coemar

manual system 12 plus

Index

1. General characteristics

Manual controls:

- **ON/OFF** switch at rear
- 2 **presets** with 12 channels on each
- 12 channel **flash** buttons
- 2 **master preset** sliders
- **A** and **B flash masters**
- variable time delay on the **master preset**
- **crossfade** ability
- individual channel output level leds
- individual channel **preview** leds
- **flash** buttons can be inhibited
- **72** channels of **DMX patching**
- **patch** states can be locked
- indicators for: • power on
    - **DMX 512** output
    - correct audio input level
    - **patch** activated
    - channels can be set to swtich only for motorised or strobe effects
    - **flash** buttons disenabled

Effects generated:

- 1 **master effects** slider
- 2 buttons for manual advancing of sequential/chase effects
- Four 4 channel chase effects (single zone)
- Eight 6 channel chase effects (single zone)
- Twelve 12 channel chase effects (multi zone)
- variable program step speeds
- chases can be stepped in sound-to-light mode, manually, at variable speed or crossfaded
- **super auto** function for completely automated light shows in the absence of an operator
- output monitoring

tas Colore dedicated effects:

- sound-to-light selection mode or random selection mode for colours
- 2 sliders assignable to a single **DMX** channel, particularly useful for control over frost, and colour selection
- 1 **master** slider for strobe effect

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manual system 12 plus DMX 512

mode/transfer
- full
- crossfade
- audio
- manual
- direct
- super auto
- standby

preset A

preset B

mode/transfer
- full
- crossfade
- audio
- manual
- direct
- super auto
- standby

preset A

preset B

output 1 2 3 4 5 6 — flash

output 7 8 9 10 11 12 — flash

100 90 80 70 60 50 40 30 20 10 0

frost strobe color effects

random music — color

master A — master B

flash master

effects generator

delay time(sec.)

18 36 54 70 90 108 126 144 162 180 200

selector
- DMX 512 out
- audio in
- +20 V DC

speed

dmx patch
10 20 30 40 50 60

- flash inhibit
- DMX patch
- strobe setting

transfer

trigger

preview 1 2 3 4 5 6 7 8 9 10 11 12

- full
- crossfade
- audio
- manual

mode
- single zone
- multi zone
- super auto
- preview
- clear all

2. Control panel functions

power button	Powers up the **manual system 12 plus**.
preset A slider	Controls the overall output level on each channel in **preset A**.
preset B slider	Controls the overall output level on each channel in **preset B**
master A/B slider	Controls the overall output level dictated by the **preset A** and **preset B** sliders
delay time potentiometer	Allows an automatic time delay to be assigned to the **master preset**; even in crossfades
flash button	Allows individual channels to be flashed at full, irrespective of any **preset** level.
flash master buttons	Allows all 12 channels to be flashed to the maximum level determined by **presets A** and **B**, overriding the levels set by the **master A** and **B** sliders. Also allows the checking of individual channels in the **DMX patch** function.
output leds	Monitor channel output levels and also dmx channel assignments in the **DMX patch** function.
mode button	Sets various parameter functions in effects generator: **single zone:** the effects generator (**selector**) indicates 4 or 6 channel chases **multi zone:** the effects generator (**selector**) indicates 12 channel chases **super auto:** the effects generator indicates programs being run automatically **preview:** displays via the **preview** leds the output states **clear all:** interupts all program creation or outputs
rotating selector switch	Allows the selection of **4**, **6** or **12** channel programs
speed potentiometer	Adjusts the step speed in programs
trigger button	Selects the various operating modes for selected programs **full:** 2 states, on and off **crossfade:** fade out/in effect **audio:** sound-to-light, able to be used with **full** and **crossfade**. **manual:** manual, able to be used with **full** and **crossfade**, activated by **+1** or **-1.**
preview leds	Monitors the effects generated, allows preview monitoring prior to live action. Displays the channel assignments created in **DMX patch**.
transfer button	In combination the **mode/transfer** buttons activates the programs created by the **effects generator**; the two buttons must be pressed simultaneously
effects slider	A general master over the effects generated and output.
mode/transfer button	Combined with the **transfer** button, it activates the programs created by the **effects generator**; the two buttons must be pressed simultaneously It also allows the manner in which the effect steps to be altered **full:** 2 states, on and off **crossfade:** fade out/in effect **audio:** sound-to-light, able to be used with **full** and **crossfade**. **manual:** manual, able to be used with **full** and **crossfade**, activated by **+1** or **-1.** **direct:** direct transfer from the effects generator **standby:** halts the current effect being transferred until **mode/transfer** is pressed again.
DMX patch leds	Display the assignments of the dmx channels in the **DMX patch** function.
+1 -1 buttons	Steps through the effect generated in **manual** mode, also allow, in **patch** mode, the assigning of channels to the **frost** and **strobo** sliders, their activation is indicated by the switching on of their respective leds.
color button	Generates an automatic change in the output level of the channels assigned via the **DMX patch** function to the **color** slider. The effect can be in a **random** mode or in sound-to-light (**music**) mode Also allows in **patch** mode the assigning of any channel to the **color** slider, activation is indicated by the switching on of the led.
frost and **color sliders**	Useful sliders for assigning of particular channels, such as motorised projectors, particularly useful for the control of frost filters and colourchange channels.

strobe slider	Useful sliders for assigning of particular channels, such as motorised projectors, particularly useful for the control of strobes. The slider is automatically assigned when the dip-switches **strobo 1/6** and **7/12** are set. It will trigger the strobe effect on these particular effects. **TECHNICAL NOTE**: the strobing function is active in the range 150 to 245 on any **dimmer** channel, which will operate normally in the range 0 to 125.
function leds	**DMX 512 out:** indicates that **DMX 512** is being ouput **audio in:** audio input signal monitor **+ 20 V DC:** indicates power supply presence **flash inhibit: flash** buttons are disenabled **DMX patch: patch** is activated **strobe setting:** motorised fittings strobe channel facility is activated

3. DMX 512 signal connection

manual system 12 plus outputs via an XLR 5, 72 channels of **DMX 512**; varying the output via the sliders and command buttons from 0 to 255, according to the international standards for digital distribution of **DMX 512**, as regulated by the USITT (U.S Intitute of Theatre Technology)
All equipment which accepts this digital control signal is controllable via the **manual system 12 plus**.

Connection between the **manual system 12 plus** and any **DMX 512** conforms to this standard:
Output via the XLR5 outlet on the **manual system 12 plus:**
Pin 1= Ground (GND)
Pin 2= DATA -
Pin 3= DATA +
Pin 4= Optional -
Pin 5= Optional +

If cabling and connection components are required, they can be manufactured from the following **coemar** components:
ME 1344 (XLR 3 plug)
**ME 1230** (XLR 3 socket)
ME 4966 (XLR 5 plug)
ME 4965 (XLR 5 socket)
CV 4158 (2 core, screened Ø 0,5 cable, per metre)

Connection should be via 2 core screened cable which meets the above mentioned standards.
Screening should always be connected to pin 1 of the XLR and should be totally insulated from the metal housing, polarity should be maintained.
An example of **DMX 512** connection:
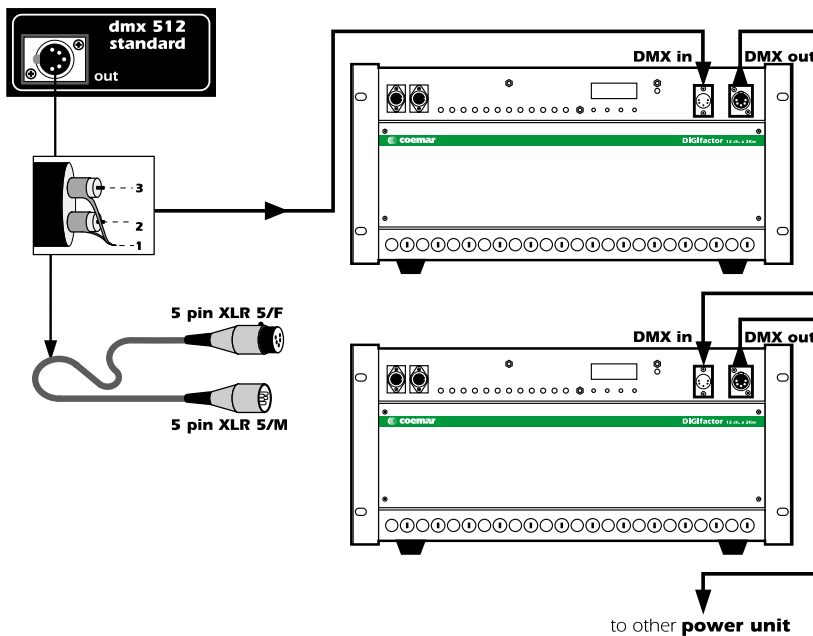
If the equipment receiving the **DMX 512** signal from the **manual system 12 plus** uses an XLR 3 connector, simply leave pins 4 and 5 unconnected, this being internationally acceptable in a **DMX 512** control system.
All **DMX 512** controlled equipment, whether dimmers or motorised projectors, require the correct **DMX** address to be set on them in order to operate via the **manual system 12 plus**.
Consult your respective equipments manuals for instructions in setting **DMX 512** addresses.

4. DMX address setting (installer option only)

The **manual system 12 plus** outputs only **DMX** digital control signal.

manual system 12 plus outputs **72** channels of **DMX 512**, assignable to the controllers on the front panel via the **DMX patch**.

The controller is normally sold in a standard configuration whereby **DMX** channels from **1** to **12** are controlled from sliders **1** to **12**, any alteration to this setting will result in the **DMX patch** led being set to on.

This assigning of channels **1** through **12** is repeated identically for channels **13** to **72**. If you wish to alter the setting, you will need to utilise the **DMX 512 patch** function, which is explained in detail in section 10 of this manual.

Prior to being operated, the unit being controlled will need to be set to the address **DMX 1** to respond correctly to the first **12** channels being output by the **manual system 12 plus.**

Depending upon the number of channels being used by this first device, subsequent **DMX** addresses should be set in multiples of **3**, **4 6 8** or **12**.

The following two examples will provide an indication of how the user may set the address for particular fixtures using either a digital display or dip-switches.

4.1. Addressing via dip-switches

Respective dip-switches have a unique numerical value, you will need to set to **ON** only the switch which has the value 1 (for address **DMX 1**) to ensure correct communication between fixture and the first channel of **DMX 512**.

Depending upon the number of **DMX** channels required, subsequent settings should be multiples of **3**, **4**, **6**, **8**, or **12**.

The following diagram shows that only dip-switch number **1** should be switched to **on**.

Multiple dimmer racks or fixtures can be controlled in parallel, for further information, refer to the units respective manuals.
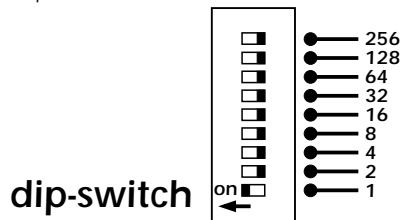
4.2. Addressing via a digital display

The first fixture should be addressed as **DMX** number **1**.

Depending upon the number of **DMX** channels required, subsequent settings should be multiples of **3**, **4**, **6**, **8**, or **12**.

The following diagram shows a connection between a **manual system 12 plus** controlled and a **coemar DIGIfactor 12 ch** dimmer rack.

Multiple dimmer racks or fixtures can be controlled in parallel, for further information, refer to the units respective manuals.

After connection to the **DIGIfactor 12 ch**:

1- Press the **+** or **-** buttons until the display shows **DMX A001**, the display panel characters will flash to indicate the address has not been recorded.
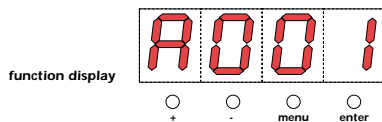
2- Press the **enter** button to confirm your selection; the display panel characters will cease flashing and the dimmer will now respond to **DMX** channel **1**.
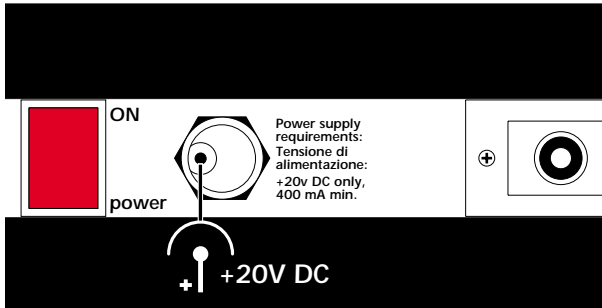
5. Power supply

To power up the **manual system 12 plus** connect a +20V DC power supply to the socket at the rear of the controller (minimum amperage 400 mA.)
The power supply's plug should be compatible with the socket at the rear of the **manual system 12 plus**:
Power supply plug dimensions: Ø internal 2,1mm, Ø external 5,5mm.
When connecting to a 230V 50/60 Hz outlet, we recommend the use of a **coemar** power supply, available from our distributors as item code:
FO644/2 (for mains power 230V 50/60Hz)

6. Powering up

After having connected the correct power supply to the **manual system 12 plus**, as described in section 5, power the controller up by switching the **power** button at the rear of the unit to the **ON** position.

The **+20 V DC** led will come on to indicate that the **manual system 12 plus** has been powered up correctly.

⚪ DMX 512 out	⚪ flash inhibit
⚪ audio in	⚪ DMX patch
🔴 +20 V DC	⚪ strobe setting

7. Connecting audio input and adjusting sensitivity

Connecting audio input allows programs to be run in sound-to-light mode; signal can be connected via the 2 RCA stereo sockets (100mV at 10V RMS), located on the rear of the **manual system 12 plus**

Audio In
100mV / 10V RMS
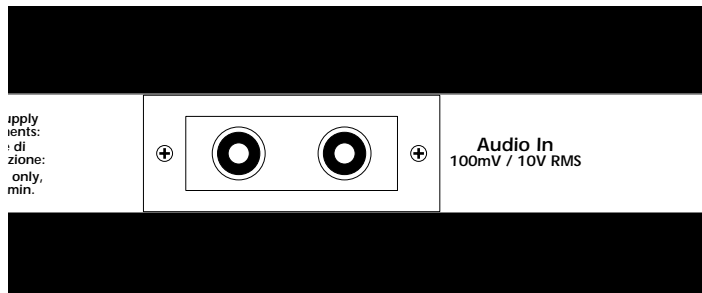
Audio input can be from any mixer with variable output from 100mV up to 10V RMS maximum. Correct levels of audio input can be monitored via the **audio in** led which will flash to the bass rhythm.

○ DMX 512 out	○ flash inhibit
● audio in	○ DMX patch
○ +20 V DC	○ strobe setting
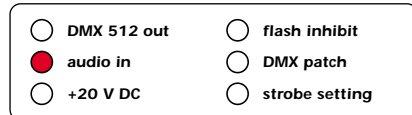
The audio input circuitry is auto adjusting; however it is possible to adjust the input level to ensure the **manual system 12 plus** is able to accomodate audio input from souces where the input levels are less than perfect.

7.1 Adjusting input sensitivity

The following procedure should only be undertaken if absolutely necessary.
Input sensitivity can be adjusted via the following procedure:

1-	Use a screwdriver to remove the four screws (**A**) which attach the rear panel of the **manual system 12 plus**.

Power up the **manual system 12 plus** and ensure that audio input is connected via the RCA. plugs on the rear panel.

2-	Locate the trimmer/adjuster (**B**) and, using a plastic electronics screwdriver, adjust the trimmer so that the **audio IN** led (on the front of the controller) flashes on and off in perfect timing with the bass signal being generated.
	○ DMX 512 out ○ flash inhibit ● audio in ○ DMX patch ○ +20 V DC ○ strobe setting

Re-position and secure the rear panel.
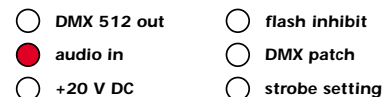
8. Manual operation

This section refers to adjusting ourput levels; the result of adjusting output will vary according to the fixture being controlled and the channel settings; for ease of explanation, all instructions in this section are made with the understanding that the **DMX patch** facility is not in use. Details on this facility can be found in section 10.

Check that the **DMX 512 out** led is flashing to ensure that the **manual system 12 plus** is outputting signal and that the **+ 20 V DC** led is on, indicating that power is being supplied to the controller.

If the **+ 20 V DC** led is off, check the system as described in sections 5 and 6 of this manual.

8.1. Adjusting output levels

This procedure allows all 12 channels to be adjusted to respective levels of output signal.

1-

Adjust the levels of the **12** preset **A** sliders as desired.

2-

Adjust the **master A** slider to view the output levelsof each channel.

master A   **master B**

3-

output 1 2 3 4 5 6

The green **output leds** will mimic the output levels of their respective channels as set.

4-

A different set of output levels can be set on the **B** preset sliders; when you wish to view these outputs, lower the **master A** slider and raise the **master B** slider; this will crossfade between the **A** presets and the **B** presets.

Setting the **master A** and **B** sliders both to a similar level above **0** will result in the higher of the two levels on the individual channels being output.

For example, if channel 1 on **preset A** is set to 50% and the same channel **1** is also at 50% on **preset B**, then channel **1** will output at 50%.

However, if channel **1** on **preset A** is set to 50% and the same channel **1** is at 70% on **preset B**, channel **1** will ouput at 70%; the highest level taking precedence.

8.2. Timed A/B crossfades

Using this function allows delays to be effected via the **master** sliders

1- **delay time(sec.)** 100 90 80 70 60 50 40 30 20 10 0 **master A** **master B**	To add a time delay to a **master A** or **B**, adjust the **delay time** potentiometers A timed crossfade between two presets can include a **black-out** during the crossfade only if the first scene is manually faded out, otherwise the crossfade will be governed by the times set on the potentionmeters. **Note 1**: the time delay function operates both in fade up and fade down actions. **Note 2**: the time delay function operates over all channels in the individual presets since the potentiometers act on both **masters A** and **B**.

8.3. Flash buttons

This function allows outputs to be instantly flashed up to maximum.

1- **output** 1 2 3 4 5 6 **flash**	The **flash** buttons are always active, and will cause the respective channels to flash at 100%
2- **master A** **master B** **flash master**	**flash master**, there are two, one for each **A/B** preset. Pressing either of these will flash the channels to the levels determined by the individual channel sliders. These act instantly, and over-ride the individual **master** sliders.

The **flash** buttons can be disenabled to avoid accidental use.

3- **dip-switch** ON ● optional ● optional ● optional ● optional ● **flash inhibit** ● patch lock ● strobo 7/12 ● strobo 1/6	Locate at the rear of the **manual system 12 plus** the dip-switches. The **flash inhibit** dip-switch function can be activated by setting the dip-switch to **ON**.
4- ○ DMX 512 out ● flash inhibit ○ audio in ○ DMX patch ○ +20 V DC ○ strobe setting	The **flash inhibit** led in the **effects generator** section of the controller will come on to indicate the **flash** function is disenabled.

After setting the dip-switch as described above, the **flash** buttons will no longer function; repeat the operation setting the **flash inhibit** to the **OFF** position if you wish to enable the **flash** buttons once again.

9. Using pre-programmed effects

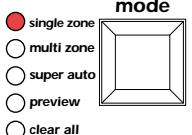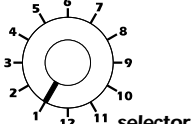**manual system 12 plus** provides several pre-programmed chase effects which can be used as required.
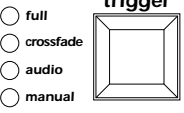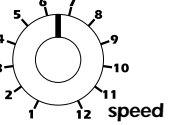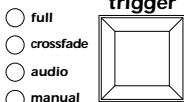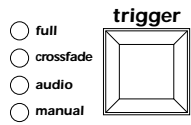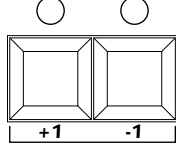The programs can be single zone, for groups of six channels, or multi-zone utilising all **12** channels.
Note that these effects can take precedence over the manual operation described in previous sections.

9.1. Single zone effects generator

In single zone mode, there are 8 pre-programmed 6 channel chases (programs **1** to' **8**) and 4 pre-programmed 4 channel chases (programs **9** to **12**).
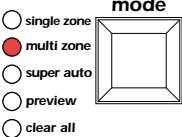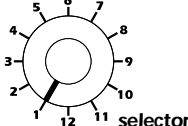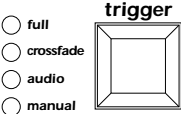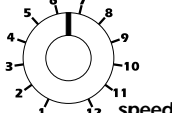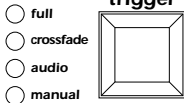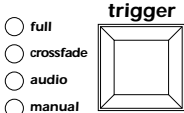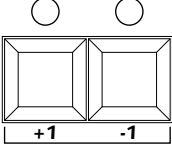The 4 channel chases allow the remaining 2 channels to be used as dimmer channels, independent of the effects generated; a typical usage of this may be to use the two remaining channels to control house lighting dimming, whilst a sound-to-light chase is occuring on the other channels

1- **mode** — single zone / multi zone / super auto / preview / clear all	Press and hold the **mode** button in the **effects generator** until the **single zone** led comes on.
2- **selector**	Select the required program **1** to **12** you wish to utilise via the **selector** button.
3- **preview** 1 2 3 4 5 6 7 8 9 10 11 12	The **preview** leds **1** to **6** or **1** to **4** will mimic the program selected.
4- **trigger** — full / crossfade / audio / manual	Press the **trigger** when the required program is selected to select the attack mode in which the chase will occur: Channels can chase in one of two modes, either flash on/off (**full**), or in a crossfade (**crossfade**); select the mode you wish to utilise by pressing the **trigger** button until either of the two leds **full** or **crossfade** are lit.
5- **speed**	You may alter the chase speed by using the **speed** potentiometer. The **preview** leds will mimic the chase speed as it is altered to facilitate selection.

An alternative to assigning a chase speed via the **speed** potentiometer is to assign select either a sound-to-light option or a manual step contolled by the operator.

6- **trigger** — full / crossfade / audio / manual	Press the **trigger** button until the **audio** led is lit at the same time as either **full** or **crossfade**. In this mode, chase step advancement is now contrtolled via sound-to-light (see section 7).

or

7- **trigger** — full / crossfade / audio / manual **+1** **-1**	Press the **trigger** button until the **manual** led is lit at the same time as either **full** or **crossfade**. In this mode the chase step advancement is controlled by the operator; they may step through the chase forward or back by using the **+1** or **-1** buttons.

To output the selected program, see section **9.3** of this manual.

9.2. Multi zone effects generator

Multi zone effects are defined as those using all 12 channels of the **manual system 12 plus**. You may select from 12 different multi zone programs

1-	**mode** ○ single zone ● multi zone ○ super auto ○ preview ○ clear all	Press and hold the **mode** button in the **effects generator** until the **multi zone** led comes on.
2-	**selector** (dial 1–12)	Select the required program **1** to **12** you wish to utilise via the **selector** button.
3-	○○○○○ ○○○○○ 1 2 3 4 5 6 **preview** 7 8 9 10 11 12	The **preview** leds **1** to **12** will mimic the program selected.
4-	**trigger** ○ full ○ crossfade ○ audio ○ manual	Press the **trigger** when the required program is selected to select the attack mode in which the chase will occur: Channels can chase in one of two modes, either flash on/off (**full**), or in a crossfade (**crossfade**); select the mode you wish to utilise by pressing the **trigger** button until either of the two leds **full** or **crossfade** are lit.
5-	**speed** (dial 1–12)	You may alter the chase speed by using the **speed** potentiometer. The **preview** leds will mimic the chase speed as it is altered to facilitate selection.

An alternative to assigning a chase speed via the **speed** potentiometer is to assign select either a sound-to-light option or a manual step contolled by the operator.

6-	**trigger** ○ full ○ crossfade ○ audio ○ manual	Press the **trigger** button until the **audio** led is lit at the same time as either **full** or **crossfade**. In this mode, chase step advancement is now contrtolled via sound-to-light (see section 7).

or

7-	**trigger** ○ full ○ crossfade ○ audio ○ manual ○ ○ +1 -1	Press the **trigger** button until the **manual** led is lit at the same time as either **full** or **crossfade**. In this mode the chase step advancement is controlled by the operator; they may step through the chase forward or back by using the **+1** or **-1** buttons.

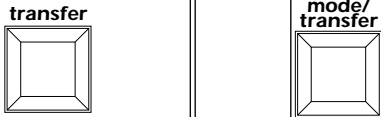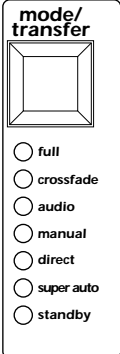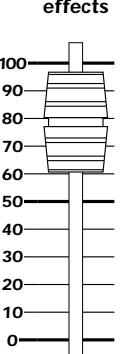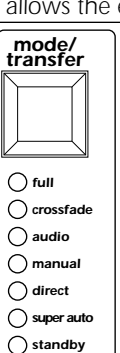To output the selected program, see section **9.3** of this manual.

9.3. **Outputting an effect**

In the previous sections **9.1** and **9.2** various chase effects were generated and previewed on the leds, these effects are yeat to be outputted to the fixtures connected via the **DMX 512** ouput, nor were they previewed on the green **output** leds.
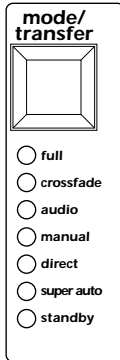
If the effects are to your requirements, you can output them as follows.

If the effects to be outputted are **multi zone** (section **9.2**), they can only be assigned to the first zone (channels **1** to **6** or **1** to **4**); if the effect is a **single zone** (section **9.1**), they can be asssigned to the first zone (channels **1** to **6** or **1** to **4**) or to the second zone (channels **7** to **12** or **7** to **10**).

1-	transfer mode/transfer	After having viewed the effect on the monitor leds, press the **transfer** button in the **effects generator** group, whilst simultaneously pressing the **mode/transfer** button in the zone to which you wish to transfer the effect.
2-	mode/transfer ○ full ○ crossfade ○ audio ○ manual ○ direct ○ super auto ○ standby	Note that after the effect has been transfered to the **mode/transfer** button, the the effect and its parameters are held in memory. In this manner, the effects generator can continue to be used to select new chase effects and then transfer these.
3-	effects 100 90 80 70 60 50 40 30 20 10 0	Slide up the **effects** slider to achieve the output level you require the chase to run at (either ouput to a connected dimmer rack or to any **DMX 512** device). At this point the **output** leds will come on to mimic the effect being generated.

manual system 12 plus allows the effect being outputted to be alterered.

4-	mode/transfer ○ full ○ crossfade ○ audio ○ manual ○ direct ○ super auto ○ standby	Press the **mode/transfer** button briefly, note that the **standby** led comes on, indicating the chase has been transferred to this button, and is now not being outputted. Press the **mode/transfer** button once again and the chase resumes once more.

| 5- | mode/
transfer

○ full
○ crossfade
○ audio
○ manual
○ direct
○ super auto
○ standby | Press and hold the **mode/transfer** for a few seconds; note that the **standby** led comes on and allows several parameters to be altered; you may choose from:
full: on/off only chase
crossfade: a crossfading chase
audio: sound-to-light, at either **full** or **crossfade**.
manual: manual stepping, at either **full** or **crossfade**, activated by the **+1** or **-1.**
direct: allows effects to be transfered directly from the effects generator; without the need for pressing the **transfer** button.
standby: blacks out the current chase until the **mode/transfer** button is pressed again. |

6- To reactivate a chase whose parameters you have altered, briefly press the **mode/transfer** button; the **standby** led will go off.

Note: The chase speed (**speed**) is unable to be altered once it has been transferred; you will need to alter the speed potentiometer (**speed**) in the effects generator and then repeat all the steps as described to this point.

9.4. Effects generator advanced functions

Apart from the **single zone** and **multi zone** functions, the **mode** button allows the selection of various other functions such as **super auto**, **preview** and **clear all**.
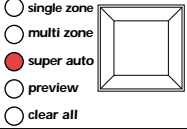
super auto

The **super auto** function is only used if an audio singnal is connected to the controller. This effect can be considered as one which chases through different programs with time delays and attack being altered randomly and automatically. This effectively allows the lighting operator to be absent for a period of time.

Since the programs being run are selected randomly from memory, it is impossible, therefore, for any preview of the effect which will be generated.

The **super auto** effect can can be generated and transferred to a single zone(6 channels) or to the whole controller.
When you wish to assign this function to a single zone, you must press the **mode** button until both the **single zone** and the **super auto** leds come on. If, however, you wish to transfer the function to the whole controller, you must press the **mode** button until both the **multi zone** and the **super auto** leds come on.
Transferring the single zone /super auto function to one zone of the controller allows you to have one zone running in a totally automated manner, whilst the other remains under operator control.

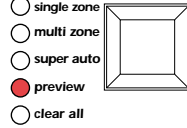| 1-	mode ○ single zone ○ multi zone ● super auto ○ preview ○ clear all	Press the **mode** button in the **effects generator** section of the controller until the **super auto** and **single** or **multi zone** leds come on (as desired).
2-	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ 1 2 3 4 5 6 preview 7 8 9 10 11 12	The **preview** leds will come on and mimic the first of what will be randomly selected chases.

3- Proceed now as discussed in section **9.3** if you wish to transfer the **super auto** function to the outputs of your **manual system 12 plus**.

preview

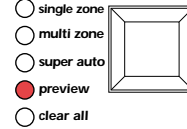Allows effects generated via the master effects slider to be previewed, without disrupting the live outputs
The **preview** leds will mimic any effects generated in, and transfered to outputs from, the **effects generator**, even if the **master effects** slider is set to 0; in this way effects can be previewed and edited without affecting any live ouputs.

The levels set on **preset A** and **preset B** take control over chase effects when the **master effects** slider is active; in this mode you have complete and real-time control over the output levels from the **master effects** slider.

1-	mode ○ single zone ○ multi zone ○ super auto ● preview ○ clear all	Press the **mode** button in the **effects generator** section until the **preview** led comes on.
2-	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ 1 2 3 4 5 6 preview 7 8 9 10 11 12	The **preview** leds which mimic the effects generator will now mimic outputs so that you may view what occurs when the **master effects** slider is raised. The output levels of the individual channels, whose levels are controlled by the **master A** and **B** sliders, will take precedence over the output levels of the **12** channels of the **manual system 12 plus**.

clear all

Transferring this function of the effects generator will black out all outputs and will cause all the leds to turn themselves off, this perhaps bein g a useful function when scenes change in a production.

1-	mode ○ single zone ○ multi zone ○ super auto ● preview ○ clear all	Press the **mode** button in the **effects generator** section until the **clear all** led comes on.

2- Proceed now as discussed in section **9.3** if you wish to transfer the **clear all** function to the outputs of your **manual system 12 plus**.
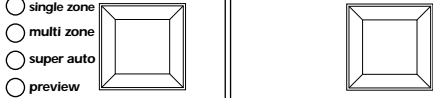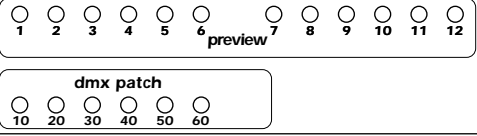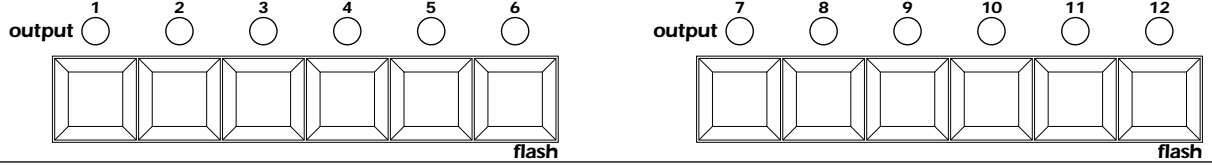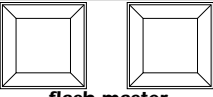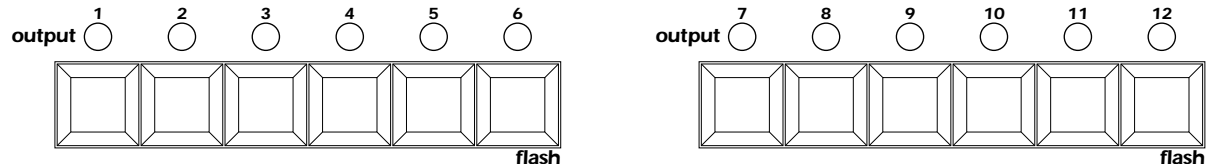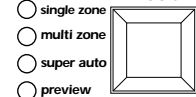
10. DMX patch

The **DMX patch** is used to assign any of the **72** channels that the **manual system 12 plus** can generate via the controllers on the front panels.

This function allows multiple fixtures to be assigned to a single slider, for example, several colour-changers with different addresses, or unlimited dimmer rack channels which you may wish to operate in parallel.

We recommend that you read the following section 10.1 for a description of the function of the **DMX patch** move on to section 10.2 for a description of how to modify the patch.
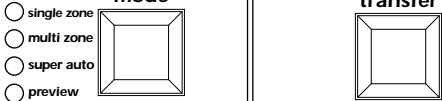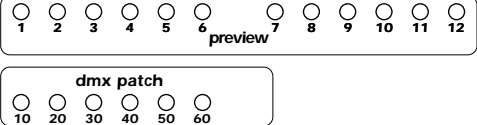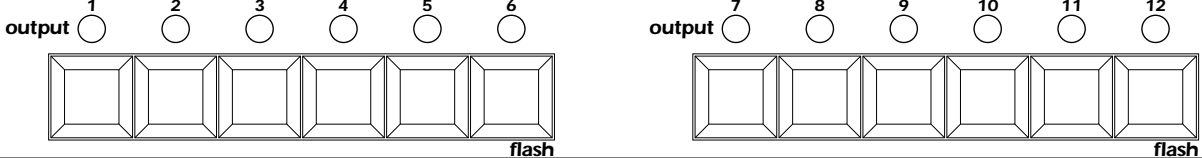
10.1 Viewing DMX channels assignments (patch)

1-	**mode** ○ single zone ○ multi zone ○ super auto ○ preview **transfer**	Turn on the controller whilst holding down the **mode** and **transfert** buttons
2-		**manual system 12 plus** will test all the leds on the front panel in turn, this will take approximately 30 seconds. At the end of this test, the controllers leds will all turn off and the controller will be in **DMX patch** mode.
3-	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ 1 2 3 4 5 6 **preview** 7 8 9 10 11 12 **dmx patch** ○ ○ ○ ○ ○ ○ 10 20 30 40 50 60	The **preview** (**yellow**) led, together with the **DMX patch** (**green**) led will represent active DMX 512 channel. The **preview** leds represent units and the **DMX patch** leds represent tens (eg. channel **52** is represented by **green 50** and **yellow 2** on simultaneously).
4-	**output** 1 2 3 4 5 6 ○ ○ ○ ○ ○ ○ **output** 7 8 9 10 11 12 ○ ○ ○ ○ ○ ○ **flash** **flash**	
	The slider to which that channel is assigned is represented by a lit **output (green)** led.	
5-	**flash master**	Press the **flash master** buttons to alter the active DMX channel; the **flash master A** decrements, whilst the **flash master B** increments; holding the button down cause the increase/decrease to change rapidly.
6-	**output** 1 2 3 4 5 6 ○ ○ ○ ○ ○ ○ **output** 7 8 9 10 11 12 ○ ○ ○ ○ ○ ○ **flash** **flash**	

The **preview** and **DMX patch** leds indicate the standard settings:

DMX 1 = channel **1**	**DMX 8** = channel **8**
DMX 2 = channel **2**	**DMX 9** = channel **9**
DMX 3 = channel **3**	**DMX 10** = channel **10**
DMX 4 = channel **4**	**DMX 11** = channel **11**
DMX 5 = channel **5**	**DMX 12** = channel **12**
DMX 6 = channel **6**	**DMX 13** = channel **1**
DMX 7 = channel **7**	**DMX 14** = channel **2**
	etc..,

this sequence of 12 channels is repeated up until the final channel able to be generated:
DMX 72 = channel **12**.

7-	**mode** ○ single zone ○ multi zone ○ super auto ○ preview **transfer**	To return to normal operating mode, once again press the **mode** and **transfert** buttons simultaneously, or simply turn the controller off and on again.

We recommend that you practise the application of this function several times prior to moving on to the next section where you will be instructed as to how to alter the various **DMX** channel assignments.
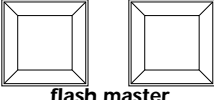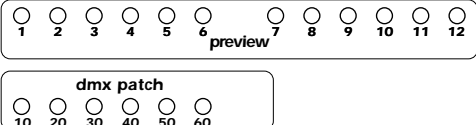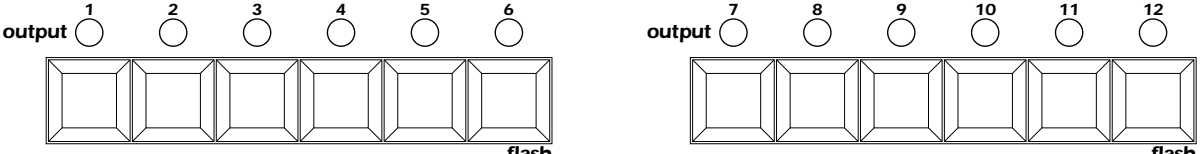
10.2 Altering DMX channel assignments (patch)

Make sure that you have read carefully through section **10.1** prior to attempting the following procedure.

ATTENTION: altering this function may compromise the operation of any **DMX 512** device connected to the controller. It should only be utilised by a person with a thorough knowledge of the controllers operation and the **DMX 512** standards.

1-	**mode** ○ single zone ○ multi zone ○ super auto ○ preview **transfer**	Turn on the controller whilst holding down the **mode** and **transfert** buttons
2-		**manual system 12 plus** will test all the leds on the front panel in turn, this will take approximately 30 seconds. At the end of this test, the controllers leds will all turn off and the controller will be in **DMX patch** mode.
3-	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ 1 2 3 4 5 6 **preview** 7 8 9 10 11 12 **dmx patch** ○ ○ ○ ○ ○ ○ 10 20 30 40 50 60	The **preview (yellow)** led number **1** will come on to indicate that **DMX 1** is active.

4-	**output** ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 **output** ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12 flash flash

Press the **flash** button of the channel you wish to assign as **DMX** channel **1**; the corresponding **output** (**green**) led will flash.

Note: All yellow **preview** leds will already have a channel assigned; pressing the **flash** button merely begins the procedure for altering the current assignement.

5-	**flash master**	Press the **flash master** buttons to alter the active DMX channel; the **flash master A** decrements, whilst the **flash master B** increments; holding the button down cause the increase/decrease to change rapidly.
6-	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ 1 2 3 4 5 6 **preview** 7 8 9 10 11 12 **dmx patch** ○ ○ ○ ○ ○ ○ 10 20 30 40 50 60	With every press of a **flash master** (**A** or **B**), a new DMX channel becomes active. The **preview** leds represent units and the **DMX patch** leds represent tens (eg. channel **31** is indicated by the green **30** led and the yellow **1** led being on simultaneously). Select the next channels whose assignment you wish to alter and then press the **flash** button of the channel to which you wish it assigned.

output ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 **output** ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12   flash   flash

Note: all **72** channels which the **manual system 12 plus** can be assigned to the same slider if you wish. obviously, the converse cannot be true, any two sliders cannot be assigned to the same **DMX** channel if they are not in separate **presets**.

Channels may also be assigned to the **color**, **flash** and **strobe** sliders.

7-	**frost strobe color effects** scale: 100, 90, 80, 70, 60, 50, 40, 30, 20, 10, 0 **random music** ⊙ ⊙ ⊙ ⊙ □ □ □ **+1 -1 color**	The **+1** button assigns to the **frost** slider. The **-1** button assigns to the **strobe** slider. The **color** button assigns to the **color** slider. Upon pressing the **frost**, **strobe** or **color** buttons, the led should come on to indicate the assigning of the selected DMX channel. **Note:** The **strobe** slider is automatically assigned the DMX channel assigned its **preset** if the dip-switche **strobe** on the rear of the unit are set to on (for more inofrmation see sections 10 and 11).
8-	**mode** ○ single zone ○ multi zone ○ super auto ○ preview **transfer**	**Simultaneously** press the **mode** and **transfert** buttons to return the **manual system 12 plus** to normal operating mode. The new assignments are recoded in memory.
9-	○ DMX 512 out ○ flash inhibit ○ audio in ● DMX patch ○ +20 V DC ○ strobe setting	A **patch** other than the default (hwere the first 12 DMX channels correspond to the sliders in strict sequence **DMX 1**= channel **1**,..... **DMX 12**= channel **12**) will always be indicated by the **DMX patch** led being on.

From this point on, all the functions previously referred to and any stored programs will behave normally, however the **DMX** channels operating will depend on those assigned in the **patch**.

The **patch lock** dip-switch on the rear of the panel is there to avoid any accidental patch assignments being made.
Moving it to the **ON** position allows the **patch** you have just created to be locked in.

10-	**dip-switch** ON ●—— optional ●—— optional ●—— optional ●—— optional ●—— flash inhibit ●—— patch lock ●—— strobo 7/12 ●—— strobo 1/6	Locate the dip-switches at the rear of the **manual system 12 plus** which, amongst other functions, allow **patch lock** to be activated by setting the switch to **ON**. Patch assignments can still be viewed, but cannot be altered.

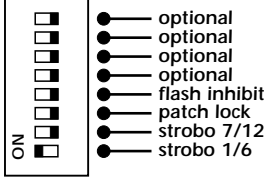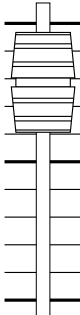The **patch lock** dip-switch should be set to **off** if you wish to alter any **DMX** assignments.

11. Controlling the strobe effect of a motorised projetor

The **strobe** function allows the dimming function of a zone of 6 channels or of the whole controller to be altered.

This function is designed primarily for projectors which use a mechanical shutter for either dimming or strobe purposes; using a DMX value of between **0** and **125** for dimming and between **150** and **245** for variable speed strobing.

ATTENTION!: activating this function can alter the proper operation of any **DMX 512** devices connected. Tuld only be utilised by experienced **DMX 512** device operators.

Two dip-switchs at the rear of the controller, **strobe 1-6** and **strobe 7-12** allow this function to be activated.
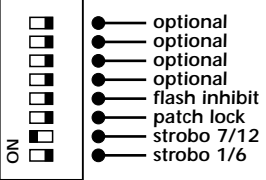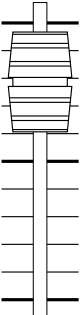
11.1 Zone 1 (sliders1 to 6)

1- **dip-switch** ○—— optional ○—— optional ○—— optional ○—— optional ○—— flash inhibit ○—— patch lock ○—— strobo 7/12 ○—— strobo 1/6 ON	Locate on the rear of the **manual system 12 plus** the dip-switches marked **strobe 1-6**. Set this dip-switch to **ON**; the DMX channels now assigned to the sliders **1** to **6** will now adjust intensity from **0** to **125**.
2- **strobe**	Automatically, the **strobe** slider is now able to alter the **DMX** level from **150** to **245** on all the **DMX** channels now assigned to sliders **1** to **6**.

With this modification, you may now assign the chases created in the **effects generator** to any motorised projectors (for example, to the **tas colore**) which behave in a similar manner to a normal incandescent luminaire.

The strobe effect can be operated across all the assigned channels simultaneously via the **strobe** slider.

11.2 Zone 2 (sliders 7 to 12)

1- **dip-switch** ○—— optional ○—— optional ○—— optional ○—— optional ○—— flash inhibit ○—— patch lock ○—— strobo 7/12 ○—— strobo 1/6 ON	Locate on the rear of the **manual system 12 plus** the dip-switches marked **strobe 7-12**. Set this dip-switch to **ON**; the DMX channels now assigned to the sliders **7** to **12** will now adjust intensity from **0** to **125**.
2- **strobe**	Automatically, the **strobe** slider is now able to alter the **DMX** level from **150** to **245** on all the **DMX** channels now assigned to sliders **7** to **12**. (or from **1** to **12** if all dip-switches **strobe 1-6** and **7-12** are set to on.

Note: The **strobe** slider can also be assigned to any channel selected via the **DMX patch**. function. In this case its level will vary through 0 and 255 and it will be unaffected by any chases created.
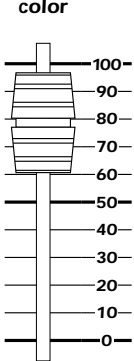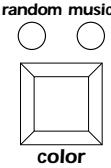
12. Controlling colour selection in a motorised projector

The **color** slider has several functions which make it extremely useful for controlling colour selection in a motorised projector.

This function allows operators to control colour changes manually, in a random mode (**random**), or in sound-to-light mode (**music**).

Note: The **color** slider, as with the **frost**, can be assigned to be a colour change channel or simply a normal channel; for example as a reset channel for motorised effects or, indeed, any other function which the user does not want included in chases created in and transferred from the **effects generator**.

1- For **color** slider functions involving a motorised projector, you must first assign the channels which you want to control via the **DMX patch** facility described in section 10.

2-	color 100 90 80 70 60 50 40 30 20 10 0	The **color** slider allows the **DMX** levels of channels assigned to it to be altered. The action is fully proportional over the travel of the slider.
3-	random music ○ ○ color	Press the **color** button until the **random** led comes on. The **DMX** channels assigned to the **color** slider will receive a random selection of DMX signal which takes precedence over the action of the **color** slider. Press the **color** button until the **music** led comes on. The **DMX** channels assigned to the **color** slider will receive DMX signal which is synchronized to the beat of the audio signal connected and takes precedence over the slider's action; to take full advantage of either the **random** or **color** functions, the **color** slider should be set to **0**.

Note that if the effect you wish to obtain from the fixtures being controlled by the **manual system 12 plus** soley colour changing, simple colour changing can be achieved by any slider having the appropriate channel assignment made via the **DMX 512 patch**.

13. manual system 12 plus as a controller for:
tas Colore a.t. 20° - Colore fresnel - VersìColore

The functions described in sections 10, 11 and 12 have varied and multiple uses. They make the **manual system 12 plus** particularly adept at controlling the functions of the **tas Colore** range.

The following descriptions may be considered as typical, but not exhaustive, examples which you may care to apply; and the possibilities increase significantly if you are taking full advantage of the **DMX patch** facility described in section 10 and are aware of the advantages afforded by the use of **DMX 512**.

The following examples use the **manual system 12 plus** to control three different types of lighting projector:

13.1 tas Colore a.t. 20°
13.2 tas Colore fresnel
13.3 tas VersìColore

13.1 tas Colore a.t. 20°
You may control **Colore a.t. 20°** projectors using any of the functions of the **manual system 12 plus**.

The descriptions for these functions have all been previously described in a genereic sense in preceding sections of this manual; the following are summary descriptions.

Following these settings will make control of the fixture particularly simple.

settings on the Colore a.t. 20°
Each **tas Colore a.t. 20°** utilises **3** address channels for complete control of its functions via **DMX 512**:

Channel 1: **dimmer/strobe**
Channel 2: **color**
Channel 3: **reset** (from 20 to 50%) and proportional colour wheel control (from 50 to 80%)

To ensure that each projector receives the correct signal , each unit must be correctly addressed; any number between **1** and **70** (**manual system 12 plus** can address its **DMX** to a maximum address of **72**). This can be set on the projectors via the dip-switches on each unit.

This procedure should be undertaken on every **Colore a.t. 20°** by setting the dip-switches to **on** or **off** according to the simplified table shown below. To be effective, it should be done when the projector is switched off.

N.B. The 10° dip-switch should be set to **OFF**

an example of dip-switch setting for 12 Colore a.t. 20°
This table may also be used if a lesser number of **Colore a.t. 20°** are being used.

numero proiettori/ projector number	numero DMX/ DMX number	dip-switches	
01	01	1	1 2 4 8 16 32 64 128 256 c.c.
02	04	4	1 2 4 8 16 32 64 128 256 c.c.
03	07	1-2-4	1 2 4 8 16 32 64 128 256 c.c.
04	10	2-8	1 2 4 8 16 32 64 128 256 c.c.
05	13	1-4-8	1 2 4 8 16 32 64 128 256 c.c.
06	16	16	1 2 4 8 16 32 64 128 256 c.c.
07	19	1-2-16	1 2 4 8 16 32 64 128 256 c.c.
08	22	2-4-16	1 2 4 8 16 32 64 128 256 c.c.
09	25	1-8-16	1 2 4 8 16 32 64 128 256 c.c.
10	28	4-8-16	1 2 4 8 16 32 64 128 256 c.c.
11	31	1-2-4-8-16	1 2 4 8 16 32 64 128 256 c.c.
12	34	2-32	1 2 4 8 16 32 64 128 256 c.c.

settings to be made on the manual system 12 plus to control 12 Colore a.t. 20°

The following settings should be made on the **manual system 12 plus** to allow complete control over **12 Colore a.t 20°**.; these settings will not be effective unless the changes to the dip-switches on the projectors have been made as advised above.

Upon completion of this procedure, the following functions will be available on the controller:

- The 12 **preset A** and **B** sliders will control the output of the projectors.
- The **strobe** slider will control the speed of the strobe effect.
- The **color** slider and the relative **random** and **music** buttons will control the colour selections.
- The **frost** slider will allow the colour wheel to be controlled proportionally (from 50 to 80%) or to reset all the projectors (from 20 to 50%).

<table>
<tr>
<td>1-</td>
<td>
dip-switch

ON
optional
optional
optional
optional
flash inhibit
patch lock
strobo 7/12
strobo 1/6
</td>
<td>
On the rear of the **manual system 12 plus** the dip-switches can be set to allow the functions **strobo 1-6 and strobo 7-12**.
Set the dip-switches to **ON**; the **DMX** channels assigned to sliders **1** to **12** now output levels from **0** to **125**. The strobe effect is now assigned to the **strobe** slider.
</td>
</tr>
<tr>
<td>2-</td>
<td colspan="2">
Assign the **DMX** channels via the front controllers as described in section 10, following the instructions in the table below. Note that once the **DMX patch** facility is engaged:
A- The **DMX** channels are displayed via the **preview** (yellow) leds and the **DMX patch** (green) leds.
B- **DMX** channels are altered via the **flash master A** and **flash master B**.
C- A ll **DMX** channels are assigned by pressing the **flash** button on each channel.
</td>
</tr>
</table>

an example of dip-switch settings on the controller for 12 tas Colore a.t. 20°"

This table may also be used if a lesser number of **Colore a.t. 20°** are being used.

canali/ channels	funzione di Colore at 20°/ functions Colore at 20°	Assegnazione sul pannello frontale/ front pannel devices
ch 01	dimmer/shutter	preset 1
ch 02	colour	colour
ch 03	function	frost
ch 04	dimmer/shutter	preset 2
ch 05	colour	colour
ch 06	function	frost
ch 07	dimmer/shutter	preset 3
ch 08	colour	colour
ch 09	function	frost
ch 10	dimmer/shutter	preset 4
ch 11	colour	colour
ch 12	function	frost
ch 13	dimmer/shutter	preset 5
ch 14	colour	colour
ch 15	function	frost
ch 16	dimmer/shutter	preset 6
ch 17	colour	colour
ch 18	function	frost
ch 19	dimmer/shutter	preset 7
ch 20	colour	colour
ch 21	function	frost
ch 22	dimmer/shutter	preset 8
ch 23	colour	colour
ch 24	function	frost
ch 25	dimmer/shutter	preset 9
ch 26	colour	colour
ch 27	function	frost
ch 28	dimmer/shutter	preset 10
ch 29	colour	colour
ch 30	function	frost
ch 31	dimmer/shutter	preset 11
ch 32	colour	colour
ch 33	function	frost
ch 34	dimmer/shutter	preset 12
ch 35	colour	colour
ch 36	function	frost

You may now exit the **DMX patch** function and control your **Colore a.t.20°**.

As you will have noted, the ability to assign different patch configurations affords great potential in control; ne abbiamo our examples list only a few; should you encounter any difficulties with the procedure, you may confidently refer your enquires to an authorised **coemar** service centre, who will be able to advise you of the required **DMX 512** settings required for you particular application.

13.2 tas Colore fresnel

You may control **Colore fresnel** using any of the functions availble on the **manual system12 plus**.

The descriptions for these functions have all been previously described in a genereic sense in preceding sections of this manual; the following are summary descriptions.

Following these settings will make control of the fixture particularly simple.

settings on the tas Colore fresnel

Colore fresnel utilises **4** channels of **DMX 512**; it is possible to control up to 12 of these units completely using teh functions of the **manual system 12 plus** via the sole compromise of using them in "**compact channel**" mode; this procedure is the most complex that needs to be performed and is explained in detail below.

In "**compact channel**" mode (dip-switch number 10 **ON**), each **tas Colore fresnel** utilises **3** channels of **DMX 512** signal for complete control of the projectors functions:

Channel 1: **dimmer/strobe**
Channel 2: **frost**
Channel 3: **color**

To ensure that each projector receives the correct signal , each unit must be correctly addressed; any number between **1** and **70** (**manual system 12 plus** can address its **DMX** to a maximum address of **72**). This can be set on the projectors via the dip-switches on each unit.

This procedure should be undertaken on every **Colore fresnel** by setting the dip-switches to **on** or **off** according to the simplified table shown below. To be effective, it should be done when the projector is switched off.

N.B. The number 10° dip-switch must be set to **ON**

an example of dip-switch settings for 12 Colore fresnel

This table may also be used if a lesser number of **Colore fresnel** are being used.

numero proiettori/ projector number	numero DMX/ DMX number	dip-switches	
01	01	1	1 2 4 8 16 32 64 128 256 c.c.
02	04	4	1 2 4 8 16 32 64 128 256 c.c.
03	07	1-2-4	1 2 4 8 16 32 64 128 256 c.c.
04	10	2-8	1 2 4 8 16 32 64 128 256 c.c.
05	13	1-4-8	1 2 4 8 16 32 64 128 256 c.c.
06	16	16	1 2 4 8 16 32 64 128 256 c.c.
07	19	1-2-16	1 2 4 8 16 32 64 128 256 c.c.
08	22	2-4-16	1 2 4 8 16 32 64 128 256 c.c.
09	25	1-8-16	1 2 4 8 16 32 64 128 256 c.c.
10	28	4-8-16	1 2 4 8 16 32 64 128 256 c.c.
11	31	1-2-4-8-16	1 2 4 8 16 32 64 128 256 c.c.
12	34	2-32	1 2 4 8 16 32 64 128 256 c.c.

settings to be made on the manual system 12 plus to control 12 tas Colore fresnel

The following settings should be made on the **manual system 12 plus** to allow complete control over **12 Colore fresnel**; these settings will not be effective unless the dip-switches on the projectors have been made as advised above.
Upon completion of this procedure, the following functions will be available on the controller:

- The 12 **preset A** and **B** sliders will control the output of the projectors.
- The **strobe** slider will control the speed of the strobe effect.
- The **color** slider and the relative **random** and **music** buttons will control the colour selections.
- The **frost** slider will allow you to adjust the beam angle by activating the frost filter effect in all the projectors connected.

1-	**dip-switch** (ON) — optional / optional / optional / optional / flash inhibit / patch lock / strobo 7/12 / strobo 1/6	On the rear of the **manual system 12 plus** the dip-switches can be set to allow the functions **strobo 1-6 and strobo 7-12**. Set the dip-switches to **ON**; the **DMX** channels assigned to sliders **1** to **12** now output levels from **0** to **125**. The strobe effect is now assigned to the **strobe** slider.
2-	Assign the **DMX** channels via the front controllers as described in section 10, following the instructions in the table below. Note that once the **DMX patch** facility is engaged: A- The DMX channels are displayed via the **preview** (yellow) leds and the **DMX patch** (greeen) leds. B- **DMX** channels are altered via the **flash master A** and **flash master B**. C- A ll **DMX** channels are assigned by pressing the **flash** button on each channel.	

an example of dip-switch settings on the controller for 12 tas Colore fresnel

This table may also be used if a lesser number of **Colore fresnel** are being used.

canali/ channels	funzione di Colore fresnel/ functions Colore fresnel	Assegnazione sul pannello frontale/ front pannel devices
ch 01	dimmer/shutter	preset 1
ch 02	frost	frost
ch 03	colour	colour
ch 04	dimmer/shutter	preset 2
ch 05	frost	frost
ch 06	colour	colour
ch 07	dimmer/shutter	preset 3
ch 08	frost	frost
ch 09	colour	colour
ch 10	dimmer/shutter	preset 4
ch 11	frost	frost
ch 12	colour	colour
ch 13	dimmer/shutter	preset 5
ch 14	frost	frost
ch 15	colour	colour
ch 16	dimmer/shutter	preset 6
ch 17	frost	frost
ch 18	colour	colour
ch 19	dimmer/shutter	preset 7
ch 20	frost	frost
ch 21	colour	colour
ch 22	dimmer/shutter	preset 8
ch 23	frost	frost
ch 24	colour	colour
ch 25	dimmer/shutter	preset 9
ch 26	frost	frost
ch 27	colour	colour
ch 28	dimmer/shutter	preset 10
ch 29	frost	frost
ch 30	colour	colour
ch 31	dimmer/shutter	preset 11
ch 32	frost	frost
ch 33	colour	colour
ch 34	dimmer/shutter	preset 12
ch 35	frost	frost
ch 36	colour	colour

You may now exit the **DMX patch** function and control your **Colore fresnel**.
As you will have noted, the ability to assign different patch configurations affords great potential in control; ne abbiamo our examples list only a few; should you encounter any difficulties with the procedure, you may confidently refer your enquires to an authorised **coemar** service centre, who will be able to advise you of the required **DMX 512** settings required for you particular application.

13.3 tas VersìColore

You may control **tas VersiColore** using any of the functions availble on the **manual system12 plus**.
The descriptions for these functions have all been previously described in a genereic sense in preceding sections of this manual; the following are summary descriptions.
Following these settings will make control of the fixture particularly simple.

settings on the tas VersiColore

tas VersiColore utilises **5** channels of **DMX 512**; it is possible to control up to 12 of these units completely using teh functions of the **manual system 12 plus** via the sole compromise of using them in "**compact channel**" mode; this procedure is the most complex that needs to be performed and is explained in detail below.
In "**compact channel**" mode (dip-switch number 10 **ON**), each **tas VersiColore** utilises **3** channels of **DMX 512** signal for complete control of the projectors functions:

Channel 1: **dimmer/strobe**
Channel 2: **frost**
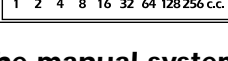Channel 3: **color**
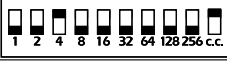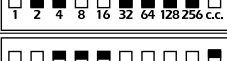
To ensure that each projector receives the correct signal , each unit must be correctly addressed; any number between **1** and **70** (**manual system 12 plus** can address its **DMX** to a maximum address of **72**). This can be set on the projectors via the dip-switches on each unit.
This procedure should be undertaken on every **tas VersiColore** by setting the dip-switches to **on** or **off** according to the simplified table shown below. To be effective, it should be done when the projector is switched off.
N.B. The number 10° dip-switch must be set to **ON**

an example of dip-switch setting for 12 VersiColore

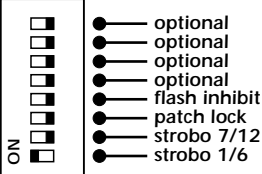This table may also be used if a lesser number of **Colore fresnel** are being used.

numero proiettori/ projector number	numero DMX/ DMX number	dip-switches	
01	01	1	
02	04	4	
03	07	1-2-4	
04	10	2-8	
05	13	1-4-8	
06	16	16	
07	19	1-2-16	
08	22	2-4-16	
09	25	1-8-16	
10	28	4-8-16	
11	31	1-2-4-8-16	
12	34	2-32	

settings to be made on the manual system 12 plus to control 12 tas VersiColore

The following settings should be made on the **manual system 12 plus** to allow complete control over **12 VersiColore** ; these settings will not be effective unless the dip-switches on the projectors have been made as advised above.
Upon completion of this procedure, the following functions will be available on the controller:

- The 12 **preset A** and **B** sliders will control the output of the projectors.
- The **strobe** slider will control the speed of the strobe effect.
- The **color** slider and the relative **random** and **music** buttons will control the colour selections.
- The **frost** slider will allow you to adjust the beam angle by activating the frost filter effect in all the projectors connected.

| 1- | dip-switch | ON | ● — optional
● — optional
● — optional
● — optional
● — flash inhibit
● — patch lock
● — strobo 7/12
● — strobo 1/6 | On the rear of the **manual system 12 plus** the dip-switches can be set to allow the functions **strobo 1-6 and strobo 7-12**.
Set the dip-switches to **ON**; the **DMX** channels assigned to sliders **1** to **12** now output levels from **0** to **125**. The strobe effect is now assigned to the **strobe** slider. |

| 2- | Assign the **DMX** channels via the front controllers as described in section 10, following the instructions in the table below. Note that once the **DMX patch** facility is engaged:

A- The **DMX** channels are displayed via the **preview** (yellow) leds and the **DMX patch** (greeen) leds.
B- **DMX** channels are altered via the **flash master A** and **flash master B**.
C- A ll **DMX** channels are assigned by pressing the **flash** button on each channel. |

an example of dip-switch settings on the controller for 12 tas VersiColore

This table may also be used if a lesser number of **VersiColore** are being used.

canali/ channels	funzione di Versìcolore/ functions Versìcolore	Assegnazione sul pannello frontale/ front pannel devices
ch 01	dimmer/shutter	preset 1
ch 02	frost/cto	frost
ch 03	colour	colour
ch 04	dimmer/shutter	preset 2
ch 05	frost/cto	frost
ch 06	colour	colour
ch 07	dimmer/shutter	preset 3
ch 08	frost/cto	frost
ch 09	colour	colour
ch 10	dimmer/shutter	preset 4
ch 11	frost/cto	frost
ch 12	colour	colour
ch 13	dimmer/shutter	preset 5
ch 14	frost/cto	frost
ch 15	colour	colour
ch 16	dimmer/shutter	preset 6
ch 17	frost/cto	frost
ch 18	colour	colour
ch 19	dimmer/shutter	preset 7
ch 20	frost/cto	frost
ch 21	colour	colour
ch 22	dimmer/shutter	preset 8
ch 23	frost/cto	frost
ch 24	colour	colour

You may now exit the **DMX patch** function and control your **VersiColore**.
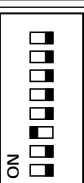As you will have noted, the ability to assign different patch configurations affords great potential in control; ne abbiamo our examples list only a few; should you encounter any difficulties with the procedure, you may confidently refer your enquires to an authorised **coemar** service centre, who will be able to advise you of the required **DMX 512** settings required for you particular application.

14. Dip-Switches

On the rear of the **manual system 12 plus** you will find 8 dip-switches, whose functions have been described previously in this manual.

Their functions are summarised below, for your convenience.

I 4 The DIP-SWITCHES marked as optional have no functions in the current version.

dip-switch		
dip-switch	ON — optional — optional — optional — optional — flash inhibit — patch lock — strobo 7/12 — strobo 1/6	**strobo 1/6:** alters the dmx ouput level range on channels 1 to 6, from 0/255 to 0/125 for normal operation. The range from 150 to 245 of all 6 channels (1/6) are now assigned to the **strobe** slider. (Page 24).
dip-switch	ON — optional — optional — optional — optional — flash inhibit — patch lock — strobo 7/12 — strobo 1/6	**strobo 7/12:** alters the dmx ouput level range on channels 7 to 12, from 0/255 to 0/125 for normal operation. The range from 150 to 245 of all 6 channels (7/12) are now assigned to the **strobe** slider. (Page 24).
dip-switch	ON — optional — optional — optional — optional — flash inhibit — patch lock — strobo 7/12 — strobo 1/6	**patch lock** locks up the dmx patch function to avoid it being written over; this is particularly useful if a particular patch assignment has been created for a specific show and thus needs to be preserved. (Page 22)
dip-switch	ON — optional — optional — optional — optional — flash inhibit — patch lock — strobo 7/12 — strobo 1/6	**flash inhibit** inhibits the action of the flash buttons, thus avoiding them being accidentally pressed during a show. (Page. 15)

Multiple **dip-switches** may be selected simultaneously, thus allowing multiple effects/inhibits to be selected as required.

15. Technical characteristics

- maximum control of: 12 independent dimmer channels
                           12 independent **tas Colore**
- 72 digital **DMX 512** output channels numbered 1 to 72
- Power supply: +20 V DC V via coaxial plug, (plug characteristics: Ø internal 2,1mm, Ø external 5,5mm).
- **DMX 512 rate**: 15 mS
- crossfade times (fade time A and B): from 0,1 to 200 seconds
- audio input level from 100 mV to 10V RMS via 2 pin RCA
- 8 bit microprocessor
- dust resistant,long life hi-endurance, auto lubricating sliders
- silver contact buttons
- **DMX 512** ouput via XLR 5 socket
- Over-voltage powersupply protection
- 4 rubber feet
- Wall mountable fixing available
- weight 7,3 Kg
- complies with all recognised standards CE

- Dimensions:
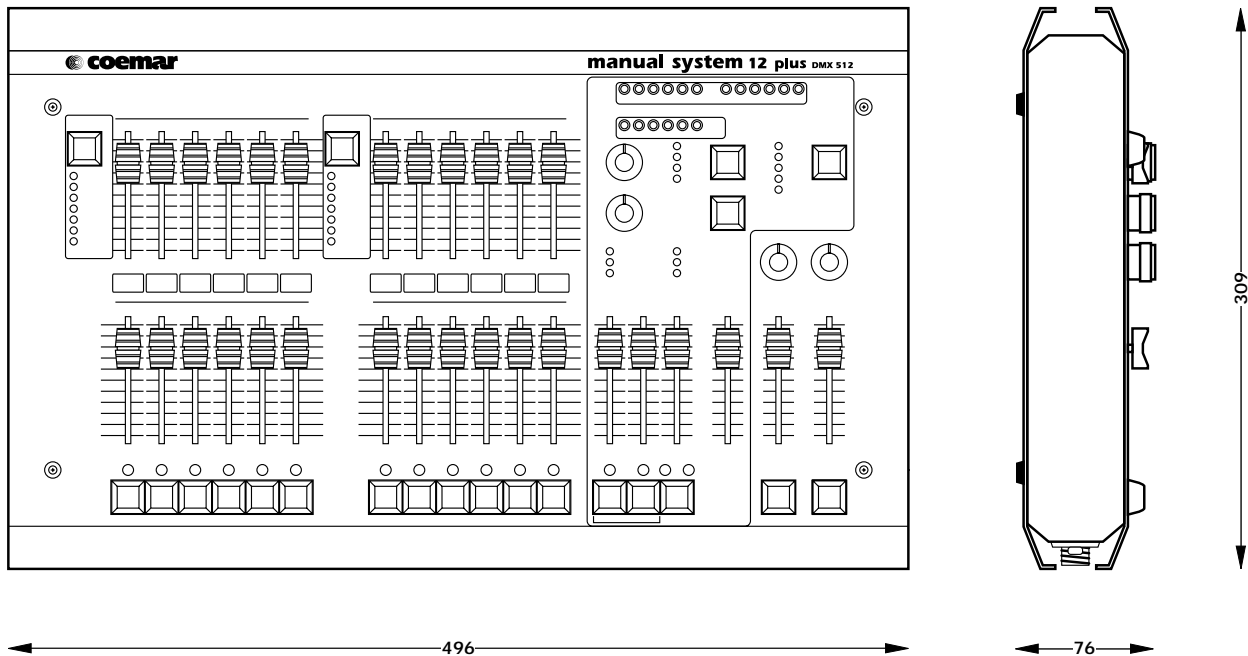
manual system 12 plus
16. Software version 3.1 update

The software version loaded in the **manual system 12 plus** can be determined when the console is powered up.
If software version 3.1 is loaded, the yellow **preview 3** led and the green **dmx patch 1** led will be on.
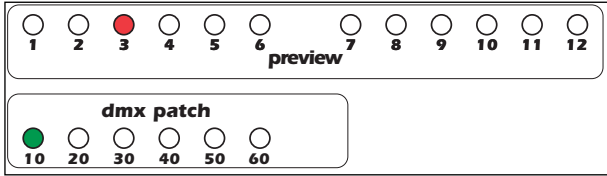
Version 3.1 adds several new features to the **manual system 12 plus**.
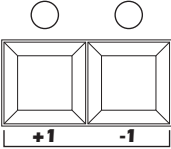
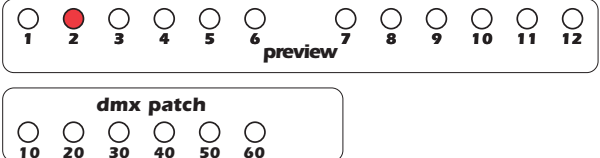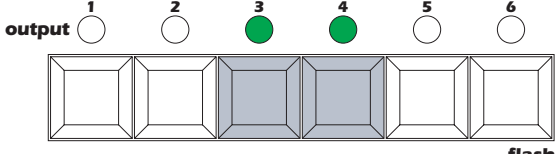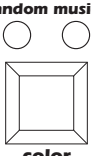## 1. Programming sequential chase effects
Single zone or multizone sequential chase effects may be programmed.
This effect is programmable as effect **1**, and is able to be selected by the rotary **selector control**.
The maximum number of steps in both the single zone and multizone effect is **60**.
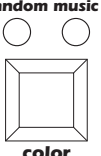
Programming a single zone effect

1-		Press the mode button in the **effects generator** bank until the **single zone** led is **on**.
2-		Select the first sequential/chase **program**, using the rotary **selector**.
3-		**Simultaneously** press the **transfer** button and the **color** button.
4-		All the **trigger** leds will come on to confirm that the console is in programming mode.

From this moment on, the **preview led** (indicating units) and the **dmx patch** led (indicating decimals), will indicate the current program step; the green **flash** leds indicate steps currently held in memory.

5-		The **preview 1** led will come on to indicate that you are at the first step of a recordable program. The **flash** led indicates the first step of the program.
6-		Press the **flash** buttons in zone 1 (channels **1** to **6**) corresponding to the channels you wish to have on as the first step of the program, for example 1 and 2.
7-		Press the **color** button to confirm the recording of the first step of the program.

8-		

,Press the **+1** button to move to the second step of the program; the **preview** led **2** will come on.

9-		Press the **flash** buttons in zone 1 (channels **1** to **6**) corresponding to the channels you wish to have on as the second step of the program, for example **3** and **4**.
10-		Press the **color** button to confirm the recording of the second step of the program**.**

NOTE: The **preview** led will flash to indicate that you have created the first steps of a program which is as yet unrecorded and saved, the **flash** leds will still show the last step of a previously recorded program.

You may continue the programming procedure for program **1**, repeating the procedure outlined in steps **8** and **9** to a maximum of 60 steps.

When you have completed the last step of the program you wish to record, you must terminate the program as described in the following procedure step 11.

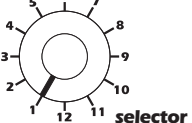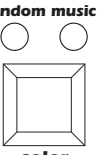|		
11-		Simultaneously press the **transfer** and **color** buttons to conclude the programming process.
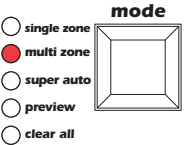
To view the recorded program, refer to section **9. Using pre-programmed effects.**

Programming a multi zone effect
Multizone effects are those chases created across **12**, **18** or **24** channels.

You may choose to program the **manual system 12 plus** across either **12** channels, depending upon teh arrangement of the luminaires you wish to control.

After determining how many channels you wish your **multi zone** effect to operate on, proceed as follows:

1-		Press the **mode** button in the effects generator bank until the **multi zone** led is on.
2-		Select the first sequential/chase **program**, using the rotary **selector**.
3-		**Simultaneously** press the **transfer** button and the **color** button.
4-		All the **trigger** leds will come on to confirm that the console is in programming mode.

From this moment on, the **preview** led (indicating units) and the **dmx patch** led (indicating decimals), will indicate the current program step; the green **flash** leds indicate steps currently held in memory.

5- 	The **preview 1** led will come on to indicate that you are at the first step of a recordable program.
6- 	
Press the flash buttons corresponding to the channels you wish to have on in step 1, for example from **1** to **3**	
7- 	Press the **color** button to confirm your recording of the step in the program.
8- 	
Press the **+1** button to move to the second step of the program; the **preview** led **2** will come on.	
9- 	
Press the flash buttons corresponding to the channels you wish to have on in step 2, for example from **10** to **12**	
10- 	Press the **color** button to confirm your recording of the second step in the program.

NOTE: The **preview** led will flash to indicate that you have created the first steps of a program which is as yet unrecorded and saved, the **flash** leds will still show the last step of a previously recorded program.

You may continue the programming procedure for program **1,** repeating the procedure outlined in steps **8** and **9** to a maximum of 60 steps.
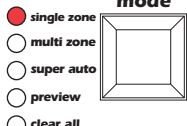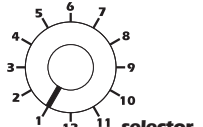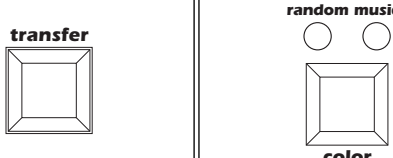
When you have completed the last step of the program you wish to record, you must terminate the program as described in the following procedure step 11.

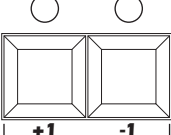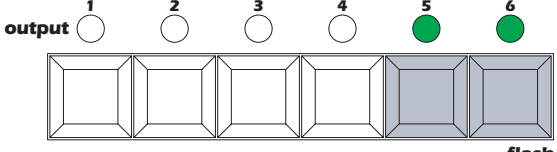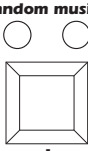|	
11- 	Simultaneously press the **transfer** and **color** buttons to conclude the programming process.

To view the recorded program, refer to section **9. Using pre-programmed effects**.
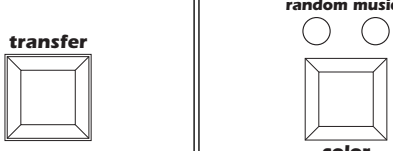
Modifying a step in a previously recorded program

If you wish to alter one or more steps of a previously recorded program, follow the procedure as outlined below.

1-	**mode** — single zone ● / multi zone ○ / super auto ○ / preview ○ / clear all ○	Press the **mode button in the effects generator bank until either the single zone** or the **multi zone led comes on, depending upon the chase you wish to modify**.
2-	**selector** (rotary dial 1–12)	Select the program sequential chase **1**, via the rotary **selector**.
3-	**transfer** / **random music** / **color**	Simultaneously press the **transfer** and the **color button**.
4-	**trigger** — full ● / crossfade ● / audio ● / manual ●	All the **trigger** leds will come on to confirm that the console is in programming mode.

From this moment on, the **preview led** (indicating units) and the **dmx patch** led (indicating decimals), will indicate the current program step; the green **flash leds indicate steps currently held in memory**.

5-	**+1 -1**	Press the **+1 or -1** buttons until the step of the program you wish to alter is displayed via the **preview** led.
6-	**output** 1 ○ 2 ○ 3 ○ 4 ○ 5 ● 6 ● — **flash**	Press the **flash button corresponding to the channel you wish to deactivate** and then press that corresponding to the channel you wish to activate, for example, **5** and **6**
7-	**random music** / **color**	Press the **color button to record your modification**.

Repeat steps 5 to 7 to alter any other steps you may wish changed.

8-	**transfer** / **random music** / **color**	Simultaneously press the **transfer button and the color button to conclude the editing procedure**.

To view the recorded program, refer to section **9. Using pre-programmed effects.**

Important note: manual system 12 plus will not allow you to exit the programming procecure if you have selected an empty step, this will be indicated by a flashing preview led.

Step playback speed

In software version 3.1 the step playback (chase) speed is alterable via the **speed potentiometer** from **60** sec. (**speed 1**) to **0.1** sec.

CE

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instruction manual

manual system 12 plus

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