

Use of ARRI Lighting Equipment

This manual explains how to handle lighting equipment correctly and in a safe way. Use of floodlight, floodlight systems and its accessories is permitted to authorized and trained personnel only. Use of lighting equipment is licensed only for professional purpose in correspondence to valid operating manuals and regulations of the trade associations (BetrSichV , BGI 810 -1, -3 and -4 as well as BGV A1).

1: General safety standards for the use of lighting equipment

In addition to information by operating manuals please take notice of the following safety standards:

a) Safety requests in shipping, handling and daily use of equipment

- Protection clothing is highly recommended to prevent injuries when working with floodlights
- When moving and lifting please take notice of the specific weight of lighting equipment and care for instructions given by regulations of the trade association (BGI 810-1).
- When laying cables please avoid any danger for persons or damages caused by vehicles by suitable means of marking or using protection covers.

b) Safety requests regarding electric hazards

- All lighting equipment and all its electric protection systems have to be tested before every use.
- Working of power supply and its protection systems has to be guaranteed before being connected to the floodlight system.
- To avoid dangerous head voltage special precautions can be requested if the lighting equipment is used in special environmental surroundings as there are:
 - Use of Earth fault protection device (differential protection device RCD)
 - the use of protective extra-low voltage, protective separation or isolation
 - take care of equipotential bonding if necessary for safety reasons (e.g. if working in environment mainly existing of iron).

c) Safety requests regarding fire, burning and radiation (UV, FACE, IR)

To avoid personnel injuries or property damages through any kind of radiation please take notice of minimum distances as shown on type signs and/or in instruction manuals

Fire and burning danger

- Floodlight has to be installed far enough from all inflammable material.
- do not cover any ventilation mouths of the equipment
- All lighting equipment will get very hot during use. Do not touch the floodlight and be aware of burning risk if installed reachable within a height of 2.5 ms over floor level
- Please note minimum distances to all inflammable objects.
- There is a real danger of overheating when exceeding the tilt angle of floodlight shown in instruction manuals and on type signs.
- Closed barn doors or blinds can lead to overheating of floodlight.

Danger caused by radiation (UV, FACE, IR)

- UV radiation emitted by HMI floodlights can cause health problems like sunburn. Minimum distances shown in manuals and on type signs are valid for the inner light beam of floodlight if not exceeding a stay of eight hours per day.
- Never look directly into a floodlight. Blending may reduce any eye functions and may cause accidents.
- Note minimum distances when lighting through glass, windows or close to decorative displays, because these materials can burst due to excessive warming and cause injury by fragments.

2: Use of floodlight

All floodlight has to be mounted, placed, secured and supervised accurately.

a) Indoor and outdoor use and in special environment (influences by wetness, dust)

Protection classes (IP-code) of all lighting equipment have to correspond with environmental influences (dust, wetness, rain). As a minimum the following IP classes are needed:

- IP x0 for indoor use, e.g. theatre or studio
- IP x1 (drip-proof) for damp and wet environment indoor and outdoor
- IP x3 (splashproof) for all unprotected environment.

If any components of the used lighting equipment do not own appropriate protection classes, you have to take care for suitable additional protection measures, e.g. weather protected installation, shelter or covers. Sufficient ventilation and derivation of warmth has to be guaranteed at any time.

b) Safety standards for using floodlight shoreline or in water

- No other electric equipment may be operated with the same distributor
- All electric equipment and power supply has to be placed without the risk of dangerous voltage.
- All electric units have to be protected against the risk of falling into water
- Cabling has to be installed with sufficient distance to water and protected against the risk of falling into water.
- Only special protected cabling may be led through water
- Security purpose will be increased as described under 1b) with guidelines to avoid electric hazards.

c) Safety standards for using floodlight on tripods

- Please note that tripods are licensed only for carrying the proposed floodlight, its accessories and connecting cables.
- Avoid any lateral side loads on the floodlight's tripod plug when setting up and in use. High lateral side load can cause damages and break any part of the tripod.
- Tripods for transportation or moving floodlights must be set up safe. Additional safety measures are necessary if
 - surrounding grounds do not allow safe positioning
 - the requested heights of tripods restrict safe positioning
 - there is the possibility of stormy winds
 - people could collide with tripods.

Suitable safety measures:

- securing of the tripods on the ground with stage drills
- weigh down the tripod feet with sand sacks
- anchoring to walls or components standing safe
- barricade of the tripod area
- security personnel.

d) Floodlight in overhead / hanging use

- Make sure that any stage or scaffold is licensed for the weight of floodlight, its accessories and connection cabling
- Avoid any lateral side load on the floodlight's tripod plug when setting up and in use. High lateral side load can cause damages and break any part of the tripod.
- Two independently working safety measures have to prevent floodlight and its accessories from falling down.
- Any fittings have to be prevented by suitable technical measures from falling down. No need for additional safety measures in permanent settings if fittings are well fixed, could be untied only by using tools and are prevented against loosening
- if lighting equipment installed and permanently connected with walls and the surrounding buildings the fixing has to hold at least 5 times the mass of the equipment. In the case of ailing fixtures floodlights must be prevented from turning aside and causing danger
- all material and safety procedures must correspond to BGI 810-3 regulations (loads over persons).

3. Maintenance

Care and maintenance work is necessary for all use of all equipment. This requires eye sight attention before everyday use as well as test of electrical safety at least every 12 months with results documented and stored appropriate. Instruction manuals provide additional information how to get started and to use the floodlight.

For any further information please contact our branches and workshops (see addresses listed below), or visit www.arri.com

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