Tips For Getting The Most Out Of Your Radio Mics

Please read this guide carefully, especially if you have not used radio microphones before. It contains important information about the best ways to use radio microphones, and tips to resolve the most common problems. These are especially important if you are running a large number of systems.

Sennheiser User Manuals for all of our radio mic systems are available at www.radiofacilities.com/manuals/.

Getting Started

Before each system leaves us, we check it thoroughly. We set up and co-ordinate the frequencies for best performance, and we recommend that you do not alter these unless you are familiar with frequency planning, and are using proper frequency planning software.

Each transmitter carries a number which corresponds with its matched receiver, and the XLR output cable.

When you plug in a mains receiver it will automatically power on, and start listening for its matched transmitter. The power button on beltpack transmitters can be found by opening the front flap (hold the two latches on either side of the unit and gently pull the flap open). Press and hold the ON/OFF button until the screen lights up. To turn the unit off again, press and hold the ON/OFF button until the screen shows the word “OFF”. The power button for handheld microphones is on the base of the unit, coloured red.

Microphone Placement:

To get the best performance from your radio mics, you should experiment with the placement of the microphone in relation to the mouth. If the microphone is too close then the sound may distort during loud passages. If it’s too far from the mouth then the microphone will pick up a lot of background noise, with an increased risk of feedback (the high-pitched squealing that occurs when microphones are placed too close to loudspeakers).

The sensitivity of the microphones can be adjusted up or down on the beltpack. Consult the supplied manual for instructions, or call us if you are uncertain how to do this.

All microphones (apart from the Sennheiser handheld, ME4 lavalier or ME3 headset) are omnidirectional — they pick up sound from all directions, and not just from where the microphone is pointing.
Receiver Positioning:

The receivers should be positioned as close to the stage as possible. The Sennheiser systems we supply are quoted as having a range of 100 metres in open air, but this distance is reduced substantially if the receivers don’t have a clear line of sight to the stage. We therefore recommend maintaining a maximum distance of 25 metres when using large numbers of radio mics (6 or more systems). Common obstructions include pillars, walls and even audience members! However, many venues have a multi-core cable running from the stage area to the sound box, and where available we recommend that you place the receivers close to the stage and use this multi-core cable to send your audio signals back to the sound desk. It’s worth remembering that a small change in receiver positioning can make a big difference, so experiment.

If you are hiring directional antennas from us, these should be placed at least 5 metres apart and pointed towards the stage.

Note: it is very important that you do not place transmitters on top of receivers. This can cause interference across all frequencies, although it will not damage the equipment.

Loudspeaker Positioning:

Good loudspeaker positioning is vital to avoid feedback. Loudspeakers should be facing away from the stage, towards the audience. Actors should be made aware that if they walk in front of the loudspeakers, there is an increased risk of feedback. Experiment with the volume levels and stage positions beforehand to see where this is likely to occur. Positioning microphones closer to the mouth can reduce feedback, since you won’t need to have the microphone sensitivity turned up as much. If you are concerned about feedback, we strongly recommend using directional microphones (Sennheiser handheld, ME4 lavaliel or ME3 headset).

Mute Switches:

The beltpack transmitters have a sliding Mute switch on top. Handheld microphones have the mute button on the front (roughly at the point where your thumb would be when you hold it), and it’s labelled “MIC”. This glows red when the microphone is transmitting sound (ie. not muted). Unless otherwise stated, handheld radio mics have the mute switch disabled before they are delivered. You should keep all transmitters switched on throughout the performance and use these mute switches instead. This will help to prevent interference caused by receivers picking up weak signals on other frequencies.

Warning: G3 transmitters have a menu-based feature called RF Mute, which is accessed by pressing the ON/OFF button quickly. This should remain set to RF Mute off, as turning this feature on will stop the systems from working.
Please see below for answers to the most frequently asked questions:

**What type of batteries do the mics take?**
Each system takes 2 standard AA batteries, and the battery life is approximately 8 hours. We provide the first set of batteries. We don’t recommend using rechargeable batteries, as these can die quickly and without warning.

**Do you provide output cables?**
We supply each system with an XLR lead as standard.

**How are the receivers supplied for larger orders?**
Our mains-powered receivers are rack-mounted in sets of 2, 4, 6 or 8. We’ll supply you with a combination of racks and individual receivers to make up the required number.

**How do I set up the frequencies?**
We test and number each system in advance (for example, microphone number 3 corresponds with receiver number 3). Under normal circumstances you shouldn’t need to alter these settings, and the systems will operate out of the box.

**Do I need a licence to operate the mics?**
We’ll provide you with a copy of our Ofcom licence, which covers use of our systems on Channel 38.

**Do you provide spares?**
We don’t provide spares for the microphone systems themselves, as these are incredibly reliable. However we usually supply a small number of spare mic capsules or headsets in case of any problems.

**How will the equipment be delivered?**
We use APC Couriers to deliver during working hours (9am-4pm). You’ll be sent a tracking email.

**How do we return the equipment at the end of the hire?**
We’ll supply you with return address labels and plastic tie-wraps to seal the cases. Once you’ve finished, please make sure you have sealed and addressed the cases and then email us. We’ll book APC Couriers to collect at a convenient time.

**If A Problem Occurs:**
In the unlikely event that a problem does arise, please call us on 0845 838 2332. This number is also available out-of-hours in an emergency.

Please don’t wait until the end of the hire period. Most problems can be resolved quickly over the phone.