How to Do a Soundcheck for an Acoustic Band

Copyright 2021 by Bruce Bartlett

Whether your group plays old-time, bluegrass, Irish or Americana, you need to do a soundcheck before putting on a concert. You play on stage while the sound person sets levels in the mixer, sets the monitor volume for each instrument and vocal, and creates a good mix in the house.

After the soundcheck, everything sounds great and all the players can hear themselves on stage.

The sound check is critical. If well done, it gives the band confidence so they can relax and just play. And when the band members hear the monitor mixes they need, they perform better.

The person running the mixer might be a sound professional or might be a member of the band, chosen for their technical ability and good ears.

Every sound tech has their own method for doing a soundcheck. Here is a method that has worked well for me. I'll discuss the procedure from the point of view of the sound mixer.

Before the soundcheck

We'll assume that you already set up the sound system and checked that everything is working properly. All the cables are plugged in, and there are no hums or buzzes caused by bad cables. If you have a separate power amplifier, turn up the power amp halfway.

In your mixer, the faders are the sliding volume controls. Set the mixer master fader to 0. Play a CD or a sound file through the mixer, and turn up its fader until the mixer output level peaks around 0 on the mixer meters. You should hear undistorted sound from the house speakers.

If the sound in the house is too quiet, turn up the power amp a bit, or vice versa. Tweak the system EQ (equalization: highs, lows, mids) so that the speakers' sound is accurate or natural when playing a few CDs or audio files of the same genre as the band. The sound should be not too bassy or thin, not too trebley or muffled.

Place the band's input list at the stage box and at the mixer to label the input channels. With the master fader and monitor master send turned down, plug in the mics and pickups, then turn on phantom power.

Again set the master fader to 0. Turn up the master monitor send to 0.

Do a line check or a "tap test". As you bring up each fader in turn, check each mic and pickup to make sure that it sounds clean and is on the correct channel. Now you're ready to begin the soundcheck itself.

Soundcheck overview

It helps to use a talkback mic. At the mixer, plug a mic into a spare channel and turn up its monitor send. Talk to the band through the monitor loudspeakers – it beats yelling instructions across the room or using sign language.

Make sure the talkback mic and its cable sound clean. I recently did a soundcheck in which I heard crackles and noise, and wasted time tracking it down – until I found it was the talkback mic's cable!

Musicians want clear directions from the sound mixer. For example, "Bass, play for a minute and nod when it's loud enough." "Lead singer, please get closer to your mic." "Mr. guitar, please move your mic a little more toward the neck."

Never allow feedback during a sound check, Not only is it annoying and painful, it can damage hearing and cause tinnitus. Start with low levels and slowly bring them up.

Here's a suggested order of events in a typical soundcheck:

1. With faders and monitor sends set very low or off, set the gain trim for each instrument/vocal (explained later).
2. With faders up, set the monitor level for musician #1.
3. Set preliminary EQ for musician #1.
4. Repeat steps 2-3 for musician #2, and so on.
5. Ask the entire band to play. Set up a house mix.
6. Touch up the monitor mixes as requested by the band members.

Let's go through each step.

Set Gain Trims

First, set the faders and monitor sends very low to prevent feedback. Turn down all the gain trims. Those are the knobs at the top of the mixer. They control the level of each microphone signal where it enters the mixer.

You might say to the band, "Okay we're ready for the sound check. I'm just setting levels now, not monitors." Turn up the vocal mics first and leave them on so the performers can communicate with you.

Ask musician #1 to play or sing as loud as they will during the performance. Slowly turn up the gain trim until the clip light flashes, then back off about 10 dB to create some headroom. (There are other methods). This procedure sets the signal levels to minimize noise and distortion in the mixer.

Repeat for each musician. Some sound techs prefer to have the entire band play a tune while setting gain trims.

If you have already set gain trims at past concerts, write them down and repeat those settings in future soundchecks – assuming your mics and pickups are unchanged.

Set Monitor Levels

Turn up the faders about ¾ up to design center (but watch out for feedback). Use full-volume house levels if possible so the monitors don't need to be turned up so much.

Ask musician #1 to play. Slowly bring up that channel's monitor send until the musician is happy with the sound.

Say something like, "Terry, play your banjo. I'll slowly turn it up in the montors. Give me a thumbs up when you feel okay about what you hear."

Set EQ

Now set preliminary EQ for that channel. Make sure it sounds reasonably accurate. Some musicians provide you with a pre-EQ'd sound that they don't want changed, so be sensitive to their requests.

If an acoustic guitar is boomy, move the mic away from the sound hole or turn down the low-frequency EQ.

If an acoustic guitar pickup is too bright or electric sounding, turn down 2 kHz and/or 12 kHz. If you hear vocal pops, switch in a high-pass (low-cut) filter at 100 Hz or so. It's a good idea to highpass everything except the bass.

Set the monitor level and EQ for each musician. Note: The EQ that sounds right on individual instruments might not work well when the entire band plays. You'll need to tweak the EQ during an ensemble performance.

Do The House Mix

Now ask the band to play a song all together as you set up a house mix. Make sure you can hear every instrument and vocal with a good balance. Go for a natural sound, like real instruments, usually with little or no effects. Have the band play a short section of a few different song styles.

You might have each band member stand by the mixer and make suggestions. You'll need to run a long cable from their instrument to the stage box. Does their instrument sound like they want it to sound? Adjust the EQ as needed. Some bands simply trust the sound person to do a good job.

Touch Up The Monitor Mixes

You, or the monitor mixer, will set each performer's monitor mix so they can hear themselves and any other parts they need to hear.

If there is more than one monitor mix, ask each player what they want in their monitor. If the monitors seem "hot" overall and are starting to ring, turn down the master monitor send a little.

Some musicians comment on the monitor tonal balance. They may want less bass, less mids, more highs, or whatever. If your monitor sends do not have EQ, you can tweak the graphic EQ (if any) that is feeding the monitor power amp. That EQ is also used before the soundcheck to "ring out" the monitors to minimize feedback.

Note that the musicians are hearing the bassy sound off the back of the house loudspeakers, so they may not need much bass in the monitors. That's great – then you can roll off or filter out the lows in the monitors, which also reduces rumble and feedback.

Watch for the performers' cues about the monitor levels. Some players cup their hand next to their ear, which means "I can't hear myself. Turn me up in the monitors." Or they point to their instrument, then point up (turn it up) or point down (turn it down). Then when the level is right, they make an okay sign.

Good luck in running a professional sound check. The musicians will thank you.

I recommend this youtube video: https://www.youtube.com/watch?v=A5yDRYsYk04

Bruce Bartlett has mixed sound for concerts, jazz festivals and folk festivals. He also is a recording engineer, musician, and microphone engineer. Check out his clip-on mics at bartlettaudio.com. His latest books are "Practical Recording Techniques 7th Ed." and "Recording Music On Location 2nd Ed."