

# Problems with your PA system sound?

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## What to do before reaching for any test instruments

There are tons of articles and videos on how to set up live sound systems, but how do you find a fault and fix a system? I can share the following tips gathered from years of professionals bashing their heads against walls. I hope that they help you.

Although faults in a PA system can often best be found using measurement instruments, there are several things to consider towards fixing the fault before reaching for your test instrument.

## Cover the basics:

**first stay calm** - blaming people or equipment will not solve the problem

**if you have no stereo sound** - probably the fault is post-mixer

**be methodical** - the shortest way isn't the best -> follow each signal path, it's better than checking components randomly

**switch it out** - consider changing multi-core channel, mixer channel with ones that are known to be working

## No Sound? – here's a quick checklist:

- all components are switched on?
- the channel is muted on the mixer?
- all cables are in the signal path plugged in correctly?
- a battery requires replacing?
- the input gain is too low on the mixer?

## Remove the Hum:

Everyone has occasional problems with hum. Very often mains hum is caused by incorrect cabling of equipment.


- if your earth reference voltage is different from one end of the signal path than the other - to fix this, simply make sure that all components (mixer, instruments, and PA) are plugged-in to a single electricity mains wall socket
- don't run audio cable through a load of coiled mains cable
- don't use lighting dimmers on the same supply as your sound system supply


Earth hum can be very difficult to isolate especially with very large PA systems. You can determine where the hum is coming from by unplugging all equipment from the inputs of your mixing desk and then plugging in each piece of equipment one by one. This method is very effective. Of course, the problem component will ALWAYS be the very last one you try - simply because you will stop looking after you've found the problem. ☐

Good mixing!

Do you have a favorite tip or trick? Leave a comment below.

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