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UNPACKING

The carton should contain the following:-
1 x Q12
1 x Instruction manual

Either - (Rack Model)
Rack mount the Q12 into a 19 inch rack.

Or - (Desk Model)
Stand the Q12 on a suitable flat surface.

POWER CONNECTION AND SWITCHING ON

The Q12 requires a supply voltage of +18 Volts DC at 300mA. This can be provided either by a special Q12 power supply unit available from LightProcessor or by phantom power from certain types of dimmer packs, such as LightProcessor's Q Pack. See CONNECTIONS section later in this manual for details.

In case switches have been disturbed in transit, ensure that the switches in the top right corner of the desk are set as follows:-

Desk On/ D.B.O. is set to Desk On.
Blind is not selected.
Program/Run/Modify is set to Run.

The Q12 has no mains switch. When power is applied to the desk, the red Desk On LED lights.

LOW VOLTAGE OUTPUT CONNECTIONS

These are described later in the section CONNECTIONS.

MASTER SLIDERS

The GRAND MASTER slider controls the overall output of the Q12.
The CHASE MASTER slider controls the overall level of a chase.
The A and B MASTER sliders control the overall levels from the top and bottom banks of sliders.
For ease of operation it is usual to invert the operation of the B MASTER slider, so that it may be moved together with the A MASTER and not in the opposite direction. See OPTIONS section for details.

MANUAL OPERATION

With the Grand Master and the A Master set to full on and the B Master set to off, arrange the A sliders (top bank) as you require. The collective positions of the faders is called a preset. As the sliders move, the changes will be seen in the output LED's across the top of the desk and also in any lamps which are connected to the outputs. Set up another preset using the B sliders (bottom bank).

As you reduce the level of the A Master, the levels of the channels called by the A sliders reduce. As you increase the level of the B Master, the levels of the channels called by the B Master increase. Move the A and B Master sliders together to fade from one preset to the other.

CROSSFADE TIMER

The A and B Masters are connected to an internal fade timer which allows a constant fade in/out time, no matter how fast the master sliders are moved.

The fade time is adjusted by means of the RATE rotary switch and is stored by pressing the button marked FADE/CHASE. The minimum setting (anti-clockwise) gives the longest fade time, approximately one minute. The maximum setting gives instantaneous crossfade. This fade time range can be exchanged for a fade time range of 0-10 seconds (see OPTIONS section).

DESK BLACKOUT

Selecting DBO disables all outputs from the Q12. The red LED flashes when DBO is active. Switch back to Desk On to enable the outputs.

FLASH BUTTONS

Each channel has a flash button which allows the channel to be brought to 100% for as long as the button remains pressed. Only the Grand Master has priority over the flash buttons.

•SCENES•

The Q12 can store 120 static scenes of any combination of the twelve channels and their associated levels. Scenes are stored across ten pages of memory. Each page of twelve scenes is selected by means of the rotary PAGE selector switch. Each scene within the page is accessed, either by its associated slider or its flash button.

TO PROGRAM A SCENE

1. Select PROGRAM. *Note that both the SCENE and CHASE LEDs flash.*

2. Press the SCENE button *and the CHASE LED goes off.*

3. Move the A sliders to the desired levels.

4. Set the rotary page selector as required and press one of the twelve 'flash' buttons *to select a memory page and a position on the page where the scene will be stored.*

5. Either
Program another scene by moving the sliders, selecting the page and pressing the 'flash' button

Or
Exit programming mode by selecting RUN.

TO MODIFY A SCENE

1. *Having already recalled the scene,* select MODIFY. *The SCENE LED flashes.*

2. Press SCENE.

3. Select the scene using the rotary page switch and the appropriate 'flash' button.

4. Change the level in any channel by moving the appropriate A slider to the same level as that channel has within the scene you are modifying. *The channel will 'lock on' and follow the slider movements, allowing you to change the level of the channel.*

5. Select RUN. *The modifications have been saved.*

BLIND

The BLIND switch is normally used in conjunction with PROGRAM/RUN/MODIFY. Its function is to allow the Q12 to be operated without having any effect on the pattern being output. It is most often used to amend scenes to turn off a selected channel in the event of a lamp failure.

If BLIND is selected prior to MODIFY, the output levels of the A sliders are held while modifications are being made. It also becomes unnecessary to bring a slider to the same level as the sub-master channel before modification occurs.

All programming/modification is done using the A sliders but these could be forming a part of the output effect. In such an instance BLIND is used to hold the outputs from the A sliders while they are adjusted during the programming/modification. Note that any settings in the A sliders will be output, when you return from PROGRAM or MODIFY to RUN.

Remember to de-select BLIND after use.

SUB-MASTERS

Whereas, in manual operation the B sliders control the level of individual channels, in scene mode they act as sub-masters and recall pre-programmed scenes. Twelve scenes may be recalled at any one time. Press the SCENE button so that the LED lights, then operate the B sliders to recall scenes at the desired level. Alternatively, scenes may be recalled at 100% of their programmed levels by means of the flash buttons. See OPTIONS section for details of how to set up the flash buttons to recall scenes.

A slider must be returned to its zero position before it can recall a scene in the same position from another page.

Whenever scenes from two or more pages have been selected, the MIX LED flashes.

COPYING SCENES

Scenes (sub-masters) may be copied to other positions within the ten pages by using the COPY TO button.

1. Hold down the COPY TO button and select MODIFY.

2. Release the COPY TO button.

3. Select the page from which you will copy.

4. Hold down the 'flash' button of the scene to be copied, press COPY TO and release both buttons together.

5. Select the page to which you wish to copy and press the 'flash' button of the new location.

6. Select RUN *when you have finished copying.*

PILE ADD

Pile add copies a number of scenes (sub-masters) into one sub-master location, storing the highest value copied into each sub-master channel.

1. Hold down the COPY TO button and select MODIFY.

2. Hold down the ‘flash’ button of the location to which you wish to copy.

3. Press each of the ‘flash’ buttons from which you wish to copy.

4. When finished, select RUN.

•CHASES•

The Q12 can store twelve moving sequences (chases) along with the level applied to each channel during programming. The chases are stored under the flash buttons. Two chases may be run simultaneously. A total of 192 chase steps can be stored with a maximum of 64 steps in any one chase.

PROGRAMMING A CHASE

1. Select PROGRAM. *Note that both the SCENE and CHASE LEDs flash.*

2. Press the CHASE button *and the SCENE LED goes off.*

3. Select one of the twelve chase memories by pressing one of the 'flash' buttons.

4. Move the A sliders to the desired levels, then press the CHASE button to enter the selection as a step in the chase.

5. Repeat step 4 for each chase step.

6. Select RUN *when all the desired steps have been entered.*

RUNNING A CHASE

1. Select RUN.

2. Press CHASE.

3. Press the 'flash' button in which the chase is stored *and the chase starts to run.*

4. Repeat steps 2 and 3 with a different flash button to run a second chase or with the same flash button to stop the first chase.

5. Press CHASE twice to stop one or both running chases.

PROGRAMMING A SEQUENCE OF SCENES (SCENE CHASE)

1. Press the SCENE button.

2. Select PROGRAM. *Note that both the SCENE and CHASE LEDs flash.*

3. Press the CHASE button *and the SCENE LED goes off.*

4. Select one of the twelve chase memories by pressing one of the 'flash' buttons.

5. Recall a scene, using the page select rotary switch and the B sliders.

6. Press the CHASE button *to enter this scene into the chase sequence.*

7. Recall further scenes and enter them in the same way until the sequence is complete.

8. Select RUN and press SCENE to exit.

A chase will always start to run at its programmed speed. This speed may be varied during the chase run using the RATE rotary switch, so long as the chase is 'live'. Clockwise is fast; anti-clockwise is slow. The 'live' chase is the one most recently set running.

When the RATE switch is at its minimum setting (anti-clockwise), audio mode is selected. A chase will now advance according to the internal microphone or to an audio input via the audio jack socket. Note that inserting a jack plug into the audio socket disconnects the internal microphone.

The next setting to AUDIO is BUMP. Each press of the BUMP button will advance the chase one step.

STOPPING A RUNNING CHASE

Stop a running chase and save any speed changes by pressing CHASE and then the flash button under which the chase is stored. Alternatively, one or two running chases may be stopped by pressing the CHASE button twice but this latter method does not save any speed changes.

•DMX AND THE Q12•

PREPARING THE Q12 FOR DMX MAPPING

If you wish to software patch the Q12 to DMX dimmers or intelligent luminaires capable of working with DMX, it will first of all be necessary to clear any previous programming including the default DMX map.

There are three power-up options on the Q12 which are relevant here.

- Flash button no. 8 completely resets the Q12, resets the DMX map to the default setting and disables DMX programming.

- Flash button no. 7 functions as a toggle switch to enable/disable DMX programming.

- With DMX programming enabled hold down flash button no. 2 during power up to wipe any previous DMX map.

It is therefore necessary to establish that DMX programming is enabled and then to wipe any existing DMX mapping before starting to program a softpatch.

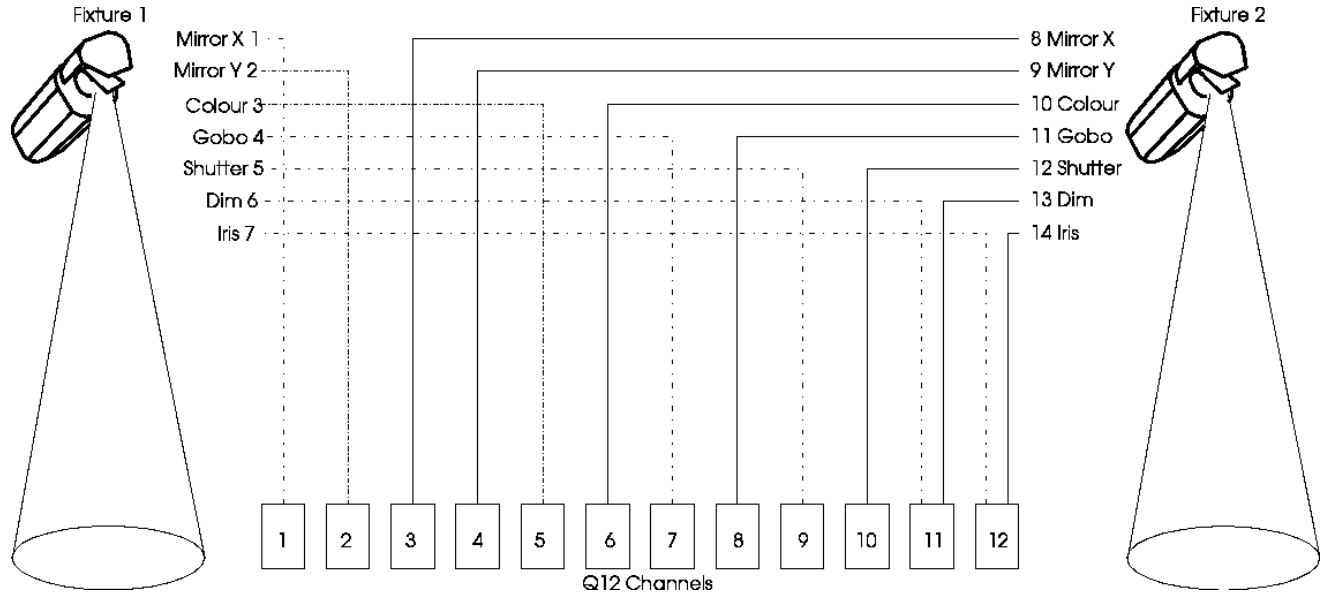
INTELLIGENT LIGHTING

With intelligent lighting it will be necessary to control some or all of the following features depending on the model.

1. Mirror X axis
2. Mirror Y axis
3. Colour change
4. Gobo change
5. Strobe speed
6. Dimming level
7. Iris

The diagram below shows one way in which the 12 channels of the Q12 can control the 14 channels presented by two lighting fixtures like the above example. The two fixtures would use the DMX start addresses 1 (for the first channel of fixture 1) and 8 (for the first channel of fixture 2).

Additional fixtures could be added to the example and would need to be given the start address 1 or 8, in order to determine whether they would function exactly like fixture 1 or fixture 2. Note that channel 11 from the Q12 is controlling DMX channels 6 and 13; the Q12's channel 12 is controlling DMX channels 7 and 14.



A Q12 connected to seven-channel intelligent fixtures. The dimmer channels and the iris channels are softpatched, allowing twelve desk channels to control fourteen fixture channels.

WORKING THROUGH DIMMER PACKS

Whereas mains power is likely to be supplied directly to intelligent lighting fixtures, pinspots, PAR cans, etc. will be fed from a dimmer pack. Using a DMX dimmer like the Q Pack, it is possible to allocate DMX addresses to 72 channels of lighting. The DMX start address is selected on the DIL switch on the front of the Q Pack. Since the Q Pack is a six channel device, it outputs in groups of six channels, starting with the channel selected on the DIL switch, e.g 1-6, 7-12, 13-18, 19-24 etc.

MAKING A SOFTPATCH - DMX MAPPING

The twelve analogue output channels can be transmitted as DMX data to 72 separate DMX channels. This process is known as DMX mapping. Normally channels 1-12 are repeated sequentially throughout the 72 DMX channels (12 channels per page).

To map a DMX channel, it is necessary to identify the page in which that channel is situated and where on that page it can be found. This is more easily achieved if any previous DMX mapping is cleared from memory (see Options section).

Note that DMX channels	1-12	appear on page	1
"	13-24	"	2
"	25-36	"	3
"	37-48	"	4
"	49-60	"	5
"	61-72	"	6

Therefore...

DMX channel	4	is page	1	flash button	4
"	15	"	2	"	3
"	34	"	3	"	10

MAPPING DMX CHANNELS

To move a DMX channel to another fader...

1. Hold down flash button 7. Disconnect the power. Reconnect the power. Release button 7. *This enables DMX mapping.*

2. Select BLIND. To move channel 1 to fader 2, press flash button 1 and then flash button 2. De-select BLIND.

3. Moving fader 1 now does nothing. Moving fader 2 brings on DMX channels 1 and 2.

4. Hold down flash button 7. Disconnect the power. Reconnect the power. Release button 7. *This disables DMX mapping.*

To switch off a DMX channel...

1. Hold down flash button 7. Disconnect the power. Reconnect the power. Release button 7. *This enables DMX mapping.*

2. Select BLIND. To switch off channel 25, for example, select DMX 25 (page 3, channel 1) by turning the page selector to page 3 and pressing flash button 1. De-select BLIND.

3. The result of this is that moving fader 1 gives no output when the page selector is set to page 3, i.e. DMX 25.

4. Hold down flash button 7. Disconnect the power. Reconnect the power. Release button 7. *This disables DMX mapping.*

To switch on a channel which has been switched off...

1. Hold down flash button 7. Disconnect the power. Reconnect the power. Release button 7. *This enables DMX mapping.*

2. Select BLIND. To switch on channel 25, set the page selector to page 3 and press flash button no. 1 twice. De-select BLIND.

3. Fader no. 1 on page 3 noe has control of the channel.

4. Hold down flash button 7. Disconnect the power. Reconnect the power. Release button 7. *This disables DMX mapping.*

•OPTIONS•

Various user options may be installed, using the 'flash' buttons. To implement, remove the power, hold down the appropriate 'flash' button and restore the power.

1. Program Security. Software locks the Q12 and prevents unauthorised programming. Each time this option is selected, 'locked' becomes 'unlocked' and vice versa.

2. Format DMX Map. Clears any DMX mapping from the memory.

3. Invert B Slider. Each time this option is selected, the direction of operation of the B Master slider is inverted/returned to normal. When performing manual crossfades most people find it easier to work with the B slider inverted.

4. Warm Start. On power-up the last selected chase runs automatically.

5. Scene Flash. Allows scenes to be instantly recalled to 100% of their programmed values using the flash buttons. The sliders continue to function as normal.

6. Shortened Crossfade Times. Selecting this option gives a cross fade time between 0 and 10 seconds. Selecting the option a second time returns to the longer crossfade values.

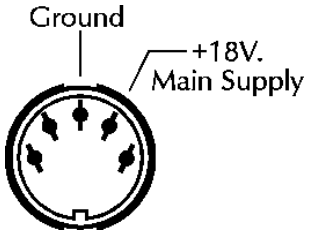
7. Allow/Prevent DMX Mapping. Alternately locks/unlocks the DMX mapping utility.

8. Full Reset. Completely resets the Q12, empties all memories and re-installs the default DMX map.

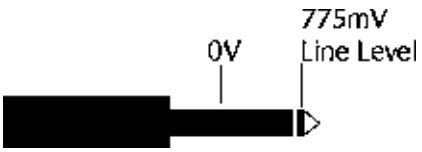
•CONNECTIONS•

POWER IN

The Q12 requires a power supply of +18V. DC at 300mA.
This may be delivered by:-
•A Q Range power supply unit, either through the Euro socket on the top edge of the Q12 (where fitted - centre pin positive) or through the 5-pin DIN PSU input socket on the back.
•A phantom supply from TWO QPacks into the 8-pin analogue output sockets on the Q12.

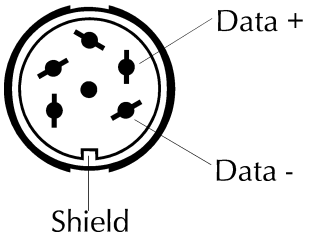


AUDIO INPUT

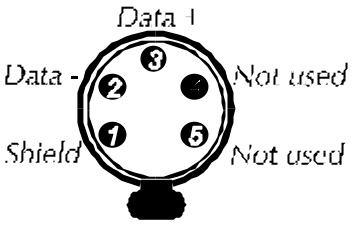


DMX OUTPUT

Depending on the version DMX output connection are made either via a 5-pin 240° DIN plug wired as shown or via a 5-pin XLR wired screen to pin 1, data negative to pin 2, data positive to pin 3. Pins 4 and 5 are not used.



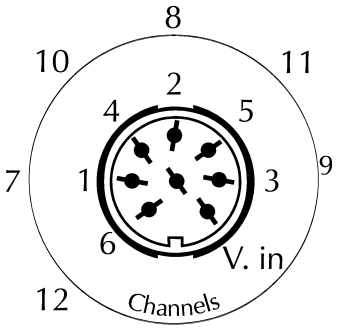
Old Version



Current Version

ANALOGUE OUTPUT

Analogue output connections are made via two 8-pin 270° locking DIN plugs wired as shown below.



Centre Pin
= Ground