



nexus
audio visual limited

Health & Safety Policy Method Statement Document

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These Method Statements have been produced for our clients and our staff in order that they may understand the detailed working methods of **Nexus Audio Visual Limited**, the safety precautions that are undertaken and the organisational structure of on-site projects. All **Nexus Audio Visual Limited** staff working for clients on-site are required to abide by these rules and regulations.

The Company is committed to the highest standards of professionalism at all times and believes that this is demonstrated throughout this document. Whilst every effort has been made to produce a comprehensive guide to working practices, clients are encouraged to ask any further questions on specific issues which are not covered in the following pages.

Generic and specific Risk Assessments are also available upon request for the activities required in order to stage an event.

Nexus Audio Visual Limited are bound by the following statutes and are committed to ensuring that all staff are aware of their obligations under this legislation.

Fire Precautions Act 1971
Health and Safety at Work Act 1974
Road Traffic Act 1971
Environmental Protection Act 1990
The EU Working Time Directive

The Company also complies with the subsequent regulations and codes of practice, which have arisen from this legislation, in particular the HSE Guidance Note GS50 (second edition) -Electrical Safety in Places of Entertainment.

HEALTH AND SAFETY AT WORK ACT 1974

All Production staff must co-operate with the Event Manager and the Client or the Client's Agent on Health and Safety matters and must not, by law, interfere with or misuse anything provided for safety purposes. This is clearly stated in Section 7 & 8 Health and Safety at Work Act 1974. Other sections of the HASAW Act infer a responsibility on **Nexus Audio Visual Limited** and those in charge of buildings to ensure that all equipment and the way it is installed and used is safe for all crew and also for performers and members of the public. All electrical equipment will be checked prior to dispatch from the local Warehouse and a record of the previous inspection will be kept.

PRODUCTION LIGHTING SYSTEMS

Lighting circuits should be kept separate from circuits which will be used for audio equipment. The hoist for lighting bars and booms should normally be supplied by a separate circuit. Only a single phase should be supplied to any one boom and the connections from the individual lantern to the boom should be by plug and socket. Flexible cables should be properly secured.

*Lanterns should not be suspended from a flexible cable alone

*Lighting rigs should be out of the reach of performers and the audience (unless specifically designed for use at low level).

Care should be taken that the metalwork of individual lanterns is adequately connected to the protective earth conductor.

*Scaffolding, metal frameworks, bars and booms on which electrical equipment is fixed should be efficiently earthed.

*If earthing connections are looped, care will be taken that the conductor is adequate throughout its length.

*If lighting is connected to two or three phases of the electrical supply, the dimmer cubicles on different phases should be clearly separated to avoid confusion.

*Connections will be by 15 amp three round pin plugs and sockets to BS 546 are quite satisfactory for indoors purposes. High power lights, such as 5kW follow spots, need higher power sockets, usually 32 amp industrial type to BS EN 60309 (previously BS4343). This type of connector is also best used for out-door events.

*All power cables, especially multi-core cables, should be checked for their suitability as regards flexibility and protection against heat, abrasion or other mechanical damage and properly secured in a grip.

*Lighting control positions will be properly earthed.

There should be no provision within the installation for 'lifting' (disconnecting) protective earths.

Some dimmer controls have excessive leakage qualities and a number of RCDs will be necessary at sub-circuit level. A single RCD is also unwise in view of the hazard which may result in all the lights going off at once should the device trip. Some dimmer controls have the effect of 'desensitising' some types of RCDs, particularly those with electronic components.

PRODUCTION SOUND SYSTEMS

It is preferable that different parts of a Sound System should be powered from the same phase of the electricity supply. Mains powered equipment should either be double insulated or correctly fitted with a protective earth. Where a number of items of sound equipment are connected together, it is possible that cable screens, together with mains protective earths form loop resulting in mains hum on the system. If this occurs, protective earth connections **will not** be removed. Instead the Production Electrician will re-arrange the cabling in order to eliminate the problem. Extension leads are frequently associated with electrical accidents. Make sure that they are properly connected, that there is no damage to the leads at any point and that the lead is fully unwound. Only fully extended leads are capable of carrying the full load capacity of the cable. Staff will ensure that high power amplifiers have sufficient ventilation around them and are not blocked by other equipment. Audio equipment should be protected by residual current devices (RCDs) having a nominal tripping current of 30 mA. Provided that they are readily accessible to allow restoration of supply, the RCDs should be located at the sub-circuit distribution board. It must be emphasised that should a 30mA RCD trip, it is an indication that the equipment **is not safe** and the excessive leakage should be cured.

WORKING PRACTICES ON SITE

ARRIVING ON SITE

All crew will report to security or to the Venue Manager according to the instructions from the Event Manager. All personnel involved with the project will have read the safety guidelines, the full brief from the Event Manager, the additional instructions and guidelines for the site and have in their possession a list of contact names and telephone numbers, and an on-site schedule of works. All crew must carry their ID card.

All production get-in and get-out procedures will be the responsibility of the Event Manager. The Event Manager will fully brief the crew on the working practices that are appropriate for the Venue and incorporate the rules and regulations which are imposed by the Venue Manager and/or Client.

Each member of the crew will have a schedule of information, including details of the venue, catering arrangements, hours of work, accommodation, team leaders and any additional rules. A full contact list including addresses, telephone numbers and fax numbers for the Venue and accommodation will be supplied to all members of the crew before arriving on-site.

It is the responsibility of the Event Manager to check during production site visits the situation with regard to access, parking (for equipment and crew), Police restrictions, booking of access roads, loading bays etc. Detailed information will be required concerning the access to the working area from the loading areas, paying particular attention to the following:

- Size and weight restriction of lift, if one exists.
- Weight restrictions of flooring, bridges, stairs.
- Weight and size of flight cases.
- Ladders - size and manoeuvrability on site.
- Security of equipment on-site.
- Any public access before event.

It is also important for the Event Manager to liaise closely with the Venue Manager regarding other Contractors' requirements and also any restrictions in the locality, i.e. the timing of the get-in and whether this may disturb the adjacent community or other users of the Venue.

It is imperative that this initial stage is carried out smoothly, efficiently and with the full support of the Venue Manager and other Contractors as it is only with their support and goodwill that the Production will be completed successfully and to the satisfaction of the Client.

WORK PERMITS

During the safety briefing, staff may be issued with a work permit, which should be carried at all times. This will contain details of the areas designated for work and the times at which work has been authorised to take place.

If any additional personnel are required at a later stage of the job, work permits will be issued via the Event Manager in agreement with the Venue Manager.

HEALTH & SAFETY

All crew should be fully aware of the safety guidelines, which apply to all **Nexus Audio Visual Limited** on-site production work, but will also make sure that they understand the additional safety rules which apply to the venue in/at, which they are working. The responsibility for the safety of the crew lies ultimately with the Event Manager, but all staff must take responsibility for their own safety on site and the safety of their colleagues. This includes the responsibility for the results of the staff's own actions on all other personnel on site and the public. Any member of **Nexus Audio Visual Limited** staff, who is found to be acting in such a way as to threaten the safety of others, or who has not adhered strictly to the safety regulations will be instantly evicted from the site. All queries regarding safety matters must be referred to the Event Manager.

ACCIDENT REPORTING

All accidents should be immediately reported to the team leader or Event Manager, who will keep a record of the event and take the necessary steps to rectify the situation, avoid any repetition and investigate the reasons for it. Any accidents must also be reported to the Venue Manager and Company Safety Adviser.

WELFARE

All members of the crew will receive details of the catering arrangements, accommodation and other welfare matters before arriving on site. Neither the Event Manager, nor the Venue will take responsibility for the security of personal belongings whilst staff work on-site. Staff are responsible for their own out-of-pocket expenses whilst on-site. Records must be kept and produced at a later date in order that a reimbursement may be authorised.

LEAVING THE SITE

Before leaving the site, all equipment must be cleared and all areas restored to their former condition. No litter or stray pieces of equipment are to be left on site. **Nexus Audio Visual Limited** are responsible for the removal of all waste generated by their activities.

All get out arrangements will be made through the Event Manager. Where there is any damage to existing property caused by the work carried out by staff, this will be made good at the expense of **Nexus Audio Visual Limited**. The exit procedure is as important as the entry to the venue and should be fast efficient and smooth running. At

the final point of exit, all personnel should hand in any work permits to the Venue Manager or the Event Manager and inform them of their intention to leave.

CORRECT LIFTING

Material handling is safe providing the correct lifting techniques are applied. Manual handling injuries are caused by incorrect/poor lifting technique such as stooping, twisting, over-stretching and having parallel hands & feet. All crew must follow these fundamental guidelines to the base lifting technique:

- ***ASSESS** the load (& the route and final destination).
- ***FEET** - place the feet asymmetrically either side of the load.
- ***KNEES** - with the heel of the forward foot staying on the ground, bend both knees.
- ***BACK** - keep your back straightened and relaxed throughout.
- ***NECK & HEAD** - look ahead (not down or around).
- ***GRIP** asymmetrically with your whole hand, instead of your fingertips.
- ***HOLD THE LOAD CLOSE** to the body

Finally:

- *If you can't manage on your own, ask for help.
- *Take care of leads or cable trailing on the ground.
- *Wear protective clothing and gloves.
- *Always PUSH wheeled flight cases but PULL super-lifts.

SAFE WORKING WITH TOOLS AND EQUIPMENT

Use the right tool for the job - and use properly. If a tool is defective - **DON'T USE IT**

Power Tools - ensure that you understand the instructions for use. All hand tools that are not battery operated preferably should be 110 volt via a transformer plugged in at the source of the supply. All power tools will be inspected and tested regularly.

Hand Tools - ensure that all tools are fit for the job and not worn out. Use insulated screwdrivers for work on electrical installations.

WORKING AT HEIGHTS

No person will be called upon to work at unaccustomed heights against his/her will, or without having undertaken suitable training for working at heights. When working at heights it is necessary to take appropriate precautions to avoid the risk of falling or dropping other objects such as tools. This risk should be controlled by excluding the area directly below the height working, securing all tools via a lanyard to the operative and by providing personnel with suitable harnesses and shock absorbing fall arresters securely attached to an appropriate anchorage point. When working at heights above 2 metres, particular care and attention must be taken to avoid endangering persons below. All structures will be constructed according to the safety guidelines set down in the manufacturers/suppliers instructions and drawings

Where a work is at a height above 2 metres and there is inadequate protection by guarding, safety harnesses with shock absorbing fall arresters & safety lines must be used by all persons working there. Safety lines should be anchored to a point above the waist to limit any fall. Safety lines fitted to safety belts should limit a fall to 0.6 metres. Where a longer fall is unavoidable, a full harness must be worn and the free fall limited to 1.8 metres on a shock absorbing or an inertia reel type of safety block must be connected to the full harness. Safety equipment which suffers accidental damage or shock loading must be taken out of service immediately and serviced or returned to the manufacturer for a thorough check or replacement. Belts and harness must be properly stored to avoid damage, particularly from chemical substances. All safety equipment must be thoroughly examined on a regular basis and an inspection record kept.

LADDERS

Safe use of ladders depends heavily on correct placement, especially as a ladder is most likely to slip when the weight is near the top. The ladder must be placed the right way round, e.g. with conventional extension ladders, the narrowest section must be outermost facing the user. A metal-reinforced wooden ladder should be placed so that the reinforcement is on the under, or tension, side of the stiles.

The foot of the ladder should be placed on a firm, level, non-slippery surface. Under no circumstances will ladders be stood on movable objects such as debris, loose bricks, barrels or oil drums to obtain extra height. On smooth surfaces offering little grip, the ladder must be held at the stile end by another member of the crew.

The best footing grip is obtained when the ladder is inclined at around 75 degrees to the horizontal i.e. one metre out for every four metres up. If the ladder is used to get to a higher working level, it must project at least 400 mm above that level so as to provide a hand hold. If a rung is to be used as a working platform, that rung must be at least 1 metre from the top of the ladder.

The ladder must not lean sideways under any circumstances and should be tied in wherever practicable, particularly for ladders over 6 metres long. Where guy stakes are used at the top, the ladder must also be secured at the foot. Ladders should be kept clear of un-insulated electricity cables unless isolated and should be clear of all doors, which may open.

The climber should have any tools or equipment firmly secured in a bag on his back or a belt on his waist but never just in his hands. He should face the ladder squarely and ascend using both hands to grasp the rungs. Feet should be placed firmly into the rungs. Eyes should be directed at the working level or above. Only one person will be on one ladder at any one time. Ladders longer than 3 metres should be carried by 2 people. Users should never slide down the ladder and should secure the ladder if left unattended. Both feet should always remain on the ladder and the feet should be spread as far apart as possible, especially if two-handed work is being undertaken.

TRUSSING

SPECIFICATION

When specifying the type of truss to be used for a specific project, consideration will be given to the following

- Weight of the load
- Safe Working Loads of points in venue / support points
- Layout and dimensions between points
- Spans between primary and/or secondary support points
- Size of truss
- Headroom of venue
- Aesthetic view of truss

Primarily the truss specified will be able to support the given load over the given span. No support system will be loaded beyond its Safe Working Load. Trusses will always be used in accordance with manufacturer's instructions and recommendations. All flying tackle and machinery will have been specified by a competent person, with adequate knowledge & training, and have proof of recent inspection.

ERECTION OF TRUSSING

Assembly of a flying or support system will be undertaken with a strictly safe system of work. The area of space required for the system will be cleared of all obstructions. Access will be safely gained to the primary points and the top fix will be installed and checked by a competent person. Secondary fixings will also be put in place. The system in its component form will be laid out in the order in which it is to be assembled according to a predetermined plan. Truss work and cross bracing will be assembled and connected and all fixings checked. The lifting machinery will be connected to the flying or support system, such that all points from the primary point to the truss system are vertical and that they connect to the correct point on the system according to the predetermined plan.

The system will then be lifted to approximately 150 mm off the ground. Assessment of the correct assembly will now take place. The system can now be lifted to a comfortable height for further work to take place. As the load is applied to the system, it will be checked to ensure that it conforms to the predetermined plan. Any changes will then be made before the system is finally lifted to its trim height. The primary support point may now be terminated to the system and the lifting equipment removed by a competent person. Safety points will be attached alongside the primary points.

SOUND EQUIPMENT

SAFE WORKING LOADS

The total weight of all hanging sound equipment will be known before work commences. Safe Working Load limits will be strictly adhered to throughout the planning and development stages of any project.

The load bearing capacity of all flooring, risers and platforms will need to be established and taken into account when designing the style and positioning of speakers and other heavy equipment such as amp racks, etc.

PRIMARY FIXING

It is standard practice to secure speakers with two or more fixing points and therefore a secondary fixing device will not be required.

SECONDARY FIXING

However, should a piece of equipment be supported by a single point, such as a flying frame, then a secondary fixing will be fitted in the form of a safety chain or safety bond. The secondary fixing must be capable of supporting the load to which it is attached if the load becomes detached from its primary fixing.

CABLE ROUTING

SEPARATION

Due to interference created between certain types and frequencies of cables, cable routing is of utmost importance. From a safety point of view, cables will be kept well away from public areas and places of frequent traffic, either from pedestrians or from motor vehicles. Where a site has specified servicing runways, then these will be clear at all times, even from cabling. These are often used as the fire escapes and clear access and egress at all times is vital. Cables run across the floor, however disguised, make it uneven and will not be acceptable.

Where possible, control, comms & sound cables will be separated from any mains or dimmed lighting cables by at least 500mm. Long runs parallel to mains cable are to be avoided. If control, comms & sound cables meet mains or dimmed lighting cables they should cross at right angles.

PROTECTION

Any cabling which interferes with a public right of way, fire regulations, or general health and safety regulations on-site should be moved from ground level and suspended at a safe height and in a secure fashion. If this is not feasible, then a cable management scheme will be employed and marking tape is used to mark the routes of each cable.

Cables outdoors, in a temporary situation supply other areas with power, should be buried to a depth of at least 0.1 metres. The Event Manager must check with the Venue Manager the plans of underground services before any digging commences to avoid any interference with essential services i.e. gas, drainage, mains electricity. Once the cables have been laid, the site will be marked out with danger marking tape following the route of the cables whilst underground. Cables laid on top of soil, grass etc. will be indicated by "**Danger Electrical Cables**" tape. This is especially important when working in close proximity to heavy machinery, water supplies, etc. The tape will show clearly the nature of the cable(s) within. The cabling should be inspected by a suitably competent person at regular intervals on-site.

Sound cables should always be protected from sharp edges or chaffing that may sever the outer covering and affect the screen or inner cores. Care should be taken when connecting speaker lines to ensure that the amplifier is turned down or off to avoid any contact with live terminals.

LIGHTING FOCUS

After a lantern has been rigged, it will be fully checked for all required connections, fixings and safety aspects before focusing commences. The lantern will be locked off by its hook clamp and the secondary fixing should be attached to the luminarie & the rigging.

The lantern can now be roughly focused in the required direction to ensure that there is sufficient manoeuvrability in the cable attachment and also to ensure that the lanterns are at a sufficient distance apart so as to avoid collision. The lantern will then be locked off to approximately 80% full tension, allowing the remaining 20% available for the final adjustments. The lantern will then be checked finally to ensure that all functions are in good working order. The following basic checks will then be carried out

Check the lens(es) runs smoothly and locks off; check the four shutters, if fitted, do not foul the gate, each other or nearby items of equipment; then fully extract. Check holding/stabilising clips on colour/barn door runners are fully function able.

All lanterns, regardless of size, type, age and usage, will undergo these basic checks to ensure correct and smooth operation. Only when all the checks have been thoroughly carried will the focusing begin.

When focusing commences, the lighting board operator will fade up each lantern to approximately 30% (depending on the lamp size) so the lamp just overbleeds. This will enable the focuser to point the lantern in the direction it is required and delay the heat build up and shape the light output.

With the desk channel up to full, the focuser will now focus in accordance with the lighting designer's instructions. On completion, the colour will be inserted in the colour runners and, after one final visual inspection, the lantern will be locked off to 100% full tension. A lantern should be able to withstand being knocked by a ladder (for example) and not move at all.

SOUND CHECKS

The importance of sound checks cannot be over emphasised. Specific time will be allocated for sound checking and system set up, especially where tone, pink noise or high sound peak levels are to be used. Where busy schedules apply to productions, it is sometimes necessary for sound checks to be carried out during lunch or tea breaks. However, when possible, time must be allocated for the function in the overall project schedule. It is never worth cutting corners on sound checks, even when the schedule is tight. All crew should be pre warned about the possible noise levels in case this disturbs their own work or causes a local disturbance, which needs to be managed. It should be remembered that a sudden loud noise can be potentially hazardous. Staff who are unaware of the likelihood of a sound check, especially if they are working at heights, may be seriously affected.

For system set-up, total silence will be required and this will need to be allowed for in the working schedule and respected by other departments working in the same area. Again, if a sound check is to be conducted with artists, then other work should be halted, for the minimum amount of time, so that both artist and engineer can achieve the required effect. Where possible, artists and musicians will need to make themselves available for sound checks, especially where radio-microphones are being used.