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MP 700 ZOOM

- ***Code 02E006 - Electronic Ballast***
- ***Code 02E005 - Magnetic Ballast***

- ***OPERATING INSTRUCTIONS***

Realized by PC CAD & VIDEO

Printed in November 2001

Declaration of CE conformity

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

Ponte Buggianese, 10 October 2001

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.

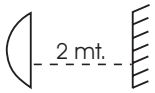
5) Make the electric connections and the installation / replacement of the lamp after having disconnected the power supply and after haved positioned the power switch to OFF.The apparatus is classified as belonging to Class 1 type of protection against electric shocks. Its connection to an earthed mains unit is compulsory. The equipment must be protect by an adeguated magneto-thermal 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 the lamp trough 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; they might be dangerous for children.

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 particulary 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 dager 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 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:

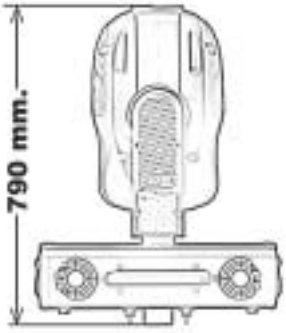
- *MP700 Zoom complet unit.*
- *This user manual.*
- *2 quick lock/release (omega) brackets.*
- *1 connector XLR 3 pin male.*
- *1 connector XLR 3 pin female.*
- *1 connector POWER.*
- *1 safety-chain equipped with two snaps.*

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; they might be dangerous for children.

1.0 DIMENSIONS & POSITIONING



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

2.0 TECHNICAL NOTES

MP700 Zoom with Magnetic Ballast **Code: 02E005**

MP700 Zoom with Electronic Ballast **Code: 02E006**

- *Lamp: MSR 700 SA 700W 54.000 lumen*
- *16 bit movement resolution - PAN 540° / TILT 270°*
- *PAN and TILT automatic repositioning*
- *9 rotating gobos all interchangeable and indexable on 540°*
- *Zoom linear motorized from 11° to 24° zoom possibility manteining a costant focus*
- *Focus motorized*
- *33 colors + white + bi-colors*
- *Linear dimmer from 0 to 100%*
- *Electronic dimmer of lamp from 100% to 50% (only electronic ballast version)*
- *Shutter motorized*
- *Iris motorized*
- *Adjustable strobe*
- *Rainbow effect adjustable in speed*
- *Black light filter*
- *Optical system with multilenses system*
- *Linear frost*
- *Rotating 3 faces prism adjustable in speed for both directions*
- *Multifunction display*
- *Remote reset via DMX*
- *Remote On/Off lamp via DMX*
- *Software upgrade via DMX (with UNI-PROG 8 Accessory)*
- *Automatic fault survey*
- *Automatic ventilation adjustment with internal temperature survey*
- *Internal power factor correction*
- *DMX 512 standard*
- *Lamp lighted sensor*
- *Over temperature protection*
- *Absorbed power 230V.ca 50Hz 4,1A.*
- ***Weight: 37,5 Kg (with electronic Ballast 28,5 Kg.)***

3.0 INSTALLATION

The constructor is not be considered responsible in case of:

- *Improper use fo 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

- *The unit mounts high pressure lamp.*
- *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.*
- *Switch off the projector before operating.*
- *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.*
- *Don't look directly the lamp.*
- *Read carefully the lamp builder's instructions.*

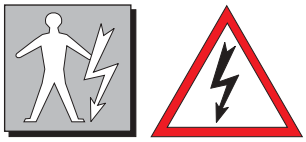
Wait 30 minutes in order to avoid burns.

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 VOLTAGE ADJUSTMENT

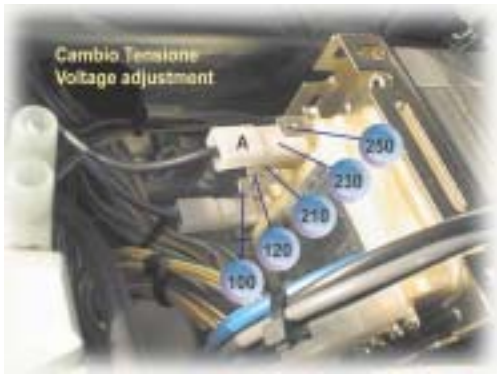


WARNING: switch off the projector before operating

Attention: the change of tension can be carried out on the model with Electronic Ballast only.

The tension value suitable for the projector is shown in a table placed in the board of the base of the MP700 Zoom. A flag marks the values preset for your equipment. It is possible to modify these settings according to the country where the MP700 Zoom is going to be installed (only for the model with Electronic Ballast) just by shifting the cable with faston device (part. A) to the proper terminal of the transformer which supplies the electronic card assembled inside the base of the projector.

We recommend to update the serigraphy table with the new value.



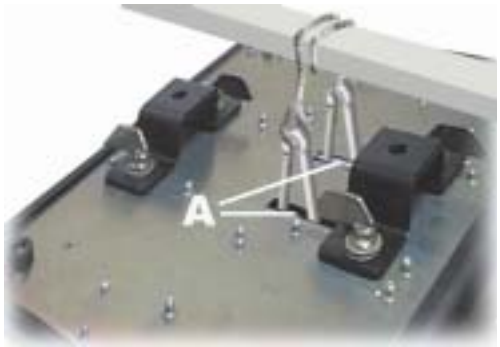
3.3 PROJECTOR INSTALLATION

To fix the **MP 700 Zoom** 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 addiction 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 **MP 700 Zoom**'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 Zoom, (see part. **A**), must be properly installed and fixed to the supporting structure, in a way that an incidental givin in of the main bracket would leed 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 the serigraphy table (tollerance: +5% / -10%)

Should there be different electrical characteristics or special steps to be carried out, 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 XRL plugs. Respect the DMX 512 signal input and output according to the panel indications. A terminal pin with 120 ohm resistance (¼ 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 Zoom** 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 Zoom** (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) 11 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** 4 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	1/498 Magnetic 1/497 Electronic		DMX start channel
TIME	LAMP	SHOW - KH, H	Lamp working hours (KH=thousands H=hours)
		RST - GO?	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
	E230		Malfunction of the GOBOS motor/sensor
	E240		Malfunction of the GOBOS ROT. motor/sensor
	E250		Malfunction of the PAN motor/sensor
	E260		Malfunction of the TILT 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 exausted lamp)
SHUT	HOME		HOME SHUTTER
	TEST		TEST SHUTTER
	ADJ	P 1 - 49 / 49	Fine regulation of the closing shutter.
	SET		Reserved
COL	HOME		HOME COLOR
	TEST		TEST COLOR
	CSHUT	(*) OFF / ON	Color change in black-out position
	MODE	(*) MOD1 / MOD2	Color switching or linear wheel motion
	ADJ	P 1 / P20 -29 / 29	Fine regulation of the COLOR position (P1 / P20)
GOBO	HOME		HOME GOBOS
	TEST		TEST GOBOS
	GSHUT	(*) OFF / ON	GOBO change in black-out position
	ADJ	P 1 -29 / 29	Fine regulation of the NEUTRAL GOBO position
RGOB	HOME		HOME Rotation GOBOS
	TEST		TEST Rotation GOBOS
CONV	HOME		HOME Conversion filters
	TEST		TEST Conversion filters
	ADJ	P 1 -99 / 99	Fine regulation of the CONVERSION FILTER position
FCUS	HOME		HOME Focus trolley
	TEST		TEST Focus trolley
ZOOM	HOME		HOME ZOOM trolley
	TEST		TEST ZOOM trolley
EFCT	HOME		HOME Prism/Frost
	TEST		TEST Prism/Frost
	ADJ	P 1 -99 / 35	Fine regulation of the PRISM position
RPRS	TEST		TEST of the Prism rotation
IRIS	HOME		HOME Iris
	TEST		TEST Iris
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 / CH14 (CH15)	CH15 = Electronic Ballast only	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	Display on / Display off
		(*) STND / REV	180° rotation of the visualization display
	SWPT	(*) STND / SWAP	Channel control switch PAN / TILT
	EDIM	YES / NO (automatic value)	YES = Electronic Dimmer ON (Can. 15 / Electronic Ballast)
	VER		Show the installed software version

7.0 CHANNELS AND DIGITAL VALUES

CH 1 — SHUTTER / STROBE / DIMMER

0-5	SHUTTER closed		
6-100	DIMMER from channel 14 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		

CH 2 MODE1 — COLOR MODE 1

0 - 5	Neutral
6 - 15	Yellow
16 - 25	Blue
26 - 35	Magenta
36 - 45	Green light
46 - 55	Orange
56 - 65	Cyano
66 - 75	Pink
76 - 85	Red
86 - 95	Blu light
96 - 105	Green
106 - 115	Wood
116 - 125	White-Yellow
126 - 135	Yellow-Blue
136 - 145	Blue-Magenta
146 - 155	Green light-Orange
156 - 165	Orange-Cyano
166 - 175	Cyano-Pink
176 - 185	Red-Blue light
186 - 195	Blue light-Green
196 - 200	Random full-color (slow)
201 - 205	Random full-color (fast)
206 - 230	CW Rotation adjustment
231 - 255	CCW Rotation adjustment

CH 2 MODE2 — COLOR MODE 2

0 - 5	Neutral
6 - 10	Yellow
11 - 15	Blue
16 - 20	Magenta
21 - 25	Green light
26 - 30	Orange
31 - 35	Cyano
36 - 40	Pink
41 - 45	Red
46 - 50	Blu light
51 - 55	Green
56 - 60	Wood
61 - 180	Positioning
181 - 185	Random fast
186 - 190	Random middle
191 - 195	Random slow
196 - 200	Random very slow
201 - 215	Random very fast
216 - 235	CW Rotation adjustment
236 - 255	CCW Rotation adjustment

CH 3 — GOBOS

0 - 10	Neutral	
1 1- 20	GOBO 1	chann.4 controls rotation
21 - 30	GOBO 2	chann.4 controls rotation
31 - 40	GOBO 3	chann.4 controls rotation
41 - 50	GOBO 4	chann.4 controls rotation
51 - 60	GOBO 5	chann.4 controls rotation
61 - 70	GOBO 6	chann.4 controls rotation
71 - 80	GOBO 7	chann.4 controls rotation
81 - 90	GOBO 8	chann.4 controls rotation
91 - 100	GOBO 9	chann.4 controls rotation
101 - 110	GOBO 1	chann.4 controls position
111 - 120	GOBO 2	chann.4 controls position
121 - 130	GOBO 3	chann.4 controls position
131 - 140	GOBO 4	chann.4 controls position
141 - 150	GOBO 5	chann.4 controls position
151 - 160	GOBO 6	chann.4 controls position
161 - 170	GOBO 7	chann.4 controls position
171 - 180	GOBO 8	chann.4 controls position
181 - 190	GOBO 9	chann.4 controls position
191 - 198	GOBOS Random fast	
199 - 205	GOBOS Random slow	
206 - 230	CW Rotation adjustment	
231 - 255	CWW Rotation adjustment	

CH 4 — ROTATION GOBOS

0 - 5	STOP
6 - 255	From 0 to 540° GOBO positioning
6 - 130	CW Rotation adjustment of the GOBO
131 - 255	CWW Rotation adjustment of the GOBO

CH 5 — PAN MOVEMENT

CH 6 — PAN MOVEMENT FINE ADJUSTMENT

CH 7 — TILT MOVEMENT

CH 8 — TILT MOVEMENT FINE ADJUSTMENT

CH 9 — COLOR FILTER CONVERSION

0 - 79	Neutral
80 - 169	Conversion 3400°K
170 - 255	Conversion 5600°K

CH 10 — FOCUS ADJUSTMENT

0 - 255	Linear FOCUS adjustment

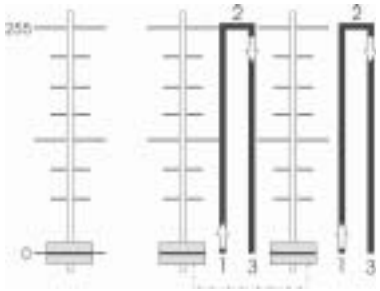
CH 11 — LINEAR ZOOM ADJUSTEMT

0 - 255	Linear ZOOM adjustment

CH	
12	**EFFECTS (Frost - Prism)** 0 - 5 Neutral 6 - 20 Automatic FROST from 0 to 100% (velocity adjustment) 21 - 40 Automatic FROST from 100% to 0 (velocity adjustment) 41 - 60 Frost 61 - 80 Prism 3 faceted 81 - 170 CW PRISM rotation with velocity adjustment 171 - 255 CWW PRISM rotation with velocity adjustment
13	**IRIS** 0 - 5 Open / Neutral 6 - 130 IRIS with manual regolation (100% - 0) 131 - 150 IRIS closed 151 - 170 IRIS 0 - 100% 171 - 190 IRIS 100% - 0 191 - 210 IRIS 0-100%-0 slow 211 - 230 IRIS 0-100%-0 middle 321 - 250 IRIS 0-100%-0 fast 251 - 255 IRIS 0-100%-0 random
14	**DIMMER** 0 - 5 DIMMER Closed 6 - 250 DIMMER regolation 251 - 255 DIMMER Open **WARNING**: position CHANNEL 1 at a value between 6 and 100, in order to control DIMMER with this channel.
15	**DIMMER** Electronic (only Electronic Ballast Code: 02E006) 0 - 5 Light at 50% 6 - 250 Light from 50% to 100% 251 - 255 Light at 100%

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

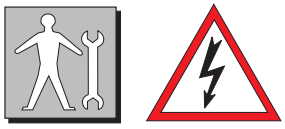
MASTER RESET:
CHANNEL 1 = value 0
CHANNEL 2 and CHANNEL 3 = value 0 > 255 > 0

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.***

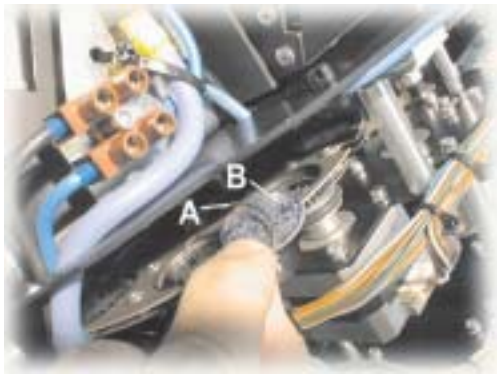
Lamp adjustment is necessary to obtain a uniform and powerful light beam. Switch on the projector and set the channels without gobo and colors. Adjust the three screws **C** until you reach the ideal condition between power and homogeneity.

9.0 GOBOS REPLACEMENT



WARNING: switch off the projector before operating

Open the cover of MP700 Zoom by the 4 fast screw.
The gobo-wheel of the MP 700 Zoom contains dichroic gobos. They are interchangeable simply by removing the little elastic ring with a screwdriver (see figure).
In order to replace a dichroic gobo with a steel gobo, put a thick ring between the gobo and the elastic ring.
Insert the chosen gobo and place again the steel ring, paying attention that it reaches its correct position.



10.0 ORDINARY MAINTENANCE

Ordinary maintenance on the projectors **MP 700 Zoom** 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.

10.1 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. In order to make its use easier, we advise you to completely draw out the mechanic unit of the zoom and focus movements as follows: disconnect the two motors (connectors **B** and **C**) and the fan (connector **D**); remove the 4 screws (part. **A**) and carefully extract the whole mechanic unit. Clean carefully the indicated parts.

Once the frame with the Zoom/Focus mechanic unit has been removed, it is possible to clean the parts which are usually difficult to reach. Reassemble the Zoom/Focus unit carefully, being sure in particular that the blade with prism and frost is positioned between the two lenses of the Zoom/Focus unit. Remember then to connect again the 2 motors and the fan to their connectors.

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 Zoom 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.

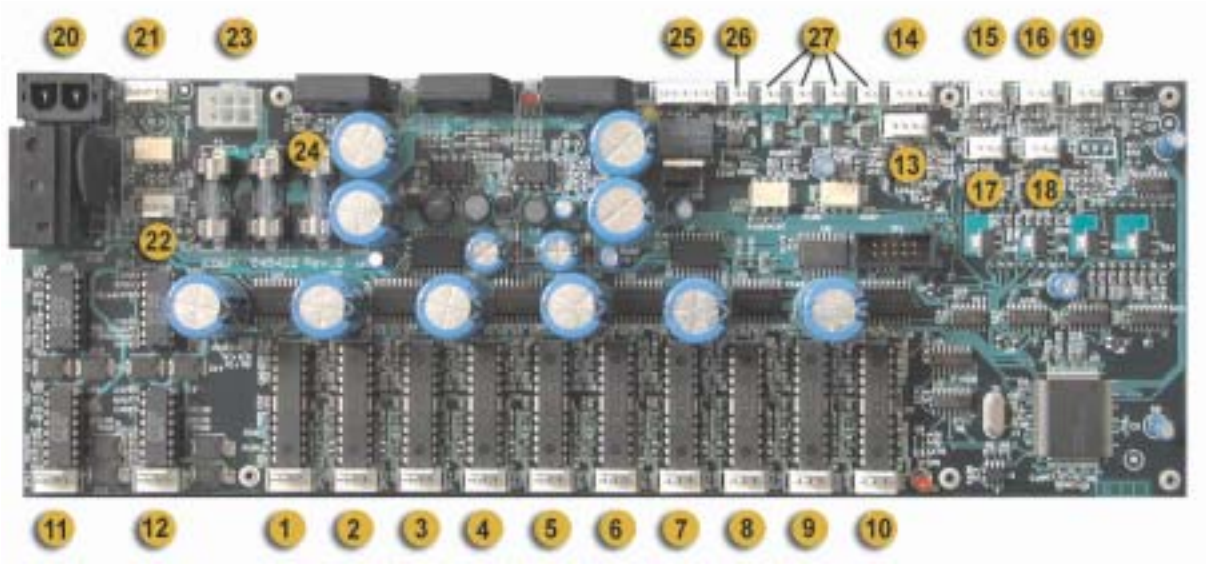
10.2 ELETTRONIC MAINTENANCE

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 irremediably the electronic and/or mechanical components of the projector.**



1	Motor SHUTTER / STROBE	15	Sensor PAN
2	Motor COLORE wheel	16	Sensor TILT
3	Motor GOBOS wheel	17	S1 Sensor COLOR wheel
4	Motor GOBOS Rotation	18	S2 Sensor GOBOS wheel
5	Motor EFFECTS wheel	19	S3 Sensor GOBOS Rotation
6	Motor ZOOM	20	ON/OFF Lamp (only Magnetic Ballast version)
7	Motor FOCUS	21	Electronic Ballast connector
8	Motor CONVERSION FILTERS	22	LIGHT Sensor / NTC Sensor
9	Motor IRIS	23	POWER Connector
10	Motor PRISM Rotation	24	Faston GROUND connection
11	Motor TILT	25	DMX IN/OUT
12	Motor PAN	26	Head FAN
13	Encoder TILT	27	Base FAN
14	Encoder PAN		

23 - Alimentazione / Power

5	3	1
6	4	2

1-2 12V.AC. ± 5%
3-4 28V.AC. ± 5%
5-6 28V.AC. ± 5%

11.0 TROUBLESHOOTING

PROBLEM	CAUSE	ACTION
 The projector doesn't swich 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 swiches on but doesn't answer to commands	- Wrong DMX configuration	Make sure that the projector is correctly configurated.
	- 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 - Electronic board	Technical aid is required.
 The PAN or TILT movement doesn't coincide to the selcted value	- Defective motor - Electronic board	Carefully clean the optical group lenses and the projector components (see "Maintenance"). 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).