

Technical Information Sheet for general installations and the use of Electrical equipment used by performers.

WARNING:

Always consult a qualified electrician when wiring equipment and making electrical connectors. Entertainers have been injured and even killed from electric shocks while performing or practicing. Make sure your next performance is not your last. Even a very small electrical current flowing through your body can kill you. One twentieth of an amp (50 milliamps) can cause pain, paralysis of the chest muscles and after a few seconds, upset the heart beat. The higher the current, the more dangerous and quicker are the effects.

Precautions:

Inspection, maintenance and repairs should only be carried out by someone who is suitably qualified and experienced, such as an electrician. Do NOT rely on other people's equipment being in a safe condition or properly connected. All equipment that is dry hired from Stage Management Company has been tested prior to your hire but should still be tested and visually inspected on site if this is possible. If it looks unsafe DO NOT use and inform Stage Management Company IMMEDIATELY. Beware of equipment where separate items may be incompatible or where someone has tried to solve a problem in the wrong way. Always use a residual current device (RCD) for instruments, audio equipment and anything which will be touched or handled when in use. These are relatively inexpensive and widely available from Stage Management Company or retail outlets selling electrical goods.

Earth Connections:

Lack of maintenance of earth connections causes the commonest electrical safety problems with sound equipment. Any item of equipment that is mains powered should either be double insulated or correctly fitted with a protective earth.

If you are in any doubt about the connections of equipment, consult a competent electrician. Remember that an audio expert might not be an expert in electrical safety.

Single items of equipment, if correctly maintained usually present very little problem. If a number of items are connected together however it is possible that cable screens, together with protective earths, form earth loops resulting in a mains "hum" on the system.

DO NOT remove protective earth connectors. This has been one of the common causes of entertainers receiving electric shocks, some of which have been fatal. Good quality sound equipment should not cause a "hum" although in some cases you may need to disconnect the screen at one end of the interconnecting audio cables. In other cases rearranging the equipment so that the wires do not crisscross the stage can solve the problem. When obtaining new equipment, discuss your needs with the supplier. Some equipment has a facility for disconnecting the "signal" earth.

RCD

An RCD, also known as an earth leakage circuit breaker, is a gadget which, when fitted to the electricity supply can detect a very small amount of current to earth. The RCD will automatically switch off the electricity so quickly that although a person may suffer a minor shock it should have no lasting effect. It is recommended that the sockets you use, particularly for audio equipment, be protected by RCDs with a nominal current cut off of 30 Milliamps (mA). The best place for an RCD is at the main switchboard or at the socket outlet itself. Owners of venues should provide this, but if they do not, you can use an RCD fitted plug or RCD adaptor, which is better than nothing.

REMEMBER:

AN RCD IS A BACKUP IF SOMETHING ELSE GOES WRONG

IT IS IMPORTANT THAT YOU ALWAYS KEEP EQUIPMENT IN GOOD CONDITION.

IF THE RCD TRIPS IT IS A SIGN THAT THERE IS DANGEROUS TROUBLE. CHECK IT OUT AND GET IT FIXED BY SOMEONE WHO IS QUALIFIED TO DO SO.

NEVER BYPASS THE RCD SO THAT YOU CAN CARRY ON USING THE EQUIPMENT WHICH MAY BE FAULTY.

Lighting Supports:

Unless specifically designed for use at a low level, lighting and rigs should be put out of the reach of performers and audience mainly due to the excessive heat and brightness given off by some lanterns and lamps. If cables to lights are run above the audience they should be supported along their length (preferably by an earth strain wire) unless the cable is of the special type which incorporates a strain wire. Light fittings should normally NOT be suspended by a cable alone; they should also have a chain or other support which takes the strain off the cable. Make sure lighting stands are stable and well balanced. Reduce the load and height if you are unsure.

Mirror Balls:

Mirror Balls that are for use in public places should be installed in accordance with EN60598-217. The larger types require a dual chain for extra security and motors must have fail-safe shafts. If you plan to install a large mirror ball consult a structural engineer to ensure that what you are rigging it to is capable of withstanding the load.

For further information on if you are unsure about any aspect of your production, please do not hesitate to contact us.

www.stagemanagementcompany.co.uk

info@stagemanagementcompany.co.uk