

HISS

Hiss is quite likely to be permanently present at annoying levels in a low quality system or in a good system with even one low quality component. Assuming your system has been installed by me or by another reputable installer then hiss is probably arising from an incorrect setting in what is known as the gain structure of the system. First thing to do is to locate the source of the hiss. Turn down the main master volume control on a mixer/amplifier or the main output fader(s) on a sound desk. If the hiss stops (it probably will) then the problem is in the mixer section or sound source. Turn the control back to its original position and turn down the volume control for each microphone or sound source in turn. This is likely to reveal that one or more microphones is causing most or all of the hiss. On a mixer/amplifier try increasing the microphone volume control and reducing the master volume and on a sound desk try increasing the gain or sensitivity control and reducing the channel fader. If this doesn't help, the hiss may be being generated by the microphone or sound source, in which case, try a different microphone. If you are using a DI box, reduce the attenuation control if there is one.

HUM

Hum is usually caused by an earthing problem in one of the items of equipment or interconnecting cables. It can be tricky to analyse but if it has appeared suddenly then the most likely cause is a faulty interconnecting cable. A microphone cable is often to blame as it is being continually flexed. Try a different cable - if the hum goes away then you've found your problem.

DISTORTION

Distortion indicates that some part of the equipment chain is being overloaded. Again it can be tricky to analyse but try reducing each volume control in the system in turn until you find the one that reduces the distortion. remember that there can be a number of volume controls between each microphone and the loudspeaker and any one of them could be causing the problem.

RUSHING NOISE

If you hear sudden bursts of noise similar to the old between station noise on a

radio, it is likely that your radio microphone receiver is picking up spurious interference. This will not happen if your transmitter is switched on. There is an adjustment to remove such interference - usually it is marked squelch or mute sensitivity. Adjust the control clockwise to remove interference.

CRACKLES

Crackles are usually caused by an intermittent connection, usually though not exclusively in a cable connecting two items of equipment. The offending cable is usually easy to find - give it a shake and it will crackle. Lapel microphones on radio systems can give trouble simply because of the combination of flexing and thin cable.

SQUEALING

Squealing or feedback is caused by the volume of one or more microphones being too high. Feedback can be reduced by any and all of the following: Keep microphones as far from loudspeakers as possible

Turn off microphones that are not in use
Do not use boost tone controls. Cut instead. If you want more treble, try cutting the bass.

Do not cup the head of the microphone in your hand

If you use a tape or CD recorder to record and play back, make sure that the playback volume is reduced to zero when recording.

If your church has a pipe organ, make sure that a pipe is not stuck on - this sounds very like feedback.

THE CHURCH NEXT DOOR

If you suddenly hear the church next door or indeed up to a few hundred metres away, you will be picking up their radio microphone transmitter on your radio microphone receiver. For this to happen, both transmitter and receiver will be on the same frequency. The problem will be temporarily solved by either turning your transmitter ON or by turning your receiver OFF or by turning the volume control for your receiver DOWN. If the problem has arisen suddenly then either you or your neighbour has probably bought a new radio microphone system. Although there are no laws governing the use of radio microphones on licence free frequencies, it is good manners for the buyers of the new system to arrange with their installer to

change the frequency. Modern systems usually have switchable frequencies so you can change the frequency yourself.

RADIO ULSTER (OR OTHER MW STATIONS)

This can be a real problem if your church is near to a radio transmitter. Churches in the Lisburn area are often troubled by the transmitter at Sprucefield. Modern systems are less prone to interference but if it is obtrusive, your only option is to call in your installer. Often it is only one microphone that is causing the problem, so you could try turning down each of your microphones in turn.

TAXIS

If you have a modern sound system and if the local taxi companies are operating their transmitters within legal limits, you should not have a problem. If, however, the taxi base station is very close to the church, problems can arise. There is little you can do other than contact your installer.

SYSTEM DEAD (OR MICROPHONES OR LOUDSPEAKERS)

Make sure that your system is switched on (yes it does happen!) and that each component of the system is switched on (individual components usually have pilot lights). If everything is on, listen closely to a loudspeaker. If you hear hiss, then the fault is not in the amplifier or loudspeaker. Speak into a microphone - sound desks and amplifiers normally have LEDs that indicate signal strength. If these light, the problem is not in the microphone or sound desk. If radio microphones work but fixed microphones don't, the problem is likely to be that the PHANTOM POWER switch has been accidentally switched off. On a sound desk, it only takes one control to be off for the entire system to appear to be faulty, so check settings carefully. If one microphone appears faulty, try a different cable, then try plugging the microphone into a different microphone socket. Loudspeakers rarely show faults. If a single loudspeaker appears to be faulty, check the connections.