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MP 700 WASH



- **Code 02E013 - DVP - Electronic Ballast**
- **Code 02E012 - DV - Magnetic Ballast**

• **OPERATING INSTRUCTIONS**



Declaration of CE conformity

We Manufacturer **COEF srl.** Via Albinatico, 80-82 / 51019 Ponte Buggianese (Pistoia) **ITALY**
Declare that the product **MP700 WASH** is in conformity with **89/336 EEC-EMC** directive and
with the actual required safety standards in accordance with **LVD 73/23 EEC**

Ponte Buggianese, July 02 - 2002

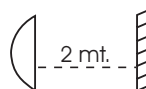
ATTENTION: carefully read the directions of this manual. Exclusively follow the safety rules in force and do not carry out assembly and/or maintenance operations without taking all precautions as indicated in the different sections or without the necessary specialization.

This manual must always accompany the equipment, therefore it must be available and readable at any moment if necessary. Also in case of sale, rent, change of place and/or ownership, these documents shall be enclosed with the relative equipment.

ADVICES FOR A CORRECT INSTALLATION

This equipment is destined to an exclusively Professional use.

- 1) Make sure that all the fastening parts of the spotlight are in good condition. Regulate the proportions of the fastening accessories (screws, bushes, nuts, supports, etc.) in order to be slightly over-dimensioned as compared to the actual requirements.
- 2) Carefully check the contents of the packaging and the completeness of the components. If any of the parts listed hereunder is missing, please contact your Dealer immediately.
- 3) Do not install the projector outside where the influence of atmospheric factors could damage the unit working (rain, wind, intense heat etc.) or indoor if there is a high percentage of humidity.
- 4) Do not clean the projector using water jets or immersion in different liquids. Scrupulously follow the indications given in the chapter MAINTENANCE.
- 5) Make the electric connections and the installation / replacement of the lamp after having disconnected the power supply and after having positioned the power switch to OFF. The apparatus is classified as belonging to Class 1 type of protection against electric shocks. Its connection to an earthed mains unit is compulsory. The equipment must be protected by an adequate magnetothermal switch. You are recommended to equip the system with aptly dimensioned differential switches.
- 6) Do not touch in any case the internal and external parts of the projector without previous authorization of the constructor and make modifications only by the intervention of qualified staff.
- 7) Make sure that the projector is correctly fixed on the support as indicated in par. 3.3
- 8) If the bulb explodes, the particular design of the apparatus prevents the splinters from going outside the projector. All the parts, therefore, shall be complete and perfectly assembled. The lenses, if visibly damaged, shall be replaced by original spare parts.
- 9) **Minimum distance from illuminated objects:** The projector must be positioned in such a way that objects struck by the light beam are located at least 2 metres from the projector objective.



- 10) **Minimum distance from inflammable materials:** 0.3 meters
- 11) **MAX ambient temperature:** 40° C.
- 12) **MAX external surface temperature:** 90° C.
- 13) Don't look directly at the lamp through the lens.
- 14) We recommend not to look at the lamp without wearing a proper protection; also ensure that the covers are assembled to the equipment.
- 15) Inside the equipment there are high temperatures and tension/current values which might be very dangerous. It is necessary to disconnect the equipment from the mains before removing its protection covers and wait for 30 minutes at least before touching any part inside.
- 16) Do not switch on the equipment if its lamp is not inserted.
- 17) Leave sockets and air outlets free from encumbrances and clean them periodically (see "Maintenance" section).
- 18) Do not leave the packaging elements (polystyrene, nylon, metal parts, etc.) unattended.

This manual has been organized in order support the user, the installer or the maintenance operator of the described unit with those necessary informations for a correct use of the installation and working procedures of the same unit. The various procedures will be just signalled by indicators (when necessary) evidencing the operation dangers and the necessity of technical support.

Please find here below a list of symbols and relative meaning:



OPERATOR : Not particularly qualified staff, that can operate when no specific knowledge is required



COEF OPERATOR: Technical staff, qualified and trained by the constructor, for repair and extraordinary operations.



MECHANICAL OPERATORS: Staff employed in the ordinary mechanical maintenance.



SPECIALIZED MECHANICAL OPERATOR: Qualified staff employed in extraordinary authorized installations and repair.



ELECTRIC OPERATORS: Staff employed in the ordinary electric maintenance.



SPECIALIZED ELECTRIC OPERATORS: Qualified staff employed in extraordinary authorized installations and repairs.



DANGER SIGNAL: Generic danger signal and electric shock danger signal.

GENERAL WARRANTY CONDITIONS

- The guarantee is valid for a period of 12 months from the date of purchase of the equipment.
- The guarantee is not valid in case a wrong voltage or frequency is selected.
- The parts which are proved to have manufacturing defects are also covered by the guarantee.
- The external parts of the equipment, its removable elements and lamps are excluded from the guarantee; for these parts we recommend to follow the directions supplied by their manufacturers.
- The guarantee is not valid in case of tampering or repairs carried out by non-authorized personnel.
- The replacement of the equipment during the validity of the guarantee is not provided for.
- The transport freights from and to the manufacturer for repairs under guarantee are at Customer's charge.
- When applying for the repair, always mention the serial number and the model of the equipment.

PACKING CONTENTS

Carefully check the contents of the packaging and the completeness of the components. If any of the parts listed hereunder is missing, please contact your Dealer immediately:

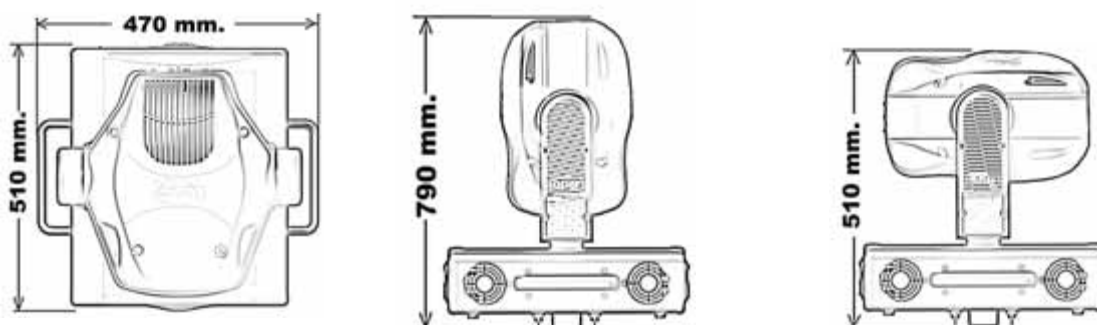
- **MP700 Wash** complet unit.
- This user manual.
- 2 quick lock/release (omega) brackets.
- 1 connector XLR 3 pin male.
- 1 connector XLR 3 pin female.
- 1 connector POWER.
- 1 safety-chain equipped with two snaps.

PROTECT NATURE.

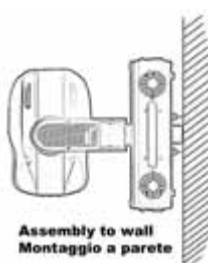
**DO NOT DISPOSE OF THE PACKAGING IN THE ENVIRONMENT.
CAREFULLY KEEP THE BOX AND THE COMPONENTS OF THE PACKAGING FOR ANY DISPLACEMENT
OR RE-SHIPMENT OF THE EQUIPMENT.**

Do not leave the packaging elements (polystyrene, nylon, metal parts, etc.) unattended.

1.0 DIMENSIONS & POSITIONING



It is possible to set up the MP700 Wash in any position.



2.0 TECHNICAL NOTES

MP700 Wash DV with Magnetic Ballast

Code: 02E012

MP700 Wash DVP with Electronic Ballast

Code: 02E013

- Lamp: MSR 700 SA 700W 54.000 lumen
- 16 bit movement resolution - PAN 540° / TILT 270° with automatic repositioning
- Silent movement
- Silent operating mode (only DVP)
- Dichroic glass reflector and pebble convex antialo lens
- CMY colour mixing system
- RGB basic colour system
- 3200° and 5600° K conversion filters
- Linear dimmer from 0 to 100%
- Adjustable strobe
- Rainbow effect adjustable in speed
- Black light filter
- Linear frost effect from 12° to 28°
- Rotating and indexable beam shaping
- Mechanic shutter
- Multifunction display
- Internal power factor correction
- DMX 512 standard
- Remote On/Off lamp via DMX
- Remote reset via DMX
- Software upgrade via DMX (with UNI-PROG 8 Accessory)
- Automatic ventilation adjustment with internal temperature survey
- Lamp lighted sensor
- Over temperature protection
- Automatic fault survey
- 16 control channels
- **Weight: 37,5 Kg (with electronic Ballast 28,5 Kg.)**

Power supply | Absorbed power

V~	Hz	Ballast type	I	W
100	60	Electronic	10 A	1000
120	60	Electronic	8,1 A	970
208	50/60	Electronic	4,5 A	940
208	60	Magnetic	4,2 A	840
230	50/60	Electronic	4,1 A	940
230	50	Magnetic	4,1 A	870
230	60	Magnetic	4 A	840
250	50/60	Electronic	3,7 A	920

3.0 INSTALLATION

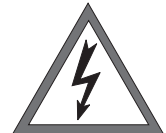
The constructor is not be considered responsible in case of:

- Improper use of the unit or use by not trained staff
- Use in contrast with the directions on work safety
- Wrong installation
- Defective power supply
- Serious lacks in the necessary maintenance
- Unauthorized modifications and interventions
- Use of spare parts that are not original or not specific for the unit
- Total or partial inobservance of instructions
- Unusual events

3.1 LAMP MOUNTING OR REPLACING



WARNING: read carefully



- Switch off the projector before operating.
- The lamp used in the fixture is a high pressure lamp and must be handled very carefully.
- The unit is realized to use only MSR700 lamp; absolutely don't use other types of lamp.
- The lamp must be changed if damaged or deformed by heat.
- Wait at least 15 minutes after the projector has been switched off before operating again, in order to let it cool down and avoid the lamp explosion.
- Wear protection gloves and glasses.
- Read carefully the lamp builder's instructions.
- Don't look directly the lamp.



Wait 30 minutes in order to avoid burns.

Unscrew with a cross screwdriver the first screw A for a single turn; unscrew the second one completely B; unscrew completely the screw A and to remove the cover that supports the lampholder.

Insert delicately the lamp in the projector support, driving it with the round cover.

Pay attention: the lampholder's wires must correctly reenter in the projector. Block the cover screwing the screws up (part. A-B).

3.2 OPERATING VOLTAGE

WARNING : unplug the fixture from the power supply before operating . The operation must be performed only by highly specialized staff.

WARNING : The wrong selections of the operating tension and/or frequency compromise the good operation of the fixture and will immediately invalid the COEF warranty.

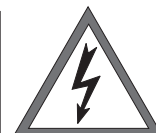
3.3 Settings for magnetic ballast Cod. 02E012



A

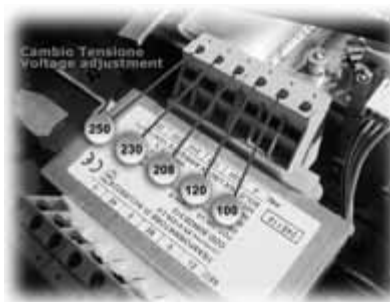


B



The fixture can work at the following tensions : 230 V~50 / 60 Hz and 208 V~60 Hz (optional on request) . Please be careful to connect the cable to the right terminal that is relevant to the desired tension and frequency; both on the ballast and on the transformer located in the **MP700 Wash** base. Please carefully follow the indications shown in the pictures **A** and **B**.

3.4 Settings for electronic ballast Cod. 02E013



The fixture can work at the following tensions : 100V ~ 60 Hz, 120V ~ 60 Hz, 208 V ~50/ 60 Hz, 230 V ~50 / 60 Hz, 250 V ~50 / 60 Hz.

You can modify the settings following the needs of the country where the fixture is installed. This operation is easily done by moving the cable to the right terminal of the electronic board transformer that is located in the base of the fixture. The ballast (electronic) does not need any adjustment.

We recommend you to update the serigraphy table at the new value.



VAC	Hz	BALLAST
100	60	C.B. 1.0
120	60	C.B. 1.1
210	50/60	C.B. 1.2
210	50	M.B. 1.3
210	60	M.B. 1.4
230	50/60	C.B. 1.5
230	50	M.B. 1.6
230	60	M.B. 1.7

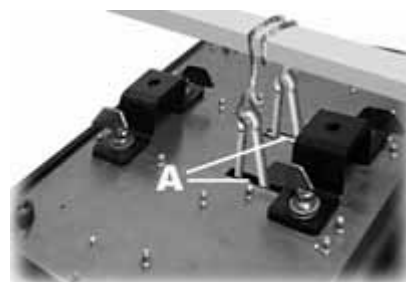
3.5 PROJECTOR INSTALLATION

To fix the **MP700 Wash** is necessary, when the installation has to be on a raised-from-the ground support, to block the quick lock/release brackets of the unit by means of a screw provided with nut and locknut measuring not less than **M10X50**, to insert in the central pre-arranged hole on the fixing bracket.

In addition to the provided quick lock/release (omega) brackets, in order to guarantee a necessary security and in respect of the actual safety rules concerning the projectors' installation, it is compulsory to install a safety-chain, equipped with two snaps, provided with the projector, to connect the **MP700 Wash**'s body to the fixing structure.

ATTENTION: the safety chain, equipped with two snaps which can be hooked to the two pivots placed under the base of the **MP700 Wash**, (see part. **A**), must be properly installed and fixed to the supporting structure, in a way that an incidental given in of the main bracket would lead to the shortest possible fall of the projector. **After such an intervention the safety-chain must be replaced with another original part.**

ATTENTION: COEF is not responsible for installations not correctly made or made without respecting the above indications: those installations are considered dangerous.



4.0 - POWER SUPPLY CONNECTIONS

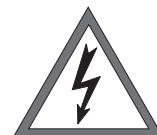
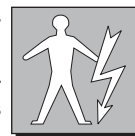
WARNING: In order to guarantee the utmost safety, connect the apparatus only to a properly earthed mains system.

The projector is designed to work at the tension and frequency indicated by the electrical data label on the rear. Before connecting the projector to the mains, a qualified electrician must check its conformity.

- *The projector must be protect by an adeguated magneto-thermal switch .*
- *Don't power the unit with a dimmer circuit.*

Power : indicated in the serigraphy table (tollerance: +5% / -10%)

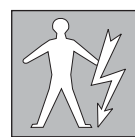
Should there be different electrical characteristics or special steps to be carried out (see par. 3.2), please contact COEF by telephone or e-mail elettronica@coef.it



Supply the projector by connecting it as indicated in picture.



4.1 - DMX 512 CONNECTIONS



Connect the projector and the control unit to a wire in conformity with the EIA RS-485 standards: braided bipolar, shielded, 120 ohm of characteristic impedance, 22-24 AWG, equipped with Cannon 3 Pin XLR plugs. Respect the DMX 512 signal input and output according to the panel indications. A terminal pin with 120 ohm resistance ($\frac{1}{4}$ Watt minimum) must be inserted between the terminals 2 and 3 in the last piece of apparatus.



5.0 SPECIAL FUNCTIONS AND PROJECTOR ASSIGNMENT



On the front panel of **MP700 Wash** you'll find a section for the additional functions and for setting the projector.

Following the picture, you can see all the offered possibilities in detail.

All operations are to be carried out with the **E, F, G, H** buttons, respectively indicated as **MENU, ENTER, DOWN** and **UP**. The display **D** will inform you about the selected functions.

The 3 **A, B,** and **C** leds will allow you to know:

A = reception of the DMX line.

B = lamp ON.

C = errors indicated on the ERR table (see table 6.0).

On switching the projector on, the display will indicate the type of projector and the version of control software which have been installed. To this purpose, please remember that this type of projector belongs to a new generation of projectors, designed with the possibility of updating the software version through the normal DMX connection by means of a programmer deliberately created: **UNI-PROG 8**.

After the indication **MSTR HOME**, the projector carries out the RESET and gets ready to be controlled from the connected console.

The display will indicate 1 as default value. This means that the first channel occupied by the projector will respond to the values sent to channel 1 by the DMX line. This enables us to make **MP700 Wash** (which we are installing) completely independent from control or integral with any other installed projector.

General Rules:

Refer to the Table of Section 6.0 in the following page.

By each pressure, Button **MENU** (**E**) permits to go backwards by one level.

G and **H** (**DOWN** and **UP**) buttons select functions and sub-functions.

Button **F** (**ENTER**) enters the function and confirms a control.

By pressing Button **MENU** (**E**) and buttons **UP** and **DOWN** (**H** and **G**) you can select the menu you have to modify.

Once the wished menu is reached, press Button **F** (**ENTER**) to confirm your selection and enter the function.

Press **G** or **H** to enter the sub-functions if available.

Always confirm your selection with **ENTER**.

Press **MENU** to go out of the function and press again to go back to the starting level.

Example: We installed our projector on the ceiling and for this reason we want the visualization of the display to be correct.

Press **MENU**

Press **H** (**UP**) 14 times up to "**MISC**"

Press **ENTER** the Display will show "**RSET**"

Press **H** (**UP**) twice up to "**DSPL**"

Press **ENTER** the Display will show "**ONOF**"

Press **H** (**UP**) once up to "**STRV**"

Press **ENTER** the Display will show "**STND**"; this is the actual configuration state.

Press **H** (**UP**) once up to **R.E.V.**; the blinking point indicate the available configuration.

Press **ENTER** The Display visualization as been rotated to 180°.

Press **MENU** 3 times to return to starting MENU.

The indication of the display will automatically come back after 120 sec. and inform on the set starting channel DMX. **If we are now in a sub-function, this automatic device will not assume control.**

6.0 MENU, FUNCTION & SUB-FUNCTIONS (*) = default value - factory assigned

MENU	FUNCTION	SUB-FUNCTION	DESCRIPTION
DMX	1/497		DMX Start channel
TIME	LAMP	SHOW - KH, H RST - GO?	Lamp working hours (KH=thousands H=hours) Lamp working hours reset (confirm by ENTER)
	MACH	SHOW - KH, H	Projector working hours (KH=thousands H=hours)
ERR	E OK		No error
	E110		EEPROM failure
	E220		Malfunction of the COLOR motor/sensor
	E250		Malfunction of the PAN motor/sensor
	E260		Malfunction of the TILT motor/sensor
	E270		Malfunction of the BEAM SHAPING motor/sensor
	E420		No ignition of the lamp beyond 3 attempts. (break?)
	E510		Malfunction encoder PAN
	E520		Malfunction encoder TILT
	W310		Checksum Setup not valid
	W410		Lamp working hours for more than 500 hours
	W422		LAMP start beyond 1 attempts (attempt to warmth or exhausted lamp)
	W424		LAMP off in not standard mode
SHUT	HOME		HOME SHUTTER
	TEST		TEST SHUTTER
	ADJ	P 1 - 19 / 19	Fine regulation of the closing shutter.
	SET		Reserved
COL	HOME		HOME COLOR
	TEST		TEST COLOR
	CSHUT	(*) OFF / ON	Color change in black-out position
	ADJ	P 1 -49 / 49	Fine regulation of the COLOR position
CYAN	HOME		HOME CYANO color
	TEST		TEST CYANO color
	ADJ	P 1 -49 / 49	Fine regulation of the CYANO position
	SET		Reserved
MAGT	HOME		HOME MAGENTA color
	TEST		TEST MEGENTA color
	ADJ	P 1 -49 / 49	Fine regulation of the MAGENTA position
	SET		Reserved
YELL	HOME		HOME YELLOW color
	TEST		TEST YELLOW color
	ADJ	P 1 -49 / 49	Fine regulation of the YELLOW position
	SET		Reserved
SHAP	HOME		HOME BEAM SHAPING Filter
	TEST		TEST BEAM SHAPING Filter
	ADJ	P 1 -99 / 99	Fine regulation of the BEAM SHAPING position
FRST	HOME		HOME FROST Filter
	TEST		TEST FROST Filter
	ADJ	P 1 -49 / 49	Fine regulation of the FROST filter
	SET		Reserved
PAN	HOME		HOME PAN movement
	TEST		TEST PAN movement
	STRV	(*) STND / REV	Switch movement direction (DX / SX)
	ENCO	(*) ON / OFF	ON/OFF the automatic repositioning of the PAN
TILT	HOME		HOME TILT movement
	TEST		TEST TILT movement
	STRV	(*) STND / REV	Switch movement direction (UP / DOWN)
	ENCO	(*) ON / OFF	ON/OFF the automatic repositioning of the TILT
SCH	CH1 / CH16		DMX value for the indicated channel
LAMP	ONOF	(*) ON / OFF / AUTO	Lamp ON / Lamp OFF / LAMP OFF after 1 hour of no change on DMX
	CDMX	(*) NO / YES	LAMP switching on by DMX control
MISC	RSET		MASTER HOME (Starting RESET)
	RDMX	(*) YES / NO	MASTER HOME via DMX control
	DSPL	(*) ON / OFF (*) STND / REV	Display on / Display off 180° rotation of the visualization display
	SWPT	(*) STND / SWAP	Channel control switch PAN / TILT
	EDIM	YES / NO (automatic value)	YES = Electronic Dimmer ON
	VER		Show the installed software version

7.0 CANALI E VALORI DIGITALI

CANALE	SHUTTER / STROBE / DIMMER
1	0-5 SHUTTER closed (no Dimmer)
	6-100 DIMMER from channel 13 value
	101-110 DIMMER 0 > 100% Automatic 6 sec.
	111-120 DIMMER 100% > 0 Automatic 6 sec.
	121-126 DIMMER 0 > 100% slow Faster shut down
	127-132 DIMMER 0 > 100% middle Faster shut down
	133-138 DIMMER 0 > 100% fast Faster shut down
	139-144 DIMMER 100% > 0 slow Faster open
	145-150 DIMMER 100% > 0 middle Faster open
	151-156 DIMMER 100% > 0 fast Faster open
	157-162 DIMMER 0 > 100% > 0 slow
	163-168 DIMMER 0 > 100% > 0 middle
	169-174 DIMMER 0 > 100% > 0 fast
	175-180 Strobe lamp from 1 to 6 random [reg. 0.0-0.5 sec.]
	181-186 Strobe lamp from 1 to 6 random [reg. 0.6-1.5 sec.]
	187-192 Strobe lamp from 1 to 6 random [reg. 1.6-2.5 sec.]
	193-250 STROBE Speed adjustment
	251-255 SHUTTER open (no Dimmer)
2	CYANO COLOR
	0 - 5 Neutral
	6 - 250 insert CYANO color
	251 - 255 CYANO color is full inserted
3	MAGENTA COLOR
	0 - 5 Neutral
	6 - 250 insert MAGENTA color
	251 - 255 MAGENTA color is full inserted
4	YELLOW COLOR
	0 - 5 Neutral
	6 - 250 insert YELLOW color
	251 - 255 YELLOW color is full inserted
5	PAN MOVEMENT
6	PAN MOVEMENT FINE ADJUSTMENT
7	TILT MOVEMENT
8	TILT MOVEMENT FINE ADJUSTMENT
9	COLOR WHEEL "RGB" BASE/ COLOR CONVERSION/ WOOD
	0 - 5 Neutral
	6 - 35 BLU
	36 - 65 RED
	66 - 95 GREEN
	96 - 125 Wood
	126 - 155 Color filter conversion 5600°K
	156 - 185 Color filter conversion 3200°K
	186 - 195 Random full color (slow) 7 steps
	196 - 205 Random full color (fast) 7 steps
	206 - 230 CW rotation adjustment
	231 - 255 CCW rotation adjustment
10	COLORS PRE-SETTINGS
	0 - 15 WHITE NEUTRAL
	16 - 30 YELLOW COLOR 1
	31 - 45 GREEN COLOR 2
	46 - 60 ORANGE COLOR 3
	61 - 75 PINK COLOR 4
	76 - 90 CYANO COLOR 5
	91 - 105 PURPLE COLOR 6
	106 - 120 RED COLOR 7
	121 - 135 BLUE COLOR 8
	136 - 150 GREEN WATER COLOR 9
	151 - 165 YELLOW LIGHT COLOR 10
	166 - 180 GREEN LIGHT COLOR 11
	181 - 195 ORANGE LIGHT COLOR 12
	196 - 210 PINK LIGHT COLOR 13
	211 - 225 CYANO LIGHT COLOR 14
	226 - 240 GREEN VERY LIGHT COLOR 15
	241 - 245 FAST COLORS MIXING
	246 - 250 MIDDLE COLORS MIXING
	251 - 255 SLOW COLORS MIXING

CANALE	
11	BEAM SHAPING FILTER 0 - 5 Neutral 6 - 210 Positioning 211 - 225 vertical/orizzontal/vertical (slow) 226 - 240 vertical/orizzontal/vertical (middle) 241 - 255 vertical/orizzontal/vertical (fast)
12	FROST 0 - 5 Neutral 6 - 130 Regulation insertion FROST effect 131 - 140 FROST inserted 141 - 155 from FROST 100% to FROST 0% (t=5 sec.) 156 - 170 from FROST 0% to FROST 100% (t=5 sec.) 171 - 185 from FROST 100% to FROST 0% (t=4 sec.) > return to "NO FROST" fastly with continuous effect 186 - 200 from FROST 0% to FROST 100% (t=4 sec.) > return to "FROST" fastly with continuous effect 201 - 250 from FROST 0% to FROST 100% continuous effect and adjustable speed 251 - 255 FROST inserted
13	DIMMER 0 - 5 DIMMER Closed 6 - 250 DIMMER Adjustment 251 - 255 DIMMER Open WARNING: position CHANNEL 1 at a value between 6 and 250 in order to control DIMMER with this channel.
14	USE MODE (only code 02E013 with Electronic Ballast) 0 - 5 Studio mode 6 - 250 Adjustment 251 - 255 Live mode
15	EFFECTS TIME ADJUSTMENT (work on channels 2-3-4-9-10-11-12-13) 0 - 5 NO delay 6 - 250 adjustment delay 251 - 255 MAX delay
16	MOVEMENTS TIME ADJUSTMENT (work on channels 5-7) 0 - 5 NO delay 6 - 250 adjustment delay 251 - 255 MAX delay

7.1 SPECIAL ACTION

When the lamp control via **DMX (CDMX)** and the reset via **DMX (RDMX)** function have been activated in the configuration menu, it's possible, by a combination of the channels values, to control the lamp switch **ON/OFF** or to allow the projector **MASTER RESET**.

Lamp ON via DMX:

CHANNEL 2 = value 0

CHANNEL 3 and CHANNEL 4 = value 0 > 255 > 0

Lamp OFF via DMX:

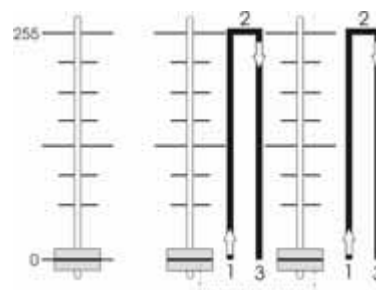
CHANNEL 2 = value 255

CHANNEL 3 and CHANNEL 4 = value 0 > 255 > 0

MASTER RESET:

CHANNEL 1 = value 0

CHANNEL 2 and CHANNEL 3 = value 0 > 255 > 0



8.0 LAMP ADJUSTMENT



- Don't look directly the beam trough the lens.
- The lamp is pre-regulated by the factory. Only fine-adjustment. Don't move the screws "C" up to upper or lower extremities.



Lamp adjustment is necessary to obtain a uniform and powerful light beam. Switch on the projector and set the channels without gobo and colors. Adjust the three screws **C** until you reach the ideal condition between power and homogeneity.

9.0 ORDINARY MAINTENANCE

Ordinary maintenance on the projectors **MP700 Wash** is necessary to maintain the perfect efficiency of the unit and to avoid defects like the low luminosity of the light beam or the elevated overheating of the equipment.

In the figures you can see those components that can easily accumulate dust and grease. Clean them using a soft cloth and common glass-cleaners.



9.1 EXTRAORDINARY MAINTENANCE

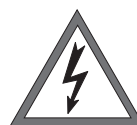
WARNING: switch off the projector before operating



To make an extraordinary maintenance, it is necessary the presence of a generic or qualified mechanical operator, according to the type of the needed intervention.

Open the cover of MP700 Wash by the 4 fast screw.

Clean carefully the indicated parts.



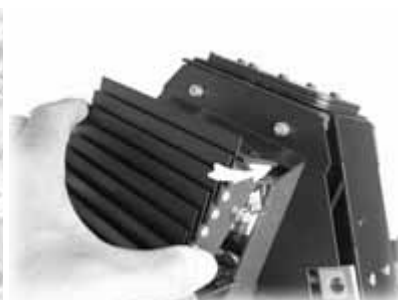


You must particularly take care of the sensors which are really fundamental in the unit working.
The sensors are absolutely necessary when a general reset of the projector is needed. If this function is not correctly executed, it will totally compromise the regular working of the projector, at least for the group referred to the sensor itself.



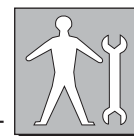
The sensors of the encoders concerning the PAN and TILT movements are located in the base and in the arm of the MP700 Wash respectively. The pictures clearly show how you can reach these components and where you can correctly operate for their maintenance.

Another place where grease and dust settle is inside the lamp-box. Carry out the following operations in order to clean: unscrew, but not completely, the 4 screws on the side of the fin unit located on top of the bulb; draw out the full fin unit; clean the antiheat filter and the parabola of the bulb; assemble the fin unit again by inserting first the part next to the lamp-board and then the 4 screws in their seat; tighten carefully.



9.2 ELETTRONIC MAINTENANCE

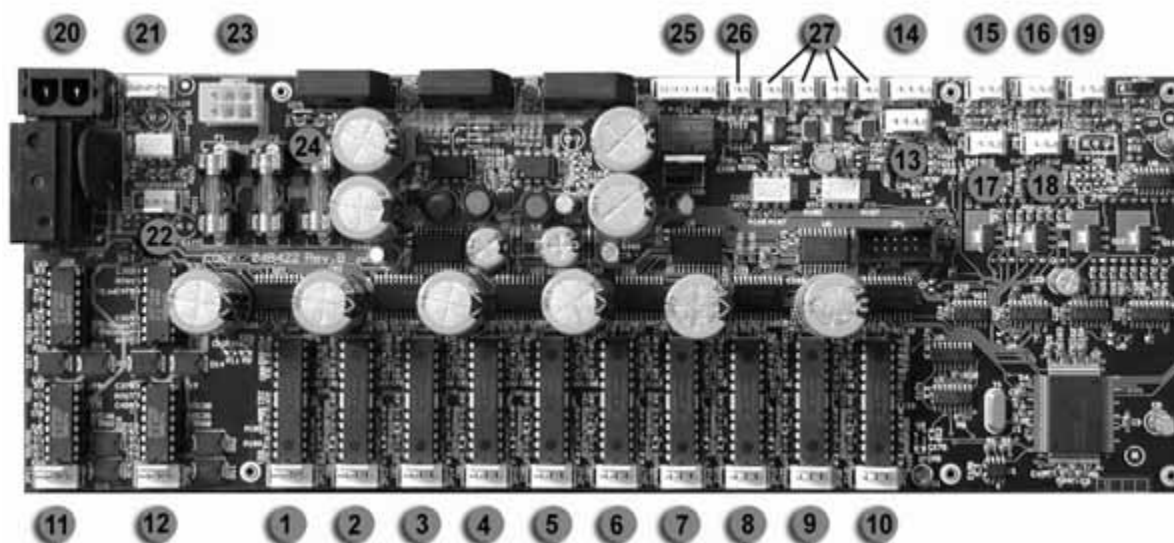
WARNING: switch off the projector before operating



This section is dedicated in detail to the electronic connections between the card and the mechanical components, assembled in the projector. These informations will be absolutely necessary when the mechanical unit has to be removed from the projector for maintenance and/or repair.

The connections are made using handy connectors and are detailed in figure where you can find indications about the connection between a specific connector and a specific component of the mechanical unit. This includes the motors and the sensors of the various effects wheels (color, gobos, prisms, shutter etc.).

WARNING! An improper use of this documentation made by not specifically qualified staff can damage irretrievably the electronic and/or mechanical components of the projector.















1	Empty	15	Sensor PAN
2	Motor COLOR wheel	16	Sensor TILT
3	Motor BEAM SHAPING	17	S1 Sensor COLOR wheel
4	Motor FROST	18	S2 Sensor BEAM SHAPING
5	Empty	19	Empty
6	Motor CYANO	20	ON/OFF Lamp (only Magnetic Ballast version)
7	Motor MAGENTA	21	Electronic Ballast connector
8	Motor YELLOW	22	LIGHT Sensor
9	Motor SHUTTER 1	23	POWER connector
10	Motor SHUTTER 2	24	Faston GROUND connection
11	Motor TILT	25	DMX INPUT
12	Motor PAN	26	HEAD FAN
13	Encoder TILT	27	BASE FAN
14	Encoder PAN		

23 - Power connector on board



1-2 12V ~ +/- 5% Blue
 3-4 27V ~ +/- 5% Grey
 5-6 27V ~ +/- 5% Black

10.0 TROUBLESHOOTING

	PROBLEM	CAUSE	ACTION
	The projector doesn't switch on	- The power supply is not present	Check if the luminous indicator is lighted or not.
		- The lamp is not working	Replace the lamp.
		- The thermal switch is active	Just to wait for little of time.
	The projector switches on but doesn't answer to commands	- Wrong DMX configuration	Make sure that the projector is correctly configured.
		- Defective cables	Replace or repair the DMX cable.
		- LED A is off	Check the control unit & DMX cable.
		- Defective control unit	Check the control unit by means of other working projectors. Technical aid is required.
	Defecting projection	- The lens is broken	Check that the lens are not broken.
		- Dust or grease stored on the all parts of projector	Remove dust or grease stored on lenses.
			
	Projection with halo	- Dust or grease stored on the all parts of projector	Carefully clean the optical group lenses and the projector components (see "Maintenance" chapter).
	The color or other effects doesn't coincide to the selected value.	- Position sensor dirty with dust or grease	Carefully clean the optical group lenses and the projector components (see "Maintenance").
		- Defective motor	Technical aid is required.
		- Electronic board	
	The PAN or TILT movement doesn't coincide to the selected value	- Defective motor	Carefully clean the optical group lenses and the projector components (see "Maintenance").
		- Electronic board	Technical aid is required.
			
	The projector does not carry out the automatic repositioning of the PAN or TILT movements.	- ENCO off in the PAN/TILT configuration menu (cap. 6.0)	Set ON ENCO Function of PAN/TILT configuration menu (cap. 6.0).
