

Mixer wiring for microphones and speakers

The Passion of Dracula has lots of sounds. I added a sub-woofer and a reverb processor to the standard equipment available at the Amato Center, and wired it all up as follows:

- main outs from the mixer go to the house speakers. This is normal.
- Aux out 5 feeds the on-stage speaker upstage of the fireplace through S1-14 patched to SL21 to the powered speaker up stage right (audience left). This speaker receives left channel sounds, except no sound from the microphones.
- Aux out 6 feeds the on-stage speaker upstage of the desk and out the archway through S1-15 patched to SL22 to the powered speaker up stage left (audience right). This speaker receives right channel sounds, except no sound from the microphones.
- Aux out 2 feeds an on-stage sub-woofer, placed upstage center, under the sideboard, using S1-16 patched to SL23 to the sub-woofer up stage center. This speaker receives both left and right channels, except no sound from the microphones. Its volume is controlled by the aux 2 send dial. Make it loud for heartbeats and thunder, soft for wind.
- Input channels 1 and 2 are the Zoom R16 left and right respectively. They are routed to the mains left and right and to auxes 5 (left), 6 (right), and 2 (both).
- Input channels 3 and 4 are the Roland SP-404SX left and right respectively. They are routed the same as input channels 1 and 2.
- Input channel 5 is wireless microphone 2, used for Dracula's reverberating voice on pages 21, 81, 84 and 86. It is routed to aux out 4. This channel is muted except when the microphone is live.
- Input channel 6 is wireless microphone 6, used for Helga's reverberating voice on page 61. It is also routed to aux out 4, and is muted except when the microphone is live.
- Aux out 4 feeds the reverb machine, which returns its sound to inputs 7 and 8.
- Input channels 7 and 8 are the output of the reverb machine. They are routed to the mains left and right.
- Input channels 9 and 10 are connected to a smartphone for test tones, but are not used during performance.

Start-up

This is the checklist for preparing the sound system for an on-stage rehearsal or a performance:

1. Verify that the main amplifiers are powered off.
2. Power on the mixer using the switch under the sound desk.
3. Pull all of the mixer's volume sliders down to ∞ .
4. Turn all aux sends and aux returns down to $-\infty$.
5. Switch on the power strip behind the reverb processor.
6. Switch on the Zoom R16, the Roland SP-404SX and the reverb processor.
7. On the Zoom R16, move all the sliders for tracks 1-8 then return them to fully down. Do the same for tracks 9-16. This is necessary because the sliders are "soft" but not motorized.
8. Power on the microphone receivers.

9. Turn the main amplifier volumes down to ∞ .
10. Power on the main amplifiers.
11. Power on the power strip behind the set down stage left.
12. Mute all unused channels.
13. Pan input channel 1 left, 2 right, 3 left, 4 right, 5 center, 6 center, 7 left, 8 right and 9 center.
14. Route channels 5 and 6 to aux 4.
15. Route channel 1 to aux 2 and 5, 2 to aux 2 and 6, 3 to aux 2 and 5 and 4 to aux 2 and 6.
16. Bypass the per-channel equalizers.
17. Route only channels 1-4 and 7-8 to the main mix.
18. Calibrate the sound effects using the test tones on F05 and Z11. Set the trim inputs on channels 1-4 to make them read 0db on the mixer with faders 1-4 and main set to 0db.
19. Set aux send 4 to maximum, which is +15.
20. Set the house speaker amplifiers to 40 (10 o'clock).
21. Set aux sends 2 to 12 (straight up), 5 to 12:30 (clockwise from up) and 6 to 12:30
22. Set the main fader to 0.
23. Test the amplifier settings for the main and on-stage speakers using the heartbeat, wind and thunder sound effects. Adjust the main fader and aux sends 2, 5 and 6 as necessary.
24. Set the trim inputs on channels 7 and 8 to 8 o'clock, and adjust the volume sliders and aux 4 send to provide a good level for reverberated voice over through the wireless microphones connected to input channels 5 and 6. Try trim 11 (counterclockwise from up) for channel 5.
25. Verify that the door pounding sound effect has a reasonable level and comes from the the audience's left.
26. Verify that the music and wind have reasonable levels. The wind at -60 and the music at -30 should be low enough not to obscure the dialogue, but high enough to be barely heard, at least, everywhere in the audience area.

Pre-show

When the house opens, play the 30 minutes of classical music on the Roland SP-404SX at F8, volume 9. Four minutes and 15 seconds before the pre-show announcements are scheduled to start, fade out F8 and play Love Song for a Vampire, as sung by Annie Lennox, from F7. If the pre-show announcement is delayed, play F6, which is the sound track from Bram Stoker's Dracula (1993) by Wojciech Kilar, with Ring of Fire (track 12) omitted. It runs 53 minutes and 12 seconds and ends with Love Song for a Vampire.

Performance Timeline

In the first column of the timeline, below, numbers are microphone channels, A through F are banks of the Roland SP-404SX, and Z is tracks of the Zoom R16. The hounds, heartbeat, wind, rats and Dracula music go on the Zoom R16: tracks 1 & 2 for the Dracula music, tracks 3 & 4 for the wind, tracks 5 & 6 for the hounds, tracks 7 & 8 for the heartbeat and tracks 9 & 10 for the rats. Tracks 11 & 12 contain a 440 HZ test tone. All other sounds go on the Roland SP-404SX, banks A through F.

Volume notation is different for the two devices. The sliders on the Zoom R16 are marked in dB, so the

volumes are those numbers, between -62 (soft) up to -10 (loud). The knob on the Roland SP-404SX is not marked, so the numbers are the clock position: from 8 (soft) up to 13 (loud).

Act 1:

src	page	sound
Z3	5a	Wind, volume -50
Z3	6a	Wind out as doors close
A1	13a	Pounding on door, volume 11
A2	15a	crash from hall, volume 10
A3	17a	wolf howl, volume 10
A4	18a	Wolf howl (replaces scream in script), volume 10
Z3	19a	Wind as doors open, volume -35 then fade to -40
Z3	19b	Wind out when the doors close
Z1	20b	Music, volume -20
A5	20c	Wolf howl, volume 10
5	20a	Unmute microphone
A6	21b	Backup for microphone—Dracula reverberating voice: “Wilhelmina, come to me”
5	21c	Mute microphone
Z1	21e	Music fades to -30
A7	21g	Camera flashes, volume 9, only if the strobe fails
Z1	21h	Music fades out when camera flashes
Z1	24a	Music, volume -30
Z3	25a	Wind starts as French doors open, volume -35
Z3	25b	Wind out as French doors close
Z1	25c	Music out
A8	26a	Fly buzzes, lands stage left, volume 9
Z3	27a	Wind as doors open, volume -40
Z3	27b	Wind out as doors close
Z1	29a	Dracula theme music on Renfield's third “BACK!”, volume -20
Z3	30a	wind blows as doors open, volume -20
Z3	30b	Wind -60 as Dracula appears
Z1	30c	Music -30 as Dracula appears

src	page	sound
Z1	30d	Music fades out as Renfield exits
Z3	30e	Wind stops as doors close
A9	33a	Loud wolf howl nearby, fades quickly under dialogue, volume 10
Z3	34a	Wind as doors open, volume -40
Z3	34b	Wind stops as doors close
A10	35a	Camera flash triggers, volume 9, only if the strobe fails
A11	36a	Photo-plate breaks in fireplace, volume 9
A12	37a	distant wolf howls, volume 9 fades to 8 (looped)
Z3	37b	Wind blows as doors open, volume -30 fades to -40
Z3	37c	Wind fades to volume -60
Z3	38a	Wind ends as Helga closes the doors
Z1	38b	Dracula theme music when Helga exits, volume -30
Z3	38c	Wind as Dracula enters, volume -30
Z3	38d	Wind fades to volume -60
Z1	38f	Music fades up to volume -10 during spell and crossing up to doors
Z1	39a	Music fades down to -30 under dialogue
Z1	39b	Music out as Helga interrupts
Z1	39c	Music at the end of Helga's line, volume -30
Z3	40b	Wind as Dracula and Helga exit, volume -40
Z1	40c	Music fades up to -20 as Dracula and Helga exit
Z3	40d	Wind fades down to -60 as Harker enters
Z1	40e	Music fades down to -30 as Harker enters
Z3	40f	Wind fades up to -40 on Harker's "Oh, never mind".
Z1	40g	Music fades up to -20 on Harker's "Oh, never mind".
F01	40h	Wolf howl
Z1	40i	Music out when Willy screams
Z3	41a	Wind fades up to -20, then down to -30
F02	41b	Wolves howl as lights go down, volume 10
Z3	41c	Wind out

Act 2:

Src	Page	Sound
B1	42a	Thunder clap, volume 8
B2	42b	Thunder clap, volume 8
B3	44a	Thunder clap, volume 8
Z3	46a	Wind as doors open, volume -20
B4	46b	Thunder, volume 9
Z3	46c	Wind out as doors close
B5	47a	rumble of thunder, volume 8
Z1	48a	Music fades in on “The truth”, volume -30
B6	48b	wolf howl, volume 9
Z3	49a	Wind -20 as Renfield exits, then fades down to -60
Z1	49b	Music fades out as Dracula exits
Z3	50a	Wind out as doors close behind Dracula
B7	50b	Slap as Willy cuffs Godalming – live
B8	52a	House bell rings on pull of cord – cut
B9	55a	Thunder, volume 8
B10	59a	House bell rings on pull of cord – cut
B1	60a	Thunder as Jameson exits (added to script), volume 8
C1	61a	Thunder clap as lights flicker, volume 10
6	61b	Unmute microphone
C2	61c	Backup for microphone—Helga reverberating voice, whispering “Gordon”
C3	61d	Backup for microphone—Helga reverberating voice: “Gordon”
C4	61e	Thunder clap as Goldaming drinks and lights flicker, volume 10
C5	61f	Backup for microphone—Helga reverberating voice: “Gordon”
C6	61g	Thunder as lights flicker, volume 10
C7	61h	Thunder as lights flicker, volume 10
C8	61j	Backup for microphone—Helga reverberating voice: “I am cold, Gordon, so cold. Let me in, warm me.”
C9	61k	Backup for microphone—Helga reverberating voice: “Gordon, my love, there is a way for us to be united forever.”
C10	61l	Backup for microphone—Helga reverberating voice: “You thought I had

Src	Page	Sound
		deserted you, did you not? No, I have studied with the Master, learned the secret that will make you mine forever.”
6	61m	Mute microphone
Z3	61n	Wind as doors open, volume -20 fading to -60
Z11	62a	Music fades up when Dracula is visible, volume -30
C11	62b	Lightning and thunder, volume 10
Z5	62d	Slowly fade up hounds baying as Dracula speaks (also on F04 looped)
C12	62e	Nearby hound when doors open for Helga's exit, volume 12
Z5&C12	63a	Hounds slowly fade down and out on “come, as I bid you.”
Z1	63b	Music replaces hounds, volume -30
Z1	63c	Music slightly louder as Dracula and Willy kiss, volume -20
Z1	64a	Music out
D01	66a	pistol shot (loud) — live
Z3	67a	Tremendous wind, volume -10
D02	67b	Explosion, volume 13
Z3	67c	Wind ends when the cast is ready for act 3

Act 3 (no break):

Src	Page	Sound
D3	68a	Fly, starts when Godalming starts to sit up, stops when Godalming grabs it, volume 9
Z1	70a	Wind, volume -62.
D4	73a	Scream (live), echoed by wolf howl, volume 9
D5	74a	pistol shot, volume 12
Z3	76a	Wind off as doors close
Z1	78a	Dracula theme music, volume -25
D6	78b	Slap as Harker strikes Willy – live
Z1	78c	Music out as Harker strikes Willy
5	81a	Unmute microphone
Z1	81b	Music as Dracula starts to speak, volume -30
D7	81c	Backup for microphone—Dracula reverberating voice: “I am the resurrection and the life. He that believeth in <i>me</i> , though he were dead, yet shall he live.

Src	Page	Sound
		Whosoever liveth and believeth in <i>me</i> shall never die.”
5	81d	Mute microphone
Z1	81e	Music fade out by first “King!”
5	84a	Unmute microphone
D8	84b	Backup for microphone—Dracula reverberating voice: “Come, my creatures of the night, of the dark, you shall gnaw English bones at my wedding! Advance before me as I come to claim my own!”
5	84c	Mute microphone
Z9	84d	rats squeaking and scrabbling, volume -25
Z3	84e	Wind on when doors open, volume -60
D9	84f	shotgun discharge, volume 10
D10	85a	shotgun discharge, volume 10
D11	85b	Shotgun discharge, volume 10
D12	85c	Whoosh of flame, fire burning, volume 12
Z9	85d	Rats fade
Z9	85e	Rats out
Z3	85f	Wind out as doors close
D12	85d	Fire out
Z1	86a	Music on “Take her upstairs, John”, volume -30
E1	86b	Wolves, volume 9 (looped)
5	86c	Unmute microphone
E2	86d	Backup for microphone—Dracula reverberating voice: “Wilhelmina”
5	86e	Mute microphone
E1	86f	Wolves stop
E3	86g	Doors explode when they open, volume 10
E4	86h	Chandelier explodes – cut
E5	86i	Fireplace explodes – cut
E6	86j	Sound begins to reverberate, volume 10
Z7	87a	Heartbeat, volume -10 (also on E7, looped)
Z1	87b	Music fade out under heartbeat
Z7	87c	Heartbeat fades under dialogue, volume -25

Src	Page	Sound
E8	88a	cross explodes, volume 9
Z1	88b	Music on Dracula's line "Now ... my queen, know thy lord...", volume -30
E9	88c	Stake pierces Dracula – cut
Z1	88d	Music out when Dracula is staked by Wilhelima
E10	89a	Van Helsing's stake pierces Dracula – cut
Z7	89b	Heartbeat out on Van Helsing's first strike of the stake
E11	89c	Dracula groans and expires on second strike
E12	89e	Lone wolf howls after "Per omnia saecula saeculorum . . .", volume 9
Z1	89f	Music plays from the beginning, volume -10
Z1	89g	Music fades down to volume -20 after first phrase, and runs until the end of bows.

Post-Show

Let the Tocatta and Fuge in D Minor play from Z1 until the audience has left, or switch to F6 to play the sound track from Bram Stoker's Dracula (1993) if they linger so long that the song gets repetitious.

Shutdown

The Amato theater's sound system is used by others between our shows. They are trained to switch on the sound system using this procedure:

1. Power on the mixer using the switch under the sound desk
2. Power on the main amplifiers using the button near the bottom of the rack near the light desk.
3. Unmute and bring up the volume fader for input channel 11, for the red hand-held microphone, or input channel 12 for the green hand-held microphone, or both.
4. Bring up the main volume fader.

When they switch off the sound system they reverse the above procedure. Therefore, our procedure for shutdown is designed with their start-up procedure in mind.

1. Turn the main amplifier volumes down to ∞ . This is probably unnecessary, but I am cautious.
2. Switch off the main amplifier.
3. Switch off the power strip off stage down left, which will switch off the three up stage speakers.
4. Pull all of the mixer sliders all the way down to ∞ .
5. Power off the microphone receivers.
6. Turn all of the aux sends down to $-\infty$.
7. Route input channels 11 and 12 to main.
8. Power off the mixer using the switch under the sound desk.
9. Power off the Zoom R16, the Roland SP-404SX and the reverb processor.

10. Switch off the power strip behind the reverb processor.
11. Turn the amplifier volumes up to 10 (80%).

Story Dates

The time-line of the story is as follows. The UK did not observe daylight saving time in 1911.

- August 12, 1911, 09:00 PM: The Demeter arrives at Lands End just after dark, six weeks before act 2.
- August 14, 1911, 11:45 AM: Willie becomes ill, 2 hours before 1:45 PM.
- August 19, 1911: first killing by the Whitby Terror, a month before act 1.
- August 20, 1911: Renfield begins eating spiders and flies, a month before act 1.
- September 8, 1911: second killing by the Whitby Terror, full moon.
- September 17, 1911: third killing by the Whitby Terror, three days before act 1.
- September 20, 1911, 5:00 PM: Jameson finds Willy while Seward is meeting Van Helsing.
- September 20, 1911, 5:30 PM: Van Helsing arrives at Whitby.
- September 20, 1911, 9:30 PM: Act 1 begins, 4 hours after Van Helsing's arrival.
- September 23, 1911, 9:00 PM: Act 2 begins, 3 days after act 1, after dark, on a Saturday.
- September 24, 1911, 5:30 AM: Dracula is staked just before dawn.