Quick set up guide

Pixelpar 90 Architectural for software 1.04 issued June 2004

Please read the whole manual if you are unfamiliar with DMX based fixtures.

The following four pages are intended for people who are already fully experienced with dmx control of lighting fixtures.

Quick operating mode explanation

We have designed various operating modes developed to better harness the products functionality to provide you with multiple ways you can use the product to achieve the desired effect, with either DMX based controllers or through our video driven Pixeldrive package.

External control of all 3 channels on	**DMX**	this allows you to run the fitting with A full function desk.
Internal control of red green and blue	**MAN**	this function allows you to setup the unit Using the RGB internal control.
This function gives you RGB control But also access to some amazing Strobe oscillation patterns, at up to 28 frames per second.	**Max 2**	This mode gives access to just 10 channels of Control. The internal chase patterns, an RGB mix across all cells and a master intensity.
	Max 1	we advise using max 2.
	EX 61	we advise you use max 2.
Operating mode if you wish to run the Pixelpar without a controller	**EF M**	User interface access to the internal patterns. You must set this mode up before you can Control the device from the PROGram menu.
	EF D	we advise using max 2.

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Control tips

- Pressing the left hand MENU button acts as a reverse key and will take you back up the menu tree if you need to step back.
- MASTER/SLAVE mode as indicated to the right of the display, to control the unit normally set the device to slave. The master mode allows you to control the remaining products connected to a dmx line, without the use of a dmx external control. The factory default is set to slave.
- Remember that if you want the device to return to your setting you must press ENTER or upon power down/up the fitting will return to its previous setting.

Operation tips

- Stroboscopic lighting in places of public entertainment requires you to inform the audience with suitable signage ahead of using the device, this device can trigger up to 28 flashes per second.
- If the display disappears after a few minutes, just press the far left MENU button to switch it back on
- Because you may have rigged the unit in the air and cannot see the power and status indicators, there is an option in the personality menu to add a colour scroll on powering up the device to show the device has just been energized.
- This information relates to version 7 software, we continue to strive in improving the performance of our product range. We offer a free upgrade facility. We shall inform you if a new software upgrade becomes available.
- **See next page for User Interface Menu Structure.**

Pixelpar 90 Architectural version 1.07 operating mode, channel layouts.

MAX 2 Low channel use mode, with combined master intensity and access to RGB colour Mixing without cutting off the internal effects generator if activated

Ch1	All Red
Ch 2	All Green
Ch 3	All Blue
Ch 4	Chase 1 Effect (zero is generator turned off)
Ch 5	Chase 1 Speed
Ch 6	Chase 1 Xfade
Ch 7	Chase 2 Effect (zero is generator turned off)
Ch 8	Chase 2 Speed
Ch 9	Chase 2 Xfade
Ch 10	Combined master intensity (0-255)

User Interface Menu Structure

ADDR			DMX address from 1-512 channels
MODE	DMX		This gives you access to full external control without any extra functions
	MAN		Provides access to control the RGB levels of all cells through the internal or manual control
	EF D		Facility not used, max 2 is the operating mode we recommend with this product
	EF M		Effects generator under internal control via the program function
	EX 61		Facility not used, max 2 is the operating mode we recommend
	MAX 1		Facility not used, max 2 is the operating mode we recommend
	MAX 2		10 channel control, with the chase generator, combined master intensity and all cell control of red green and blue merged with the chase generators output
PERS	RES		Does not apply to the Pixelpar 90
	DISP		Display blanks if set to auto off (AOFF) status LED's remain illuminated
	DINT		Display intensity, allows you to adjust the brightness of the display
	RSET		Scrolls through colours at power on to show fitting is energized, you can switch this function on and off
	DATA		Toggles between master and slave mode, do not switch to master if you plan to control the device with a DMX lighting desk
	MINT		Does not apply to the pixelpar 90
MAN	RED		All cells controlled as red
	GREEN		All cells controlled as green
	BLUE		All cells controlled as blue
PROG	LEVL		Master level of both chase one and two (0-255)
See appendix B for chase pattern description	C1		
		EFF	Chase pattern select
		SPED	Chase speed
		XFAD	Adjusts from snap to cross fade between steps
	C2		
		EFF	Chase pattern select
		SPED	Chase speed
		XFAD	Adjusts from snap to cross fade between steps
INFO	CPU		Main software version number
	DISP		Display controller software version

Pixel par 90

User Instructions for software 1.04 June 2004

Solid state lighting by James Thomas Engineering using silicon based 1 watt light emitters.

You have purchased a product designed for an exterior use. We have thought about the life of this product, so that in the future you may wish to upgrade the LED board only, in years to come as light emitting diodes become increasingly brighter.

Latest generation electronics and software ensure that this product will have a lifetime lasting years. We are one of the only companies specializing in a well designed heat management system. This system ensures that the led output does not deteriorate through heat induced degradation.

We have also designed the electronics to work within the specifications of the LED's used. We do not overdrive the devices, nor are you able to. Overdriving the LED's may increase the output, but this substantially reduces the lifetime of the LED's. We want you to enjoy a truly 'plug and play' relationship with our range.

We work closely with the major lighting console manufacturers to ensure that the latest personalities are available for you to gain the most from the product. The latest personalities are posted on our website at www.pixelpar.com

Energy conservation is becoming a byword associated with this market sector. By using this product you are doing your bit for the environment. With up to a 90% reduction in both heat and power consumed you can connect up to 36 units in a 16amp line and not worry about setting fire to surface being illuminated. Energy consumption is also proportionate to how much you use the product, with 8 watts being the standby or blackout consumption and 125 watts if on full intensity.

The effects generator provides a range of the most common effects used. Our product features the ability to run two patterns at once. We have also included a colour mixing option (MAX2) giving you over 625 internal patterns and wash control. The effects generator is accessed by removing a disc on the back of the unit revealing the user interface.

It is possible to use the lighting console to produce even more complex effects. With DMX data speeds being slower than our limitations, you are able to strobe the internal patterns a lot faster than from an external control source. Please remember to warn your audience if you use the strobe patterns. The chase patterns relate to the same patterns available across the Pixel range.

We now offer Pixeldrive as an option, giving you ultimate freedom to explore the true potential of multiple Pixelrange products. The Pixeldrive is offered in either mac or pc formats. Rather than thinking of the lights as fixtures, this package has been designed with IRAD systems RADLITE video manipulation engine, which turns the fixtures into pixels. With ethernet/ USB to dmx converters, up to 30 dmx universes are possible from one pixeldrive system.

We hope you enjoy the range of possibilities this product has to offer. Should you wish to suggest an improvement, then please do contact us at R&D@jamesthomas.co.uk.

Product Overview

The Pixelpar 90 Architectural unit is manufactured in 4 different variants with 2 different beam angle options. Use this overview when choosing the model that suits your requirements.

Product code	Description
PA0090L	Pixelpar 90 Architectural housing with integrated control unit and PSU for interior use. IP40 rated with user interface on back of unit, male and female trailing DMX connectors and IP54 rated Ceeform on 1.5 metre tail. Fitted with safety wire.
PA0090LP	Pixelpar 90 Architectural housing with integrated control unit, PSU and plastic conduit elbow for high level applications. IP65 rated. User interface is situated behind an access cap. Client has to wire power and control into the unit and supply plastic trunking, which protects the wires and stops ingress of water, to source. Fitted with safety wire.
PA0090LA	Pixelpar 90 Architectural housing with integrated control unit and PSU with armoured conduit to termination box for low level applications IP65 rated. User interface is situated behind an access cap. Client has to wire power and control into the termination box.
PA0090LR	Pixelpar 90 Architectural housing with remote mounted control unit and PSU. IP68 rated. Designed for underwater use up to a depth of 1 metre. Client has to wire between housing and termination box with suitable cable up to a maximum of 15 metres apart in addition to mains input cable to box. Termination box has to be situated indoors and is rated at IP40. User interface, DMX male and female chassis mount connectors are fitted to the termination box.

In addition to the 4 variants there is the option to use 6 degree or 25 degree beam angles. If a wide angle beam is required then a bolt on adapter with wide angle lens can be supplied at additional cost.

Menu Access (See Menu Structure)

Overview

It is possible to set-up different operating modes by using the user interface (located behind a machined disc at the back of the unit which is retained using 6 screws and seals). This interface allows access to the different built in functions performed by the on-board microprocessor.

The four digit alpha numeric displays menu and function information. Four blue leds provide status information on power, data present, Master and Slave mode.

Pressing each of the four recessed switches located directly under the alphanumeric display performs access to the various functions.

The Pixelpar 90 Architectural is shipped, factory set to DMX address 001.

The alphanumeric display fades out after 30 seconds, the display will illuminate when the menu key is pressed once.

Computer menus

- **To gain access to the following menu pages, press [menu] once, then use the up or down arrow to select the desired page.**
- **Once you have scrolled to the desired menu page, press [enter] once**
- **scroll to the desired sub menu and press [enter] once**
- **To adjust the function, use the up and down arrows, then press [enter] once**
- **Press [menu] once to return to your previous position**

Note 1) MASTER / SLAVE MODE - **IMPORTANT**

When the Pixelpar 90 is in SLAVE mode, the unit receives and processes DMX data for its control. This mode would be used in normal operation.

When in MASTER mode, the Pixelpar 90 acts as a controller and transmits the 3 channels of DMX data generated by the internal effects generator. In this mode, other pixelpar 90's in the chain can create complex colour animation sequences. The chase patterns are standard across the Pixelrange, so patterns familiar to Pixelline 1044 are replicated in this product.

The standard DMX protocol is used for the data transmission so other lighting products using this control protocol can be driven by a Pixelpar 90 in Master mode.

When the Pixelpar 90 is running in master mode, ensure that no other controller (or other Pixelpar 90 in master mode) is connected to the data line otherwise data corruption will occur.

DMX transmission from the Pixelpar 90 only occurs, when the menu of the user interface is at the top of the tree, ie showing the DMX start address Axxx. When the menu system is entered to change operating parameters, DMX transmission ceases. The "Master" Pixelpar 90 will work in real-time so the desired effect can be selected using the user interface with the LED's of the master unit showing the desired effect. Once this is achieved, taking the menu back to the top will initiate DMX transmission and other lighting units connected to the data line will follow the Master unit.

Data connection

This product is capable of receiving USITT DMX512. Wiring code is listed below. PA0090L is fitted with XLR 5 pin trailing plug and socket the wiring configuration is as follows :-

Pin 1 Ground **Pin 2** Data – input **Pin 3** Data + input **Pin 4** not used
Pin 5 not used

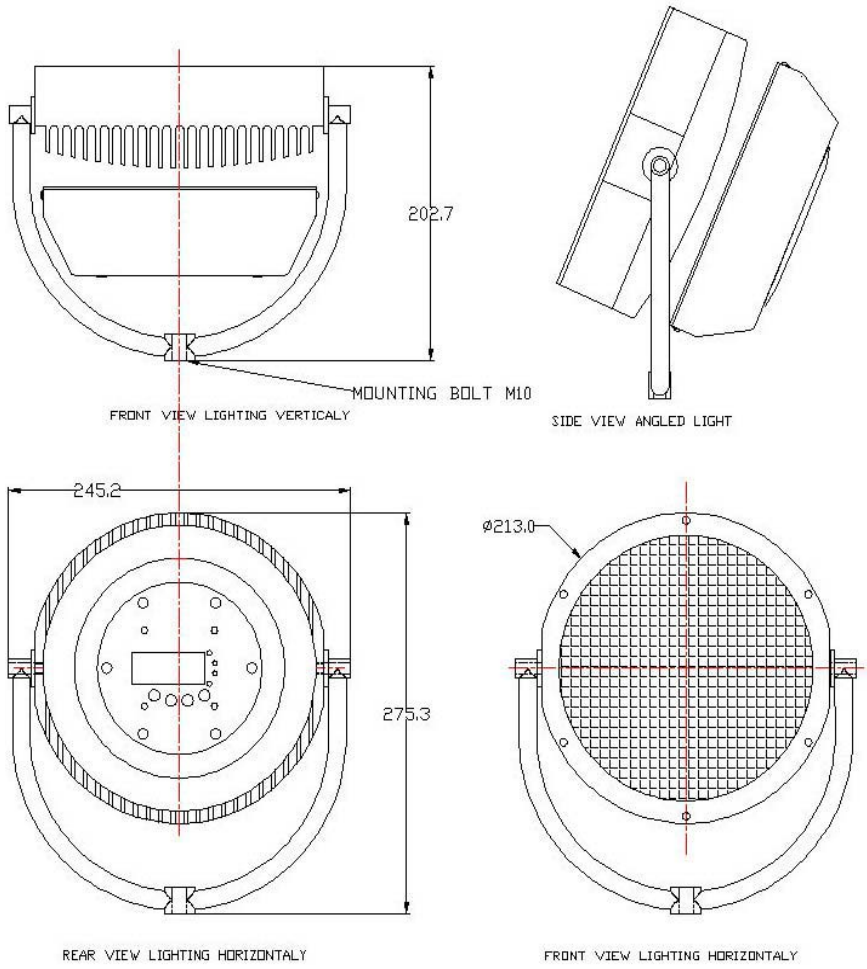
Others variants are to be hard wired by installation contractor.

Electrical information

Input voltage	**100 volts to 250 volts**
Power consumption	**Standby Power 8 watts** **Maximum Power 125 watts**
Power inlet	PA0090L is fitted with 16 amp 240 volt 2 pin and earth Male Ceeform connector. Others variants are to be hard wired by installation contractor.
Fuse	Anti-surge (T) 2 amp 20mm HBC S505 Series ceramic body (RS 265-1212)

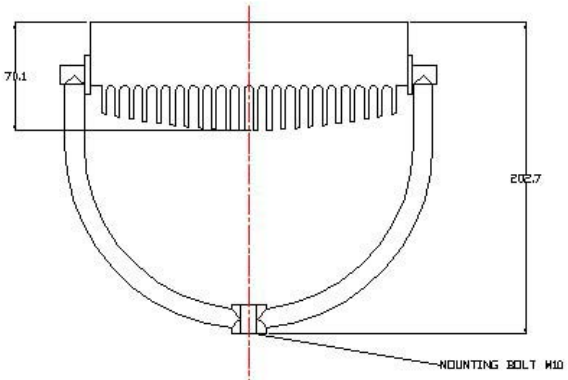
Mechanical information

General arrangement of PA0090L, PA0090LP and PA0090LA

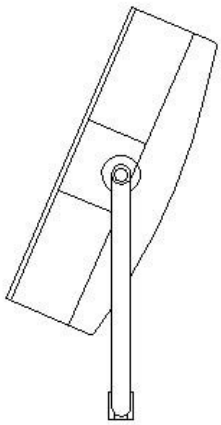


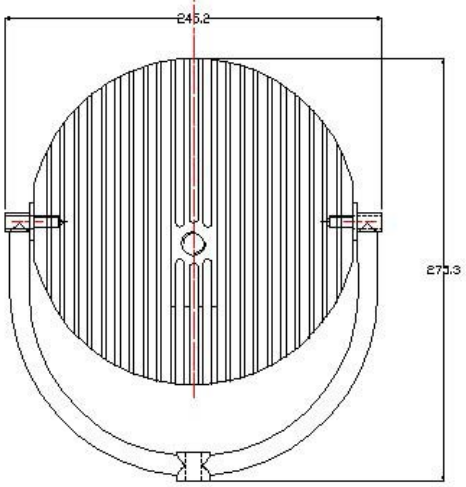
Weight	5.5 Kg
IP Rating	PA0090L is IP20 PA0090LP and PA0090LA are IP65
Paint finish	Polyester powder coat
Paint colour	Silver standard, White, Black, polished or anodized available to order.
Yoke	Supplied with yoke with 10mm hole fixing.
Beam angle	Standard unit supplied with 25 degree medium circular with the option of 6 degree at time of order placement
Wide angle adapter	Additional lens changes the standard 25 degree unit to a wide flood (option available at additional charge)
Egg crate louvring	Designed to reduce glare when viewed from the side (option available at additional charge)

General arrangement of PA0090LR

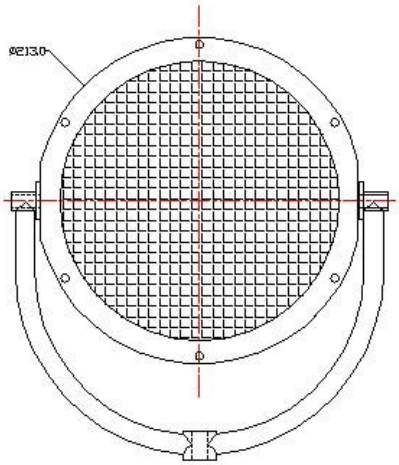


FRONT VIEW LIGHTING VERTICALY


SIDE VIEW ANGLED LIGHT



REAR VIEW LIGHTING HORIZONTALY



FRONT VIEW LIGHTING HORIZONTALY

Weight	4 Kg Head only	2kg Termination box
IP Rating	PA0090L is IP20	PA0090LP and PA0090LA are IP65
Paint finish	Polyester powder coat	
Paint colour	Silver standard, White, Black, polished or anodized available to order.	
Yoke	Supplied with yoke with 10mm hole fixing.	
Beam angle	Standard unit supplied with 25 degree medium circular with the option of 6 degree at time of order placement	
Wide angle adapter	Additional lens changes the standard 25 degree unit to a wide flood (option available at additional charge)	
Egg crate louvring	Designed to reduce glare when viewed from the side (option available at additional charge)	

Appendix A

Useful colour dmx values for recognised colour filters

Reference number	Name	BLUE DMX value	RED DMX value	GREEN DMX value
2	rose pink	34	255	52
16	Medium bast. Amber	16	255	101
7	pale yellow	18	255	142
8	dark salmon	0	131	23
10	medium yellow	0	255	139
13	straw tint	7	211	98
15	deep straw	0	255	95
17	surprise peach	4	184	53
19	fire red	0	114	60
20	medium amber	0	175	60
21	golden amber	0	165	38
22	dark amber	0	170	26
24	scarlet	0	44	3
25	sunset red	0	69	10
26	bright red	0	44	1
36	medium pink	8	99	27
39	pink carnation	8	75	27
46	dark magenta	2	42	2
48	rose purple	18	63	9
52	light amber	5	18	8
58	lavender	23	25	3
68	sky blue	15	4	10
71	tokyo blue	4	2	0
75	evening blue	10	0	3
79	just blue	10	1	3
88	lime green	0	58	46
90	dark yellow green	0	0	13
100	spring yellow	0	110	65
105	orange	0	160	42
106	primary red	0	46	0
113	magenta	1	56	0
115	peacock blue	10	13	34
116	medium blue green	7	0	22
118	light blue	8	0	13
119	dark blue	12	0	0
120	deep blue	7	1	0
121	lee green	0	38	40
122	fern green	0	31	48
124	dark green	0	0	35
126	mauve	8	28	0

Reference number	Name	BLUE DMX value	RED DMX value	GREEN DMX value
127	smoky pink	2	25	5
128	bright pink	8	64	0
131	marine blue	13	27	48
132	medium blue	15	0	8
134	golden amber	0	83	26
135	deep golden amber	0	64	7
138	pale green	2	34	26
139	primary green	0	2	17
140	summer blue	9	16	21
141	bright blue	12	0	15
142	pale violet	11	28	15
143	pale navy blue	7	9	13
148	bright rose	2	49	3
158	deep orange	0	101	19
161	slate blue	11	17	16
162	bastard amber	5	52	23
164	flame red	0	37	3
165	daylight blue	10	6	11
166	pale red	2	55	8
170	deep lavender	4	21	8
172	lagoon blue	8	0	15
174	dark steel blue	4	9	8
176	loving amber	2	32	10
179	chrome orange	0	33	12
180	dark lavender	7	7	2
181	congo blue	2	1	0
182	light red	0	22	1
183	moonlight blue	3	0	5
192	flesh pink	3	29	6
193	rosy amber	2	31	6
194	surprise pink	4	16	6
195	zenith blue	6	0	0
196	true blue	5	5	8
197	alice blue	6	4	4
198	palace blue	2	0	0
200	double ct blue	4	3	3
201	full ct blue	4	9	7
202	half ct blue	4	17	11
219	florescent green	5	14	20
322	soft green	5	9	29
323	jade	4	2	21
325	mallard green	1	0	6
327	forest green	0	0	4
328	follies green	9	64	4
332	special rose pink	4	49	1

Reference number	Name	BLUE DMX value	RED DMX value	GREEN DMX value
341	plum	4	36	12
343	special med. Lavender	8	6	0
344	violet	12	19	10
352	glacier blue	7	3	12
353	lighter blue	11	15	27
354	special steel blue	9	6	30
363	special medium blue	11	0	0
366	cornflour	10	13	13
151	gold tint	6	95	41
152	pale gold	7	102	41
153	pale salmon	9	105	43
154	pale rose	9	104	48
109	pale salmon	9	144	48
108	english rose	5	164	57
107	light rose	9	161	48
110	middle rose	10	119	40
111	dark pink	10	139	27
144	no colour blue	12	53	45
117	steel blue	17	14	38
147	apricot	3	120	43
102	light amber	0	107	55
103	straw	10	157	83
104	deep amber	0	206	94
101	yellow	0	177	105
63	pale blue	9	39	31

Appendix B.

Pixelpar 90 Effects Generator (Version 1.07 Software)

DMX Value	Effect
0-7	OFF
8-15	Primary/secondary 1 cell per colour Rainbow forward
16-23	Primary/secondary 1 cell per colour Rainbow reverse
24-31	White 1 cell blip forward
32-39	White 1 cell blip reverse
40-47	Double bouncing 1 cell white blip from centre to outer edge
48-55	50/50 duty cycle strobe White
56-63	50/50 duty cycle strobe Red
64-71	50/50 duty cycle strobe Blue
72-79	50/50 duty cycle strobe Yellow
80-87	50/50 duty cycle strobe Green
88-95	Pulse strobe White
96-103	Pulse strobe Blue
104-111	Rainbow strobe
112-119	RGB strobe
120-127	Primary / secondary chase
128-135	RGB Chase
136-143	Yellow / Blue chase
144-151	7 Colour roll

DMX Value	Effect
152-159	Yellow / Blue alternate cells
160-167	Red / Blue alternate cells
168-175	Miscellaneous chase 1
176-183	Miscellaneous chase 2
184-191	Miscellaneous chase 3
192-199	Miscellaneous chase 4
200-207	OFF
208-215	OFF
216-223	OFF
224-231	OFF
232-239	Static Red
240-247	Static Green
248-255	Static Blue

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