Chapman Hall

Sound System Manual

February 2018

Contents

Chapman Hall Sound System

by Jeff Davies, EUUC Sound Engineer

This document evolves as our needs and our equipment changes, and as we learn how best to use the system under different circumstances. If you read anything in here that needs correction or clarification, or run into a problem with sound during services that needs to be resolved, please contact Jeff at the email below.

Gail is the contact for scheduling operators.

We are always looking for new volunteers. If you are interested in learning the sound system and this manual doesn't scare you off, please contact Jeff.

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1 Turning it On

System Overview

The system serves three purposes, usually all at the same time:

♦ **Sound amplification** of presenters and musicians for the audience in the hall. [Main Mix]

♦ **Recording of events** in the hall. (Do not record programs without permission. The speaker owns his/her copyright. Do not distribute any music recordings.) [ALT 3-4 Mix]

♦ **Provide listening assistance** through the FM wireless system, as well as sound for the cry room and narthex. [ALT 3-4 Mix]

The operator creates two separate mixes at once. The MAIN MIX (right two sliders on the mixer) feed the main speakers above the pulpit. Always move these two sliders up and down together. Without these up, you won't hear anything from the main speakers. Bring these up to the 'U' (unity gain) position for full volume.

The ALT 3-4 MIX feeds the recorders, wireless FM system, the narthex, and cry room. Any mixer input can feed either *or both* mixes.

The system can feed back if many mics are on at once, or if the TRIM controls are not set correctly. This manual is to help you choose inputs and set volume without any squeals.
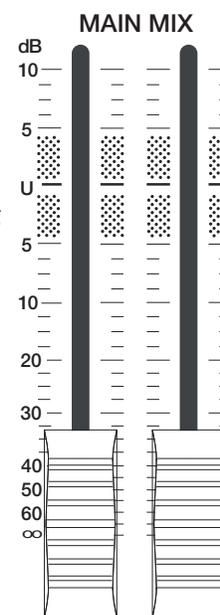
Turn It On

The key to the maple sound cabinet is kept on a tabbed chain located on the bottom shelf of the gray wall cabinet just inside the door to the upper right inside the southwest closet.

Open the lower right door of the maple sound cabinet first to remove the wireless FM receivers and headphones tray and place it on top, in case anyone needs listening assistance. Then open the large sloping lid so you see the desk. The big red power switch is located on the bottom of the racked equipment on the left. This one switch turns everything on.
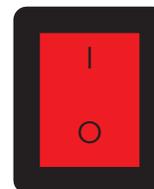
2 Select Mics

We have a selection of microphones to choose from for different applications. Different mics have different sensitivities, so the TRIM controls adjust to match the mic. A summary of mic gain settings is at the end of this section.

While connecting mics, keep all mixer sliders pulled down.

Pulpit mic

This mic is normally routed to mixer input 1. This mic in routed through a Rane HAL1 Feedback Eliminator circuit, mounted in the left lower portion of the cabinet. A dedicated equalizer gets the most volume from this mic, so there should be no need to adjust the EQ on the mixer's input 1.

Set the input TRIM to 3:00 (3 o'clock). The MUTE switch must be UP (so you can hear it through the speakers).

Hanging mics

There are three mics hanging from the ceiling: above the piano, above the center, and above left by the projector. These mics are intended only for recording and listening assistance, not to be amplified to the speakers. For music recording, use the PAN controls to create stereo. Sunday mornings are usually recorded in mono, with all PAN controls at center.

Set the input TRIM controls at 11:00. MUTE switches for these mics must be DOWN so they don't come through the speakers, only to the recorders/FM system/narthex/cry room.

SM58 wired mics

Wired mics sound better than wireless mics, and don't overload as easily (with loud singers) but they need cables. Use these when quality sound is more important than convenience. Gospel singers can yell all they want, and these are difficult to distort. These are kept in the slots over the mixer.

Set the input TRIM to 2:00. The MUTE switch can be either way. See the next section about mic patching.

Wireless handheld mics

Wireless mics don't sound quite as good as wired mics, but they are convenient. They work fine for speech, but keep their inputs down when they aren't being used, as the receivers produce a small amount of noise.

These are labeled WL1 and WL2, and kept in the slots above the mixer. WL1 is in Input 5, and WL2 is in Input 6.

Power / Mute indicator

On-off / mute button
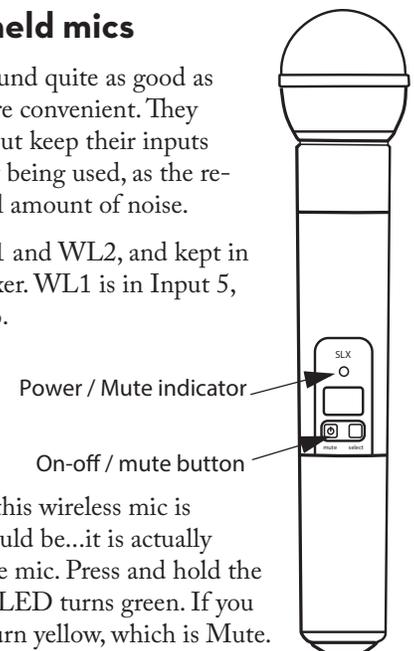
The **power switch** on this wireless mic is not as intuitive as it could be...it is actually labelled MUTE on the mic. Press and hold the MUTE switch so the LED turns green. If you push it again, it may turn yellow, which is Mute. Pushing it again turns it off. Push the switch on (green) just before the 9AM service starts and be sure to turn it off after the 11AM service to save batteries.

If the LED is steady red or yellow, it means the battery is low and needs replacing. Flashing red means it won't work until batteries are replaced. The battery compartment is opened by twisting off the bottom shell of the mic.

The Shure SLX receivers for each of these mics are in the cabinet with the green displays. The receiver knows its mic is on and working properly by illuminating the green **ready** light. This way, you can see the mic is actually on without walking across the room to it. The receiver display alerts to a low battery condition with a LOW BATT warning (LOW BATT). At the same time, the LED indicator on the mic glows red to alert the mic user.

Being a sustainable church, we use rechargables. The AA charger is located at the right of the mixer. Charges last 4 or 5 hours. This is enough to get through two services. It is a good idea to replace the batteries in the mic with freshly charged ones before the first morning service or an evening show.

If you screw off the head of the mic, you will find a tiny white switch inside. Normally this is in the 0dB position. If you have a really loud singer that overloads the mic, you can switch this to the -10dB position. Change this switch back after your loud show.

Set the input TRIM at 2:00. The MUTE switch can be either way, *down* to record only or *up* to be heard in the loudspeakers.

Wireless lavalier mics

On-off / mute switch

Power / Mute indicator
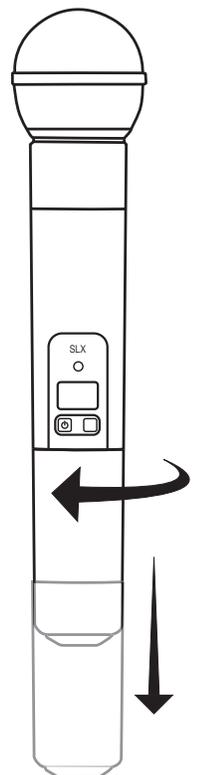
LAV1 is normally in Input 7-8, and LAV2 is normally in Input 9-10. The off/mute/on operation and battery warning operates the same way as the handheld wireless.

The connector accepts a headset mic, lavalier mic, or a guitar cord adaptor.

Because of the variety of possible inputs on these transmitters, always try to do a level check, as the previous user may have changed the side switch.

The level switch on the side of the transmitter is normally set to MIC. The 0dB setting is to plug in a guitar with a passive pickup, and the -10dB setting is for a guitar with active pickups. We have the cable to plug the transmitter directly to a guitar with a ¼" plug. This cable is usually next to the mixer, or might be in the top drawer. Be sure to switch this back to MIC if you change it. If you forget to change it and leave the switch on MIC, it is not a problem as long as you do a level check since the signal will be louder...you won't be able to bring the fader up as far.

If you aren't getting enough volume from someone using a headset, check that this switch is in the MIC position.

We have two over-the-ear headset mics. These can be worn over either ear, and aimed toward the corner of the speaker's mouth. The mic should be half an inch or more away from the cheek, and not directly in front of the mouth.

There are no trims on 7-8 or 9-10, so be sure the LINE IN LEVEL button is pushed down to -10. If you patch these into the mic inputs 1 through 6, set the input TRIM at 2:00. The MUTE switch can be either way: *up* for the speakers, and *down* for record-only.
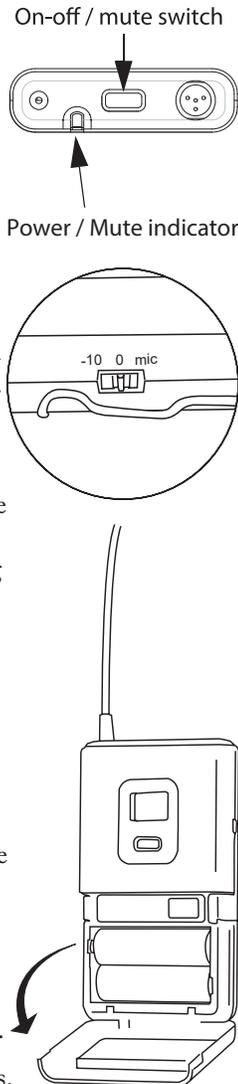
Mic Summary

This shows how the trims should be set for each mic type.

MIC	TRIM	MUTE
Pulpit	3:00	Up
Hanging	1:00	Down
Wireless Handheld	2:00	Either
Wireless Lavalier	-10 switch	Either
SM58 Handheld	2:00	Either

Instruments

Most guitar players prefer to use the 1/4" plug into a wireless transmitter so they can hop around the stage. But if both headsets are needed, and a cable is acceptable, use the Side-kick box. A keyboard can also use the Sidekick. It is usually kept along with connection adaptors in a green box in the closet.

Connect a regular guitar cable between the guitar and the INPUT on the Sidekick. Then connect the XLR "Low Z Output" to any mic input. Set the switch to "Inst." Patch it to the mixer as described in the next section.

For the sound check, turn the TRIM all the way down and the LEVEL fader at "U" on the mixer. Have the person play, and slowly turn up the TRIM. If they have a volume control on their end, have them turn it up 1/2 or 3/4-way. You should be able to get a full signal between the instrument volume and the TRIM, so that during showtime, you'll know that "U" on the fader is the right level.

Another way to use this is coming from a stage amp, and setting the Sidekick input switch to "Line." If you hear any hum, flip the "Ground Lift" switch on the Sidekick.

3 Patching the Mics

Most of the time, the mics are re-assigned to a mixer fader, and the mics are ready to go. But sometimes exceptions are needed. There are 4 mic inputs at the northeast stage floor, labeled 1-2-3-4, and one mic input at the southeast stage floor, labeled 5. These arrive in the back corner by the mixer at wall jacks with the same numbers, along with jacks for the hanging PIANO, CENTER, and FRONT mics, shown at the right.

From these wall jacks to the mixer, patch cables allow any combination of mics. Note how the four A-B-C-D cables are plugged into the mixer, and see where they plug into at the wall by the sound cabinet.

As noted in the previous section, every mic has a different sensitivity. Once each mic is patched in, adjust its initial input TRIM so that when the fader is at 0 dB, you get the same loud volume from all the different mics.

The normal mixer mic patching for most Sunday services is this:

Cable E: extra cable for another wired mic or instrument.

Cable	A	B	C	D	5	6	7-8	9-10
TRIM	3:00	1:00	11:00	11:00	2:00	2:00	-10	-10
MUTE	up	down	down	down	up	up	up	up
Mic	Pulpit	Piano	Center	Front	WL1	WL2	LAV1	LAV2
Input	1	2	3	4	5	6	7-8	9-10

The wiring shown here are the default connections. If you change anything, help the next operator and please patch everything back to this when you are done!

So to get there,

♦ Cable A goes from Wall 1 to mixer Input 1

♦ Cable B goes from Wall PIANO to Input 2

♦ Cable C goes from Wall CENTER to Input 3

♦ Cable D goes from Wall FRONT to Input 4

♦ The wireless handheld and lavaliers have marked phone plug connectors coming from each transmitter.

For instance, if you want to use a wired SM58 mic plugged into the "2" jack at the stage running to Input 2, take the cable B plug out of the Wall PIANO and put it into Wall 2. You can see both ends of the B cable, one is going to the Wall 2 jack and the other is coming into the mixer Input 2. Now the SM58 mic appears at Input 2. Since the Wall PIANO jack is now empty, nothing is heard from that hanging mic.

Then you might want to have the CENTER mic on Input 4 if you don't need the FRONT mic. Disconnect the D plug in Wall FRONT, and patch it into the Wall CENTER. Now if you follow the cable, you will see that Wall D is connected to Input 4, which is now your CENTER mic.

If you get confused or have a doubt as to what mic feeds what input, just look at the labelled plugs going from the wall to each mixer input, and repatch. **Bring the volume down before repatching any mic!** Check the TRIM control setting before bringing the volume back up.

It's a good idea before a service to make your own input labels for the mixer, whether you change any patching or not. This saves any question of which mic belongs to whom. Place them below each Input fader and give names like "Susan" or "sax" or "zither".

If you need to change any jacks or trims, please replace them with the defaults shown above so the next person won't have to trace cables. Sometimes non-sound people need to use the system, so we want it as easy as we can make it.

4 Music Playback

INPUT 11-12 is a stereo line input normally connected to the Blu-ray player below the mixer. You may need this input to connect another stereo source like a CD player, laptop output, phone output, or stereo keyboard. This LEVEL switch needs to be *up* to +4 for most inputs.

To plug in a phone, use a stereo mini to RCA with two ¼" adaptors usually hanging on a hook inside the closet. Only use as long a cable as you really need. Anything more than 10 feet will likely hum.

If a source is located far from the sound desk, you will want to be friends with the Balance Buddy. This little black box isolates the ground and eliminates the hum that would otherwise happen from long cables. It is usually kept along with connection adaptors in a green box in the closet. Use mic cables to patch between this box and the wall jacks, and use adaptors to connect between the RCA jacks and your sound source.

This works for guitars that have pickups. Get an adaptor from the ¼" guitar output to the RCA input on the Balance Buddy. then run the XLR to a mic input up front, thereby patchable to any mic input.

It can be used to patch a laptop at the podium into a pair of stage mic jacks. Use a 3.5mm to RCA cable into the Balance Buddy, then two mic cables from the Buddy to the wall jacks.

When using sources like these, turn the device about 3/4 of the way up, put the fader at "U," start with the input TRIM all the way down and turn it up to get the right volume.

Stanton S-250 CD Player

Use this when you need to play a CD and record during the same service. It is kept on the bottom shelf of the desk. You can plug it into the outlet near the red power switch. Use a short stereo ¼" to RCA cable, usually found with the player.

1. EJECT: Opens the CD door.
2. STOP: Stops the CD.
3. SKIP: Skips through the CD tracks, forward or back.
4. SCAN: Scans forward or back through the current track. This unit features 3 scan speeds. Keep a button pressed for a few seconds to change the scan speed.
5. PLAY/PAUSE: Play or pause the CD. Autocue function-sets the cue point automatically when this button is used.
6. CUE: Use to recall and preview the cue point.
7. TIME: Display reads the time remaining or time elapsed, according to this button.
8. PITCH: Turns pitch fader ON and OFF.
9. PITCH SELECT: Plus and minus buttons simultaneously changes the pitch fader range between ±8, 12, and 16%.
10. PITCH BEND: Temporarily changes the pitch while the button is pressed. Pitch gradually speeds up or down to 6% within one second. Maximum pitch is 16%.
11. SGL/CTN: Switches between Single or Continuous play.
12. LOOP: Press once to set start of loop, press again to set end point and enter a loop. Press a third time to exit loop.
13. LCD DISPLAY: Shows time and pitch information.
14. PITCH FADER: Speed up or slow down.
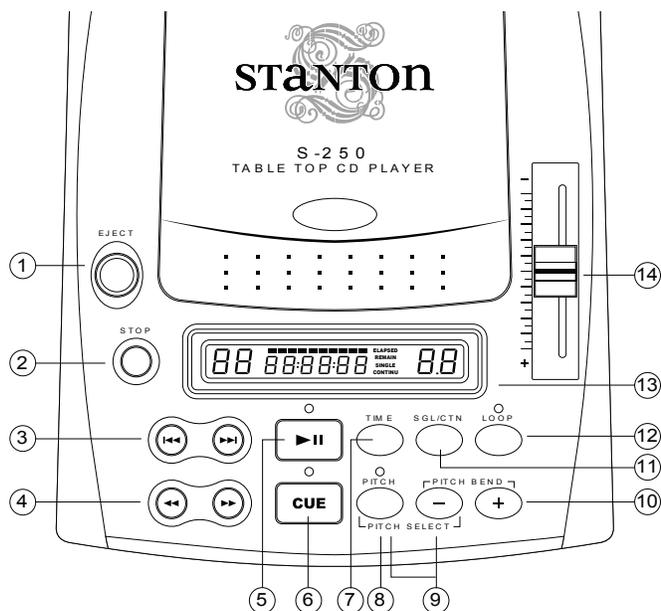
5 MUTE / ALT 3-4 Buttons

These buttons, located just above the faders for each input, determine which mix each mic is assigned to.

When the button is *up*, the signal goes to the Main Mix, the loudspeakers in Chapman Hall.

When the button is *down*, the signal is MUTED to the speakers…but it is not off, it is going to the ALT 3-4 output. This output feeds the Narthex, Cry Room, CD and digital recorders, and FM listening assistance system.

If you are doing a sound check, you can switch off the NARTHEX and CRY ROOM speakers with the switch located at the upper left corner of the sound cabinet. The sound still goes to the recorders and FM system when this is off (down). If someone tells you they aren't hearing sound in the Narthex, this is the first thing to check.

Press the MUTE ALT 3-4 buttons on inputs that you want to record but don't want to amplify. The hanging mics never are to be amplified (they will feed back), so their MUTE buttons always need to be down.

The last input on the mixer is 13-14, labeled Output to Recorders. This input *always* needs its MUTE button down. This fader *combines* the MAIN MIX *into* the ALT 3-4 mix. When this fader is down, the two mixes are totally separate — the MUTE UPs only go to the speakers and the MUTE DOWNs only go to the recorders. With this fader up, all MUTE UPs *also* go to the recorders/listening/narthex. Leave this fader up most of the time.

When headphone monitoring for the recording, check that only the ALT 3-4 switch in the C/R SOURCE section is pressed, using the CTL ROOM/SUBMIX fader for volume. This section's switches only affect the headphones. Changing them during service can't be heard by anyone but you.

During lead vocals or instrument solos, this mic needs to be heard through the speakers, but will be too loud in the recording compared to the hanging mics. Listen in the headphones and bring 13-14 down until the mix sounds good with the hanging mics. This way, the soloist's fader controls what is going to the speakers, and the 13-14 fader controls how much of it goes to the recorders. Bring 13-14 back up when the song or solo is done, so the pulpit or annoucement mic is the correct volume in the recording and FM system.
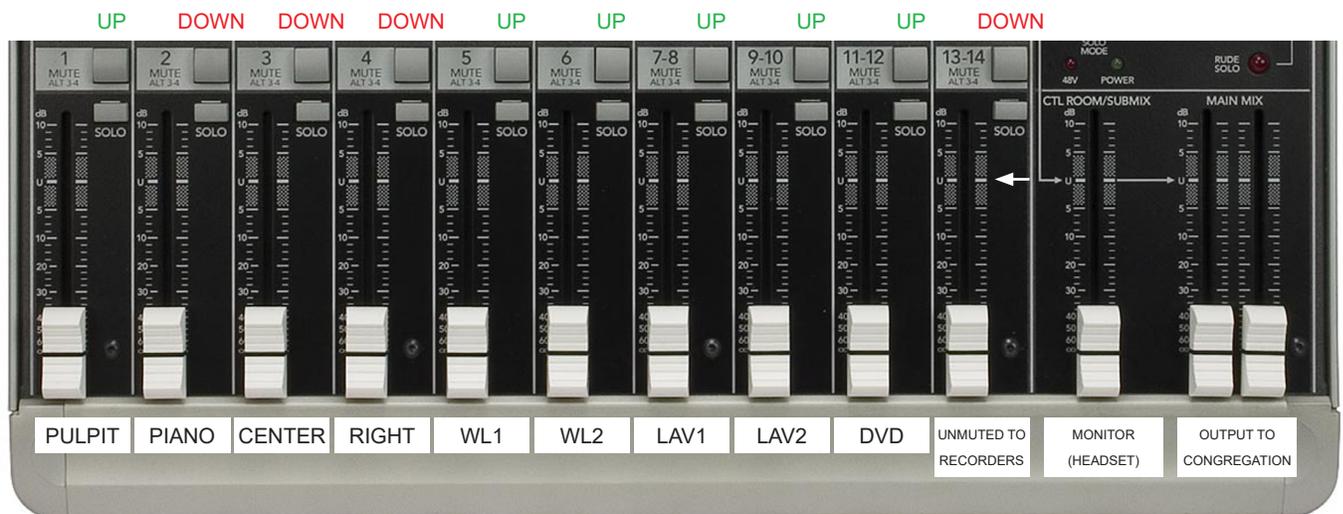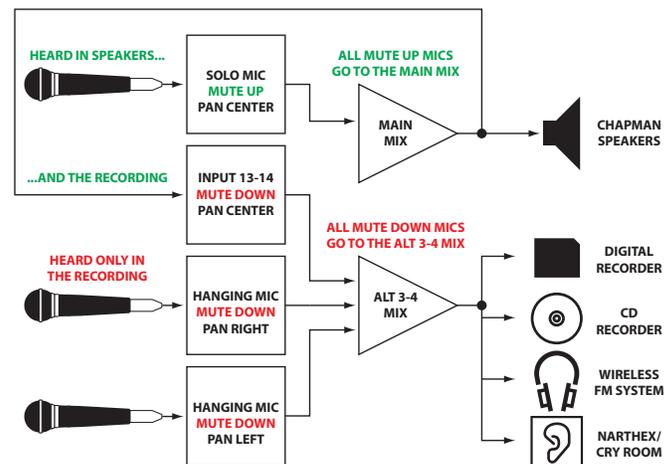
6 Recorders

Marantz Solid State Recorder

The Marantz PMD560 records up to 6 hours of stereo CD-quality audio on a 4 gigabyte compactflash card. This recorder is used for the sermons that go on the euuc.org website, edited from the full service without music or copyrighted material. Craig Wyss does this each week, usually before the next Sunday.

With the card inserted, the time remaining shows on the display. To put the recorder into standby mode, press the REC button once ⏺. This allows you to verify that signal is reaching the recorder by seeing the active meters. To start recording, press the REC button a second time ⏺. You will see the time remaining start to count down. To stop recording, press the STOP button ⏹. Once = standby…Twice = recording…Third = standby…etc.

Start the recorder before the service starts, usually after the bell, or as someone approaches the pulpit mic, as music is still playing and people are being seated. You never know if you might be distracted at the moment the service starts, and we have plenty of recording time.

An empty card will show 000 in the display before recording. After a track is recorded, it will display 001. Each time the

recorder is started and stopped, a new file is created. Press REC twice before the service starts and only press STOP after you hear the last clap. Don't stop the recorder to save space, as each stop produces a new track. We have 6 hours of recording time, and card data is moved to a hard drive, edited, and put online every week.

It is OK if the signal hits the red during extremely loud peaks, but try to minimize red. Volume is controlled by the rotary jog wheel on the right of the recorder. This control will not require any adjustment, normal recording level is set around -2dB. Volume can be adjusted during post-production on a computer, so don't worry about the meter here. The recorder has a large dynamic range and a good recording is still made even if the signal is low.

A feature of the recorder is 'Silent Skip'. When the sound level drops below a certain level for more than three seconds, the recorder stops itself, and resumes recording as soon as signal returns. The result is undetectable and saves recording time. During silent skip, the REC button flashes and the display indicates 'S. SKIP'. Recording resumes when it 'hears' signal. Don't be concerned, the recorder won't lose any recording. If you see this button flashing and the room is quiet, this is normal. It will glow steady and record once it hears audio again.

Before each service, get an Order of Service. Mark the start time (as shown in the recorder display) next to each event. This helps edit the sound file later. Make one column for 9AM and another for 11AM. The most important times to write down are the beginning and end of the sermon. This helps Craig find the editing points without having to listen to the entire service.

**Press once for record standby (blinks),
Press again to record (steady).**

Press once to stop.

That's it!

Marantz CD Recorder

The CDR633 records up to 80 minutes hours of stereo on a blank CD-R. This recorder is primarily used to record a copy of the entire service for the office and staff. Normal functions are in this manual, advanced functions are in the full Marantz manual, in the red notebook, in the bottom shelf of the sound cabinet.

CD Playback

This device can play a CD when recording is not required. (If you need to record and play a different CD at the same time, refer to page 5.) The CD player has a cable that can be patched into the mixer's 11-12 stereo input with the cables labelled "CD." It can play back regular CDs, CD-Rs, and MP3 format CDs (The MP3 must be encoded at 44.1 kHz to work with this player).

To play a CD, insert it label-side up into the slot. The display reads "Disc Loading," then "TOC Reading." After the disc is read, the display indicates the total number of tracks and the total playback time.

Disc type   **Total number of tracks**

Total playback time

Track number indicator
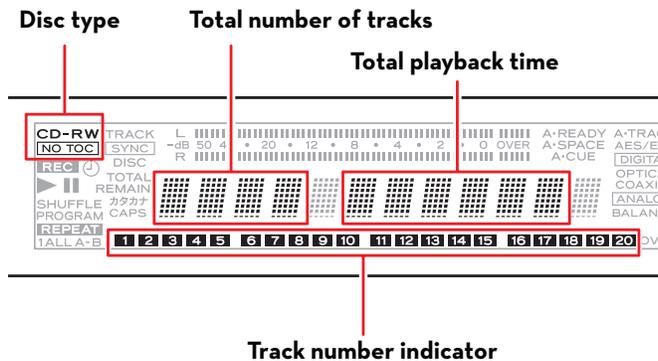
To select a track to play, turn the MULTI JOG dial left or right to the Track Number you want to play. Press the green Play button to start playing.

Playback Modes

There are four different playback modes. One is Continue playback mode, where tracks play consecutively from the track you start with. If all the tracks on the disc are displayed at once, you are in Continue mode. If only one track is visible at a time as you turn the MULTI JOG dial, you are in Single mode. To change modes:

1. While stopped, press the MENU button to enter Menu mode.
2. Turn the MULTI JOG dial until PLAY MODE is displayed.
3. Press the MULTI JOG dial *in* (enter) to select it.
4. Turn the MULTI JOG dial until SINGLE or CONT is displayed. Program and Shuffle modes are also available.
5. Press the MULTI JOG dial in (enter) or the MENU button to exit Menu mode.

Time Display

Press the DISPLAY button to switch between time displays:

No indication: Displays the elapsed time of the current track.

[REMAIN] lit: Displays remaining time of the current track.

[TOTAL] lit: Displays the elapsed time of the disc.

Eject   **Display** **Menu** **Multi Jog**

Finalize   **Stop** **Play** **Pause** **Rec /
Track Incr.**   **Fader**
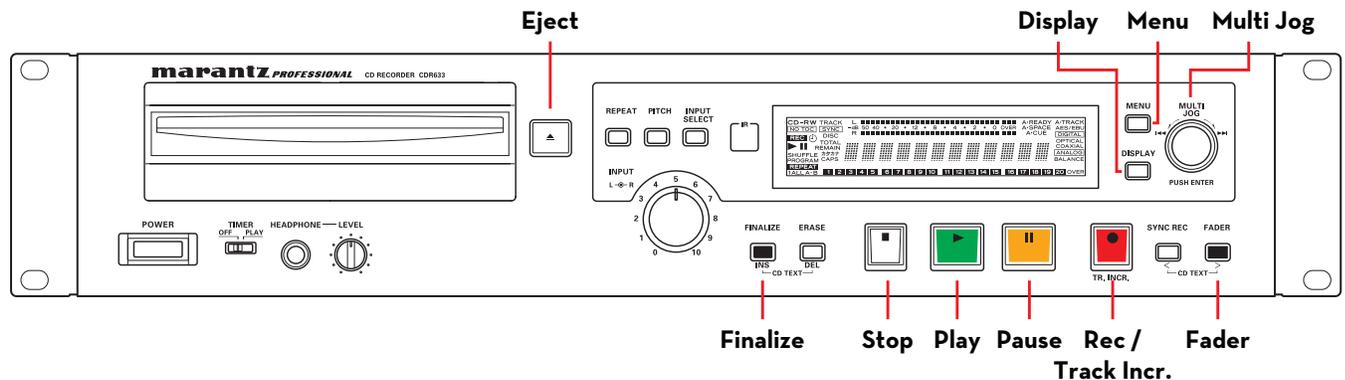
Recording

1. To record a CD, insert a blank CD-R label-side up into the slot. The display reads "Disc Loading," then "TOC Reading" as it looks for a table of contents for 10 seconds. The recorder is ready when it displays "Blank Disc."

2. Press the red button to enter record-ready mode 🔴. The display reads "Now OPC" (optimal power control) while self-adjusting the laser. The meter shows audio received.

3. Press the FADER button ▬ to start recording with a 3-second fade-in. You could start recording with the green Play button, but the FADER button sounds less abrupt.

4. To pause recording, press the orange pause button ⏸. A new track is written when the green play ▶ button is pressed and recording resumes. If a service runs over 80 minutes, use pause if you can to fit it on one CD.

5. To manually place a track marker during recording, press the red button (the display reads "TR.INCR.") 🔴. Pressing this will not interrupt the recording. Place a track marker just before each major section in the Order of Service, such as choir pieces, readings, guest speakers, and especially the sermon. Try to hit this just as a speaker looks up from the podium or the conductor counts down. It's most important to press this just before the minister starts the sermon, and make a note of this track number so you can write it on the CD.

6. To stop recording, press the FADER button ▬. This automatically ends the recording with a 3-second fade-out. You usually do this at the end of a CD, or do it anytime to fade out, pausing, then resume recording by pressing FADER again. To stop recording without a fade, press the white stop button ⏹.

7. When the service is finished and recorder is stopped, the disc needs to have its table of contents written to the disc in a process called "Finalizing." A disc must be finalized before copies can be made and played in other players. It is OK to stop and start recording on the same CD, even on different days. But once a disc is finalized, no more recording can be made on this disc.

   While stopped, press the FINALIZE/INS button ▬.
   The display reads "Finalize?"
   Enter by pressing the Multi Jog dial in ◯.
   The display reads "Sure?"
   Enter by pressing the Multi Jog dial in ◯.

   Short version: Press FINALIZE, ENTER, ENTER."

8. Press eject to get the disc out ⏏.

Labelling

Before delivering the finalized disc to the Office (leave it in the slot on the door), follow the labelling convention below, showing the date, time, speaker, and a title. Include the track number where the sermon starts. If you forgot to write it down, plug the headphones into the CD recorder, play, and advance tracks to find it. Write only on the label side of the disc. The Office has a disc duplicator that will make copies from this master.

MAY 23, 2010

11 AM

ERIC KAMINETZKY
"SERMON OR SERVICE TITLE"
TRACK 9

C4 Compressor

A compressor is like an automatic hand on the volume control...it turns the volume down when it's too loud, and back up again when it's quiet. A compressor is needed for digital recording, as really loud things distort. There are two channels for the ALT 3-4 mix (1 and 2) and two channels for the main speakers (3 and 4). The SLAVE switches must be on to work in stereo, this uses the Channel 1 controls to also set Channel 2. Here are recommended settings for Channel 1:
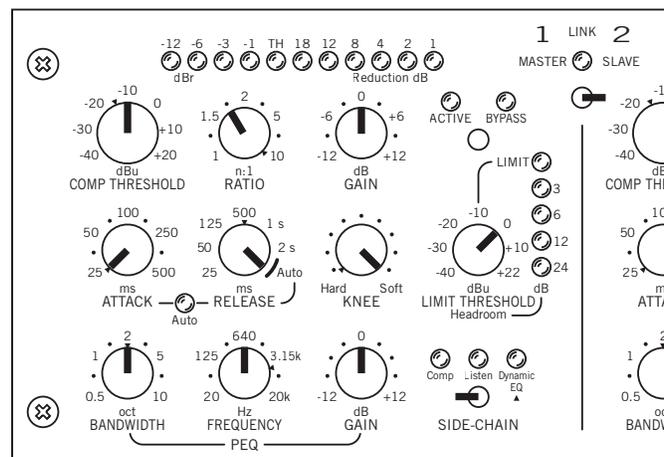
7 Mixer Settings

The two right sliders control the output to the speakers in Chapman Hall, marked OUTPUT TO CONGREGATION.

The CTL ROOM/SUBMIX is labeled MONITOR (HEADSET) for the headphones. You can select what you hear in the headphones with the C-R/SOURCE buttons above this slider, without affecting anything going to the recorders or speakers.

♦ Press MAIN MIX to hear the same signal coming from the speakers in the headphones.

♦ Press ALT 3-4 to hear the signal going to the recorders, FM wireless and narthex in the headphones.

♦ Press both of them to hear a combination of both in the headphones.

♦ The TAPE button has no function.

It's best to only press ALT 3-4 in this section so you can monitor the recording in headphones, and take them off to hear what's going on in the room.

Don't let all those knobs and buttons intimidate you! Here is how things should be set, should someone slip and hit a button they shouldn't. In case the system isn't working right, check these controls:

These buttons all need to be *down*:

AUX1 MASTER SEND = POST (To get the MAIN MIX signal to Input 13-14)

INPUTS 1 through 6 = LOW CUT (Cuts out low bass)

INPUT 7-8 and 9-10 = LINE IN -10 (To get enough level from the wireless)

INPUT 13-14 = MUTE ALT 3-4 (To get the MAIN MIX signal to the ALT 3-4 outputs (recorders)

These buttons all need to be *up*:

Input SOLO buttons (Useful for checking one mic at a time during rehearsal, but don't do it during a performance)

ASSIGN TO MAIN MIX (Sends the headphone signal to the speakers, potential feedback)

EFX TO MONITOR (Can cause feedback or imbalance to ALT 3-4)

INPUT 13-14 = LINE IN +4 (To get the right mix of MAIN and ALT to the recorders)

INPUT 13-14 = AUX 1 and AUX 2 controls need to be all the way DOWN (To prevent feedback)

The AUX controls sends the non-MUTEed Inputs, before the PAN control, to the bus that comes back to INPUT 13-14 with the jumpers that connect AUX SEND 1 and 2 to INPUTS 13-14. Normally all AUX controls are at "U" so any Input shows up as mono when it comes back to INPUT 13-14. This means anything that is going to the speakers will be mono going to the recorders. However, if you have a stereo source that you want to go to the speakers and also be recorded in stereo, there is a way. If you pan an Input left, turn AUX 1 down (sends this input to the left ALT 3-4). If you pan an Input right, turn AUX 2 down (sends this input to the right ALT 3-4).

Because of the acoustics in Chapman Hall, there is no effective stereo imaging, so the PAN controls have no discernable effect on sounds going to the speakers unless you are close to the stage. Use the PAN controls to do stereo mixing for the ALT 3-4-enabled inputs going to the recorders.

Note: "U" on the mixer faders and controls stands for "unity gain". This means that the same amount of signal going into the control is the same amount of signal coming out. No boost, no cut. When running a signal through several stages, it is best to keep all intermediate controls at unity gain for the best sound and recording quality.

TO BOTH DIGITAL AND DISC RECORDERS L/R

TO FM
LISTENING
TRANSMITTER

TO TOA AMPLIFIER
FEEDING NARTHEX

TO POWERED SPEAKERS
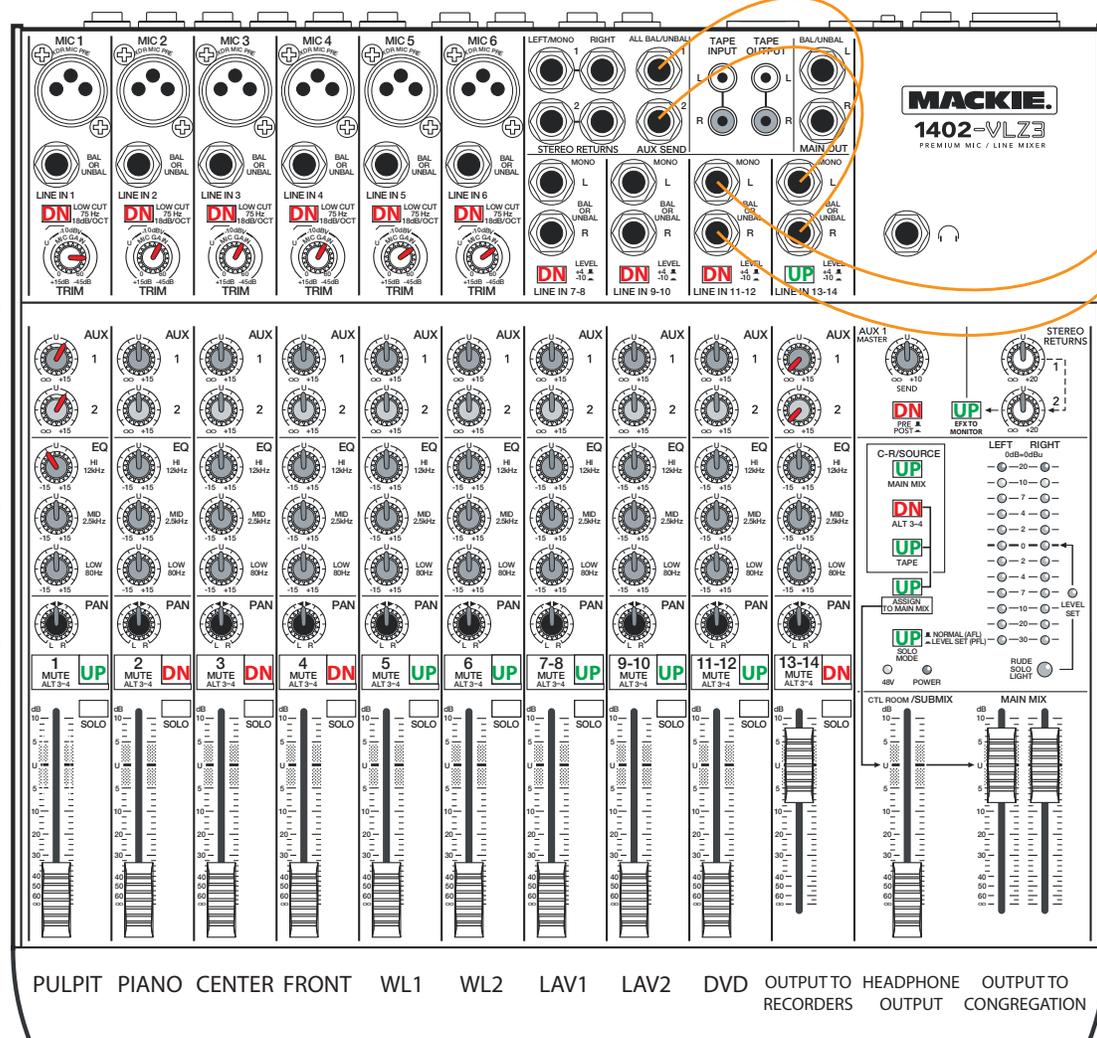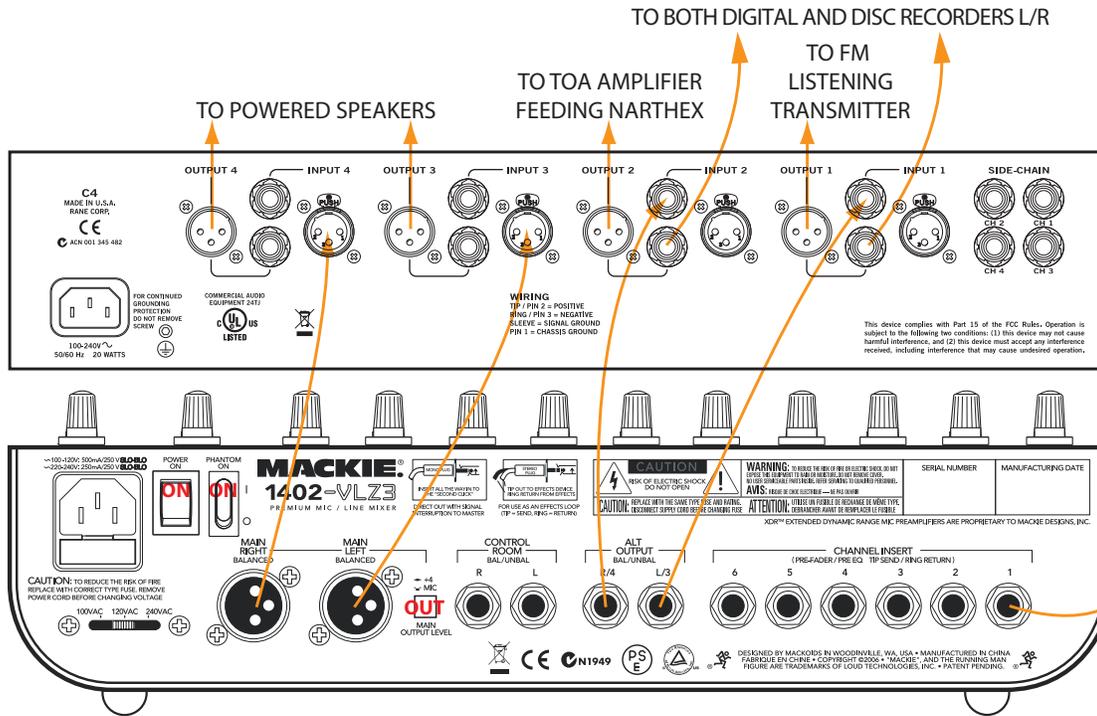
TO RANE HAL1 FOR MIC-SPECIFIC FEEDBACK CONTROL

TO STEREO OUTPUT OF DVD, OR PATCH TO COMPUTER, ETC.

LOW CUTS
ALL DOWN

TRIMS DIFFERENT
FOR EACH MIC TYPE.
SET FADER AT "U"
THEN ADJUST TRIM
FOR MAX VOLUME.

VOCAL MICS
TURN UP AUX 1&2
FOR RECORDING

PULPIT MIC
SOUNDS BEST
WITH HI EQ
SET TO 11:00

MUTES
UP=SPEAKERS
DOWN=RECORDERS

SOLO=ALL UP

TO MAKE A MIC ACTIVE,
RAISE ITS FADER
TO "U". LOWER
UNUSED MICS DOWN.

MAKE TEMPORARY
LABELS FOR EACH MIC.

PULPIT   PIANO   CENTER   FRONT   WL1   WL2   LAV1   LAV2   DVD   OUTPUT TO   HEADPHONE   OUTPUT TO
                                                                  RECORDERS   OUTPUT   CONGREGATION

8 **Projector**

Blu-ray Player as the Source

1. Go upstairs into the loft to the wall nearest above the sound cabinet (southeast corner), and locate the breaker box. Inside is a breaker marked "Projector". Turn this on to get power to the projector and wireless receiver. The only reason this may be off is to cut power to the wireless video receiver at the projector.

2. Go back to Chapman and pull down the screen slowly using the chain to the left of it.

3. Open the top lid and the right bottom door of the sound cabinet. Power on the cabinet with the big red power switch.

4. A Blu-ray/DVD player is installed in the lower cabinet. On the left side of the shelf above it is the wireless transmitter, its power supply, the remote for the DVD player, an HDMI cable coming from the back of the DVD player, and the remote for the projector. On the right side of this shelf is the listening assistance headphone tray.

5. Power on the player with either the power switch on the LG Blu-ray remote. Wait 30 seconds before attempting to open the disc tray.

6. The HD Flow transmitter has a remote power supply. Plug it into the outlet next to the red power switch on the Furman rack. When this is plugged in, the transmitter and receiver will start looking for each other. The lights on the transmitter will stop flashing once communication is established. Plug the HDMI cable from the DVD player into the HDMI input on the transmitter. If the transmitter was last used on a laptop, you can switch the input to HDMI by repeatedly pressing the little black button on the front until the HDMI section lights up. The HDMI indicator will light on the transmitter showing its input is HDMI from the Blu-ray player. The transmitter can sit on the shelf below, or up on top of the desk.

7. Aim the Hitachi remote up to the projector, and push the Power button on the remote. The green light on the bottom of the projector will light as long as step #1 is done. You may need to walk closer to the projector if it doesn't respond.

8. Press the open/close button on the LG Blu-ray remote to open the tray. Place the disc, and press the open/close button again to close the tray. Give it a minute to spin up and load. Use this remote to start / stop / navigate the disc.

9. Audio level is controlled on the mixer input "DVD." Halfway up is a good place to start. Make sure the "Output to Congregation" sliders are up. If anyone wants to use listening assistance, then push the "Unmuted to Recorders" slider up.

10. You should be getting picture and sound. If not, check the steps above, especially #6.

11. If the picture appears distorted, as people or circles look stretched wide or tall, then the aspect needs switching. This may have been switched by the last user to get the right shape screen from a laptop. Using the projector remote aimed at the projector lens, press the ASPECT button until the picture looks correct. Circles should be round, and people should not look unnaturally fat or thin.

Now it's time to put things away. Please follow this to avoid confusing the next user.

1. Open the DVD tray, remove the disc, and close the tray with the remote.

2. Aim the remote at the projector, and push the Power button on the remote. The projector screen will ask if you want to power off, and press the button again to do so.

3. Unplug the remote power supply to the HD Flow transmitter and put it along with the player and projector remotes below on the shelf to the left of the listening assistance headphones tray.

4. Power off the sound cabinet with the big red button, and lock both doors.

5. Go to the loft and power off the "Projector" breaker.

Laptop as the Source

1. Go upstairs into the loft to the wall nearest above the sound cabinet (southeast corner), and locate the breaker box. Inside is a breaker marked "Projector". Turn this on to get power to the projector and wireless receiver.

2. Go back to Chapman and pull down the screen slowly using the chain to the left of it.

3. Open the top lid and the right bottom door of the sound cabinet. Power on the cabinet with the big red power switch.

4. In the cabinet bottom, right door, on the left side of the shelf above the DVD player is the wireless transmitter, the remote for the DVD player, an HDMI cable coming from the back of the DVD player, and the remote for the projector. On the right side of this shelf is the listening assistance headphone tray. Bring the transmitter and its power supply out.

5. If you need a Windows 10 laptop, it's in here too with its power supply and mouse. The PIN is 8109 (our street number on 212th). The laptop gets email from sound@euuc.org, so you can email Powerpoint files and small videos to it.

6. It's easy if the laptop can sit on top of the sound cabinet. However, the laptop can be anywhere in Chapman Hall the operator would like it to be. There is a black bag with video cables in the closet. Find the right cable or adaptors to go from whatever video monitor jack is on the laptop to the VGA or HDMI inputs on the transmitter.

7. If you only need to project visuals without sound, use HDMI. If you need to project visuals with sound, use VGA. When using VGA, run audio from the headphone jack into the system (see chapter 4). If HDMI is connected, it automatically routes audio to HDMI, and difficult to route back to the headphone jack where it is needed.

8. The HD Flow transmitter has a remote power supply that needs to be plugged in. If you are operating from the sound cabinet, it can go in the outlet next to the red power switch on the Furman rack, or use an extension cord anywhere else. When it's plugged in, the transmitter and receiver will start looking for each other. If the transmitter was last used with a DVD player, you can switch the input to VGA by repeatedly pressing the little black button on the front until the PC section lights up, showing its connected input after the laptop is turned on. If the laptop outputs HDMI, then the same instructions apply. The lights on the transmitter will stop flashing once communication is established.

9. Aim the Hitachi remote up to the projector, and push the Power button on the remote. The green light on the bottom of the projector will light as long as step #1 is done. You may need to walk closer to the projector if it doesn't respond.

10. The most difficult part is getting the laptop to output a compatible resolution to its monitor output.
    On **Mac OSX**, go to System Preferences > Displays. On **Windows 10**, go to Settings > System > Display.
    After the HD Flow transmitter is connected, the computer "should" recognize it as a second monitor. You may need to go into the display settings to assign it. Depending on the program used, you may want the second monitor (the projector) to be a second screen, or mirror the screen on the laptop. Look for the resolution setting for the second projector. The transmitter can only read certain resolutions. Find the highest numbers in this list that the laptop can output for the best picture. Set the second monitor to 1920x1080, 1680x1050, 1280x1024, 1280x800, 1280x720, 1024x768, 720x480, 800x600, or 640x480. If there is a refresh rate, set it to 60.

11. If the picture appears distorted, as people or circles look stretched wide or tall, then the aspect needs switching. This may have been switched by the last user to get the right shape screen from a DVD. Using the projector remote aimed at the projector lens, press the ASPECT button until the picture looks correct. Circles should be round, and people should not look too fat or thin. The picture may not fill the screen, but it's better to have undistorted images than a full screen.

12. See Chapter 4 to connect audio from the laptop to the system. Use 3.5mm to dual RCA cable with the Balance Buddy. Go from the laptop headphone jack, to the Balance Buddy, to whatever inputs are most practical. Push the used Inputs and "Output to Congregation" sliders up. If listening assistance is needed, push the "Unmuted to Recorders" slider up.

Now it's time to put things away. Please follow this to avoid confusing the next user.

1. Unplug the cables from the laptop and shut down the computer.

2. Aim the remote at the projector, and push the Power button on the remote. The projector screen will ask if you want to power off, and press the button again to do so.

3. Unplug the remote power supply to the HD Flow transmitter and put it along with the player and projector remotes below on the shelf to the left of the listening assistance headphones tray.

4. Power off the sound cabinet with the big red button, and lock both doors.

5. Go to the loft and power off the "Projector" breaker.

8 Troubleshooting

The wired mic isn't loud enough / way too loud when the fader is up!

With the fader at "U", adjust the TRIM control for the right volume (page 3). If it feeds back or you hear a ring when someone talks, TRIM needs to come down a little.

The wireless mic isn't loud enough / way too loud when the fader is up!

Put the fader at "U". If it is in Inputs 1 to 6, adjust the input TRIM control (page 3). If it is in Inputs 7-12, press the LINE IN LEVEL button down. Check that the switch on the side of the lav transmitter is set to MIC.

The signal is feeding back as soon as I turn up the MAIN MIX faders!

Check the TRIM setting for the mic that is being used (see page 3). Check that the AUX 1 SELECT switch is down, EFX TO MONITOR switch is up, ASSIGN TO MAIN MIX switch is up.

There is ringing in the podium mic at the end of words.

The system is near feedback. Reduce the volume just a little, starting with the TRIM. Ringing is sometimes hard to hear in the back corner. Listening in the headphones might reveal feedback you might not hear from the sound booth.

The digital recorder stopped and the red REC light is flashing!

This is a feature called Silent Skip, when the recorder goes into pause during silence. S.SKIP will be displayed on the recorder. When sound happens again, the recorder automatically resumes and nothing is missed. You will see the time advancing again when sound resumes, the red light will glow steady again. No worries.

I'm told the FM Wireless system isn't working!

Check the power on the transmitter. A couple of times it has been turned off for unknown reasons. It might mean getting on a chair to reach the power button. Also, if the faders are down or there is nothing sent to the ALT 3-4 output, there won't be signal sent to the transmitter.

We are rehearsing or recording in Chapman Hall and I'm getting complaints that it is being heard in the narthex!

Turn off the NARTHEX switch at the top left above the recorders. Remember to turn it back on during a service.

The wireless lav or handheld isn't working!

Check the receiver in the rack. If the **ready** indicator isn't lit green, the mic may be off. Check that the green light is on at the mic or lav transmitter. If it is yellow, the mic is muted, so press the MUTE switch on the transmitter until it turns green. If it is red, you need to change batteries. Check the TRIM to be 2:00 for mic inputs, LEVEL switch must be down for line inputs. If you are expecting to hear the mic from the speakers, be sure the MUTE switch is up. Check that the switch on side of the lav transmitter is set to MIC.

All the mics are used and they are asking for one more!

Check for an input that isn't being used, like one of the wireless inputs or a hanging mic. If you need another wired mic input, you can free up one by moving one of the ¼" plugs from the wireless handheld receivers to the 11-12 line input, left jack. Wired mics need to be in inputs 1 through 6, but the wireless can be used in 7-8 through 11-12 by plugging into their "L" input. If you do this at the early service, let the later service person know so they can patch it back.

I'm only getting one channel to the recorders!

Check that the 13-14 MUTE is DOWN, the AUX 1 MASTER is DOWN. Check all the switches on the previous page.