LAVALLEY LAW LIBRARY

MEDIA SERVICES

INSTRUCTIONAL MEDIA

OPERATIONS MANUAL

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INTRODUCTION TO MEDIA SERVICES OPERATIONS

The LaValley Law Library Media Services unit provides operational support for all classes and events occurring at the University of Toledo College of Law. Different classes and events are given different levels of support. Media Services supports everything from a simple classroom movie showing setup to in room staffing of a multi-room all day conference.

The purpose of this operations manual is to provide Media Services permanent and student staff (or any other technological staff member called upon to provide instructional media support) with an understanding of the inherent complexities of instructional media support at the University of Toledo College of Law.

AUDITORIUM OPERATIONS

The instructional media equipment in the College of Law auditorium is designed to support conference setups. It allows videotaping of multiple participants who may be using microphones, PowerPoint, or video clips.

The auditorium equipment is found in four locations. There is a podium on the stage with a desktop computer, cables for a laptop, and a touch screen. The podium also has a switcher to switch between laptop and desktop computer. There is an electric screen mounted on the back of the stage with a switch on the left side of the stage. There are also four wired microphone jacks near the switch.

The projector and video camera are located on a shelf attached to the balcony. The projector sits on top of the shelf; the video camera hangs from below. The equipment cabinet inside the near closet contains the microphones, recording equipment, DVD and VCR, a listening system, and wireless control system. There are six room audio output jacks located on the back wall of the auditorium.

More details are available in the individual sections and in the appendices.

Microphone Operations

Microphone Item Detail and Signal Flow

There are seven Telex wireless microphone receivers located in the multi-media cabinet. Two additional Telex microphone receivers are usually kept in the classrooms, but can be moved to the auditorium for conference setups. Each receiver can be used with either a handheld transmitter (the "handheld microphone") or a body pack transmitter with lapel microphone (the "lapel microphone").

The system is frequency agile, meaning that receivers and transmitters can be programmed to various frequencies. The transmitter works with the receiver on the same frequency. Each transmitter has a label that corresponds with a receiver label. These labels are for the convenience of staff and end users, to mark which ones usually have matching frequencies.

From a staff perspective, the group and channel numbers found on transmitter and receiver are more important. Each frequency corresponds to a particular group number and channel number. (For more information, see the "reprogramming the wireless microphones" appendix).

Each receiver is wired to a particular channel on one of the two Shure microphone mixers. There are two Shure microphone mixers, each with eight channels. The first

four channels on the top mixer are devoted to the wired microphone jacks. The last four channels on the top mixer and the first five on the bottom mixer are devoted to wireless microphone receivers. The mixers are linked together, allowing all microphones to be output together.

There are three mixer outputs. The first leads to a "direct box" that corrects for possible ground hum in the system. The direct box is connected to an audio distribution amplifier. The audio distribution amplifier feeds the room audio output jacks. These output jacks can be used by the news media and others to capture the microphone sound.

The second output feeds the wireless control system volume control. The volume control feeds the equalizer. The equalizer feeds the amplifier. The amplifier feeds the auditorium loudspeakers. The third output feeds the recording mixer.

The recording mixer receives audio input from the microphone mixers and program (VCR, DVD, and computer) sound from the matrix switcher. It feeds the recording deck and the assisted listening system.

Known Event Operations Issues for Microphones

Microphone operations face two fundamental issues in the auditorium. First, the acoustics in the room are mediocre.

Second, there is only one equalizer for all microphones. The equalizer is set to maximize the quality of the handheld microphones because the handheld microphones are used much more frequently.

These limitations mean that the audio must be monitored closely for signs of interference and feedback. Media Services has four ways of monitoring for interference and feedback. First, pay attention to the live sound in the room. Since each staff member's hearing threshold may be different, however, it is also important to monitor in other ways.

The second way is to monitor the sound through an assisted listening device. The volume on the listening device can be turned as high as needed. In addition, because using the listening device masks the background noise, one can often hear interference before it becomes very noticeable live. If the staff member is using an assisted listening device, he or she should alternate between using the earphones and listening to live sound.

Third, the microphone mixer itself has two indicators that can reveal interference. The light above each channel normally lights green when used (the "last microphone on" light). It lights red when the mixer is overloaded. The

mixer also has a meter that runs from green to amber to red.

The fourth means of monitoring interference and feedback most often occurs with a type of interference unrelated to room or equipment limitations. The wireless microphones use UHF frequencies and are occasionally subject to outside interference. The noise is an extremely loud burst of static and can be very annoying. It is caused by one specific microphone receiver frequency receiving the interference.

If there is more than one microphone in use, one must be looking at the microphone cabinet at the moment the interference occurs to identify the offending receiver. The Audio Frequency meter will jump from zero to maximum on the offending receiver. The light above the channel on the microphone mixer will flash red.

The room and equipment limitations make the use of lapel microphones inadvisable in most situations. The lapel microphone is an omni-directional microphone. Because the sound comes from all directions, it is more susceptible to sound bouncing off of the brick walls. This leads to more feedback. Certain spots in the room are particularly bad for the lapel microphones.

In part because more of the sound is absorbed; in part because the lapel microphones cannot be equalized, only speakers who project strongly will be heard when using lapel microphones. With an audience of less than 50 people it may not matter. With a larger audience most people will not hear most speakers using lapel microphones.

The lapel microphones have one other issue that occurs from time to time. If a speaker is wearing a tight suit jacket, it can brush the body pack antenna. Brushing the antenna creates static.

Types of Microphone Setups

Almost any event in the auditorium that uses any instructional media will use microphones. Possible microphone setups for single speaker events include a) one microphone on the podium, b) podium microphone and one lapel microphone and c) either one or two stage microphones with one or more audience microphones. Audience microphones can be placed on floor stands or carried by hand.

The most common multiple speaker setup includes a podium microphone and three microphones on a table. If audience microphones are used, there are usually three microphones placed on floor stands on the first floor. Two additional microphones can be placed on floor stands in the

balcony. The auditorium can simultaneously support up to nine wireless and four wired microphones. Any of these setups can occur with video recording and/or speaker multimedia displays.

Instructions for Microphone Setups

1. Turn on each microphone receiver that will be in use.

2. Turn on each transmitter that corresponds to the receiver(s) that you turned on.

3. Check the battery life. The battery indicator is found on the microphone receiver. It is shaped like a battery and can have from one to four marks indicating battery life. Total battery life is between four and eight hours, depending on usage. Three or four marks are usually sufficient. Fewer marks mean the battery should be replaced. Exceptions will be discussed under microphone support during events.

4. Adjust volume using the corresponding channel on the microphone mixer. The labels on each channel identify which microphone receiver has been wired to a particular channel.

5. Place microphone(s) in the positions where they will be used. Leave the microphone(s) on for a few minutes. Verify that the battery indicator(s) do not change before turning microphones off.

Microphone Support During Events

1. Not all events are entitled to in-room microphone support.

2. Most microphone issues can be addressed by adjusting volume up or down as necessary. If there is outside interference, the microphone receiver needs to be turned off.

3. Single speaker events often include two introductions and a speaker. With a single microphone on the podium, volume often needs adjusting between speakers. Volume sometimes needs adjusting even during a speaker's speech.

4. Single speaker events with a lapel microphone require constant monitoring.

5. Panel discussions require constant microphone monitoring.

6. Audience microphones should be turned on at the beginning of the event. However, the volume should be all the way down until the speaker(s) is ready to take questions.

7. If the event is half-day or all day, all microphones should start with fresh batteries and be checked at every break. Batteries should be replaced when they drop to two marks.

Please refer to the appendices for further microphone information.

Display Operations

Overview of Display Capabilities

Speakers can display video clips on VHS videotape or DVD, video clips from a computer, PowerPoint, and anything they write on the touch screen. The VCR and DVD must be loaded in the closet but can be controlled from the wireless control panel. The desktop computer, laptop computer and touch screen must be controlled from the podium. The wireless panel can send VCR, DVD, cable TV, and computer to the recording deck and/or to the projector.

Computer Item Detail and Signal Flow

The desktop computer has a floppy drive, CD/DVD drive and USB ports on the front of the computer to accommodate any files a speaker wants to load. If necessary, we can also run network cables across the stage to connect to a network jack at the side of the stage to download things from the Web or the internal network.

The desktop computer VGA output connects to a VGA distribution amplifier. The distribution amplifier connects to the touch screen and to the podium switcher. The desktop computer audio output connects directly to the podium switcher.

The switcher has a VGA cable and an audio cable that can be hooked up to a laptop. Input #1 is the desktop computer. Input #2 is a laptop computer. The switcher VGA output feeds a VGA distribution amplifier on the projector shelf.

The VGA distribution amplifier feeds the projector input #1 and the scaler. The scaler feeds video input #1 on the cabinet matrix switcher. The podium switcher audio output feeds audio input #1 on the cabinet matrix switcher.

Known Event Operations Issues for Computers

There are three fairly common issues arising with the computers. First, some speakers using laptops cannot see their PowerPoints on the projector screen when first hooking in the VGA cable. This can usually be fixed by pressing whatever function keys toggle through the laptop's display options. On Dell laptops, this is the "Fn" & "F8" keys. Other laptops may be different, but the keys are usually marked. If this fails, restarting the laptop may solve the problem.

Second, sometimes the projector displays a blue screen because the podium switcher is on the wrong input. This problem is solved by pressing the button for the appropriate input.

Third, sometimes speakers' PowerPoints are displayed with the wrong colors, or parts of the PowerPoint do not display. This occurs because the projector does not or cannot render the PowerPoint properly. In most cases, this issue cannot be resolved.

Media Services staff will often be asked to try anyway. This can be difficult. It requires pointing the projector remote at the projector while simultaneously looking in the opposite direction (towards the projector screen). It is not easy to find a spot where one can see the screen while successfully operating the remote. The one advantage is that the menu screen does not time out. It will remain on the screen. See the appendices for the specific menu choices available.

Types of Computer Setups

Speakers will usually do one of two things. First, bring in PowerPoint presentations or other computer files to load on the podium computer. Second, they may bring in their own laptops to plug into the projection system.

Instructions for Computer Setups

Setup should be done 30 minutes prior to the event, if possible. If the podium computer is going to be used, make sure it is turned on. Choose "PC" on the wireless control panel and choose "Send to projector."

If the laptop computer is going to be used, hook in the VGA cable, and audio cable if applicable. Turn on the laptop. Switch the podium switcher from "1" to "2" in order to verify that the laptop is projecting properly. If the podium computer is first to be used, start with the switcher on "1." If the laptop computer is the first used, start with the switcher on "2."

Computer Support During Events

Loading presentations onto the podium computer or hooking up a laptop is normally a simple matter. What can make it complicated is the number of presentations loaded or the number of times they must be switched. Even when given instructions, some speakers are not comfortable using the podium switcher, or even changing from the previous speaker's PowerPoint slide show to their own.

Media Services will not staff events simply because a speaker has difficulty operating technology. However, many events that Media Services provides staffing for will feature speakers who struggle with technology. During events with more than one Media Services staff member present, it is sometimes a good idea to station a staff member at the front.

DVD & Playback VCR Item Detail and Signal Flow

The DVD player is located just below the recording monitor in the multimedia cabinet. It is connected to projector S-video input (#3) through the S-video output, to the matrix switcher audio & video input #3 via the RCA audio & video output, and to the wireless control system via a cable connected to the IR port. The projector input #3 is not normally used. The DVD player is normally switched through the wireless control panel.

The playback VCR is located just below the DVD player in the multimedia cabinet. It is connected to the matrix switcher audio & video input #4 via the RCA audio & video output and to the wireless control system via a cable connected to the IR port. The University cable system is connected to the VCR via the RF input and uses the VCR's internal TV tuner. It automatically comes on when the VCR is turned on.

Known DVD & Playback VCR Event Operations Issues

There are two significant operations issues with the DVD and playback VCR. First, since the University cable is not often used, it may be wise to start with the cable on channel 77 or a similar channel that will show only a blue screen.

Second, some speakers come in with multiple videotapes. This can require physically moving multiple VHS videotapes in and out of the VCR. It can also require careful monitoring of the VCR, because some tapes are auto-play and need to be stopped before they passed the cued-up part. In addition, one must often switch between PowerPoint and video on the wireless panel.

The same general issues apply if a speaker wants to show only a single DVD chapter. It is not unknown for the same speaker to come in with VHS videotapes and a DVD. The same issues apply, but with a greater level of complexity.

Types of DVD and Playback VCR Setups

The types of DVD and playback VCR setups are simple. Either or both can be used during an event, though only one of them can be displayed at a time. While both can be controlled from the wireless panel (which can be operated from anywhere in the room), both must be loaded in the multi-media cabinet.

Instructions for DVD and Playback VCR Setups

1. Load the appropriate media in the appropriate player.

2. Cue as needed, using the appropriate set of controls on the wireless control panel (see the "operating the wireless control panel appendix").

3. Send to projector and/or recording on the wireless control panel as appropriate.

4. Operate during event as appropriate.

DVD and Playback VCR Support During Events

As noted earlier, DVD's and videotapes often require substantial use of the wireless panel. Media Services personnel should familiarize themselves with its various operations. During complex operations, running the wireless panel may be delegated as a separate task, despite the cramped physical space. However, if an event is being videotaped, this will compete with using the panel for videotaping.

It is awkward but sometimes necessary for two people to operate equipment in or near the multi-media closet. It is nearly impossible for three people to operate equipment in or near the multi-media closet. If videotaping is occurring, the person doing the videotaping will have to take on the additional responsibility of DVD and playback VCR support.

Overview of Videotaping Operations

Videotaping in the auditorium is primarily done through the permanently mounted camera. It is mounted on the underside of a shelf fastened to the balcony. The camera control is mounted on a shelf in the multi-media cabinet, just above the microphone mixers. The recording VCR is located just below the playback VCR.

A second video camera can be setup in the auditorium. However, this video camera is not otherwise hooked into the auditorium system.

Videotaping Item Detail & Signal Flow

The video camera sends its video output to the camera controller. The camera controller sends it out to a composite video distribution amplifier. The CV DA sends the video output to video input #2 on the routing switcher. The routing switcher video output #2 feeds the recording deck. Audio input to the recording deck comes from the main output on the recording audio mixer. The recording deck sends video and audio output to the recording monitor.

The camera controller has a joystick that controls the camera angle and direction. Focus and zoom each have a pair of buttons. Using the shift key converts the zoom control to a camera aperture control. Each item is used during a videotaping.

Videotapes loaded into the recording VCR play automatically. The stop button should be pressed after inserting the videotape. "Record" and "play" must be pressed at the same time to begin recording. The recording monitor shows what the recording deck is recording. Most of the time, the recording source will be selected from the wireless panel (see the appendices for changing recording or display sources from the matrix switcher). We can record from only one source at a time.

Our choices include PC, VCR, DVD, cable, & camera. Pressing the any of these buttons automatically brings that item on to the preview monitor. The preview monitor is fed from the matrix switcher. Once the appropriate item has been selected and previewed, we can press "send to record."

Known Event Operations Issues for Videotaping

The colors and lighting in the recording monitor are a little off. We should use the preview monitor to adjust the lighting. Our videotapes are going to look dark because the camera's automatic gain control has a significant red push. The effect turns the dark blue background on the wall a chocolate brown. We need to keep the ACG turned off. We have tried to correct the problem and been unsuccessful.

Because the auditorium lacks signal synchronization equipment such as a black burst generator, switching sources creates scan lines. These scan lines are a result of the recording deck adjusting to the signal. The scan lines usually are not noticeable live on the recording monitor, but they are very noticeable on the videotape. These scan lines are addressed during the video production process.

Types of Videotaping Setups

There are two types of videotaping setups in the auditorium. A one video camera setup uses only the built-in camera in the auditorium. A two video camera setup adds a second video camera usually positioned just to the left of the main aisle and just behind the last row of seats on the first floor. The second video camera can also be positioned down in the front for a profile view of someone facing the stage.

Instructions for Videotaping with the Built-in Camera

1. Insert the videotape in the recording VCR. Press "stop."

2. Turn on the recording monitor.

3. Turn on the preview monitor.

4. Press "camera" on the wireless control panel.

5. Use the preview monitor to adjust the camera as needed.

6. The first adjustment is usually using the joystick to find the appropriate area on the stage.

7. The second adjustment is usually the zoom control. Zoom has two adjustments, "wide" and "tele." These buttons are in the lower right hand corner of the control console.

8. The third adjustment is usually the iris control, which shares the same buttons as the zoom control. To use the iris control, pres the shift key. When the shift key is lit, the dark gray labels define the controls. For the iris this is "open" (more light) and "close" (less light).

9. It is normal to have to make minor camera adjustments when the speakers arrive on the stage.

10.   Start recording immediately prior to the first person beginning to speak by pressing "record" and "play".

11.   Change recording sources as necessary by choosing the appropriate button and then pressing "send to record."

Instructions for Switching Recording Sources

1. Recording almost always starts with the camera as the source.

2. Press "camera" on the wireless panel and verify that it looks ok on the preview monitor.

3. Press "send to record."

4. Press the appropriate button to bring up the second source (most often "PC") in the preview monitor and verify it looks ok.

5. In general, PowerPoint slides should be sent to the recording deck when a speaker begins speaking about it. Do this by pressing "send to record."

6. Immediately press the appropriate button to preview the next source (most often "camera."). If the next source is the camera, make any necessary adjustments before sending the camera view back to the recording deck.

7. The source being recorded should always be showing in the recording monitor. If it is not what you expect, you are recording the wrong thing. The next source to be switched should showing in the preview monitor.

8. A person watching the microphones can serve as the second pair of eyes for monitoring switching.

Additional Setup Instructions for Camcorder

1. Using duct tape and the cord covers, tape down the extension cords from the back wall of the auditorium to just behind the back row and immediately to the left side of the aisle. (Alternatively, using duct tape and the cord covers, tape down the extension cords from the front right wall of the auditorium to just inside one of the front rows).

2. Open the camcorder carry case and take out the camera power cord. Plug the camera power cord into the extension cord.

3. Place the camera stand in the appropriate position.

4. Open the carry case and take out the camcorder.

5. Take off the lens cap.

6. Move the eyepiece into position.

7. Screw in the piece that connects it to the camera stand.

8. Pull back the camera stand lever that holds the camcorder in place and place the camcorder in the stand.

9. Turn on the camcorder.

10.   Slide the camcorder button back to recording position.

11. Adjust camera stand as necessary to level the

picture.

12. Adjust zoom as necessary.

13. Adjust focus as necessary.

Additional Setup Instructions for Camcorder (cont.)

14. Check audio by inserting earphones.

15. Insert videotape.

16. Make minor adjustments as necessary.

17. Press the record button when ready to begin

videotaping.

18. Verify recording by looking in eyepiece for green

light.

19. Monitor and adjust as necessary during event.

Pay close attention to the focus, because we use

manual focus rather than auto focus.

Videotaping Support During Events

Videotaping support during events usually occurs in

conjunction with microphone support during events. Events

requiring both microphone and videotaping support usually

require two staff members.

Because of the cramped space and flaws in cabinet

design within the multi-media closet, the person doing the

videotaping must usually stand to the right hand side of

the camera control. The person running the videotaping

slides out the control console only when needed to make adjustments. This position allows a clear line of sight to the person running the microphones.

The awkward positioning means that the camera should be run with minimal adjustments to the camera angle during the event. If there are other sources to be recorded, the person running the camera will usually be standing outside the closet, yet positioned where he or she can see both monitors. The videotaping person will be using the wireless panel to change sources as necessary.

Video is not often recorded due to licensing issues, but if it is, we usually wait for the speaker's cue. "Send to projector" takes precedence over "send to record." When playing a video clip, always take care of sending it to the auditorium before taking care of sending it to the recording deck.

The person doing the videotaping will be asked to watch the camcorder unless a staff member is available to watch the camcorder. When placed at the back of the room, the camcorder is used primarily for cover shots (covering over glitches in the first camera) and wide angle shots. It can occasionally be used for audience response shots, but only when a staff member is available for exclusive operation of the camcorder. When used on the side (like

for the Fornoff Finals), it is used for profile shots of students speaking at the podium. The camcorder video is combined with the first camera video during the video production process.

CLASSROOM OPERATIONS

Instructional media equipment in the College of Law classrooms is designed to support instruction in the classroom. Depending on the classroom, professors use up to three different types of instructional media. First, all classrooms have interactive whiteboards (a.k.a. SmartBoards). These can be used as electronic chalkboards and as a touch screen to advance a PowerPoint or surf the Web. Second, all classrooms have DVD players and VCR's. Third, the two large classrooms have mixer/amplifiers that support microphones. Media Services also supports videotaping and audio-taping in the classroom.