

RoboColor III

user manual

INTRODUCTION

Congratulations on your choice of the RoboColor III system, designed and manufactured by Martin Professional. The RoboColor III is a high performance, automated color changing system, providing exciting possibilities for lighting designers in many applications. The rugged construction combined with the choice of high quality components ensures that your RoboColor III system will perform reliably for many years to come.

SAFETY PRECAUTIONS

The RoboColor III is NOT for domestic use.

- Read user manual before use.
- For protection against dangerous electric shock, always ground (earth) the system electrically, use only a source of AC power that complies with local building and electrical codes, and do not expose the system to rain or moisture.
- Disconnect the system from AC power before removing any cover or part.
- Disconnect the system from AC power if the lamp blows. Allow the heads to cool for 15 minutes before installing a new lamp.
- Do not illuminate surfaces within 30 cm (12 inches) of the heads.
- Do not place filters or other objects over the lenses.
- Keep all combustible materials (for example fabric, wood, paper) at least 30 cm (12 inches) away from the heads. Keep flammable materials well away from the heads.
- Provide a minimum clearance of 10 cm (4 inches) around the fans and air vents.
- Do not operate the system if the ambient temperature exceeds 40° C (104° F).
- When suspending the system above ground level, verify that the structure can hold at least 10 times the weight of all installed devices, and secure the fixtures with approved safety cables. Block access below the work area whenever installing or removing the system.
- For protection against dangerous UV radiation, never operate the system with missing and/or damaged covers or lenses, and do not stare into the light. Replace any broken or cracked component immediately.
- Refer all service to a qualified technician.

SETTING UP

The RoboColor III system consists of the RoboColor III heads, which are the color changing spotlights, and the RoboColor III controller, which drives the heads. You can connect up to four heads to one controller.

Important! *Do NOT connect RoboColor III heads directly to the mains supply. Connect them only to a RoboColor III controller.*

UNPACKING

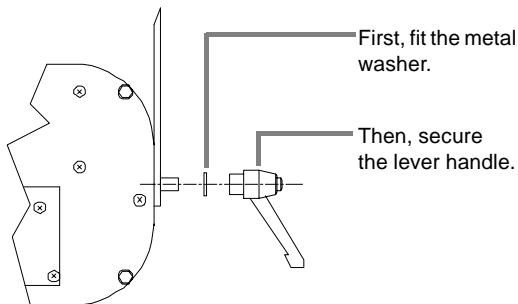
The RoboColor III system includes the following items:

- RoboColor III heads with Martin 150 W Metal Halide discharge lamps
- Mounting bracket
- Fittings for mounting bracket (two lever handles and two metal washers)
- RoboColor III controller
- 5 meter XLR-XLR cable
- User manual

PREPARING HEADS

Secure the mounting bracket

- **The mounting bracket is already fitted onto the head. Secure it with the two metal washers and lever handles supplied.**



Check voltage setting

Important! *The voltage setting of the heads must match your local AC mains supply.*

The RoboColor III head is supplied in a 50 Hz or 60 Hz version. It is not possible to rewire from 50 Hz to 60 Hz, or vice versa.

- **The factory setting is printed on a label on the back of the head. Check the setting against the table below and rewire if necessary, following the instructions on page 15.**

50 Hz Model		60 Hz Model	
Mains supply	Ballast tapping	Mains supply	Ballast tapping
210V - 235V	230V	200V - 215V	210V
235V - 245V	240V	215V - 225V	220V
245V - 255V	250V	225V - 235V	230V


PREPARING THE CONTROLLER

Install a mains plug

Warning! *For protection from dangerous electric shock, the fixture must be grounded (earthed). The AC mains supply shall be have a fuse or circuit breaker, and ground-fault protection.*

The controller may be supplied without a plug on the mains cable. You will have to fit a plug that conforms to your local mains outlet before you can connect the unit to AC power. The double insulated mains cable contains three wires.

- 1 **Connect the BROWN wire to the LIVE pin.**
- 2 **Connect the BLUE wire to the NEUTRAL pin.**
- 3 **Connect the YELLOW/GREEN wire to the EARTH pin.**

Wire	Pin	Marking	Screw color (US)
brown	live	“L”	yellow or brass
blue	neutral	“N”	silver
yellow/green	ground		green

Check voltage setting

Important! *The controller's voltage setting must match your local mains supply.*

The factory setting is printed on a label on the back of the controller. Check the setting against the table below and rewire if necessary, following the instructions on page 15.

Mains Supply	Transformer Setting
210 - 240V	230V
240 - 255V	250V

CONNECTING THE SYSTEM

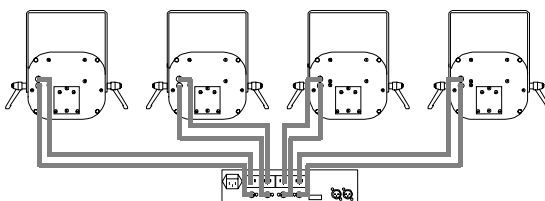
You can use any DMX or Martin lighting controller to operate the RoboColor III system. Control data is transmitted from the lighting controller via XLR data cables to the data input on the RoboColor III controller. The RoboColor III controller's data output sends the data further to additional units: up to 32 RoboColor III systems can be connected on the same data link.

The RoboColor III can also be operated without a lighting controller in stand-alone mode. In this mode, the system runs built-in sequences that are automatically or music triggered depending on the mode selected. A special master/slave feature allows several RoboColor III systems to synchronize (via the data link) in stand-alone mode. These features are further described later.

Connect the RoboColor III controller to the heads

The motor and lamp cables of each head must be connected to the RoboColor III controller. Connect each pair of cables to sockets of the same group (1, 2, 3 or 4) on the RoboColor III controller as shown below.

Important! *To avoid damaging the controller, make sure that it is disconnected from AC power before connecting the heads.*



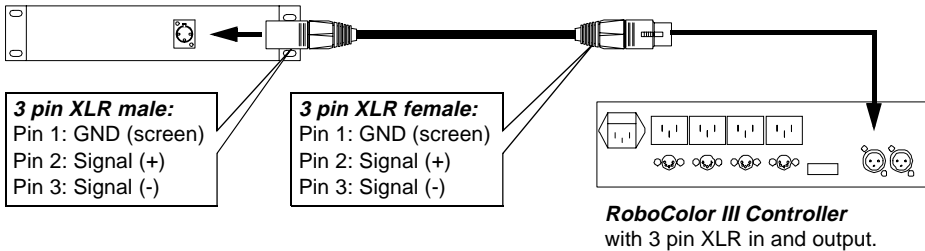
Connect the lighting controller

Once all heads have been connected to the RoboColor III controller, connect the RoboColor III controller to the lighting controller. The procedure is the same for a Martin RS-485 or DMX 512 controller, but you may need a 5-to-3-pin adapter cable if using a DMX 512 controller.

- 1 **Connect the data output on your lighting controller to the data input on the RoboColor III controller.**

MARTIN CONTROLLER: Use the XLR-XLR or DSUB-XLR cable supplied with the controller.

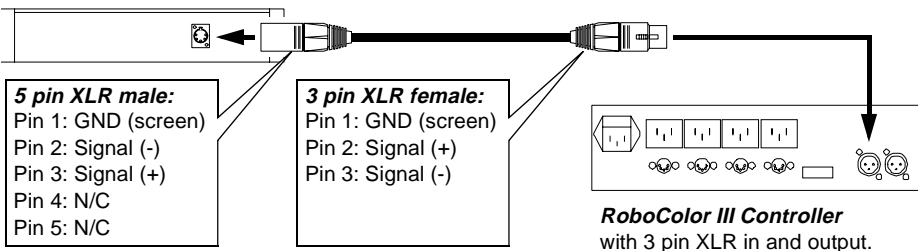
Martin Lighting Controller with 3 pin XLR output.



DMX CONTROLLER: Most DMX controllers have 5-pin XLR sockets for data output. Use a 5-pin to 3-pin phase-reversing adaptor, such as P/N 11820003, as shown below. This adaptor connects pin 2 on one end to pin 3 on the other end, and vice versa, to correct the difference in polarity between the RoboColor III system and the DMX controller.

Note: The RoboColor III controller also has an option to swap the XLR pin connections, making phase-reversing cables unnecessary. See page 18.

DMX Lighting Controller with standard 5 pin XLR output.



- 2 Connect the data output of the first *RoboColor III controller* to the data input of the next device. Use the XLR-XLR cable supplied when connecting to another *RoboColor III controller* or fixture with Martin polarity (pin 3 cold). Use a phase-reversing cable when connecting to a DMX device (pin 3 hot).

3-pin to 3-pin Phase-Reversing Cable	
Connections	
Male	Female
1	1
2	2
3	3
P/N 11820006	

3-pin to 5-pin Phase-Reversing Cable	
Connections	
Male	Female
1	1
2	2
3	3
	4
	5
P/N 11820002	

5-pin to 3-pin Phase-Reversing Cable	
Connections	
Male	Female
1	1
2	2
3	3
	4
	5
P/N 11820003	

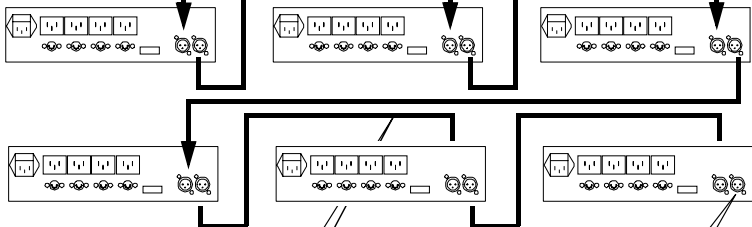
- 3 Continue the link this way, connecting output to input (daisy-chaining), until all units are linked together.
- 4 Finally, insert a male XLR termination plug in the output socket of the last unit on the link. Use a 3 pin XLR male plug with a 120Ω resistor between pin 2 and 3 (supplied with all Martin controllers).

Important! Failure to use a termination plug can cause communication errors between the lighting controller and the units.

Lighting controller



RoboColor III controllers



Use 3 pin XLR/XLR data cables to connect the units. Pin 1 = screen, pin 2 = signal (+), pin 3 = signal (-).



Insert a termination plug in the last unit on the data link.



ADDRESSING THE SYSTEM

When using the RoboColor III with a lighting controller, you must set the DIP-switch to the start channel, also known as the address, which is the first channel the controller uses to send instructions to the RoboColor III system.

For independent control, each RoboColor III system must have its own address and non-overlapping control channels. If two or more RoboColor III systems have the same address they will receive the same instructions and behave identically.

Martin mode: The RoboColor III uses 1 channel to communicate with the controller. The address may be any channel between 1 and 32.

DMX mode: The RoboColor III uses 5 consecutive DMX channels in tracking mode (DMX mode 1) and 6 consecutive DMX channels in vector mode (DMX mode 2). *The factory default is DMX mode 1.*

Example: 4 RoboColor III systems using DMX mode 1 may be addressed as follows:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
System 1 Address: 1					System 2 Address: 6					System 3 Address: 11					System 4 Address: 16				

Set a Martin address

- 1 Select an available address from 1 to 32.
- 2 Look up the DIP-switch setting on page 9.
- 3 Set the DIP-switch by flipping ON the pins found in step 2.
- 4 Set DIP-switch pins 7 - 10 to OFF.

Set a DMX address

DMX Mode	Color Control	DMX Channels	PL113 Jumper Setting
1 default	Tracking	5 Channels	No Jumper
2	Tracking/Vector	6 Channels	Pin 1 and 2

- 1 Select an available address from 1 to 507 within the lighting controller's range.
- 2 Look up the DIP-switch setting on page 9.
- 3 Set the DIP-switch by flipping ON the pins found in step 2.
- 4 Set DIP-switch 10 to OFF.

DIP-SWITCH TABLE

This table shows DIP-switch settings for channels 1- 511. To find a setting, locate the channel in the table. Follow the row to the left to find the settings for pins 1 through 5; follow the column to the top to find the settings for pins 6 through 9. A “0” indicates the pin is turned off and a “1” indicates the pin is turned on. *Pin 10 is always switched OFF when using the RoboColor III with a lighting controller.*

Example: The table shows the setting for channel 212 is 00101 for pins 1 - 5 and 0110 for pins 6 - 9. Pins 3, 5, 7, and 8 are set to on; pins 1, 2, 4, 6, 9, and 10 are set to off.

DIP-Switch Setting					#9	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
0 = OFF					#8	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
1 = ON					#7	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
					#6	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
#1	#2	#3	#4	#5																	
0	0	0	0	0		32	64	96	128	160	192	224	256	288	320	352	384	416	448	480	
1	0	0	0	0	1	33	65	97	129	161	193	225	257	289	321	353	385	417	449	481	
0	1	0	0	0	2	34	66	98	130	162	194	226	258	290	322	354	386	418	450	482	
1	1	0	0	0	3	35	67	99	131	163	195	227	259	291	323	355	387	419	451	483	
0	0	1	0	0	4	36	68	100	132	164	196	228	260	292	324	356	388	420	452	484	
1	0	1	0	0	5	37	69	101	133	165	197	229	261	293	325	357	389	421	453	485	
0	1	1	0	0	6	38	70	102	134	166	198	230	262	294	326	358	390	422	454	486	
1	1	1	0	0	7	39	71	103	135	167	199	231	263	295	327	359	391	423	455	487	
0	0	0	1	0	8	40	72	104	136	168	200	232	264	296	328	360	392	424	456	488	
1	0	0	1	0	9	41	73	105	137	169	201	233	265	297	329	361	393	425	457	489	
0	1	0	1	0	10	42	74	106	138	170	202	234	266	298	330	362	394	426	458	490	
1	1	0	1	0	11	43	75	107	139	171	203	235	267	299	331	363	395	427	459	491	
0	0	1	1	0	12	44	76	108	140	172	204	236	268	300	332	364	396	428	460	492	
1	0	1	1	0	13	45	77	109	141	173	205	237	269	301	333	365	397	429	461	493	
0	1	1	1	0	14	46	78	110	142	174	206	238	270	302	334	366	398	430	462	494	
1	1	1	1	0	15	47	79	111	143	175	207	239	271	303	335	367	399	431	463	495	
0	0	0	0	1	16	48	80	112	144	176	208	240	272	304	336	368	400	432	464	496	
1	0	0	0	1	17	49	81	113	145	177	209	241	273	305	337	369	401	433	465	497	
0	1	0	0	1	18	50	82	114	146	178	210	242	274	306	338	370	402	434	466	498	
1	1	0	0	1	19	51	83	115	147	179	211	243	275	307	339	371	403	435	467	499	
0	0	1	0	1	20	52	84	116	148	180	212	244	276	308	340	372	404	436	468	500	
1	0	1	0	1	21	53	85	117	149	181	213	245	277	309	341	373	405	437	469	501	
0	1	1	0	1	22	54	86	118	150	182	214	246	278	310	342	374	406	438	470	502	
1	1	1	0	1	23	55	87	119	151	183	215	247	279	311	343	375	407	439	471	503	
0	0	0	1	1	24	56	88	120	152	184	216	248	280	312	344	376	408	440	472	504	
1	0	0	1	1	25	57	89	121	153	185	217	249	281	313	345	377	409	441	473	505	
0	1	0	1	1	26	58	90	122	154	186	218	250	282	314	346	378	410	442	474	506	
1	1	0	1	1	27	59	91	123	155	187	219	251	283	315	347	379	411	443	475	507	
0	0	1	1	1	28	60	92	124	156	188	220	252	284	316	348	380	412	444	476	508	
1	0	1	1	1	29	61	93	125	157	189	221	253	285	317	349	381	413	445	477	509	
0	1	1	1	1	30	62	94	126	158	190	222	254	286	318	350	382	414	446	478	510	
1	1	1	1	1	31	63	95	127	159	191	223	255	287	319	351	383	415	447	479	511	

SWITCHING ON

Having connected and addressed all units, you may now start operating these from the lighting controller. The RoboColor III controller does not have a power switch, hence the unit is switched ON when mains power is applied.

NOTE: After switching on, the RoboColor III controller defaults to auto-detection mode in order to determine whether a Martin RS-485 or DMX 512 controller is connected. To ensure correct protocol auto-detection, switch the lighting controller on before switching on the RoboColor III controller.

If you are using a Martin controller then please refer to the controller's manual for further instructions. If you are using a DMX 512 controller then please refer to the DMX 512 protocol listed in appendix A. All remotely controllable functions are briefly described starting on page 11.

MASTER/SLAVE OPERATION

Master/slave stand-alone operation means that you can have one RoboColor III system (*master system*) acting as a controller when set to stand-alone mode. Additional systems (*slave systems*), which all need to have DIP-switch setting 1 (i.e. switch 1 = ON), can then be connected as if the master system were a normal lighting controller. All RoboColor III system will then perform the same programs fully synchronized. To ensure error free communication between the master and the slave systems you will have to insert a female XLR termination plug (120Ω) in the free input socket of the master system and a male XLR termination plug (120Ω) in the free output socket of the last slave system on the data link.

See page 20 for stand-alone DIP-switch settings.

Important! *Set one, and only one, RoboColor III system to stand-alone mode, otherwise damage may occur to the units.*

FOCUS

When the heads are in their final positions and powered on, you can adjust the focus objective to achieve a sharp beam.

CONTROLLABLE FUNCTIONS

This section briefly describes the various functions that can be remotely controlled via the serial data input on the RoboColor III system.

BLACKOUT

The default position of the color wheel is the blackout position. This means that no light is emitted from the unit until the wheel is moved from this position.

COLORS

Each RoboColor III head has 11 dichroic colors plus white, all placed on a color wheel. You can select these colors individually on any of the heads.

COLOR SPLIT EFFECTS

By placing the color wheel between two adjacent colors, color split effects can be achieved.

COLOR SCROLLING

When switching from one color to another you can reduce the speed to emphasize the scrolling effect.

COLOR STROBE

Strobe between two adjacent colors is achieved by first selecting a color and then activating the strobe. The color wheel will then strobe between the color selected and the next color on the wheel. E.G. to make a black/white strobe, select the blackout position on the color wheel and activate the strobe. You can adjust the strobe rate to a desired frequency.

STAND-ALONE

The built-in stand-alone programs can be activated from the controller.

SERVICE AND MAINTENANCE

GENERAL MAINTENANCE

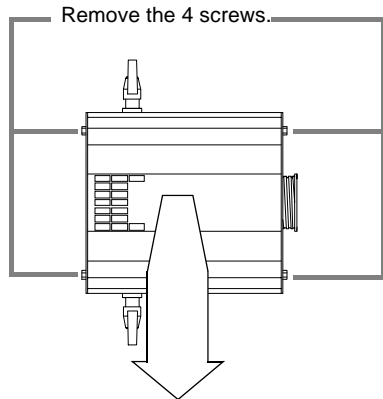
Warning! *Disconnect the system from AC power before removing any cover.*

To ensure optimum performance from the RoboColor III system, it is important to keep the heads clean. Dirty lenses and filters reduce the brightness and diffuse the beam. A fan blocked by dust may provoke overheating and cause the thermostat to cut out the lamp intermittently. Thanks to the mechanical construction of the RoboColor III, maintenance and cleaning can be done easily and requires no special tools.

The RoboColor III controller should not require any maintenance.

Clean the optics

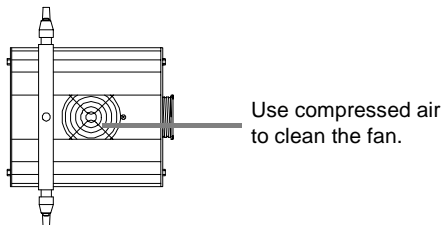
- 1 To access the optical components inside head, remove the screws as shown and then lift and remove the bottom cover.
- 2 Use only a clean, soft and lint-free cloth to clean the color filters. You may need to wet the cloth in a non-aggressive glass cleaning liquid if the filters are greasy. Use the same cloth to clean the focus objective.



Then lift and remove the cover.

Clean the cooling fan

- For adequate cooling of the head, the fan must be free of dust. Clean the fan if the air flow seems to be reduced. The fan is located at the top of the unit as per the following figure. It is easiest to clean the fan using compressed air.



LAMP REPLACEMENT

Warning! *Disconnect the fixture from AC power before removing any cover.*

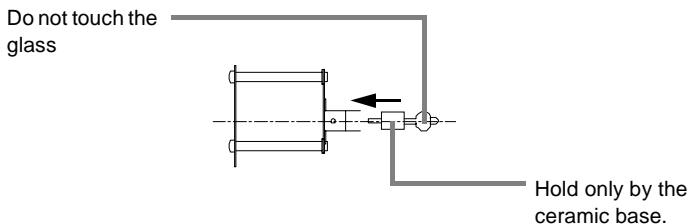
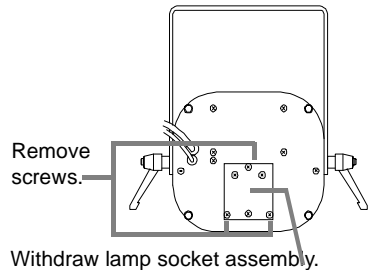
To reduce the risk of the lamp shattering, never exceed the average lamp life, listed below, by more than 25%. Disconnect the system from AC power if the lamp blows. Allow the heads to cool for 15 minutes before installing a new lamp.

The RoboColor III comes with the Martin 150 W Metal Halide lamp installed. The Osram HTI 150 and GE CSS 150 may be used as well. *Installing any other lamp may damage the fixture.*

	Martin 150 W Metal Halide	Osram HTI 150	GE CSS 150
P/N	97010107	97010108	97010104
Average Life	2000 h	750 h	1000 h
Color Temp.	5000K	6500K	5000K
Output	900 lm	1200 lm	900 lm

To change the lamp

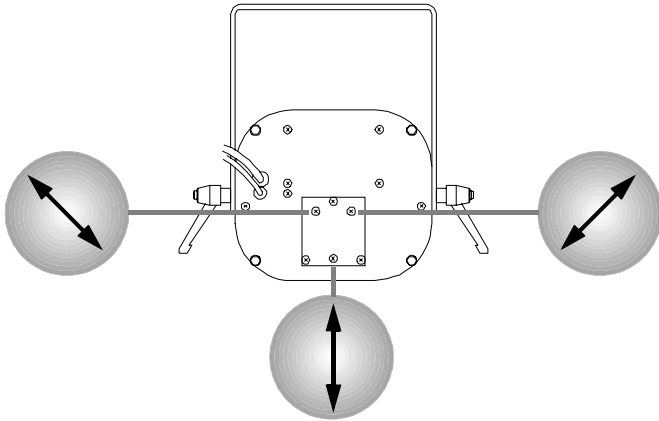
- 1 Remove the 3 thumbscrews that secure the access plate of the lamp socket assembly at the rear of the head and withdraw the lamp socket assembly.
- 2 Remove the old lamp from the socket.
- 3 Holding the new lamp in a clean cloth (do not touch the glass), carefully insert it firmly and squarely into the lamp socket.
- 4 If your fingers touch the glass, clean the bulb with a clean, lint-free cloth wetted with alcohol.
- 5 Replace the lamp-socket assembly and tighten the thumbscrews.



Optimizing the lamp for maximum output

The lamps are adjusted at the factory, however, fine adjustment of the lamp assembly may be necessary to achieve maximum light output and a minimum hot-spot.

- 1 The lamp housing access plate is held in place by 3 screws. Another 3 screws, shown below, are used to adjust the lamp-holder. Turning these clockwise pulls the lamp towards the rear of the lamp housing and vice versa.



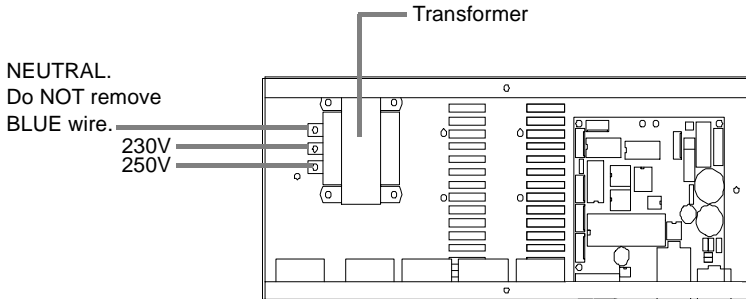
- 2 Select the 'Lamp Adjustment' DIP-switch setting by switching ON DIP-switch number 8 and 10, and apply power to the system. After finishing the reset the heads will produce white beams.
- 3 Move the head so the spot is projected on a flat surface. Focus the beam.
- 4 If there is an off-center "hot spot," the lamp is not centered in the reflector. Pull the hot spot into the center of the field with small adjustments of one or more of the screws. *Note: the Martin Metal Halide lamp is nearly as large as the reflector opening - very little side to side adjustment is possible or necessary.*
- 5 If the light is significantly brighter in the center of the field than it is at the edge, the lamp is too far forward in the reflector. Pull the lamp in by turning all three screws clockwise 1/4-turn at a time until the light is evenly distributed.
- 6 If the light is brighter around the edge than it is in the center, or if light output is low, the lamp is too far back in the reflector. "Push" the lamp out by turning the screws counterclockwise 1/4-turn at a time until the light is bright and evenly distributed.
- 7 If you have made large sideways adjustments, disconnect the fixture from AC power, allow it to cool, and remove the lamp assembly to ensure that the lamp is still placed squarely in the socket.

VOLTAGE SETTINGS

It is essential that the voltage and frequency setting of your RoboColor III system matches the mains supply. Otherwise damage may occur.

Warning! *Disconnect the fixture from AC power before removing any cover.*

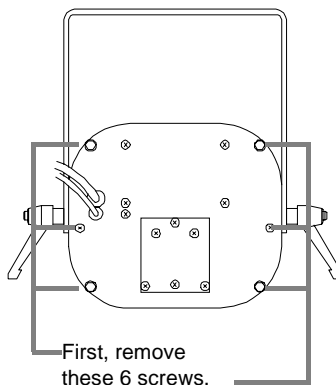
To change the controller voltage setting



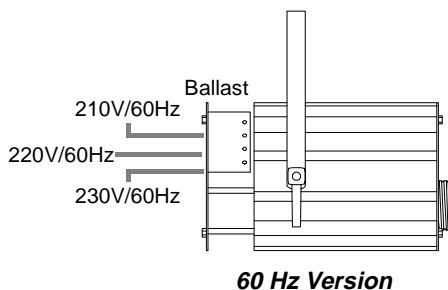
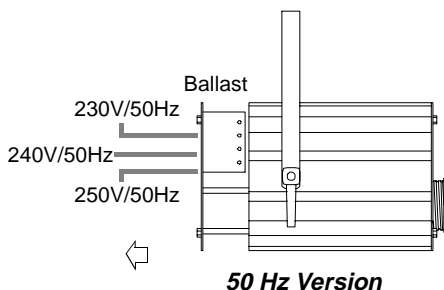
- 1 Access the transformer by removing the top cover.
- 2 On the transformer, move the BROWN wire to the correct voltage terminal. If the mains voltage is between 210 and 240 volt use the 230 volt tap. If the voltage is between 240 and 255 volt then use the 250 volt tap.
- 3 Re-assemble the unit.

To change the head voltage setting

- 1 Remove 6 screws from the back of the unit, as shown, and carefully withdraw the entire rear assembly.



- 2 On the ballast, move the **BLACK** wire to the correct voltage terminal. Use the following table to select the correct voltage setting.
- 3 Re-assemble the unit.



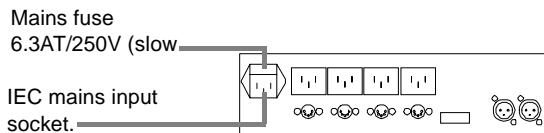
50 Hz Model		60 Hz Model	
Mains supply	Ballast tapping	Mains supply	Ballast tapping
210V - 235V	230V	200V - 215V	210V
235V - 245V	240V	215V - 225V	220V
245V - 255V	250V	225V - 235V	230V

FUSES

Should the RoboColor III system cease to work it may be due to a blown fuse. This section describes how to replace the fuses.

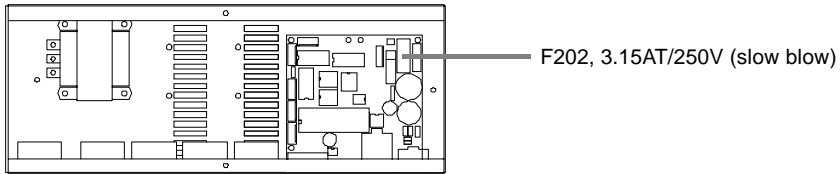
To replace the primary fuse

- The primary fuse is located inside the IEC mains input socket at the rear of the controller. Use a small screwdriver to pry open the fuse holder and replace the fuse with one of the same size and rating. The fuse rating is also printed on the serial number label.



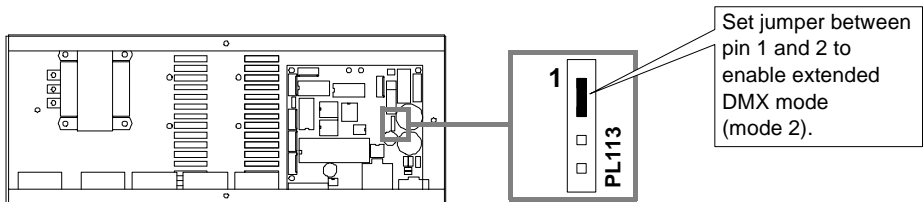
To replace the secondary fuse

- 1 Access the circuit board as described earlier.
- 2 Replace the fuse with one of the same size and rating.



DMX MODE

- You can switch between DMX modes 1 and 2 by setting or removing the jumper between pin 1 and 2 on PL113 as shown.



CPU SOFTWARE

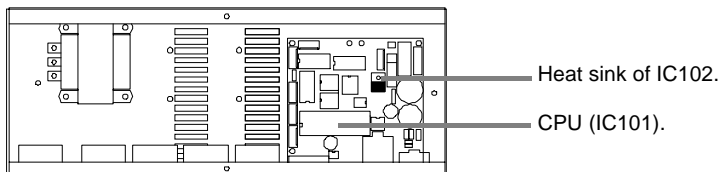
The RoboColor III control software can be updated when new features become available. Software can be supplied by your Martin dealer as P/N 62122026. Please check with your Martin dealer to find out if the software upgrade requires any mechanical changes to the RoboColor III system.

To update software

Important! To avoid damaging the CPU by electrostatic discharges, touch the heat sink of the voltage regulator (IC102) before and when removing or inserting the CPU.

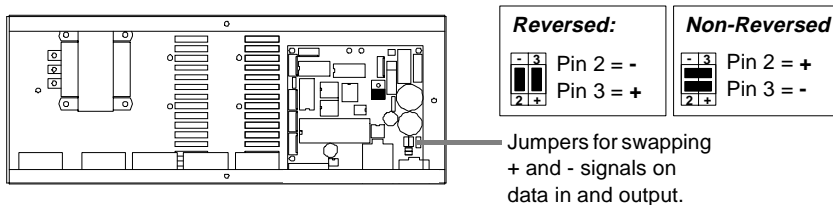
- 1 Access the circuit board as described earlier.
- 2 Remove the existing CPU (IC101) from the PCB.

- Place the new CPU in the IC socket, ensuring that all pins enter the socket correctly, and that the CPU is correctly oriented. Then press it firmly into the socket.



XLR PIN-OUT

If the RoboColor III is operated via a DMX controller, you can change the XLR pin-out to eliminate the need for phase-reversing cables. This can be done inside the RoboColor III controller by moving two jumpers as shown below.



DMX PROTOCOL

DMX channel		Value	Function
Mode 1	Mode 2		
1		0 - 74	Strobe, Stand-Alone, Reset No function
		75 - 138	Strobe on (Fast → Slow)
		139 - 170	Remote Stand-alone auto-trigger
		171 - 202	Remote Stand-alone music-trigger
		203 - 255	Reset
2 - 5 (Head 1 - 4)		0 - 15	Color Wheel (Head 1, 2, 3, 4) Blackout → White
		16 - 30	White → Color 1
		31 - 45	Color 1 → Color 2
		46 - 60	Color 2 → Color 3
		61 - 75	Color 3 → Color 4
		76 - 90	Color 4 → Color 5
		91 - 105	Color 5 → Color 6
		106 - 120	Color 6 → Color 7
		121 - 135	Color 7 → Color 8
		136 - 150	Color 8 → Color 9
		151 - 165	Color 9 → Color 10
		166 - 180	Color 10 → Color 11
		181 - 184	Color Wheel “Snaps” (Head 1 - 4) Color 11
		185 - 189	Color 10
		190 - 194	Color 9
		195 - 199	Color 8
		200 - 204	Color 7
		205 - 209	Color 6
		210 - 214	Color 5
		215 - 219	Color 4
220 - 224	Color 3		
225 - 229	Color 2		
230 - 234	Color 1		
235 - 239	White		
240 - 255	Blackout		
-	6	0	Color Speed Tracking
		1 - 255	Speed (fast → slow)

STAND-ALONE SEQUENCES

The following table provides a description of the stand-alone sequences selectable via the DIP-switch.

DIP-Switches ON	Step	Description
All		Protocol auto-detect (DMX512 / Martin RS-485)
2, 10		Stand Alone Sequence - Auto-trigger
1, 2, 10		Stand Alone Sequence - Music-trigger
2, 3, 10		Stand Alone Sequence - Auto-trigger (Head 1 - 4 same color)
1, 2, 3, 10		Stand Alone Sequence - Music-trigger (Head 1 - 4 same color)
8, 10		Lamp Adjust (color = white)
(1), 5, 10		Adjustment sequence #1
Toggle DIP-switch #1 to advance through sequence.	1	Color Adjust Position #1
	2	Color Adjust Position #2
4, 10		LED Chase - Auto-trigger
1, 4, 10		LED Chase - Music-trigger

TROUBLESHOOTING

Problem	Probable cause(s)	Suggested remedy
None of the RoboColor IIIs respond to the lighting controller.	The lighting controller is disconnected from the data link.	Connect the lighting controller.
	Use of incorrect cable between the controller and the first RoboColor III system on the data link.	If using a DMX controller with standard 5-pin output socket, remember to use a 5 to 3-pin adapter cable that swaps pin 2 and 3, between the lighting controller and the first RoboColor III system on the data link.
One or more of the RoboColor IIIs does not respond to the lighting controller or responds erratically.	Bad data link connection.	Check connections/cables in the data link and correct accordingly.
	Data link not terminated with termination plug.	Insert termination plug in the last unit on the data link.
	Incorrectly addressing (DIP-switch setting) of the RoboColor III controller.	Ensure that all lights are addressed in compliance with the lighting controller configuration.
	One or more RoboColor III controllers are set to stand-alone mode, thus transmitting on the link.	Set the DIP-switch on the RoboColor III controller to the correct address.
	There is no power to the RoboColor IIIs.	Apply power.
	The RoboColor III controllers have failed in the protocol auto-detection.	Switch off the RoboColor III controllers and then back on again. In general, switch on the lighting controller before the RoboColor III controllers.
	One of the units on the link is defective and disturbs data transmission.	By-pass one unit at a time until normal operation is regained. Do this by unplugging the XLR in and out connectors and then connect them directly together.

Problem	Probable cause(s)	Suggested remedy
No light emission from some or all RoboColor III heads.	The lamp is on but the color wheel is on blackout position.	Change color via lighting controller.
	No lamp inserted.	Insert lamp.
	Malfunctioning lamp.	Replace lamp.
	No lamp strike due to too low mains voltage.	Measure mains voltage and check against ballast and transformer tappings. Correct tappings if necessary.
	Head cables not connected to RoboColor III controller.	Connect cables. Remember to switch off the RoboColor III controller first.
The RoboColor III system appears to be completely dead (no reset when switching on).	Mains fuse blown.	Replace mains fuse.
	PCB fuse(s) blown.	Replace PCB fuse(s).
Lamp is cutting out intermittently.	Ambient temperature is too high.	Reduce room temperature.
	Fan speed is reduced due to fan covered by dirt and dust.	Clean fan.
	Incorrect ballast and transformer tappings.	Measure mains voltage and check against ballast and transformer tappings. Correct tappings if necessary.

SPECIFICATIONS

ELECTRICAL DATA (SYSTEM WITH 4 HEADS)

- Power consumption: 680 W
- Current consumption: 3.7 A @ 230 V / 50Hz
- Power factor: 0.8

COMPATIBLE LAMPS

- Martin 150 W Metal Halide..... P/N 97010107
- Osram HTI 150 P/N 97010108
- GE CSS 150..... P/N 97010104

PHOTOMETRIC DATA

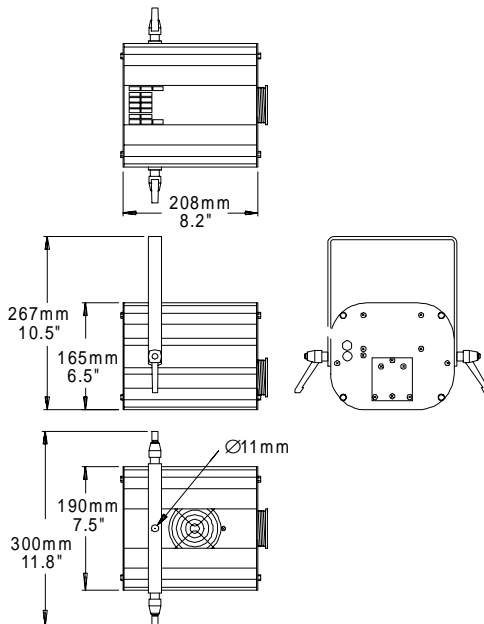
- Beam angle (standard): 17°
- Beam angle (optional): 25°

THERMAL DATA

- Max ambient temperature: 40° C

MECHANICAL DATA

- Weight (*single RoboColor III head*): 6 kg (13 lb)



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