

SOUND DESIGN TIPS

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I. Sound Design For Acoustic Orchestra With Electric Violin:

For this setup, you will need the following equipment:

- Electric violin
- Amplifier or PA system
- Effects processor (optional)
- Preamp or mixer (optional)
- Audio cable(s)
- Extension chord
- 3 options:

1. Violin in front of orchestra with amplification behind the group (optimal)

- Make sure that all equipment has access to AC power from the wall.
- Make sure all equipment is in the “off” position.
- Connect the cable from the violin jack to the input of the effects processor.

Option A:

- Connect cable from output of the effects processor to the input of pre-amp or mixing console.

Option B:

- Connect the cable from the output of the effects processor to the input of the amp or powered PA speaker in the back of the orchestra
- Turn on AC power to all equipment
- Adjust gain, beginning at the sound source and working your way through the signal chain, so that there is plenty of signal in the pre-amp or mixer without overloading the channel. (Violin volume, effects processor, pre-amp)
- Adjust the equalization (high, mid, and low frequencies) of the violin using the knobs on the amplifier to achieve a warm, pleasant sound. If the sound is too bright, then lower the high frequencies, if the sound is too nasal, lower the mid frequencies, if the sound is too boomy, lower the bass frequencies.
- Adjust the final volume of the PA or amp at the master volume. Work to achieve a pleasant balance without the electric violin overwhelming the orchestra.

2. Violin and amp in front of orchestra (least equipment required)

- Connect the cable from the violin to the amplifier
- Adjust the equalization (high, mid, and low frequencies) of the violin at the amplifier to achieve a warm, pleasant sound. If the sound is too bright – lower the high frequencies, if the sound is too nasal, lower the mid frequencies, if the sound is too boomy, lower the bass frequencies.
- Adjust the final volume of the PA or amp at the master volume. Work to achieve a pleasant balance without the electric violin overwhelming the orchestra. It is a

good idea to have a trusted colleague in the audience area to make recommendations on balance.

3. Violin in front of orchestra with sound in the house system, monitors facing orchestra

- Connect the cable from the violin to your amplifier
- The house audio engineer will connect your amplifier output to the house system.
- Turn your amp toward the orchestra. It is best to get the amp off the floor and as high as possible. It is sometimes unpleasant for the orchestra to have the high frequencies of the electric violin at or below their ear height.
- Adjust the volume on your amp so that you can hear the electric violin at virtually the same volume you would hear your acoustic violin. Don't worry about the overall blend of your violin with the orchestra. The house sound engineer will adjust that volume during the sound check and performance accordingly.

Sound Design For Acoustic Orchestra And Audio Accompaniment

Audio in house system with monitors for the orchestra:

- Provide the Bollywood Strings audio track to the house audio engineer.
- Request monitors for the orchestra.
- Position the monitors wherever your ensemble can most effectively hear the audio. (Tips: If placed on floor, tilt to face upward; If placed on stands, experiment with placement and tilt.)
- Ask the house engineer to make sure that the electric violin can be heard at all times, but without eclipsing the acoustic orchestra.
- The house audio engineer will adjust the volume of the audio accordingly during sound-check and performance.

Audio on stage from behind the orchestra:

- Position the speaker or speakers behind the orchestra so that the sound is coming through the ensemble- If only using a single speaker, place it in the center of the stage behind, but higher than the orchestra. If using two speakers, place them far left and far right behind the orchestra. In both cases, experiment with height and angle until you are sure that both the members of the orchestra and the audience can hear the accompaniment.
- Plug the audio player into the system and adjust the volume so that it matches the approximate volume of the ensemble.
- Be sure that all equalization knobs are set to "0" or "flat."
- Test the audio level during a sound check, listening for balance throughout the hall, not just from the podium.

Special Effects for the Electric Violin

You will find examples of special effects on the "Electric Spice" Video Tutorial Part 2B on the "Bollywood Strings" page (julielyonn.com), on D'Addario's Lesson Room, and on Youtube. While the score specifies the use of the phase shifter, you and your student can experiment and choose one or more effects to use across the piece, or none.

It is recommended, however, that you EQ the instrument carefully in order to get the best possible sound. You will find a discussion of tone on the “Electric Spice” Video Tutorial Part 2A on the “Bollywood Strings” page (julielyonn.com), on D’Addario’s Lesson Room, and on Youtube.

Here are a few additional suggestions:

- 1) Each special effects box has its own internal settings, but some (like Zoom) enable you to reset treble, mid-range, and bass for each effect.
- 2) If you can’t create the sound you want using the special effects box, then you will need a preamp. This is a small box that gives you control over EQ. The LR Baggs Venue or Para-acoustic DI has been designed to work extremely well with bowed strings. Amps and house systems also have built-in controls that will assist you in this process.
- 3) Always add a touch of reverb to the sound. If there is a “hall setting,” that will add a nice warm texture to the sound and broaden it. If you are still dissatisfied with the tone, try adding a touch of delay. Keep it on a minimal setting (one to two repetitions: “HELLO hello” so that you don’t muddy the sound.

Glossary of Terms

Amp or amplifier: A rectangular-shaped unit that can amplify the sound of your electric violin. Size and power output varies from amp to amp, as do tonal controls. Some amps have outputs to the house system and some do not.

Effects Processor: a special effects box that you can plug your electric violin into and then run a cable from that box to your amp or house system. Most effects boxes come with a number of choices. See the “Electric Spice” video tutorial Part 2B.

Pre-amp: A small, portable box that provides a wider range of tone and volume controls that you can keep by your side as you play through your electric violin.

Signal: The electronic output of an electronic device, resulting in this case — in a stronger quality sound and volume level.

Mixing Console: All house systems come with a board that enables the engineer to control volume, tone, and reverb. The engineer will balance sound from single or multiple monitors and speakers.

PA: A PA is a high power sound reinforcement system used to amplify an electric instrument or mic.