

# Looking after your Radio

All too often when out on events we hear the evidence of poor maintenance. It's usually something very simple that's easily fixed too. Here follow some simple tips to ensure that your set-up gives you optimum performance.

## Handhelds

First of all and most importantly handhelds should NEVER be used as your primary radio.

That was never the intention !!

They should be used as a supplement to your main set and only used if you need to go walkabout or as a backup.

Always ensure that the battery is FULLY charged just before you leave for an event. Batteries are actually quite susceptible to poor maintenance and should regularly be fully discharged to ensure best performance.

NEVER carry the handheld by the antenna, this is guaranteed to cause problems.

Always ensure that the radio is upright as this is how it is designed to operate at maximum efficiency. I am astonished at the number of times I have seen handhelds lying flat, with the loudspeaker facing down !!

Always ensure that you press the PTT at least one second before you start talking, not 2 seconds after !!!

Handhelds do not respond well to being soaked in rain (or coffee) !

There are cheap, commercially available, waterproof covers which work very well.

If you don't have a headset for your handheld a cheap and useful alternative is an over the ear earpiece. This means that if you have to go walkies you can leave the handheld on your belt and still hear everything.

If you are NOT using a headset or earpiece please don't put the radio on the back of your belt !!

Everyone behind you will hear it, but you probably won't !!

## Mobiles

### The Radio

Most radios are extremely durable and reliable particularly the new ones. Some of the second hand radios being used are less than reliable and **should be checked at least once a year** by a proper radio engineer. It's not a bad idea to mount your set on a board with at least an inch of space around the radio.

The radio should be kept clean, dust and moisture free and mounted or positioned where there is plenty of airflow around it.

Make sure all the connections on the radio are tight, clean and safe.

NEVER be tempted to disable the ID tones, they are there for a very good reason. The same applies to the Transmit time out, if you can't pass your message in 30 seconds its far too long !!

Disabling either of the above also makes your equipment out of specification and therefore means it does not comply with the terms of your MSA licence !

### Power Leads

The second most frequent cause of problems !!

NEVER, ever, use a cigarette lighter plug !!!

Dirty connections, bad contacts all conspire to cause problems.

Always use cable with a rating of at least 10 amps at 12 volts.

Always ensure that your cable is fused. You need to consult your user manual or Google to ensure that you have the correct fuse rating. Fuse both wires close to the battery.

If you use the same vehicle most of the time it's a good idea to make the installation semi permanent by using ring connectors direct to the battery. If you use croc clips make sure they are really tight and have a good connection to the battery terminals. And it goes without saying that your cabling should go **direct** to the battery. If you are not in the car and use a power supply you must ensure it's a good quality one giving plenty of amps.

Before, and after, each event check the full length of the cable to ensure it hasn't been damaged by being trapped in the door, window or boot !!

Regularly check for corrosion on all your power connectors.  
If corroded – change them !!

## The antenna / aerial

The most common fault with radio set-ups is an antenna problem. Just because you can hear everyone doesn't mean your antenna is in good working order.

The whip Your antenna whip should be tuned to the frequency, just any old whip won't do. Not only will a mismatched antenna have a bad signal it could seriously damage your radio too.

The Mag Base This should be in the MIDDLE of the roof of the car, not on the boot, bonnet, bumper or in the middle of a roof rack full of other stuff. If you can't avoid the roof rack then make a plate across the front and put a fixed antenna base through it.

Mast. If you use a mast then 2 things are important:

The antenna MUST be a proper base antenna, for the frequency you are using, and the antenna cable should be top quality low loss in one continuous run without join connectors !!

The cable. Check your magmount cable regularly. If it's been nicked or flattened in a door it needs replacing BEFORE you use the set again. You can easily check the continuity of the inner and outer with a cheap multimeter. The inner should connect to the whip, only and the outer to the base, only. If there is a short circuit between the inner and outer no one will hear you and you WILL damage your radio.

NO, you cant repair the cable using solder and tank tape !!

When you attach the antenna to the radio the plug should be tightened. When you remove it, untighten then remove by holding the plug, NOT by pulling the cable.

Don't ever have tight coils of antenna cable when the radio is working, spread the cable around.

## The Microphone

The mic doesn't work well when its full of your breakfast / lunch / coffee, etc.

Don't overstretch the mic cable, whilst it might help it WILL put strain on the plug connections.

Speak across the mic, not straight into it.