ATONEMENT LUTHERAN CHURCH TECHNICAL ARTS MINISTRY

Technical Arts Ministry Overview

What is the Technical Arts Ministry?

There are several ways we employ technology in the work of the church to enhance the way we are able to proclaim the Gospel to our members, our visitors and our community. Here are the many ways we employ technology in our church today:

- Email
- Website
- Social Media
- Digital Signage

- Video Projection (Slides)
- Sound Reinforcement (Audio)
- Audio and Video Recording
- Lighting

While there are other methods we may utilize, these are the primary tools we use almost daily in the work of the church. The four listed in the right column are regularly used in our worship services. As a Tech Team volunteer, we want you to become knowledgeable in these four areas and we'll try to make your task as simple as possible with our training. All controls for these processes are located at the tech desk in the worship space.

What does a tech volunteer do?

During a typical Sunday morning worship service, tech volunteers are responsible to ensure that the pastors and other participants are clearly heard by those in attendance and recorded for our web podcasts (**sound techs**); that worshipers have song lyrics, prayer responses and other information displayed on the screen in a way that allows them to fully participate in the service (**slide operators**); and that services are properly recorded using the video camera systems for upload to the web, sending to remote locations within the building or for streaming (**video directors**). Each service will have a video and an audio recording saved for upload to the web or for archival purposes. Often, we may have more than one tech volunteer assigned to a given worship service and, at times, volunteers may handle one or more positions if they are capable.

Why do we do what we do?

When properly used, technology can enhance the total worship experience and give new freedom to the worshipper. Congregational singing is enhanced because heads are not fixed looking down at a hymnal or bulletin in the worshipers' hands. Participants are free to express themselves with their hands by clapping or gesturing in praise to God. It helps connect worshipers to each other by eliminating the artificial barrier created by holding a book between the worshipper and the rest of the congregation. In other words, it "opens up" worship so that participants can view and interact with each other. Technology is a unique way to engage participants in the total sensory experience of worship to see, hear and feel the story and presence of God in new ways. Much of this experience can come from the judicious use of graphics, animation, film clips, sound and lighting. There are several ways in which these enhancements can draw worshippers into a new understanding as well as improve retention of what is said, sung or read.

What does all that equipment do?

At first, the amount of hardware, cables, buttons and lights can be intimidating. Once you understand the basics of what each piece of equipment controls, the task will not be quite as daunting as it first appears. You'll see a number of computers and monitors. Each has a specific purpose that will help you to organize and control each task necessary during the service. There are some parts of our responsibility where almost nothing needs to be manually controlled like our hearing-assist system. Others require constant attention, such as, running slides or cameras throughout the service.

While it is possible for one person to control it all, it's best to have an additional person or two assigned so that nothing gets left to chance. In addition, when there are a limited number of microphones in use, as for our 8:00 or 9:15 traditional services, scheduling an additional person just to run sound can be a very boring assignment.

Primarily, there are three computers that control, process and record the functions of our technical arts ministry. They are the 1) **Media Computer**, a desktop PC located on the floor just to the left of the sound mixing console; 2) **Video Recording Computer**, which is another desktop PC located on the floor to the left of the Media Computer; and 3) the **Audio Recording Computer**, a laptop that is on top of the file cabinet to the right of the sound mixing console. The Media Computer runs the software to project computer graphics and store all the digital images, videos and other files we use. In addition, it has several external drives for backup and additional local storage. The Video Recording Computer is used to process our recorded and streamed live videos. The Audio Recording Computer is set up to record an audio-only version of a service or event for uploading to our website as a podcast. All three computers are networked together and have the ability for remote access, so we can upload files from outside the building. The CPU of each one is labeled so you can clearly identify them.

In addition, there are smaller computers and processors mounted in the rack below the sound mixing console. They are used for various functions: processing sound for video and the hearing-assist system and controlling the video cameras. It is rarely necessary to make any adjustments on these computers, so we will not spend much time in this manual explaining their settings.

There is more equipment that you will learn about later in this manual, located in the rack below the sound mixing console that processes audio transmissions from our wireless microphones. In the balcony, a large rack contains more audio equipment including additional wireless microphone receivers, amplifiers for the speaker systems and a component called a digital signal processor (DSP) that handles all of the audio signals in our system controlling elements such as EQ, balance, signal delay, compression and other fancy audio terms you'll learn about much later in your training. Many of the functions of the DSP may be controlled by an iPad at the tech desk.

Camera System

One of our newest systems is our robotic camera system that enables us to record, project and/or feed the signal to a remote device: TV sets in the Gathering Place, Nursery, or stream live to the web. The system consists of three robotic Pan/Tilt/Zoom (PTZ) cameras that are all controlled from a central console. A single operator can function as the cameraman, producer and director for all the shots needed to professionally shoot any event in the worship space. In addition, a separate multi-view monitor allows you to plan camera shots and presets for each camera and enable the operator to quickly recall specific scenes. As previously mentioned, a separate desktop computer is used solely for recording and/or streaming video to the internet.

Projection System

We have two projectors in the worship space. Projector One or Main Projector, is used to display images on the front wall. The other, called the Stage Display, is used to show the same or different images on a screen in the balcony. We use a special software program called ProPresenter to control the slides used in worship. Slides may contain lyrics for hymns and songs, prayer responses, announcement slides or embedded videos. In addition, we have the ability to send the image captured by our camera system to the screen in a process called image magnification or iMag for short. This can be used so that all worshipers can see what's going on up front like during a baptism or children's sermon. It is important to note that volunteers who operate slides during worship are, in effect, a worship leader—you are leading the congregation when displaying words and images during the service. The projection system has a dedicated desktop computer that controls the software which can also use Microsoft PowerPoint for presentations to be shown in the sanctuary outside of worship.

Sound System

Aside from the standard cabling, microphones and speakers, the major components of the sound system include:

- Wireless microphones and receivers
- The sound mixing console (the "board" or "mixer")
- Amplifier rack (in the balcony)
- Digital signal processor (DSP)
- iPad (for controlling DSP functions)
- Monitors (Wedge and "Hotspot")
- USB Analog to Digital Recording Interface
- Audio Recording laptop computer
- AV Bridge (Audio to Video Embedder)
- Hearing Loop System

While we would love for you to learn how to set up sound equipment like microphones, instrument interfaces, monitors and associated cabling, your job related to *running* sound will primarily be limited to operating the mixer and creating an audio recording. You'll need to be able to do this so that the spoken word or song is intelligible, meaning: loud enough, not overpowering and without distortion or feedback in the worship space and our video feeds. For our 10:50 service, the sound tech mixes the entire band and vocal mics and we don't expect novice tech volunteers to learn or acquire the necessary experience in one or two brief training sessions.

Lighting System

The main lights in our worship space are controlled using a programmable wall pad located behind the tech desk. There are times when certain lights need to be dimmed, raised and turned on or off during a service. This directs the congregation's attention to or from a certain area in the worship space.

Cue sheets

In order to know what needs to be done at a particular point in the worship service, we prepare an individual cue sheet for sound, slides, video (camera) and the worship leaders. Each sheet will contain special instructions or specific needs for each of these technical areas at given points in the worship service. We don't expect you to "remember" detailed instructions from memory. The cue sheets will help you to prepare in advance to: bring up a microphone, position a camera, or display a slide so that it all becomes transparent to the worshipers in the pew or viewing on their screen. When no one notices the tech volunteers during the service because nothing happened to call their attention toward the tech desk, that's a GREAT DAY and you've accomplished one of your primary tasks. We like to say that no one really notices what you do *until you don't do it.*

What positions will you be expected to learn?

Ideally, we would want every Technical Arts Ministry volunteer to learn how to run all the equipment and fill all the roles related to video, projection, sound and lighting. We realize, however, that not every person will feel they have the creative or artistic talent needed to compose engaging video shots or have the ear to be able to mix the audio of several instruments or voices. Likewise we have had some individuals who feel they just don't have the timing for running slides with lyrics or liturgical elements on the screen. That's OK. As mentioned previously, we try to assign more than one person to each worship service so that every volunteer has a designated role. You might choose to "specialize" by only running video, controlling slides or being a master at mixing sound for one of our praise band-led worship services.

Training: initial and ongoing

We want you to be able to carry out your responsibilities in the most effective manner with as little anxiety and uncertainty as possible. To do this, we will provide training for each tech position or role you will be expected to cover. Some training will be one-on-one, some will include documentation, some will be video-based, some may include "shadowing" an already trained individual and, from time to time, we may also send out an email or link to a helpful website pertaining to church tech issues.

Scheduling of volunteers

One of the most often asked questions we receive is "how often do I have to serve?" The real answer is **as much as you want to!** Ideally, if you can serve once every three or four weeks that would be outstanding. For our 10:50 service, we generally try to assign the same tech team to serve with each of our three praise teams and they are on a three-week rotation. Most of our traditional services will have at least two tech volunteers assigned: one to run video production, recording and streaming and one to run slides and monitor the sound board. We use an online system called Planning Center Online to schedule our volunteers and you will receive requests via email from that system for scheduling. Our 8:00 and 9:15 services have a feature called 'Signup Sheets' enabled which will allow you to schedule yourself for an open position on any given Sunday. In addition, Planning Center allows you to manage your own schedule by blocking out dates on the internal calendar when you know ahead of time that you are unavailable. More information about Planning Center is in a separate section of this training document.

What do we expect?

We expect you to be attentive, dependable, timely and interested in your position. _Be on time!_ In fact, try to be early and there will be a lot less anxiety for everyone. Don't allow yourself to become distracted by a side conversation or a mobile device during a service. You **_are_** a worship leader even though you're not up in front of people. The congregation is expecting to be able to participate by singing or saying the right words at the right time. They came to hear the Gospel proclaimed and your technical skills can ensure they hear it intelligibly. Also, our online audience wants to engage in our worship broadcasts. You are an important part in making that happen. Ask questions. If you're unsure or suspect there's a problem, tell someone. If you're uncomfortable, let us know. We want you to succeed!

What you need to know

There are some basic skills and computer techniques that are required to operate most of the equipment in the Technical Arts area. Most of our computers run using the Microsoft® Windows operating system. We assume you know how to navigate your way around in File Explorer to locate folders and files, how to copy and move folders and files as well as using the keyboard and mouse. Terms such as click, double-click, CTRL-click, ALT-Tab, click + drag, minimize and maximize should not be foreign to you and you should know how to execute each of them. Inserting CDs, DVDs and USB devices should also be very familiar to you. You should know where to find an application's menu, how to resize a window and where to find the operating system's taskbar. We also use an iPad for controlling portions of our sound system; you should also be familiar with basic navigation on a tablet using a touch-screen device including tap, double-tab and swipe on the screen. If you lack these basic skills, they can be learned but until you are proficient with all of them, your task will be far more difficult and probably much less rewarding.

About this documentation

We've attempted to make this training material as convenient as possible. This manual contains a table of contents and an index to make locating the right information simple and quick. In addition to this brief overview, you'll find the manual is broken up in sections that help you with each area of our technical arts ministry. The sections are designed to help you with the individual areas such as camera, projection, sound, digital signage and others. Each section is further divided into individual procedures toward the front of the section and "addendum" pages at the back.

Most procedure sections start with a **Pre-Flight** checklist for that area so that they can be used as a reference tool regularly each week. Following the checklist, you'll find individual procedures for specific tasks that are regularly followed to ensure a quality product. Pages are labeled in each section to include the section number followed by the procedure number such as **1-7**, which is Procedure 7 in Section 1, or **3-12**, Procedure 12 in Section 3. Most procedures are only one or two pages in length and where needed, also include diagrams, photos or screenshots.

At the end of the first three sections you'll find a comprehensive **Operating Guide** that includes instructions, tips and tricks to operate the equipment as an overview to operating that system. These "addendum" pages are identified with a number preceded by a letter such as **A-1, A-2, A-3, B-1, B-2,** etc. The letter corresponds to the given section so '**A**' addendum pages belong to section **1**, '**B**' pages are part of section **2** and so forth. In sections where there is an Operating Guide, it will be the first addendum in that section. So A-1 is an overview of the camera system and B-1 is an overview of the projection system. These operator's guides should help you under-stand the equipment and learn the techniques to perform your tasks in a quick and efficient manner. You should become familiar with the material contained in these operator's guides *before* working with the equipment or attempting to understand the procedures in the front of each section.

Some sections may also include a troubleshooting guide, a glossary, schematic system drawings to illustrate the interaction of hardware components and other reference material. This training manual is also available as a PDF on all the computers in the tech area. If you would like a copy for yourself, please make a request and we can send one to you.

Service call times

The service call times, which is the time we expect you to show up to volunteer, are designed to allow the maximum time to conduct all necessary pre-service duties in a productive manner and allow some padding in the event you run into some problems. Service call times should be taken seriously, they are not *suggested times*, they are the times that you are expected to report for duty.

SERVICE	SERVICE CALL TIME	SERVICE START TIME
Sunday Morning 8:00am	**7:25am**	8:00am
Sunday Morning 9:15am	**8:55am**	9:15am
Sunday Morning 10:50am	**10:30am**	10:50am
Evening Services	**6:40pm***	7:15pm*
Wedding Service	**35 minutes** before start	Times vary
Funeral Service	**35 minutes** before start	Time vary

*Most of our evening services are scheduled for 7:15pm. When an alternate time is set, arrive at least 35 minutes prior to the start of the service.

When you are the first to arrive to handle tech duties for the day, the reason you need to arrive at least 35 minutes ahead of the scheduled start time for a service or event is that there are several pieces of equipment to turn on as well as software to launch and check.

Arriving late for a scheduled assignment will cause undo stress on you and others who are leading the service. If, however, you know that you will be late or get delayed due to some unforeseen circumstance—the train crossings in Barrington are a good reason—we ask that you call or text your scheduler to let them know.

Are you ready to join the Tech Arts Ministry?

We don't want you to be overwhelmed but we thought it important to let you know what's involved and be aware of what to expect. There's a lot to learn but we'll try to make it as easy as possible. Be sure to read through the training material we provide and refer to this Operations Manual as often as needed. Ask questions. Take notes. If at any time you sense that this is not your calling, let us know. If you discover errors or safety issues with the tools and equipment we provide, send a note or tell your supervisor. Above all, have fun, stay alert and do it all for the glory of God.