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## GLORY FRAMING

## XP-1000SZ F



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## Please read the instruction manual carefully which includes important

 information about the installation, usage and maintenance.WARNING
Please keep this User Manual for future consultation. If you sell the unit to another user, be sure that they also receive this instruction manual.

## Important:

Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.

- Unpack and check carefully that there is no transportation damage before using the unit.
- The unit is for indoor use only. Use only in a dry location.
- Do install and operate by qualified operator.
- Do not allow children to operate the fixture.
- Use safety chain when fixing the unit. Handle the unit by carrying its base instead of head only.
- The unit must be installed in a location with adequate ventilation, at least 50 cm from adjacent surfaces.
- Be sure that no ventilation slots are blocked; otherwise the unit will be overheated.
- Before operating, ensure that the voltage and frequency of power supply matches the power requirements of the unit.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- Maximum ambient temperature TA: $40^{\circ} \mathrm{C}$. Don't operate it when the temperature is higher.
- Don't connect the device to any dimmer pack.
- During initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective, and it will decrease gradually within 15 minutes.
- Make sure there are no flammable materials close to the unit while operating to avoid fire hazard.
- Examine the power wires carefully; replace them immediately if there is any damage.
- Unit's surface temperature may reach up to $85^{\circ} \mathrm{C}$. Don't touch the housing bare-handed during its operation, and allow about 15 minutes for cooling the unit down before replacing bulb or maintenance as it could be very hot.
- Avoid any inflammable liquids, water or metal objects entering the unit. Once it happens, cut
off the mains power immediately.
- Do not operate in dirty or dusty environment; do clean the fixture regularly.
- Do not touch any wire during operation as there might be a hazard of electric shock.
- Avoid power wires twist other cables.
- The minimum distance between light output and the illuminated surface must be more than 12 meters.
- Disconnect mains power before fuse/lamp replacement or servicing.
- Replace fuse/lamp only with the same type.
- In the event of serious operating problem, stop using the unit immediately.
- Never turn on and off the unit time after time.
- The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.
- Do not open the unit as there are no user serviceable parts inside.
- Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center if needed.
- Disconnect the mains power if the fixture is has not been used for a long time.
- Do use the original packing materials before transporting it once again.
- To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture.
- Hot lamp explosion hazard. Do not open the unit within 15 minutes after switching off.
- Do replace the bulb once it is damaged, deformed or life-expired.
- Do not look directly at the light while the bulb is on.
- Never touch bulb with bare fingers, as it is very hot after using.
- Do not start on the unit without bulb enclosure or when housing is damaged.


## - Caution:

- To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture.
- Hot lamp explosion hazard. Do not open the unit within 15 minutes after switching off.
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- Never touch bulb with bare fingers, as it is very hot after using.
- Do not start on the unit without bulb enclosure or when housing is damaged.


## 2. Technical Specification

## Power supply:

AC $230 \mathrm{~V}, 50 \mathrm{~Hz}$

## Power Consumption:

1350W

## $\stackrel{\rightharpoonup}{ }$ Lamp:

OSRAM Lok-it HTI1000/PS

## $\diamond$ Optical system:

-High efficient Optical system.

- Delivering extremely powerful output.
- High quality lens.


## $\diamond$ Movement:

- Pan: $540^{\circ}$
- Tilt: $270^{\circ}$
- Pan/Tilt moving speed adjustable
- Automatic Pan/Tilt correction.
- Easy calibration and maintenance by magnetic home positioning.
- Pan/Tilt position lock for transporting protection.


## $\diamond$ Dimmer/Shutter:

- Mechanical dimmer
- Mechanical shutter and adjustable speed strobe effect


## $\diamond$ CMY color mixing + Linear CTO

## $\diamond$ Color wheel:

- Color wheel: 6 fixed colors
- Rainbow effect in both directions.
- Easy calibration and maintenance by magnetic home positioning


## $\diamond$ Gobo wheel:

- Gobo Wheel: 1 rotation gobos with 5gobos plus white
- Easy calibration and maintenance by magnetic home positioning


## $\diamond$ Animation Wheel:

Perfect water wave and flame effects, rotating and index able

## $\diamond$ Framing System :

- 4 fast, smooth framing shutters, each shutter blade position and angle can be controlled individually
- Completed framing module can be rotated at $90^{\circ}$


## $\diamond$ Iris:

Linear iris

## $\diamond$ Prism:

Four facet prism, rotating in both direction

## $\diamond$ Focus:

Motorize focus

## $\diamond$ Cooling:

Fan cooling

## $\diamond$ Beam Angle:

$$
9^{\circ} \sim 61^{\circ}
$$

## $\diamond$ Dimension/Weight:

$454 \times 427 \times 811 \mathrm{~mm}, 40.0 \mathrm{Kgs}$
$17.9^{\prime \prime} \times 16.8^{\prime \prime} \times 31.9^{\prime \prime} \mathrm{in}, \quad 88.2 \mathrm{lbs}$


## Photometric Diagram


3. Control Panel

## Front View

Rear View


## 1. FUNCTION DISPLAY:

Shows the various menus and the selected functions;
2. BUTTON:

| MENU | To select the programming functions |
| :--- | :--- |
| $\mathbf{A}$ | To go backward in the selected functions |
| $\boldsymbol{\nabla}$ | To go forward in the selected functions |
| ENTER | To confirm the selected functions |

## 3. WIRELESS RECEIVER:

Receives the wireless DMX signal.

## 4. POWER SWITCH:

Turns On/Off the power;

## 5. ETHERNET:

Transfers fixture's information to a main controller;
6. DMX IN:

DMX 512 operation, use 5-pin XLR cable to link the unit and DMX controller;

## 7. DMX IN:

DMX 512 link, use 3-pin XLR cable to link the unit and DMX controller;

## 8. DMX OUT:

DMX 512 operation, use 5-pin XLR cable to link the next units;
9. DMX OUT:

DMX 512 operation, use 3-pin XLR cable to link the next units;
10. BATTERY DISPLAY:

Shows the battery status;
11. FUSE (AC250V/T 15A):

Protect the unit from damage of over voltage or short circuit;
12. POWER:

Connect to the mains supply.

## 4. Gobo Wheel and Lamp

4.1 Gobo Wheel


Rotation gobo wheel

## DANGER! <br> Install/change the gobo-wheel with the device switched off only.

### 4.2 Lamp

## OSRAM:

1. Because of its high internal pressure, there might be a risk that the Discharge lamp would explode during operation. The lamp emits intense UV radiation which is harmful to the eyes and skin. The high luminance of the arc can cause severe damage to the retina if you take a close look at the lamp.
2. To protect the lamp, always turn off the lamp first (via control panel or DMX controller) and let the unit run at least five minutes to cool down before switching off the mains supply. Never handle the lamp or luminary when it is hot.
3. Do not touch the bulb with bare hands. If this happens, clean the lamp with denatured alcohol and wipe it with a lint free cloth before installation.
4. The lamp generates UV radiation. Never operate the lamp without appropriate shielding.
5. When ling up, the lamp operates at high pressure and there is a slight risk of arc tube rupture.

The risk increases with age, temperature and improper handling of the lamp. Do not use the lamp longer than its lifespan.
6. Make sure the lamp is located in the center of the reflector for the best projection.

### 4.3 Change The Lamp



Loosen the screw at the rear side of the fixture and open the lamp compartment cover.


Remove the old lamp and turn the lamp left in order to take the lamp out, put a new lamp that
must be the same type as the old one. And then place the new lamp into the lamp holder and turn the lamp right in order to fix. Finally reinstall the lamp compartment cover, fastening it securely before turning on power.

## 5. How To Set The Unit

### 5.1 Main Function

Turn on the unit, press the MENU button into menu mode, and press the UP/DOWN button until the required function is shown on the monitor. Select the function by the ENTER button. Use the UP/DOWN button to choose the submenu, press the ENTER button to store and automatically return to the last menu. Press the MENU button or let the unit idle one minute to exit menu mode. In the event of disconnecting with mains power, press the UP button for one minute to enter into menu mode. Press MENU button or let the unit idle one minute to exit.

The main functions are shown below (the grayed boxes are preset settings) :



## DMX Settings

To select DMX Settings, press the ENTER button to confirm, use the UP/DOWN button to select DMX Address, Channel Mode, Connect To, Device ID, IP Address, Art-Net Setting, DMX Retransmit, View DMX Value or Wireless DMX.

## DMX Address

To select DMX Address, press the ENTER button to confirm. Use the UP/DOWN button to adjust the address from $\mathbf{1}$ to 512, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Channel Mode

To select Channel Mode, press the ENTER button to confirm. Use the UP/DOWN button to select Mode1 (34) or Mode2 (40) Channel mode, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Connect To

To select Connect To, press the ENTER button to confirm. Use the UP/DOWN button to select Auto, DMX, Art-Net or Wireless DMX, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Device ID

To select Device ID, press the ENTER button to confirm. Use the UP/DOWN button to select Auto or Manual, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## IP Address

To select IP Address, press the ENT ER button to confirm. Use the UP/DOWN button to select IP Address or Subnet Mark, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Art-net Setting

To select Art-net Setting, press the ENTER button to confirm. Use the UP/DOWN button to select Universe or Net, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## DMX Retransmit

To select DMX Retransmit, press the ENTER button to confirm. Use the UP/DOWN button to select No (normal) or Yes (DMX Retransmit), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## View DMX Value

To select View DMX Value, press the ENTER button to confirm. Use the UP/DOWN button to view the DMX channel value. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Wireless DMX Reset

To select Wireless DMX Reset, press the ENTER button to confirm. Use the UP/DOWN button to select No (normal) or Yes (Wireless DMX will reset), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Fixture Settings

To select Fixture Settings, press the ENTER button to confirm, use the UP/DOWN button to select Pan Inverse, Tile Inverse, P/T Feedback, P/T Speed, Auto Focus, BL.O. P/T Moving, BL.O. Color Change, BL.O. Gobo Change or Dimmer Curve.

## Pan Inverse

To select Pan Inverse, press the ENTER button to confirm. Use the UP/DOWN button to select No (normal) or Yes (pan inverse), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Tilt Inverse
To select Tilt Inverse, press the ENTER button to confirm. Use the UP/DOWN button to select No (normal) or Yes (tilt inverse), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## P/T Feedback

To select P/T Feedback, press the ENTER button to confirm. Use the UP/DOWN button to select No (Pan or tilt's position will not feedback while out of step) or Yes (Feedback while pan/tilt out of step), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## P/T Speed

To select P/T Speed, press the ENTER button to confirm. Use the UP/DOWN button to select Slow or Fast, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Focus Compensate

To select Focus Compensate, press the ENTER button to confirm. Use the UP/DOWN button to select Disable, Near, Medium or Far, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

BL.O. P/T Moving —Blackout while pan/tilt moving
To select BL.O. P/T Moving, press the ENTER button to confirm. Use the UP/DOWN button to select No (normal while pan/tilt moving) or Yes (blackout while pan/tilt moving), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

BL.O. Color Change - Blackout while color changing
To select BL.O. Color Change, press the ENTER button to confirm. Use UP/DOWN button to select No (normal while changing color) or Yes (blackout while color changing), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## BL.O. Gobo Change - Blackout while gobo changing

To select BL.O. Gobo Change, press the ENTER button to confirm. Use the UP/DOWN button to select No (normal while changing gobo) or Yes (blackout while gobo changing), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Dimmer Curve

To select Dimmer Curve, press the ENTER button to show the DIMMER CURVE on the display, use the UP/DOWN button to select Square Law, Inverse Squ. Linear,or S-curve. Once selected, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Dimmer Modes:


Square Law: Light intensity control is finer at low levels and coarser at high levels.
Inverse Square Law: Light intensity control is coarser at low levels and finger at high levels.
Linear: The increase in light intensity appears to be linear as DMX value is increased.
S-cure: Light intensity control is finger at low levels and high levels and coarser at medium levels.

## Lamp Settings

To select Lamp Settings, press the ENTER button to confirm, use the UP/DOWN button to select Lamp On/Off, State/Power on or Cooling Mode.

## Lamp On/Off

To select Lamp On/Off, press the ENTER button to confirm. Use the UP/DOWN button to select Off (lamp off) or On (lamp on), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## State/Power On

To select State/Power On, press the ENTER button to confirm. Use the UP/DOWN button to select Off (Lamp off while power on) or On (Lamp on while power on), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Cooling Mode

To select Cooling Mode, press the ENTER button to confirm. Use the UP/DOWN button to select Auto, Fast or Quiet, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Display Settings

To select Display Settings, press the ENTER button to confirm, use the UP/DOWN button to select Display Inverse, Backlight Intensity ,Temperature Unit or Language.

## Display Inverse

To select Display Inverse, press the ENTER button to confirm. Use the UP/DOWN button to select No (normal) or Yes (display inverse), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Backlight Intensity

To select Backlight Intensity, press the ENTER button to confirm. Use the UP/DOWN button to adjust the value from $\mathbf{1}$ to $\mathbf{1 0}$, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Temperature Unit

To select Temperature Unit, press the ENTER button to confirm. Use the UP/DOWN button to
select ${ }^{\circ} \mathrm{C}$ or ${ }^{\circ} \mathrm{F}$, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Language

To select Language, press the ENTER button to confirm. Use the UP/DOWN button to select English or Chinese, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Fixture Test

To select Fixture Test, press the ENTER button to confirm, use the UP/DOWN button to select

## Auto Test or Manual Test

## Auto Test

To select Auto Test, press the ENTER button to confirm, the unit will run built-in programs to automatically test pan, tilt, shutter, color, gobo, gobo rotation, prism, prism rotation, focus, dimmer and lamp on/off. Press the MENU button back to the last menu or exit menu mode after auto test.

## Manual Test

To select Manual Test, press the ENTER button to confirm, the present channel will show on the display, use the UP/DOWN button to select channel, press the ENTER button to confirm, then use the UP/DOWN button to adjust the value, press the ENTER button to store, the fixture will run as the channel value indicates. Press the MENU button back to the last menu or exit menu mode idling one minute.
(All channels value will become $\mathbf{0}$ after exiting Manual Test menu)

## Fixture Information

To select Fixture Information, press the ENTER button to confirm, use the UP/DOWN button to select Fixture Use Hour, Light Use Hour, Fixture State or Firmware Version.

## Fixture Use Hour

Select Fixture Use Hour, press the ENTER button to confirm, fixture use time will show on the display, press the MENU button to exit.

## Light Use Hour

To select Light Use Hour, press the ENTER button to confirm, lamp on time will show on the display, press the ENTER button to confirm, use the UP/DOWN button to select Exit or Reset Time, press the ENTER button to confirm. Press the MENU button back to the last menu or exit menu mode idling one minute.

Fixture State
Select Fixture State, press the ENTER button to confirm, fixture state will show on the display, press the MENU button to exit.

## Firmware Version

To select Firmware Version, press the ENTER button to confirm, firmware version will show on the display, press the MENU button back to exit.

## Reset Functions

To select Reset Function, press the ENTER button to confirm, use the UP/DOWN button to select Pan/Tilt, Effect or All.

## Pan/Tilt —Reset Pan/Tilt

To select Pan/Tilt, press the ENTER button to confirm, use the UP/DOWN button to select Yes (the unit will run built-in program to reset pan and tilt to their home positions) or No, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Effect

To select Effect, press the ENTER button to confirm, use the UP/DOWN button to select Yes (the unit will run built-in program to reset effect to their home positions) or No, and press the ENTER button to store. Press the MENU button to exit.

All - Reset All
To select All, press the ENTER button to confirm, use the UP/DOWN button to select Yes (the unit will run built-in program to reset all motors to their home positions) or No, press ENTER button to store. Press the MENU button to exit.

## Special Functions

To select Special Functions, press the ENTER button to confirm, and select Factory Settings.

## Factory Settings

Select Factory Settings, press the ENTER button to confirm, use the UP/DOWN button to select Yes (the fixture will reset to factory settings) or No (normal), press ENTER button to store. Press the MENU button to exit.

### 5.2 Home Position Adjustment

Press the MENU button into menu mode, then press and hold the ENTER button for about 3 seconds into offset mode to adjust the home position. Select the function by the ENTER button. Use the UP/DOWN button to select the submenu, press the ENTER button to store and automatically return to the last menu. Press the MENU button to exit.


Encoder Calibrate- Encoder Calibrate home position adjustment
Enter offset mode, select Encoder Calibrate, the fixture will calibrate the encoder. Press the MENU button to exit.

Pan - pan home position adjustment
Enter offset mode, select Pan, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{- 1 2 8}$ to $\mathbf{1 2 7}$, press the ENTER button to store. Press the MENU button to exit.

Tilt - Tilt home position adjustment
Enter offset mode, select Tilt, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{- 1 2 8}$ to $\mathbf{1 2 7}$, press the ENTER button to store. Press the MENU button to exit.

Shutter - Shutter home position adjustment
Enter offset mode, select Shutter, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to $\mathbf{2 5 5}$, press the ENTER button to store. Press the MENU button to exit.

Dimmer - Dimmer home position adjustment
Enter offset mode, select Dimmer, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to 255, press the ENTER button to store. Press the MENU button to exit.

Color - Color home position adjustment
Enter offset mode, select Color, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from - $\mathbf{1 2 8}$ to $\mathbf{1 2 7}$, press the ENTER button to store. Press the MENU button to exit.

Gobo1-Gobo1 home position adjustment
Enter offset mode, select Gobo1, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{- 1 2 8}$ to $\mathbf{1 2 7}$, press the ENTER button to store. Press the MENU button to exit.

R Gobo1 - Gobo1 rotation home position adjustment
Enter offset mode, select R Gobo1, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{- 1 2 8}$ to $\mathbf{1 2 7}$ press the ENTER button to store. Press the MENU button to exit.

Framing -Framing home position adjustment
Enter offset mode, select Framing, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to $\mathbf{2 5 5}$, press the ENTER button to store. Press the MENU button to exit.

Blade-UP1 - Blade-UP1 home position adjustment
Enter offset mode, select Blade-UP1, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to $\mathbf{2 5 5}$, press the ENTER button to store. Press the MENU button to exit.

Blade-UP2 - Blade-UP2 home position adjustment
Enter offset mode, select Blade-UP2, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to $\mathbf{2 5 5}$, press the ENTER button to store. Press the MENU button to exit.

Blade-DW1- Blade-DW1 home position adjustment
Enter offset mode, select Blade-DW1, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to $\mathbf{2 5 5}$, press the ENTER button to store. Press the MENU button to exit.

Blade-DW2 - Blade-DW2 home position adjustment
Enter offset mode, select Blade-DW2, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to $\mathbf{2 5 5}$, press the ENTER button to store. Press the MENU button to exit.

Blade-LF1 - Blade-DW1 home position adjustment
Enter offset mode, select Blade-LF1, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to 255, press the ENTER button to store. Press the MENU button to exit.

Blade-LF2 - Blade-LF2 home position adjustment
Enter offset mode, select Blade-LF2, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to 255, press the ENTER button to store. Press the MENU button to exit.

Blade-LRG1 - Blade-LRG1 home position adjustment
Enter offset mode, select Blade-LRG1, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to $\mathbf{2 5 5}$, press the ENTER button to store. Press the MENU button to exit.

Blade-LRG2 - Blade-LRG2 home position adjustment
Enter offset mode, select Blade-LRG2, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to $\mathbf{2 5 5}$, press the ENTER button to store. Press the MENU button to exit.

Iris- Iris home position adjustment
Enter offset mode, select Iris, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from 0 to 255, press the ENTER button to store. Press the MENU button to exit.

Prism - Prism home position adjustment
Enter offset mode, select Prism, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to 255, press the ENTER button to store. Press the MENU button to exit.

R Prism - Prism rotation home position adjustment
Enter offset mode, select R Prism, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{- 1 2 8}$ to $\mathbf{1 2 7}$, press the ENTER button to store. Press the MENU button to exit.

Frost - Frost home position adjustment
Enter offset mode, select Frost press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to 255, press the ENTER button to store. Press the MENU button to exit.

Focus - Focus home position adjustment
Enter offset mode, select Focus, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from 0 to 255, press the ENTER button to store. Press the MENU button to exit.

Zoom - Zoom home position adjustment
Enter offset mode, select Zoom press the ENTER button to confirm. Use the UP/DOWN button to offset the value from 0 to 255, press the ENTER button to store. Press the MENU button to exit.

Cyan- Cyan home position adjustment
Enter offset mode, select Cyan, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to 255, press the ENTER button to store. Press the MENU button to exit.

Magenta- Magenta home position adjustment
Enter offset mode, select Magenta, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from 0 to 255, press the ENTER button to store. Press the MENU button to exit.

Yellow- Yellow home position adjustment
Enter offset mode, select Yellow, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from 0 to 255, press the ENTER button to store. Press the MENU button to exit.

CTO- CTO home position adjustment
Enter offset mode, select CTO, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{0}$ to $\mathbf{2 5 5}$, press the ENTER button to store. Press the MENU button to exit.

Animation- Animation home position adjustment
Enter offset mode, select Animation, press the ENTER button to confirm. Use the UP/DOWN button to offset the value from $\mathbf{- 1 2 8}$ to $\mathbf{1 2 7}$, press the ENTER button to store. Press the MENU button to exit.

### 5.3 Error Information

## Lamp Startup Fail

It appears when there is no lamp or some wires are damaged.

## Temperature Sense Error

It appears when temperature check board is damaged.

## Lamp Too Hot Power Off

It appears when temperature is detected higher than $110^{\circ} \mathrm{C}$. Check if the unit is properly ventilated, or fans or temperature check board may is damaged.

## Lamp Too Hot Low Power

It appears when temperature is detected higher than $105^{\circ} \mathrm{C}$, the unit will run on a low power level.

## Maintenance Fixture

It appears when the maintenance remaining time becomes $0 S$, please enter menu mode and reset the time.

## Lamp On Over 700 Hour

It appears when the lamp has been on over 700 hours, please turn off the lamp.

## Memory Initial Fail

It appears when the memory IC is damaged.

## CPU-B Error, CPU-C Error, CPU-D Error

They appear when board P.C or some wires are damaged.

Pan Reset Error, Pan Encode Error, Tilt Reset Error, Tilt Encode Error, Shutter Reset Fail, Dimmer Reset Fail, Color Reset Fail, , Gobo Reset Fail, Focus Reset fail.

They may appear when turning on or resetting the unit, for some parts such as board P.C are damaged. Please contact the qualified maintenance.

## 6. Control By Universal DMX Controller

### 6.1 DMX Connections



1. At last unit, the DMX cable has to be terminated with a terminator. Solder a 120 -ohm $1 / 4 \mathrm{~W}$ resistor between pin 2(DMX-) and pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-output of the last unit.
2. Connect the unit together in a "daisy chain" by XLR plug cable from the output of the unit to the input of the next unit. The cable cannot be branched or split to a " $\gamma$ " cable. DMX 512 is a very high-speed signal. Inadequate or damaged cables, soldered joints or corroded connectors can easily distort the signal and shut down the system.
3. The DMX output and input connectors are pass-through to maintain the DMX circuit, when one of the units' power is disconnected.
4. Each lighting unit needs to have a DMX address to receive the data by the controller. The address number is between 0-511 (usually $0 \& 1$ are equal to 1 ).
5. The end of the DMX 512 system should be terminated to reduce signal errors.
6.3 pin XLR connectors are more popular than 5 pins XLR.

3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)
5 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+), Pin4, Pin5 not used.

### 6.2 Channel Mode Setting

Enter menu mode, select DMX Functions, press the ENTER button to confirm, use the UP/DOWN button to select Mode, press the ENTER button to confirm, present channel mode will blink on the display, use the UP/DOWN button to select $\mathbf{2 1}$ Channel or 19 Channel Mode, and press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

### 6.3 Address Setting

If you use a universal DMX controller to control the units, you have to set DMX address from 1 to 512 so that the units can receive DMX signal.

Press the MENU button to enter menu mode, select DMX Functions, press the ENTER button to confirm, use the UP/DOWN button to select DMX Address, press the ENTER button to confirm, the present address will blink on the display. Use the UP/DOWN button to adjust the address from 1 to 512, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Please refer to the following diagram to set the address for the first 4 units.

| Channel mode | Unit 1 <br> Address | Unit 2 <br> Address | Unit 3 <br> Address | Unit 4 <br> Address |
| :--- | :---: | :---: | :---: | :---: |
| 34 channels | 1 | 35 | 69 | 103 |
| 40 channels | 1 | 41 | 81 | 121 |

### 6.4 DMX Control

34Channels (Mode 1):

| CHANNEL | VALUE | FUNCTION |
| :---: | :---: | :---: |
| 1 | $\begin{aligned} & \text { 000-019 } \\ & 020-049 \\ & 050-200 \\ & 201-210 \\ & 211-255 \\ & \hline \end{aligned}$ | STROBE: <br> Shutter closed, lamp switches to low power <br> Shutter Open <br> Strobe, slow $\rightarrow$ fast <br> Shutter Open <br> Random strobe, slow $\rightarrow$ fast |
| 2 | 000-255 | DIMMER $0 \% \rightarrow 100 \%$ |
| 3 | 000-255 | DIMMER FINE |
| 4 | 000-255 | CYAN: $0 \% \rightarrow 100 \%$ |
| 5 | 000-255 | MAGENTA: $0 \% \rightarrow 100 \%$ |
| 6 | 000-255 | YELLOW: $0 \% \rightarrow 100 \%$ |
| 7 | 000-255 | CTO: $6000 \mathrm{~K} \rightarrow 3200 \mathrm{~K}$ |
| 8 | $\begin{gathered} 000 \\ 001-014 \\ 015 \\ 016-029 \\ 030 \\ 031-044 \\ 045 \\ 046-059 \\ 060 \\ 061-074 \\ 075 \\ 076-089 \\ 090 \\ 091-104 \\ 105-140 \\ 141-145 \\ 146-150 \\ 151-155 \\ 156-160 \\ 161-165 \\ 166-170 \end{gathered}$ | COLOR WHEEL: <br> Open <br> Open $\rightarrow$ Color 1 <br> Color 1 <br> Color 1 + Color 2 <br> Color 2 <br> Color 2 + Color 3 <br> Color 3 <br> Color 3 + Color 4 <br> Color 4 <br> Color 4 + Color 5 <br> Color 5 <br> Color 5 + Color 6 <br> Color 6 <br> Color $6 \rightarrow$ Open <br> Open <br> Color 1 <br> Color 2 <br> Color 3 <br> Color 4 <br> Color 5 <br> Color 6 |


|  | $\begin{aligned} & 171-185 \\ & 186-211 \\ & 212-217 \\ & 218-243 \\ & 244-247 \\ & 248-251 \\ & 252-255 \end{aligned}$ | Open <br> CW Rotation, fast $\rightarrow$ slow <br> Stop <br> CCW Rotation, slow $\rightarrow$ fast <br> Random color: Fast <br> Random color: Medium <br> Random color: Slow |
| :---: | :---: | :---: |
| 9 | $\begin{aligned} & 000-009 \\ & 010-014 \\ & 015-019 \\ & 020-024 \\ & 025-029 \\ & 030-034 \\ & 035-309 \\ & 040-044 \\ & 045-049 \\ & 050-054 \\ & 055-059 \\ & 060-089 \\ & 090-119 \\ & 120-149 \\ & 150-179 \\ & 180-209 \\ & 210-232 \\ & 233-255 \end{aligned}$ | GOBO WHEEL 1: <br> Open <br> Gobo 1-1 <br> Gobo 1-2 <br> Gobo 1-3 <br> Gobo 1-4 <br> Gobo 1-5 <br> Gobo 1-1 Rotation <br> Gobo 1-2 Rotation <br> Gobo 1-3 Rotation <br> Gobo 1-4 Rotation <br> Gobo 1-5 Rotation <br> Gobo 1-1 shake: slow $\rightarrow$ fast <br> Gobo 1-2 shake: slow $\rightarrow$ fast <br> Gobo 1-3 shake: slow $\rightarrow$ fast <br> Gobo 1-4 shake: slow $\rightarrow$ fast <br> Gobo 1-5 shake: slow $\rightarrow$ fast <br> Gobo wheel CW Rotation, fast $\rightarrow$ slow <br> Gobo wheel CCW Rotation, slow $\rightarrow$ fast |
| 10 | $\begin{gathered} 000-002 \\ 003-125 \\ 126-128 \\ 129-252 \\ 253-255 \\ \hline \end{gathered}$ | GOBO WHEEL 1 ROTATION: <br> Index to $0^{\circ}$ <br> CW Rotation: fast $\rightarrow$ slow <br> No Rotation <br> CCW Rotation: slow $\rightarrow$ fast <br> Index to $90^{\circ}$ |
| 11 | 0-255 | GOBO WHEEL 1 ROTATION FINE: |
| 12 | $\begin{gathered} 000-009 \\ 010-019 \\ 020-124 \\ 125-132 \\ 133-236 \\ 237-255 \\ \hline \end{gathered}$ | Animation: <br> Off <br> Open <br> CW Rotation: fast $\rightarrow$ slow <br> Stop <br> CCW Rotation: slow $\rightarrow$ fast <br> Open |
| 13 | 000-255 | Framing: $0 \% \rightarrow 100 \%$ |
| 14 | 000-255 | $\begin{aligned} & \hline \text { Blade - UP1 } \\ & 100 \% \rightarrow 0 \% \end{aligned}$ |
| 15 |  | Blade - UP2 |


|  | 000-255 | 100\% $\rightarrow$ 0\% |
| :---: | :---: | :---: |
| 16 | 000-255 | $\begin{aligned} & \hline \text { Blade - DW1 } \\ & 100 \% \rightarrow 0 \% \end{aligned}$ |
| 17 | 000-255 | $\begin{aligned} & \hline \text { Blade - DW2 } \\ & 100 \% \rightarrow 0 \% \end{aligned}$ |
| 18 | 000-255 | $\begin{aligned} & \text { Blade - LF1 } \\ & 100 \% \rightarrow 0 \% \end{aligned}$ |
| 19 | 000-255 | $\begin{aligned} & \text { Blade - LF2 } \\ & 100 \% \rightarrow 0 \% \end{aligned}$ |
| 20 | 000-255 | $\begin{aligned} & \hline \text { Blade - RG1 } \\ & 10 \mathrm{n} \% \rightarrow 0 \% \end{aligned}$ |
| 21 | 000-255 | $\begin{aligned} & \text { Blade - RG2 } \\ & 100 \% \rightarrow 0 \% \end{aligned}$ |
| 22 | 000-255 | FROST: $0 \% \rightarrow 100 \%$ |
| 23 | $\begin{aligned} & 000-010 \\ & 011-138 \\ & 139-552 \end{aligned}$ | PRISM: <br> Closed <br> Prism Indexing <br> Prism Rotation |
| 24 | $\begin{aligned} & 000-002 \\ & 003-126 \\ & 127-129 \\ & 130-253 \\ & 254-255 \end{aligned}$ | R-PRISM: <br> Stay at $0^{\circ}$ position <br> CW Rotation, fast $\rightarrow$ slow <br> Stop <br> CCW Rotation, slow $\rightarrow$ fast <br> Stay at $45^{\circ}$ position |
| 25 | 000-255 | $\begin{aligned} & \text { IRIS: } \\ & 100 \% \rightarrow 0 \% \end{aligned}$ |
| 26 | 000-255 | ZOOM: <br> Wide $\rightarrow$ narrow |
| 27 | 000-255 | ZOOM FINE |
| 28 | 000-255 | FOCUS: <br> Far $\rightarrow$ near |
| 29 | 000-255 | FOCUS FINE |
| 30 | 000-255 | PAN: $0^{\circ} \rightarrow 540^{\circ}$ |
| 31 | 000-255 | PAN FINE |
| 32 | 000-255 | TILT: $0^{\circ} \rightarrow 270^{\circ}$ |
| 33 | 000-255 | TILT FINE |
| 34 | 000-009 | SPECIAL FUNCTIONS: <br> No function |


|  | $010-014$ | Reset all |
| :---: | :---: | :--- |
| $015-029$ | Reset effect |  |
| $030-034$ | Reset Pan/Tilt |  |
|  | 035 | Fan Speed Quiet |
| $036-037$ | Fan Speed Auto |  |
|  | $038-039$ | Fan Speed Fast |
| $040-044$ | Lamp on |  |
| $045-049$ | Lamp Off |  |
| $050-059$ | No Function |  |
| $060-064$ | Dimmer curve: line |  |
|  | $064-069$ | Dimmer curve: square law |
| $070-074$ | Dimmer curve: inverse square law |  |
|  | $075-079$ | Dimmer curve: s curve |
| $080-084$ | Pan/Tilt Speed: fast |  |
|  | $085-089$ | Pan/Tilt Speed: medium |
| $090-104$ | Pan/Tilt Speed: slow |  |
|  | $105-109$ | Focus Compensate disable |
| $110-114$ | Focus Compensate near |  |
| $115-119$ | Focus Compensate medium |  |
|  | $120-124$ | Focus Compensate far |
| $125-126$ | Lamp Full Power |  |
|  | $127-134$ | Lamp Half Power |
|  | $135-255$ | No function |
|  |  |  |

40 Channels (Mode 2):

| CHANNEL | VALUE | FUNCTION |
| :---: | :---: | :--- |
| 1 | $000-019$ <br> $020-049$ <br> $050-200$ <br> $201-210$ <br> $211-255$ | STROBE: <br> Shutter closed, lamp switches to low power <br> Shutter Open <br> Strobe, slow $\rightarrow$ fast <br> Shutter Open <br> Random strobe, slow $\rightarrow$ fast |
| 2 | $000-255$ | DIMMER <br> $0 \% \rightarrow 100 \%$ |
| 3 | $000-255$ | DIMMER FINE |
| 4 | $000-255$ | CYAN: <br> $0 \% \rightarrow 100 \%$ |
| 5 | $000-255$ | MAGENTA: <br> $0 \% \rightarrow 100 \%$ |
| 6 | $000-255$ | YELLOW: <br> $0 \% \rightarrow 100 \%$ |


| 7 | 000-255 | CTO: $6000 \mathrm{~K} \rightarrow 3200 \mathrm{~K}$ |
| :---: | :---: | :---: |
| 8 | $\begin{gathered} 000 \\ 001-014 \\ 015 \\ 016-029 \\ 030 \\ 031-044 \\ 045 \\ 046-059 \\ 060 \\ 061-074 \\ 075 \\ 076-089 \\ 090 \\ 091-104 \\ 105-140 \\ 141-145 \\ 146-150 \\ 151-155 \\ 156-160 \\ 161-165 \\ 166-170 \\ 171-185 \\ 186-211 \\ 212-217 \\ 218-243 \\ 244-247 \\ 248-251 \\ 252-255 \\ \hline \end{gathered}$ | COLOR WHEEL: <br> Open <br> Open $\rightarrow$ Color 1 <br> Color 1 <br> Color 1 + Color 2 <br> Color 2 <br> Color $2+$ Color 3 <br> Color 3 <br> Color 3 + Color 4 <br> Color 4 <br> Color 4 + Color 5 <br> Color 5 <br> Color 5 + Color 6 <br> Color 6 <br> Color $6 \rightarrow$ Open <br> Open <br> Color 1 <br> Color 2 <br> Color 3 <br> Color 4 <br> Color 5 <br> Color 6 <br> Open <br> CW Rotation, fast $\rightarrow$ slow <br> Stop <br> CCW Rotation, slow $\rightarrow$ fast <br> Random color: Fast <br> Random color: Medium <br> Random color: Slow |
| 9 | $\begin{aligned} & 000-009 \\ & 010-014 \\ & 015-019 \\ & 020-024 \\ & 025-029 \\ & 030-034 \\ & 035-309 \\ & 040-044 \\ & 045-049 \\ & 050-054 \\ & 055-059 \\ & 060-089 \\ & 090-119 \\ & 120-149 \\ & 150-179 \\ & \hline \end{aligned}$ | GOBO WHEEL 1: <br> Open <br> Gobo 1-1 <br> Gobo 1-2 <br> Gobo 1-3 <br> Gobo 1-4 <br> Gobo 1-5 <br> Gobo 1-1 Rotation <br> Gobo 1-2 Rotation <br> Gobo 1-3 Rotation <br> Gobo 1-4 Rotation <br> Gobo 1-5 Rotation <br> Gobo 1-1 shake: slow $\rightarrow$ fast <br> Gobo 1-2 shake: slow $\rightarrow$ fast <br> Gobo 1-3 shake: slow $\rightarrow$ fast <br> Gobo 1-4 shake: slow $\rightarrow$ fast |

$\left.\begin{array}{|c|c|l|}\hline & \begin{array}{l}180-209 \\ 210-232 \\ 233-255\end{array} & \begin{array}{l}\text { Gobo 1-5 shake: slow } \rightarrow \text { fast } \\ \text { Gobo wheel CW Rotation, fast } \rightarrow \text { slow } \\ \text { Gobo wheel CCW Rotation, slow } \rightarrow \text { fast }\end{array} \\ \hline 10 & \begin{array}{l}000-002 \\ 003-125 \\ 126-128 \\ 129-252 \\ 253-255\end{array} & \begin{array}{l}\text { GOBO WHEEL 1 ROTATION: } \\ \text { Index to 0 }\end{array} \\ \text { CW Rotation: fast } \rightarrow \text { slow } \\ \text { No Rotation } \\ \text { CCW Rotation: slow } \rightarrow \text { fast } \\ \text { Index to 90 }\end{array}\right\}$

| 25 | $\begin{aligned} & 000-002 \\ & 003-126 \\ & 127-129 \\ & 130-253 \\ & 254-255 \\ & \hline \end{aligned}$ | R-PRISM: <br> Stay at $0^{\circ}$ position <br> CW Rotation, fast $\rightarrow$ slow <br> Stop <br> CCW Rotation, slow $\rightarrow$ fast <br> Stay at $45^{\circ}$ position |
| :---: | :---: | :---: |
| 26 | 000-255 | $\begin{aligned} & \hline \text { IRIS: } \\ & \text { 100\% } \rightarrow 0 \% \end{aligned}$ |
| 27 | 000-255 | ZOOM: <br> Wide $\rightarrow$ narrow |
| 28 | 000-255 | ZOOM FINE |
| 29 | 000-255 | FOCUS: <br> Far $\rightarrow$ near |
| 30 | 000-255 | FOCUS FINE |
| 31 | 000-255 | PAN: $0^{\circ} \rightarrow 540^{\circ}$ |
| 32 | 000-255 | PAN FINE |
| 33 | 000-255 | TILT: $0^{\circ} \rightarrow 270^{\circ}$ |
| 34 | 000-255 | TILT FINE |
| 35 | $\begin{gathered} 000-009 \\ 010-014 \\ 015-029 \\ 030-034 \\ 035 \\ 036-037 \\ 038-039 \\ 040-044 \\ 045-049 \\ 050-059 \\ 060-064 \\ 064-069 \\ 070-074 \\ 075-079 \\ 080-084 \\ 085-089 \\ 090-104 \\ 105-109 \\ 110-114 \\ 115-119 \\ 120-124 \\ 125-126 \\ \hline \end{gathered}$ | SPECIAL FUNCTIONS: <br> No function <br> Reset all <br> Reset effect <br> Reset Pan/Tilt <br> Fan Speed Quiet <br> Fan Speed Auto <br> Fan Speed Fast <br> Lamp on <br> Lamp Off <br> No Function <br> Dimmer curve: line <br> Dimmer curve: square law <br> Dimmer curve: inverse square law <br> Dimmer curve: s curve <br> Pan/Tilt Speed: fast <br> Pan/Tilt Speed: medium <br> Pan/Tilt Speed: slow <br> Focus Compensate disable <br> Focus Compensate near <br> Focus Compensate medium <br> Focus Compensate far <br> Lamp Full Power |


|  | $127-134$ <br> $135-255$ | Lamp Half Power <br> No function |
| :--- | :--- | :--- |
| $36^{\sim} 40$ |  | Reserved |

## 7. Troubleshooting

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:
A. The unit does not work, no light and the fan does not work

1. Check the connect power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED to see if it can be light up or not.

## B. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors, cables to see if they are linked properly.
2. If the DMX LED is on and no response to the channel, check the address settings and $D M X$ polarity.
3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the unit or the previous one.
4. Try to use another DMX controller.
5. Check to see if the DMX cables run near or run alongside high voltage cables that may cause damage or interference to DMX interface circuit.

## C. One of the channels is not working well

1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motor's drive IC on the PCB might be out of condition.

## D. The lamp is cutting out intermittently

1. The lamp is not working well. Check the mains voltage either too high or too low.
2. Internal temperature may be too high. Check if replacement of fan is needed on the head.

## E. If The pan belt is broken

1. Turn off the mains power.
2. Loosen all the screws $(A B)$, open the cover $(C)$.
3. Loosen the screws (D).
4. Unplug all the connect wires over the belt.
5. Change a new belt (E), put the belt around the axis gear and motor gear.
6. Plug all the connect wires back upon the belt.
7. Tighten all the screws.


## F. If The tilt belt is broken

1. Turn off the mains power.
2. Loosen all the screws (AB).
3. Loosen the screws $(\mathrm{C})$ that fix the bridge.
4. Change a new belt (D). Please adjust the tension of the belt properly. Note: do not fix the belt too tight as it is can easily rupture.

5. Reverse the procedures from step 3 to 2 .

## 8. Maintenance and Cleaning

## Check:


A.Do check the fixtures every two months and make sure that all the screws and terminals have
been locked firmly to make sure the normal performance of the fixtures. Negligence of check would cause malfunction of the fixture.
B. As the pictures shown above, please replace the cable or cable joints immediately once they've aged and turned easy to break.

## Cleaning:

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics.

- Clean with soft cloth and use normal glass to clean liquid.
- Always dry the parts carefully.
- Clean the external optics at least every 20 days. Clean the internal optics at least every 30/60 days.


## Maintenance Schedule:

To make sure that the fixture is running well and has less failures and higher performance, longer life time, safer running, the fixture should be checked and maintained periodically. Below chart is for your reference.

|  | Part Description | 750hrs | 1500hrs | 2250hrs | 3000hrs |
| :---: | :---: | :---: | :---: | :---: | :---: |
| FIXTURE HEAD | Lamp | R/A | R/A | R/A | R/A |
|  | Radiator | C | C | C | C |
|  | Color wheel module | C | C | C | C |
|  | Lens | C | C | C | C |
|  | Optical module | C | C | C | C |
|  | Zoom focus module | C/L | C/L | C/L | C/L |
| BASE | Radiator | C | C | C | C |
|  | Tilt belt | A | A | A | A |
|  | Pan belt | A | A | A | A |


| Code |  |
| :---: | :---: |
| R | Replace |
| C | Clean |
| L | Lubricate |
| A | Adjust |
|  |  |

## Declaration of Conformity

We declare that our products (lighting equipments) comply with the following specification and bears CE mark in accordance with the provision of the Electromagnetic Compatibility (EMC) Directive 89/336/EEC.

EN55103-1: 2009 ; EN55103-2: 2009; EN62471: 2008; EN61000-3-2: 2006 + A1:2009 + A2:2009; EN61000-3-3: 2008.
\&
Harmonized Standard
EN 60598-1:2008 + All:2009; EN 60598-2-17:1989 + A2:1991;
EN 62471:2008; EN 62493: 2010
Safety of household and similar electrical appliances
Part 1: General requirements

