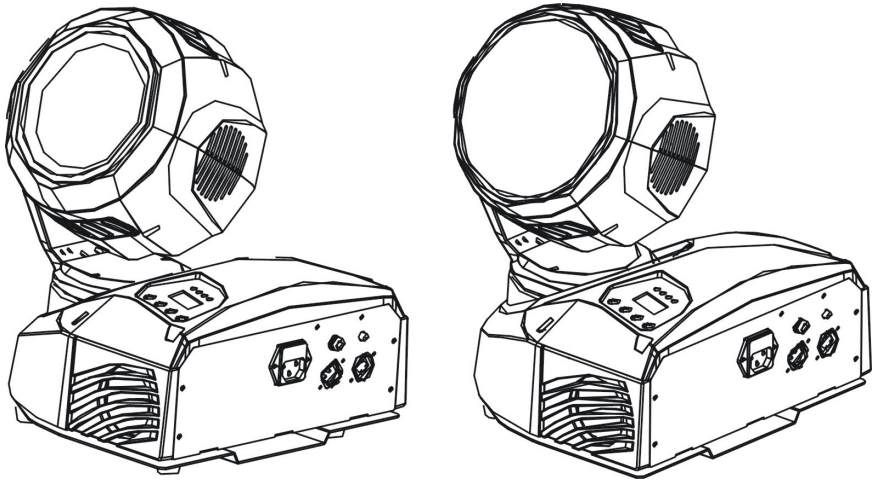
CM-18 CM-36



User Guide

Professional Entertainment Technology

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1. Safety Instruction

WARNING

Please read carefully the instruction, which includes important information about the installation, usage and maintenance.

- Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.
- Unpack and check carefully there is no transportation damage before using the unit.
- Before operating, ensure that the voltage and frequency of power supply match the power requirements of the unit.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- The unit is for indoor use only. Use only in a dry location.
- The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces. Be sure that no ventilation slots are blocked.
- Disconnect main power before replacement or servicing.
- Make sure there is no flammable materials close to the unit while operating as it is fire hazard.
- Use safety cable when fixes this unit. Don't handle the unit by taking its head only, but always by taking its base.
- Maximum ambient temperature is TA: 40℃. Don't operate it where the temperature is higher than this.
- Unit surface temperature may reach up to 85℃. Don't touch the housing bare-hand during its operation. Turn off the power and allow about 15 minutes for the unit to cool down before replacing or serving.
- In the event of serious operating problem, stop using the unit immediately. 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. Always use the same type spare parts.
- Do not touch any wire during operation as high voltage might be causing electric shock.

Warning

- To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture.
- Do not open the unit within five minutes after switching off.
- The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.

Caution

There are no user serviceable parts inside the unit. Do not open the housing or attempt any repairs yourself. In the unlikely event your unit may require service, please contact your nearest dealer.

Installation

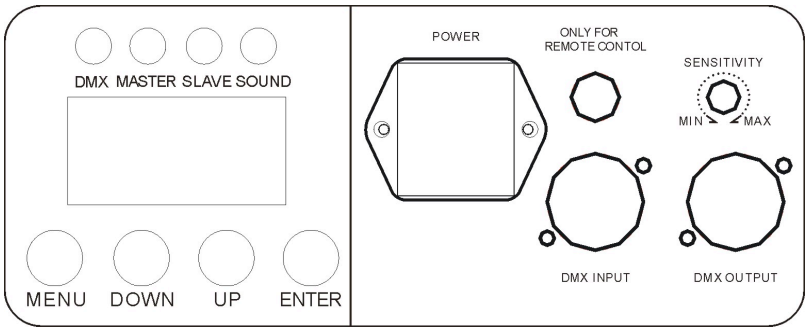
The unit should be mounted via its screw holes on the bracket. Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. Always ensure that the structure to which you are attaching the unit is secure and is able to support a weight of 20 kg for each unit.

2. Technical Specification

- Voltage：AC 100V/120V/230V 50/60Hz
- The unit is DMX 512 fixture. It features full DMX 512 control. It can be also linked together in master/slave connection, as many as required and run by built-in program chase sequences automatically or by sound activation through an internal microphone to create an intelligent effect.
- It can be operated by DMX 512 control or can be used as an individual unit without a controller.
- Features different preprogrammed chase patterns.
- Please use a cable when connecting units together.
- Accurate focusable optics system and ultra smooth stepping motors, Fan cooled.
- Pan: 540 deg. Tilt: 220 deg.
- Dimension: 266 x 276 x 302 mm
- Weight: 9 kg

3. How To Set The Unit

3.1 Control Panel



Display

To show the various menus and the selected functions

LED

DMX	On	DMX input present
MASTER	On	Master Mode
SLAVE	On	Slave Mode
SOUND	Flashing	Sound activation

Button

MENU	To select the programming functions
DOWN	To go backward in the selected functions
UP	To go forward in the selected functions
ENTER	To confirm the selected functions

Mains input

IEC socket and integrated fuse holder, connect to main power cable.

Only for remote control

By connect to the 1/4'' microphone jack to control the unit for Stand by, Function and Mode function.

Sensitivity

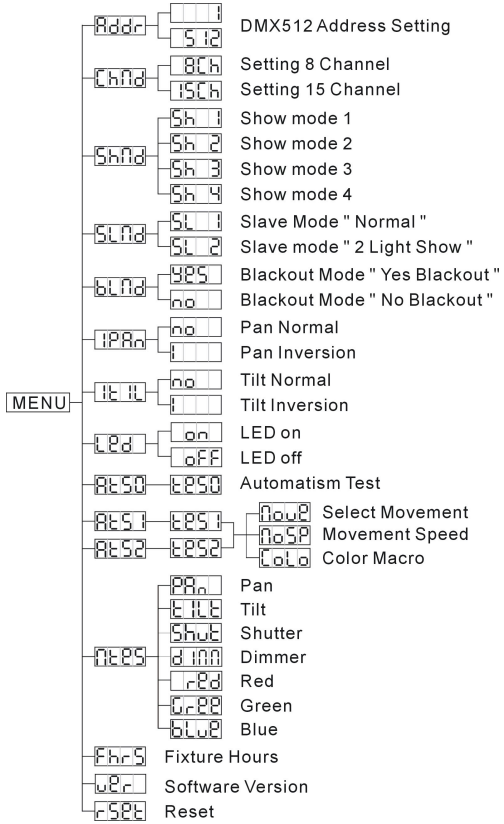
To adjust the sound receiving sensitivity

DMX input/output

For DMX512 link, use 3-pin XLR plug cable to link the unit together.

3.2 Main Function

To select any of the given functions, press the **MENU** button up to when the required one is showing on the display. Select the function by **ENTER** button and the display will blink. Use **DOWN** and **UP** button to change the mode. Once the required mode has been selected, press the **ENTER** button to setup or it will automatically return to the main functions without any change after idling 8 seconds. To go back to the functions without any change press the **MENU** button. The main functions are showing below:



DMX 512 Address Setting

Press the **MENU** button up to when the 

is showing on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to change the DMX512 address. Once the address has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 8 seconds. To go back to the functions without any change press the **MENU** button again.

ChAd Channel Mode

Press the **MENU** button up to when the ChAd is shown on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to select the (8 Channel) or (15 Channel) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 8 seconds. To go back to the functions without any change press the **MENU** button again.

ShAd Show Mode

Press the **MENU** button up to when the ShAd is showing on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to select the Sh 1 (show 1) or Sh 2 (show 2) or Sh 3 (show 3) or Sh 4 (show 4) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 8 seconds. To go back to the functions without any change press the **MENU** button again.

Sh 1 Show 1 mode - Fixture is placed on the floor. Tilt movement angle 210°.

Sh 2 Show 2 mode - Fixture is fixed under ceiling. Tilt movement angle 90°.

Sh 3 Show 3 mode - Fixture is placed on the speaker, The spot is always projecting to the audience's direction; i.e in front of the stage. Pan movement angel (left to right to left): 160°. Tilt movement angel: 90° (60° above horizon; 30° below horizon.)

Sh 4 Show 4 mode - Fixture is fixed under ceiling. The spot is mainly projecting in front of the stage. Pan movement angel (left to right to left):160°. Tilt movement angel: 90° (vertically, front 75°; back 15°)

SLAd Slave Mode

Press the **MENU** button up to when the SLAd is showing on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to select the SL 1 (normal) or SL 2 (2 light show) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 8 seconds. To go back to the functions without any change press the **MENU** button again.

bLAd Blackout Mode

Press the **MENU** button up to when the bLAd is showing on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to select the YES (yes blackout) or no (no blackout) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 8 seconds. To go back to the functions without any change press the **MENU** button again.

IPAn Pan Inversion

Press the **MENU** button up to when the IPAn is showing on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to select the no (normal) or I (pan inversion) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 8 seconds. To go back to the functions without any change press the **MENU** button again.

ItLt Tilt Inversion

Press the **MENU** button up to when the ItLt is showing on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to select the no (normal) or I (tilt inversion) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 8 seconds. To go back to the functions without any change press the **MENU** button again.

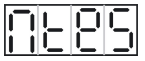
LEd Led Display

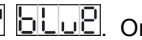
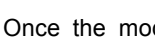
Press the **MENU** button up to when the LEd is showing on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to select the on (Led on) or oFF (Led off) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 8 seconds. To go back to the functions without any change press the **MENU** button again.

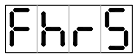
AtS0 AtS1 bF25 Test

Press **MENU** button up to when the AtS0 AtS1 bF25 is show on the display. Pressing **ENTER** button and the unit will run Self test by built in program and can test by

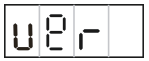
program. Back to the functions press **MENU** button again.

 Master Mode

Press the **MENU** button up to when the  is showing on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to select the        . Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 8 seconds. To go back to the functions without any change press the **MENU** button again.

 Fixture Hours

Press the **MENU** button up to when the  is blinking on the display. Pressing **ENTER** button and the display will show the number of working hours of the unit. To go back to the functions press the **MENU** button again.

 Software version

Press the **MENU** button up to when the  is blinking on the display. Pressing **ENTER** button and the display will show the version of software of the unit. To go back to the functions press the **MENU** button again.

 Reset

Press the **MENU** button up to when the  is blinking on the display. Pressing **ENTER** button and all channels of the unit will return to their standard position. To go back to the functions without any change press the **MENU** button again.

3.3 Home Position Adjust

Press **Enter** button for at least 5 seconds into offset mode to adjust the home position, use **DOWN** and **UP** button up to when the function (Focus, Pan, Tilt, B-red, B-green, B-blue) is shown on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to adjust the home position. Once the position has been selected, press the **ENTER** button to setup or automatically return to the offset functions without any change press the **MENU** button again, To go back to the main functions without any change after 8 seconds.

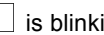
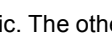
4. How To Control The Unit

You can operate the unit in three ways:

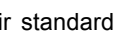
1. By master/slave built-in preprogram function
2. By easy controller
3. By iLead controller (Please refer to the user guide of iLead) or universal DMX controller

No need to turn the unit off when you change the DMX address, as new DMX address setting will be effected at once. Every time you turn the unit on, it will show  on the display and move all the motors to their 'home' position and you may hear some noises for about 20 seconds. After that the unit will be ready to receive DMX signal or run the built in programs.

4.1 Master/Slave Built In Preprogrammed Function

By linking the units in master/slave connection, the first unit will control the other units to give an automatic, sound activated, synchronized light show. This function is good when you want an instant show. You have to set the first unit in master mode and select (show 1) or  (show 2) or  (show 3) or  (show 4) mode. Its DMX input jack will have nothing plugged into it, and Its master LED will be constantly on and sound LED will flash to the music. The other units will have to set in slave mode  and select (normal) or (2 light show) mode, Their DMX cables plugged into the DMX input jacks (daisy chain) and the slave led lights will constantly on.

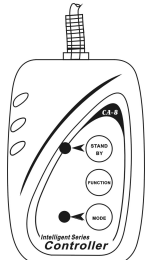
2-light show

In  (slave mode),  means the unit works normally and  means 2-light show. In order to create a great light show, you can set on the second unit to get contrast movement to each other, even if you have two units only.

4.2 Easy Controller

The easy remote control is used only in master/slave mode. By connecting to the 1/4" microphone jack of the first unit, you will find that the remote control on the first unit will control all the other units functions press the MENU button again.

Stand By	Blackout the unit		
Function	1. Sync. Strobe 2. Two-light strobe 3. Sound Strobe	Select Show 1-4	Select Gobo/Color



Mode	Sound (LED OFF)	Show (LED Strobe)	LED ON

4.3 iLead Controller

- ♦ Consistent DMX configuration enable iMove to be linked together with iRock and iShow and controlled at the same time.
- ♦ DMX address can be set remotely by iLead controller (Please refer to the user manual of iLead controller). No need to calculate the DMX channels of each fixture in the chain.
- ♦ Automatic switching between DMX function and built-in stand alone programs.

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

Press the **MENU** button up to when the Addr is showing on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to change the DMX512 address. Once the address has been selected, press and keep **ENTER** button pressed up to when the display stops blinking or storing automatically 8 seconds later. To go back to the functions without any change press the **MENU** button again. If you use please refer to the following diagram to address your DMX512 channel for the first 4 units.

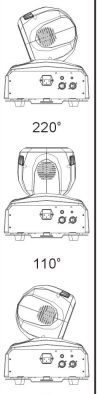
DMX address can be setting remotely by IL-0824 controller. No need to calculate the DMX channels of each fixture in the chain.

4.4 DMX 512 Configuration

8 Channels DMX-512 Configuration

Ch1	Ch2	Ch3	Ch4	Ch5	Ch6	Ch7	Ch8
Pan	Tilt	Strobe	Red	Green	Blue	Dimmer	Special Function
540°	220°	248-255 No Function 240-247 Strobe 232-239 No Function 190-231 Fast Open / Slow Close 182-189 No Function 140-181 Slow Open / Fast Close 132-139 No Function 16-131 Slow strobe / Fast strobe 0-15 No Function	255 100% 0 0%	255 100% 0 0%	255 100% 0 0%	255 100% 0 0%	240-255 Stand alone 200-209 Reset 80-89 Disable blackout while pan or tilt move 70-79 Enable blackout while pan or tilt move
270°	110°						
0°	0°						

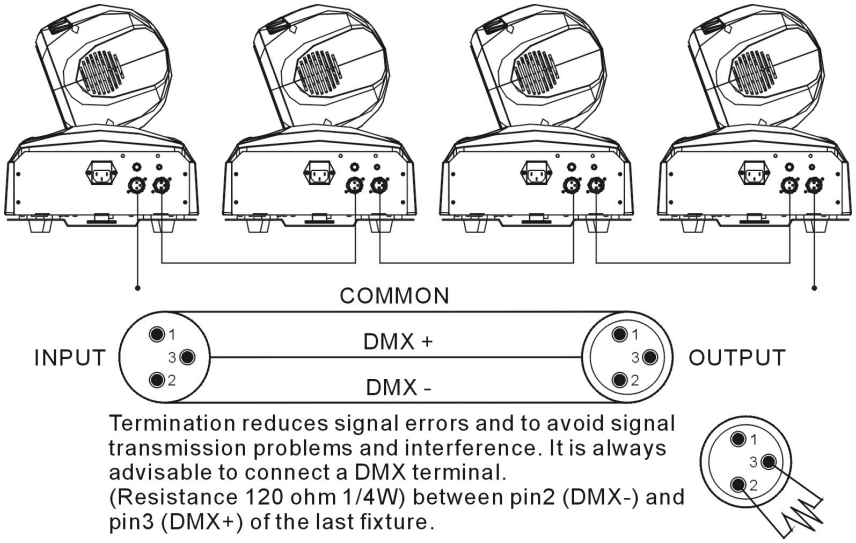
15 Channels DMX-512 Configuration

Ch1	Ch2	Ch3	Ch4	Ch5	Ch6	Ch7	Ch8
Pan	Pan movement fine	Tilt	Tilt movement fine	Pan/Tilt Speed	Pan/Tilt movement macro	Movement Speed	Special Function
 540° 270° 0°	255 16 BIT PAN 0 OFF	 220° 110° 0°	255 16 BIT TILT 0	255 Slow 0 Fast	236-255 Macro 12 216-235 Macro 11 196-215 Macro 10 176-195 Macro 9 156-175 Macro 8 136-155 Macro 7 116-135 Macro 6 096-115 Macro 5 076-095 Macro 4 056-075 Macro 3 036-055 Macro 2 016-035 Macro 1 0-15 No function	255 Slow 0 Fast	240-255 Stand alone 200-209 Reset 80-89 Disable blackout while pan or tilt move 70-79 Enable blackout while pan or tilt move

Ch9	Ch10	Ch11	Ch12	Ch13	Ch14	Ch15
Dimmer	Strobe	Red	Green	Blue	Color/Chase/fade	Chase/Fade Speed
255 100% 0% 0	248-255 No Function 240-247 Strobe 232-239 No Function 190-231 Fast Open Slow Close 182-189 No Function 140-181 Slow Open Fast Close 132-139 No Function 16-131 Slow strobe ⇒ Fast strobe 0-15 No Function	255 100% 0% 0	255 100% 0% 0	255 100% 0% 0	255 Color Fade 16 192 Color Fade 1 191 Color Chase 16 128 Color Chase 1 127 Color 32 008 Color 1 0-7 No function	255 Fast 0 Slow

4.5 DMX512 Connection

The DMX 512 is widely used in intelligent lighting control, with a maximum of 512 channels.



Termination reduces signal errors and to avoid signal transmission problems and interference. It is always advisable to connect a DMX terminal.
(Resistance 120 ohm 1/4W) between pin2 (DMX-) and pin3 (DMX+) of the last fixture.

1. If you using a controller with 5 pins DMX output, you need to use a 5 to 3 pin adapter-cable.
2. At last unit, the DMX cable has to be terminated with a terminator. Solder a 120 ohm 1/4W 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.
3. Connect the unit together in a `daisy chain` by XLR plug from the output of the unit to the input of the next unit. The cable can not branched or split to a `Y` 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.
4. The DMX output and input connectors are pass-through to maintain the DMX circuit, when power is disconnected to the unit.
5. Each lighting unit needs to have an address set to receive the data sent by the controller. The address number is between 0-511 (usually 0 & 1 are equal to 1).
6. The end of the DMX 512 system should be terminated to reduce signal errors.
7. 3 pin XLR connectors are more popular than 5 pin 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 (+)

5. 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 connection of power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED.

B. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors, cables to see if link properly.
2. If the DMX LED is on and no response to the channel, check the address settings and DMX 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 if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

C. Some units don't respond to the easy controller

1. You may have a break in the DMX cabling. Check the LED for the response of the master/ slave mode signal.
2. Wrong DMX address in the unit. Set the proper address.

D. No response to the sound

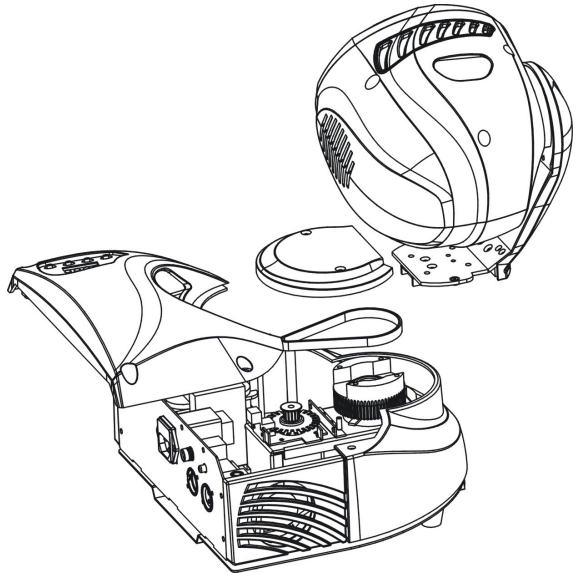
1. Make sure the unit does not receive DMX signal.
2. Check microphone to see if it is good by tapping the microphone

E. 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.

F. If The pan belt is broken

1. Turn off the main power.
2. Unscrew all the screws and open the base-housing cove.
3. Unplug all the connect wires that from the arm to PC board and ignitor.
4. Unscrew the screws that fix the axis gear.
5. Change a new belt by going through all connect wires that from the arm to base, and through the bridge for correct position.
6. Set up the gear axis to the bridge and screwed it. Note: do not press the belt.
7. Put the belt around the axis gear and motor gear.
8. Plug all the connect wires that form the arm to PC board and ignitor.
9. Adjust the pan home position.
10. Screw the base-housing cover.



6. Fixture 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 using normal glass cleaning fluid.
- Always dry the parts carefully.
- Clean the external optics at least every 20 days. Clean the internal optics at least every 30/60 days.

EC 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.

EN55014-2: 1997 A1: 2001, EN61000-4-2: 1995; EN61000-4-3: 2002;
EN61000-4-4: 1995; EN61000-4-5: 1995, EN61000-4-6: 1996, EN61000-4-11: 1994.

&

Harmonized Standard

EN60598-1: 2000+ALL: 2000+A12: 2002
Safety of household and similar electrical appliances
Part 1: General requirements

Innovation, Quality, Performance