

Alaska Folk Festival Stage Crew "How To" Reference

Thanks for volunteering for the stage crew! You are an important part of our volunteer team, and a major reason why the Festival runs so smoothly every year. Here are some pointers:

OVERVIEW -- THE STAGE ENVIRONMENT

There are two separate sound systems at the Folk Festival:

THE "HOUSE SPEAKERS" OR "MAINS"

Also called FOH, meaning Front of House, the "Mains" feed sound to the audience. Part of the sound the performers hear on stage comes from the audience speakers hanging directly over the stage. This is OK, but can be the source of problems if that sound gets into the performers microphones too loudly and causes feedback.

The "Mains" are run from a sound board at the back wall, opposite the stage.

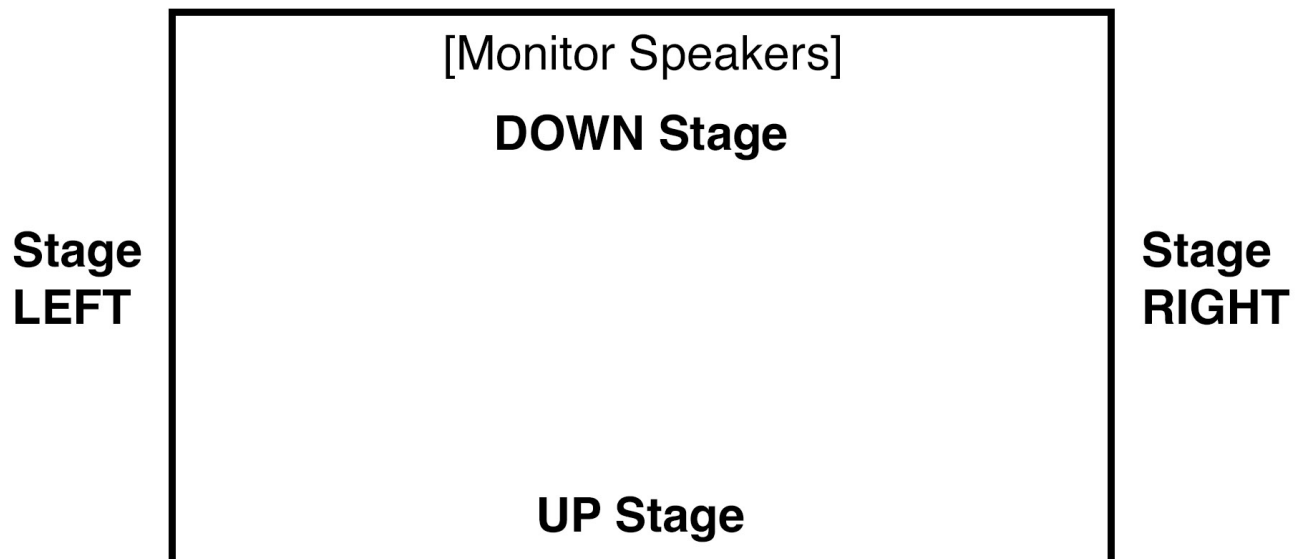
STAGE MONITORS

The "Monitors" are the four speakers that aim sound at the performers to give them more of a "living room" sound (what they are used to when practicing), so that hear what they need to hear in order to play well, free of distracting sounds. **Warning:** Sound from the monitor speakers can also get into the mics and cause **feedback** if improperly aimed. Something for the Stage Crew to be aware of.

The "Monitors" are run from a sound board at **Stage-Left**. The stage crew and the monitor board operator work together, closely.

Stage direction nomenclature, below:

Audience Audience Audience



MICROPHONES and DIs

All sound gets into both sound systems from the same sources: microphones and direct input (DI) boxes.

For the best results we want all the sound that gets to the microphones to come from the performers. We want to minimize the amount of sound getting into the microphones from any of the speakers.

THE STAGE

There is a semicircle taped on the stage. This is the performers "toe line" or "nose line." If the performers are standing, their TOES will be on this line, if sitting, then their NOSES will be up to it.

OVERVIEW -- MICS AND OTHER INPUTS -- SOME TERMINOLOGY

VOCAL MIC (Sennheiser e935 (left) or Shure SM58 (right):
Usually identified by the wire ball on the end.



INSTRUMENT MICS

C1000s (AKG C1000 condenser mics):

These microphones are slightly gold-tinted, metal cylinders with screening projecting from one end and an XLR connector socket in the other. They will be used almost exclusively as INSTRUMENT MICS.



Another type instrument mic that might be on stage at the Alaska Folk Festival is the Shure SM57, shown below.



Shure KSM32 (The “Single Mic”) This **Large Diaphragm Condenser** mic is sometimes **incorrectly** called an “omnidirectional mic,” but it has a **cardioid** pickup pattern like the other mics on stage; it is not omnidirectional. **The label “Shure” side must face the performers.** There may be different **Large Diaphragm Condensers** mics on stage, instead of or in addition to this mic.



Note: Performers often call these "omni-mics" but they are NOT omnidirectional. The best sound into the mics goes into the FRONT, the labeled side.

MIC STANDS:

There are twelve, numbered 1-6 with VOCAL MICS attached and 7-12 with INSTRUMENT MICS attached. There are two tall mic stands for use with choirs.

DIRECT INPUT BOXES (DIs): little black boxes for instruments with pick-ups. The Festival will use the DI on the left, the IMP 2. One end has 1/4" connectors, the other has XLR connectors for connecting to the sound system. These mics have their own dedicated cables.



CABLES:

There are two types of audio cables on stage. MIC CABLES with XLR connectors (~3 inch long, 3/4 inch wide cylindrical connectors) which we will use for everything we connect, going from the mics and DIs to the sound board. All of these MIC CABLES will have had numbers on each connector, so you can tell which cable goes with which mic -- useful should you disconnect a cable from a mic.



The second type cable, often called a "GUITAR CORD" or a "1/4 inch cable" is for instruments that need a DI box (guitars and other instruments with a PICKUP, or electric keyboards). This cable will be connected between the instrument and the DI box. The other end of the DI box will have an XLR cable attached.



BASS GUITAR AMP:

Some acts may use an electric bass guitar. Those folks will need to plug their instruments into the bass amp, on stage with a 1/4" cable. An mic cable will go from the bass amp into the sound system.

ELECTRIC PIANO:

There may be one of these on stage. It will connect into a DI, like a guitar with a pick-up.

MONITOR SPEAKERS are wedge shaped speakers that aim the sound mixed by the monitor board toward the performers ears.

GUITAR AMPS and AMP STANDS

If an act has one or more electric guitar amps, they should be placed on an amp stage (picture) and positioned with the amp **facing the musician**.



THE STAGE CREW IN ACTION

A) GETTING ORGANIZED

- 1) ARRIVING
- 2) STAGE CREW LEADER
- 3) STAGE LAYOUT FORMS (SLF)
- 4) MIC NUMBERING
- 5) PLANNING - WHAT NEEDS TO BE DONE? BY WHOM?

B) STAGE CREW IN ACTION - SETTING, STRIKING & MOVING MICS

- 1) STRIKE
- 2) SET-UP
- 3) MOVE
- 4) TIPS

Tape Line on the Stage
Avoiding Cable Tangles
Storing Mics in Front of the Stage

C) AIMING MICROPHONES

D) AIMING THE MONITOR SPEAKERS

E) FIXING THINGS DURING AN ACT

E) CARE, USE AND "FEEDING" OF EQUIPMENT (AND PERFORMERS)

A) GETTING ORGANIZED

1) ARRIVING

Arrive at least a half-hour before the concert, **EARLIER** if directed by the **AFF Stage Crew organizer**. This will allow for some hands-on training. And, there may be some things that need to get done before the concert starts, useful information to be passed on about the coming concert.

2) STAGE CREW LEADER

This person is responsible for leading the discussion and making decisions about what mics to use for the next act and how to make the next act change as efficiently as possible, and assign task to stage crew members.

AS SOON AS THE ACT YOU JUST SET UP IS PERFORMING, the **Crew Leader** will be THINKING ABOUT THE NEXT ACT, and how to go from the act on stage to the next act as EFFICIENTLY as possible. How to minimize wasting time moving mics on and off stage when you don't need to. Detailed suggestions follow in **5) PLANNING**.













3) STAGE LAYOUT FORMS (SLF):

The Stage Manager will get these forms from the acts and give them to the Crew Leader. The Crew Leader may need to give the Stage Manager advice about how to get the forms best filled out.

STAGE LAYOUT FORM

Performer/Group Name: _____

THE AUDIENCE IS OUT HERE

 Vocal	 Fiddle	 Amp	 Piano
 Guitar	 Banjo	 Direct Box	 Chair
 Mandolin	 Bass		 Stool

Info for the Sound Crew: Performers, please give us info about your set (which are songs, which are instrumentals). Note any important solos (vocal or instrumental). Who are going to do those solos? Include ANY information you think will help the sound crew mix your set. Thanks!

Your Set List

#1-

#2-

#3-

Play and sing **NO MORE THAN 1-2 inches** from the mics -- **STAY CLOSE TO THEM!**
Remember, your set should be no more than 15 minutes, including set up time.
The red light is your **TWO-MINUTE WARNING!** Thanks!

BEFORE the 3-part SLFs are separated, the Stage Crew Leader will MARK the MIC NUMBERS on the SLF that you will use for the next act. As soon as you are done planning the next act and have MARKED mic numbers on the SLF, check to make sure that your mic number markings show up well on ALL THREE sheets. The Top (White) sheet goes to the Main Mix person, Yellow goes to the Monitor person. The Stage Crew gets the bottom (Pink) sheet. The sound boards will use the numbers you marked, so don't make any changes without making CERTAIN both sound boards get the message.

You should be able to plan even further ahead than just the next act. This is a good idea and will keep you organized. Your ability to plan ahead will depend on the complexity of upcoming acts and the timely arrival of a well filled out SLF from the Stage manager.

4) MIC NUMBERING:

Check out the Stage Map at the end of this document for a listing of all mic lines on the stage. There are Mics #1-6 as vocal mics and paired them with Mics #7-12, set up as instrument mics. These are spaced out across in front of the stage. The mic stands all have numbers on them as do the DIs and cables. There dedicated DI lines, drum mics and other speciality mics with their own dedicated mic line. **Keep the VOCAL and INSTRUMENT mics in number order BOTH on the floor in front of the stage (1-6 and 7-12) and ON the stage, (1-12). There are also dedicated audio lines 13-22, for various special uses.**

5) PLANNING -- What needs to be done? Who will do what?

While the current acts is on stage, get organized and discuss what you are going to do with the next act. How you can minimize changing what is on stage? If you have questions about how to do something, talk to the sound crew about it.

Compare the SLF for the act on stage with the act coming next. What is on stage now that you can leave there to be used for the next act? What do you need to remove? What do you need to add? **Strive for maximum efficiency. Move only what you have to move.**

MARK on the Stage Layout Forms the MIC NUMBERS for which mics will be set for which vocals and instruments. Don't do more work than you have to. This becomes your "plan of attack" and greatly facilitates smooth, quick stage changes. Only AFTER you have MARKED the MIC NUMBERS for that act, do you separate the 3-part Stage Layout Form. **MAKE SURE ALL THREE COPIES HAVE READABLE NUMBERS.** The bottom (PINK) sheet of the form is for the stage crew to make notes on the setup, including who will move, strike, or setup which number mic, direct input box, etc.

If you can, try to keep a couple of sets ahead with your planning. Often not possible.

Try to assign each person a mic or mics to cover, or a section of the stage. For example, person one does stage left, including three mics, person two does stage center, including two mics and a direct input, person three does stage right, including one mic and the piano. If possible, set up the vocal mics first, so the **Performer** can get their preliminary talking to the audience done quickly, if they wish. For larger groups particularly, or any time you're moving a lot of mikes on or off the stage, it can help to have one person on the floor, down in front to help move mics up to and down from the stage, and to make sure cords are not tangled. That person can also look over the whole stage setup to see if it looks OK from the audience's viewpoint. Regardless, it is good to have someone walk along the front of the stage every few sets to disentangle cords.

B) STAGE CREW IN ACTION - SETTING, STRIKING & MOVING MICS

Basically, there are three actions:

1) SET-UP

This means to bring a mic up from the floor on to the stage and set it up for a performer.

*It is **IMPORTANT** to get the performer talking into their vocal mic and playing their instrument. To a large extent, this time before the MC introduces their act is their **SOUND CHECK**. Help Performers make use of this time by encouraging making sounds. This **ALSO** helps the sound people to dial in the performers. And, it can catch problems, like a bad guitar pickup before the act starts.*

2) STRIKE

This means to move the mic off the stage. Mics go back to the **SAME** spot on the floor in front of the stage where they came from. Try not to mix them up, as cable chaos can result! Keep the mics in numerical order on the floor, 1-6 and 7-12.

3) MOVE

This means to move a mic on stage. If you are careful (and lucky), you can leave some mics in place from one set to the next, where the next set uses the same type of mic in about the same place as the previous set. In the **PLANNING** stage, strive to assign mics in numerical order across the stage, 1-12.

4) TIPS - doing the job

Tape Line on the Stage:

When setting up the mics, be aware of the floor layout markings. You don't want people too close to the front of the stage, or feedback from the main or monitor speakers can occur. (This is what the "toes and nose line" is for.) Likewise, you don't want them too far back, since they are further from the audience, and may be out of the stage lights (and less visible to the audience).

Set-up as the Performer Sound Check:

Encourage Performers to use the Set-up time as their Sound Check, making sounds into mics and DIs.

Avoiding Cable Tangles:

One of the easiest ways to avoid tangling the mic cables is to move mics from the front of the stage **STRAIGHT BACK** to where they will be used. When you start moving mics diagonally, you start crossing cables, which leads to tangles. This is not 100% avoidable, but can be minimized.

Storing Mics in Front of the Stage:

When the mic stands are on the floor in front of the stage, retract the boom, loosen the pivot and rotate the boom vertically with the mic on the top. This minimizes how much the mic stands block the audience view. With the mics on top, they are unlikely to fall out of the clips. Keep the mics in numerical order, 1-6 & 7-12.

C) AIMING MICROPHONES AND MONITOR SPEAKERS

How to aim the microphones at instruments and people, and where to aim the Monitor speakers:

Voices:

The critical thing with vocal mics is to make sure that they are the right height and distance from the person. Height is obvious -- you want it to be around mouth height, aimed up at the mouth, with the vocalist's mouth a **couple INCHES** away. Getting novice performers to get CLOSE to the mic can be challenge.

Encourage performers to **get people CLOSE to the vocal mics**. Being close to the mic makes it easier for the sound people. ALSO, encourage them to **mic check**, talk/singing into the mic. THIS is really their sound check. (This is sometimes hard with nervous and inexperienced performers. They tend to shy away from the mics.)

Regarding the PLACING the mic STANDS, use the semi-circle taped on the stage as a guide. When setting up the mics DON'T EXTEND THE MIC BOOM to reach the performer, DO get the performer to move to the mic, or move the entire mic stand.

Guitars (mandolins, banjos and most other stringed instruments):

Generally, place the mic so it **points AWAY from the monitor speakers (to avoid feedback)**, so will be angled up at the instrument face, **NOT** at the sound hole, about 4 inches away. Each string instrument (guitar, mandolin, banjo) have slightly different ideal aiming points.

Fiddles:

Mic should be above the fiddle, and placed such that it isn't in the way of the bow. The mic angle and the monitor speakers, again, need to be taken into consideration.

Direct Input Box (aka "DI" -- "dee-eye"):

Fairly simple: attach a cord (1/4" connectors on each end) from the instrument to the box. There will be a mic cable running from the DI to the monitor board. The dedicated DI lines are 13 and 14.

The DI boxes are NUMBERED. Make sure you are giving the right number to the right performer. Get the performer you just plugged into a DI to start playing their instrument. This helps the sound people.

There is a "Ground Lift" switch on the DI. If there is "hummm" a low buzz in the sound system coming from the DI/instrument, usually switching that switch will eliminate the "hummm."

Piano:

One mic on the acoustic piano. At the AFF there will be an "X" marking the aiming point on the BACK of the Upright Piano. Set up the mic about 4-6" away aiming at the "X".

With an electric piano, you'll need to connect a DI. Don't forget AC power for the electric piano. There are power strips along the back edge of the stage.

Accordions and Concertinas:

Usually you will have two mics, one on either side pointing at it.

Other instruments:

If in doubt, ask the performer -- most will know how they want the mic placed -- or ask the Chief Sound Engineer.

Drum Sets:

There are dedicated mics for the Snare and Kick Drums, plus an overhead mic.

Amplifiers:

Mics on guitar (or other) amplifiers should not point at the center of the speaker (e.g., point the mic at the "paper" part of the speaker, below the center), and should be placed around 8-10 inches from the speaker, no further away.

Bass Amplifier:

On the AFF stage, there is a designated cable for electric basses to plug into the bass amp just like a guitar plugs into a DI (see Direct Input Box, below). You will have a cable running from the bass amp to the sound board. Since this mic cable is not dedicated the bass amp, you will have to take one of the extra mic lines, number 15 or 16. The cable ends are numbered, so grab the one you marked on the Stage Layout Form. Some performers will want the bass amp to provide some sound on the stage. They will usually know how to adjust that. Some will be satisfied with the bass sound coming from the monitor speakers.

Tall Boom Mics aka ("the 451s" or "choir mics"):

Generally used with large groups, where single mics for each person are not possible or desirable. Placement will depend on the group. Try to point the mics to get coverage of the most people. Aim the mics TOWARD the voices so a bit DOWN toward the performers accomplishes this.

Using the TAPED Semi-circle:

Use this arc as a guide for where to place the mic stands. Get people to come to the mics. Do not chase the performer with the mic; move the performer DOWNSTAGE to the mic.

D) AIMING THE MONITOR SPEAKERS

Sometimes, after the mics are set, it may be useful to re-aim the monitor speakers at the performers. There will be spike tape marks on the stage showing the "normal" monitor placement.

E) FIXING THINGS DURING AN ACT

The Stage Crew's responsibility for the act on stage does not end with finishing the set-up. There will be times when you have to go BACK ON STAGE AND FIX SOMETHING. **So, someone stage crew member MUST be watching the stage at all times to be ready to fix things should a problem arise.**

What problems?

A drooping mic; a DI may not be working; a vocal mic on a guitar playing singer may be mis-aimed when the performer looks at their fingerboard a lot. The performer is in the middle of their song and can't do anything. It's time for the Stage Crew to send someone on stage to fix it, even in the middle of a song, and definitely at the end between songs..

F) CARE, USE AND "FEEDING" OF EQUIPMENT (AND PERFORMERS)

MIC STANDS:

Basically, make sure you loosen them before adjusting, or they won't last. Don't leave the boom arm out at full extension, as they will fall over easily, and it makes it harder for the performer to adjust them, should they wish to. Also an extended boom is more likely to droop. HALF WAY if far enough to extend the boom, most times. Note that the sliding pieces of the boom can rotate 360 degrees, so you can point the mic in just about any direction by loosening one of the thumb screws on the shaft of the boom.

CHOIR MIC BOOMS:

Adjust similarly to regular mics, loosen them before adjusting. Beware extending them too far, as they make a mighty crash, and can really waste the mic!

MIC CORDS:

Basically, keep them orderly and untangled. Learn how to coil them properly. At the end of the night, tidy them up for the next night. The Sound board folks will cut the volume between sets, so you can detach and attach them without making horrible sounds. If for some reason you have to disconnect or connect a cable during a set, try to alert the Sound board so we don't get a minor explosion of sound. Do not roll the piano over mic cables.

PERFORMERS AS PEOPLE:

Be nice! Some folks are really nervous. Your goal, besides setting mics for performers, is to make them feel well taken care of so that they can do their best. Smile. Be encouraging. Experienced will know what they want. If the setup is not obvious, and they don't tell you what they want, ask them. Likewise, for unusual instruments where the best mic placement is not obvious, ask them for guidance. It is good to remind inexperienced/nervous performers to sing right into the mic (around 2-4 inches away). It is hard to get too close to the mics.

Thanks again for helping! You really ARE a part of making the Alaska Folk Festival happen.

