to 1 hour before live meeting opens
- Rename host laptop as "Host"
- Rename A/V laptop as "Presentation" or "Podium"
- Get all presenters connected, set as Co-Hosts with ability to unmute themselves
- Check out all presenters' sound and video - lighting, etc.
- Check out room sound from A/V laptop and podium/wireless mics
- Check out projector with screen share from A/V laptop - dry run slides and videos
- **IMPORTANT:** In Zoom, make sure to check the "Computer Audio" box when starting screen share
- Consider a backup phone conference setup between host and AV operators (if separated) and remote presenters -- FreeConferenceCall.com. If something goes wrong, you have a live phone connection to all players
- When everyone and everything is ready, turn off waiting room and admit all waiting

Host Operator Duties

- Set up & check out meeting per above
- Unmute for local speaker - remote mic or mixer
- Use "Spotlight" to immediately switch the thumbnail image to remote speakers. The "Participants" window has a typeahead search to make it easy to find them.
- Use chat or phone to communicate with and cue remote presenters, making sure they are unmuted before they begin speaking.
- When the meeting is over, you can "undo" the mute and allow the virtual audience to talk among themselves.
- Using a smartphone, log into the Zoom meeting and use earbuds and the screen to monitor what the Zoom audience is actually hearing and seeing (with some time delay)

A/V Operator Duties

- Secure and dry run all slides and videos in advance. This eliminates the scramble when the speaker arrives late, tosses you a USB drive that may or may not contain his slides or video
- Run a "handout" print of all slides, so you know what is coming up and can easily follow remote presenters or assist a live presenter if there is a slide clicker problem. Good place for cues and notes
- Set up A/V laptop so sound from music or videos goes to virtual audience (Check "Computer Sound" box in Zoom Screen Share)
- Check audio levels with both PA system and virtual audience
- Mute the host laptop mic and stay muted
- Use Full Screen Mode
- Share your screen when videos or slides are running for both virtual audience and projector
- Unshare and show either speaker view or gallery view of remote audience on projection screen. Switch on occasion for some variety
- You may want to avoid swapping screen shares with remote presenters. If remote presenters are using slides, they can run them locally (only they see them) and do their voice-over presentation. Their webcam view will be in the thumbnail alongside their slides (use spotlight to ensure that). The virtual and live audience will see the slides from the A/V laptop screen share as the A/V operator "follows" the remote presenter. During longer slide durations, unshare the screen and the remote presenter will go full screen in speaker view.

Hybrid Meeting Photo Examples



- Webcam on Dampened Tripod (note height)
- Laptop
- Projector



- Gallery View of Virtual Audience on screen