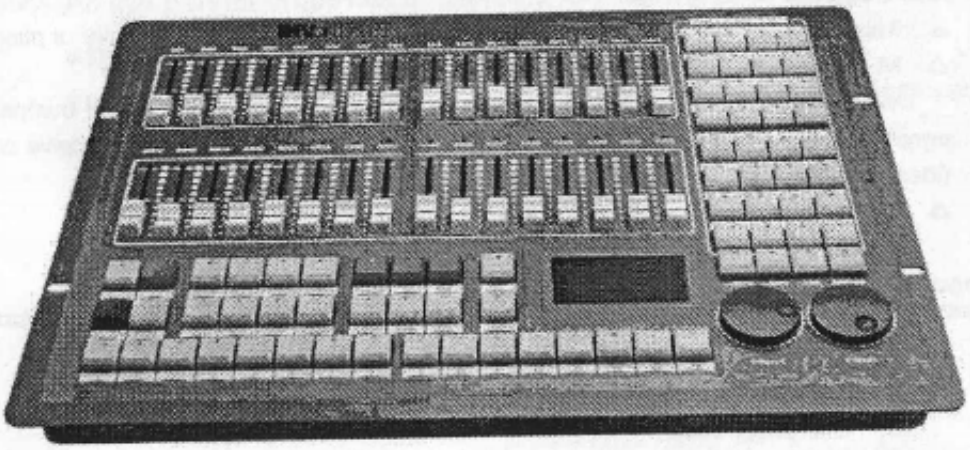
INVOLIGHT

DL500

1024 DMX Controller
User Manual



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AIO64

Please read carefully before using the unit. Thank you!

General Instructions

Read the instruction in this manual carefully and thoroughly, as they give important information regarding safety during use and maintenance. Keep this manual with the unit, in order to consult it in the future. If the unit is sold or given to another operator, make certain that it always has its manual, to enable the new owner to read about its operation and relative instructions.

⚠ Warnings!

⚠ **DO NOT** make any inflammable liquids, water or metal objects enter the unit.

⚠ Should any liquid be spilled on the unit, **DISCONNET** the power supply to the unit immediately.

⚠ **STOP** using the unit immediately in the event of serious operation problems and either contact your local dealer for a check or contact us directly.

⚠ **DO NOT** open the unit — there are no user serviceable parts inside.

⚠ **NEVER** try to repair the unit yourself. Repairs by unqualified people could cause damage or faulty operation. Contact your nearest dealer.

⚠ Cautions!

⚠ This unit is NOT intended for home use.

⚠ After having removed the packaging check that the unit is NOT damaged in any way. If in doubt, DON'T use it and contact an authorized dealer.

⚠ Packaging material (plastic bags, polystyrene foam, nails, etc.) MUST NOT be left within children's reach, as it can be dangerous.

⚠ This unit must only be operated by adults. DO NOT allow children to tamper or play with it.

⚠ NEVER use the unit under the following conditions:

In places subject to excessive humidity. In places subject to vibrations or bumps. In places with a temperature of over 45℃/113F or less than 2℃/35.6F. Protect the unit from excessive dryness or humidity (ideal conditions are between35% and 80%).

⚠ DO NOT dismantle or modify the unit.

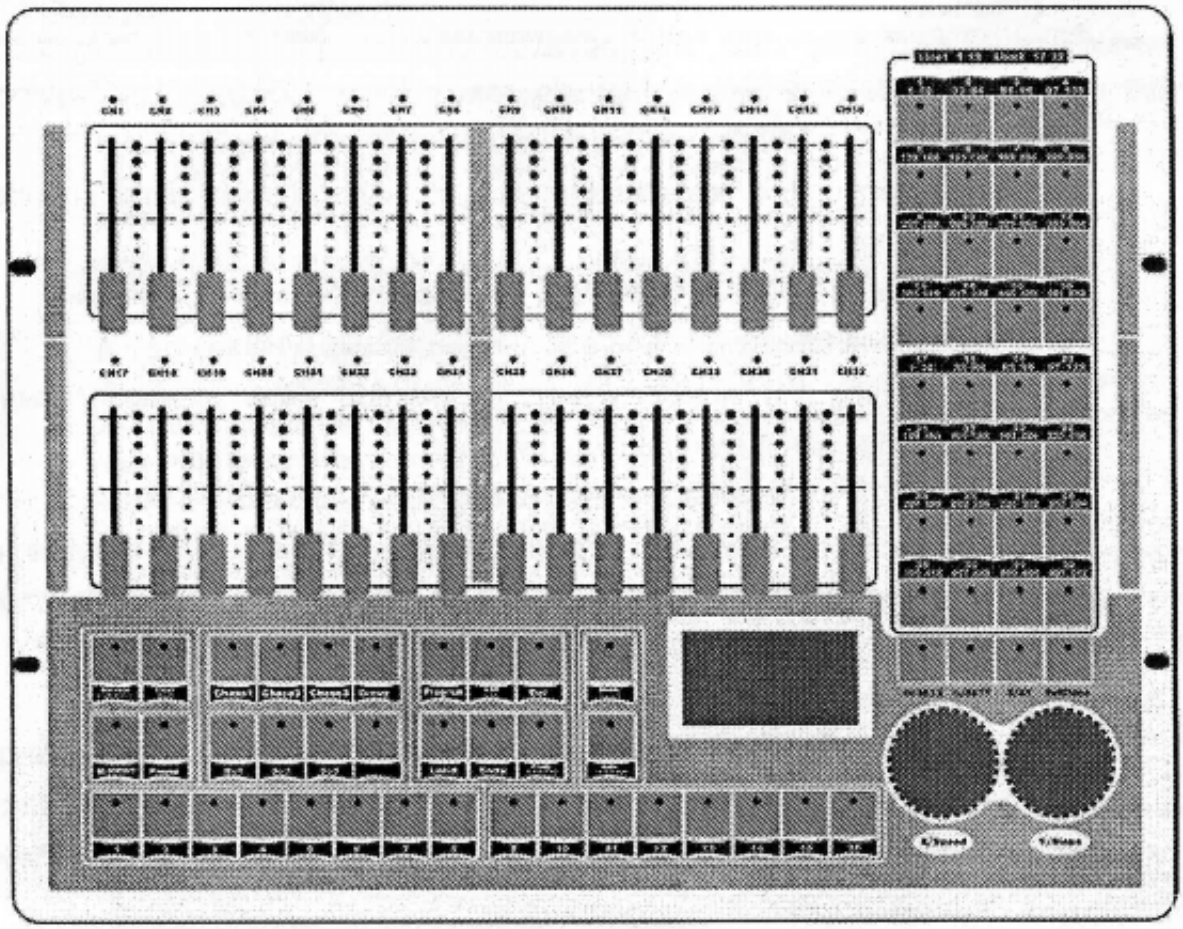
Unpack

1. One unit of console
2. One user manual
3. One power cable

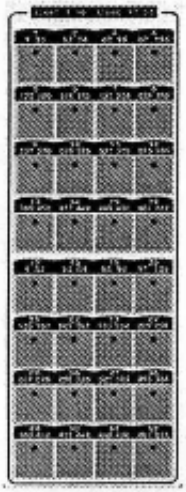
I. Features

- ✓ 1024 DMX512 control channels, compatible with DMX512/1990 standard.
- ✓ Control up to 32 fixtures, each with up to 32 channels.
- ✓ 32 sliders on the front panel for easy and fast control of all the channels in the fixture.
- ✓ Big size LCD display with language selection (Chinese/English).
- ✓ 48 scenes for direct output and simultaneously running.
- ✓ 48 chases run simultaneously. Speed and slope of each chase are adjustable either separately or together.
- ✓ Up to 200 steps in each chase; totally 1700 steps can be stored.
- ✓ 16 groups of chases run simultaneously, each with up to 48 steps, each step with up to 48 chases; fade time and speed of each step adjustable;
- ✓ 3-pin DMX in/out × 4 in 2 sets;
- ✓ 16 master sliders, each can be assigned with any channels.
- ✓ Photoelectric isolated data output, resistant to 3KVDC, preventing the controller from being damaged by the electric leakage from the fixture.
- ✓ All the pan/tilt channels in different fixtures can be assigned to the function wheels.
- ✓ The slope channel when a chase is running can be configured, in which the pan/tilt slope is fixed and the gobo/color channels can be set as without slope to avoid unexpected effect.
- ✓ Built-in microphone and audio input for sound activation.
- ✓ Built-in switching power supply, suitable for all countries.

II. Front Panel



◆ Fixture Selection Buttons



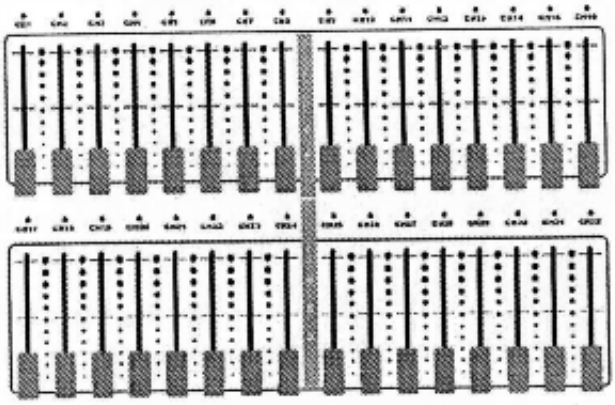
1, 2, ..., 32: 32 fixture selection buttons, each with 32 fixed DMX channels for the fixture. Connected fixtures can be selected directly. Once selected, the LED indicator on the button will be on. When the LED indicator of the fixture selection button is flashing, the LED indicators of the sliders will show the status of the fixture.

Activation and inactivation can be applied to one or more fixtures at the same time. For example, to activate Fixture 4, 5, 6, 7, 8, 9 and 10 at the same time, when the indicators of these buttons are all off, press and hold Button 4 and then press Button 10, then Fixture 4, 5, 6, 7, 8, 9 and 10 are activated at the same time.

Note: According to DMX512/1990 standard, each set of DMX512 signal output has maximum 512 channels. So, the 1024 channels in this controller are divided into two sets. 1—16 fixture selection buttons are related to LIN1 output; while 17—32 are related to LIN2.

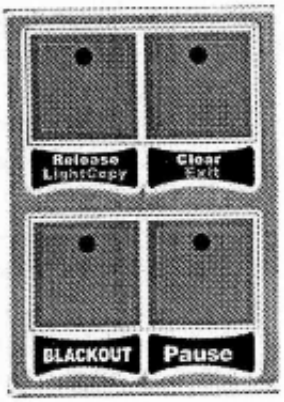
◆ Sliders and LED Indicators

There are 32 sliders, each with an LED indicator, on the front panel. With these sliders and the fixture selection buttons, all 1024 channels can be controlled directly by manual. And, the 16 sliders at the bottom can be used as the 16 master sliders.



◆ Function Buttons

Note: Button name indicates the function of the button; Button name indicates the additional function of the button.



★ Release: When there is output in the slider, press Release and push the slider, then the channel of the slider will be released.

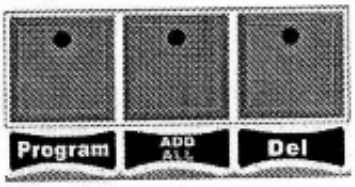
★ LightCopy: To copy the data from one fixture to another. First, adjust the channels of one fixture by pushing the sliders, then press and hold LightCopy + the current fixture selection button till the LCD display shows COPY OK. Press and hold LightCopy again + the button of the target fixture till it shows PASTE OK, then the data of the first fixture are copied to the second fixture. This function is for the fast setting of the same type of fixtures.

★ Clear: Operations on this button will be different in different status.

★ Exit: Exit button. When Program or DEL is in use, this button can be used to exit the current command.

★ BLACKOUT: When LED indicator of this button is on, all output are zero.

★ Pause: Press this button to pause all running chases.



★ Program: Press this button to enter programming.

★ ADD: Press this button to add a step when programming a chase or a chase group.

★ ALL: When a chase is running, press this button to adjust the speed and slope of all the steps in the chase.

★ DEL: To delete a scene/chase/chase group, or to delete a step when programming.

★ Music: When a chase is running, press this button to enter sound activation mode.

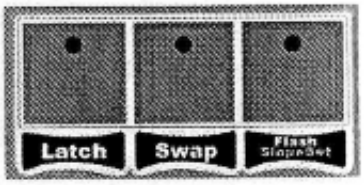
★ Insert: Press this button to insert a step when programming.

★ Auto: Auto mode is the default chase running mode. Press this button to turn the chase running from sound mode to auto mode in preset speed and slope.

★ Language: Press Program first and then press this button to toggle Chinese and English.

★ Latch: Press this button to latch two or more scenes /chases /chase groups, so that they can run simultaneously.

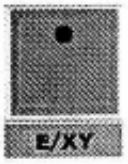
★ Swap: Press this button to swap the running of a different scene /chase / chase group (only one running at a time).



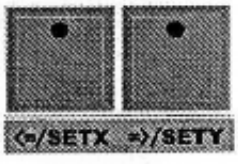
★ Flash: Press and hold this button, and then select a scene /chase /chase group to run it; Release the button to close the running.

★ SlopeSet: Press this button to set a channel with slope. (The pan/tilt channels controlled by the function wheels are fixed with slope.

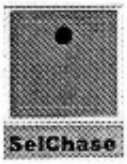
★ E/XY: Press this button to switch the function of the function wheels from speed/slope adjustmen (LED off) when chase is running to pan/tilt control (LED on). The speed/slope adjustment of chase group is by X/Speed only.



★ <=/SETX & =>/SETY: Press the buttons to change the running direction of a running chase, or to set the pan/tilt movement to the function wheels.

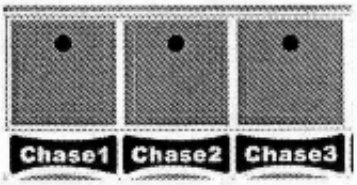


★ SelChase: Press this button to select one of the running chases for setting of its running.

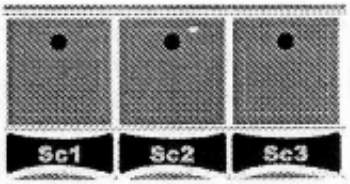


◆ Storage Area of Scene, Chase and Chase Group

★ Chase1, Chase2 & Chase3: 3 chase groups, each with 16 chases, total 48 chases.



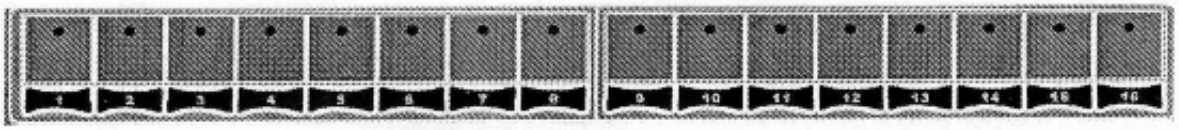
★ Sc1, Sc2 & Sc3: 3 scene groups, each with 16 scenes, total 48 scenes.



★ Group: 16 chase groups.

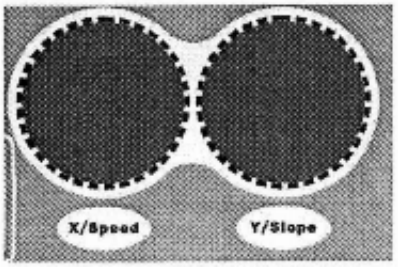
★ Master: 16 master controls.

★ 1—16: 16 number buttons for use of scenes, chases and chase groups.

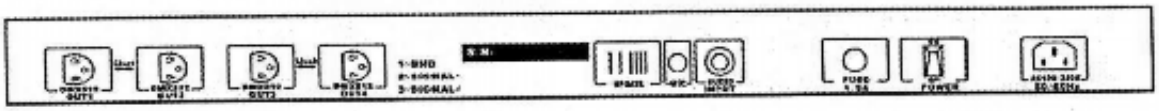


◆ Function Wheels

★ X/Speed & Y/Slope: Use to control the pan/tilt of the fixtures (the pan/tilt channels should be preset to the function wheels) and speed/slope adjustment of chase and chase group.



III. Rear Panel



★ 3-PIN XLR socket × 4 in two sets, each with 512 DMX channels, total 1024 DMX channels.
★ Firmware update port, reserved for future use.
★ Audio input, by built-in microphone or external audio input.
★ Fuse
★ Power switch with LED indicator.
★ Power socket, suitable for 100~240VAC 50/60Hz power supply

IV. General Operations

★ Power on: Please confirm the power supply is correct for the controller before connection. After power on, the controller will start reseting. You may see the LED indicators flashing.

★ Fixture selection: After power on, the fixture selection buttons are inactivated and the sliders are not ready to work.. Press the fixture selection buttons to select fixtures.

1. 1-32 fixtures can be selected. If the LED indicator of the button is on, it means the fixture is selected. The flashing LED indicators of the sliders indicate the output status of the fixture.
2. Two or more fixtures can be activated or inactivated simultaneously. For example, If you want to activate or inactivate 10 fixtures, press and hold the first button and then press the 10th button, then Fixture 1-10 will be activated or inactivated simultaneously.

★ Manual control: After activating the fixtures, you can control the fixtures by pushing the sliders. If the fixtures do not response to the sliders, push the slider to the bottom and try again. The brightness of the sliders' LED indicators indicates the output value. It the indicator is flashing, it means the output value on the slider is 0. The output by manual control is prior to the output by a running scene /chase /chase group. Press and hold Release, then push a slider, the output of the channel by manual control will released.

Note:

◇ Press and hold Release, then push a slider to release the channel and the LED indicator will be off. But, if there is a scene/ chase/ chase group running on that channel, the brightness of the LED indicator will change according to the output value.
◇ Press Clear to clear all manual output. All the LED indicators of the sliders will be off.
◇ Manual output is prior to the output of a running scene /chase /chase group.

★ Clear

- When one of the LED indicators of SC1, SC2, SC3, Chase1, Chase2, Chase3, Group1 and Group2 is on, press Clear once, it will clear all manual output.
- When one of the LED indicators of SC1, SC2 and SC3 is on, press Clear and hold for about

1 second, it will clear all manual output and close all the running scene.

- When one of the LED indicators of Chase1, Chase2 and Chase3 is on, press Clear and hold for about 1 second, it will clear all manual output and close all the running chases.
- When one of the LED indicators of Group1 and Group2 is on, press Clear and hold for about 1 second, it will clear all manual output and close all the running chase groups.

V. Create a Scene

Step	Description
1	Select the desired fixtures.
2	Push the sliders to adjust the lighting effects.
3	Press Program to enter programming mode.
4	Select one of SC1, SC2 and SC3 to store the scene.
5	Select one number from 1–16 to store the scene.
6	After saving the scene into the number button, it will automatically exit the programming mode.

Note:

- The LED indicators of the sliders with manual output will be on or flashing (output value = 0). The values will all be saved into the scene. However, if the LED indicators are off, they will not be saved. If you don't want to save the value of a certain channel, press and hold Release and then push the slider to release the channel, the LED indicator of the slider will be off. It is recommended to release the unnecessary channels to avoid unexpected lighting effects.

- If it prompts error when saving a scene, it means there is an existing scene running in the number button, or the new scene is blank not for save.

VI. Run a Scene

Step	Description
1	Select one of SC1, SC2 and SC3 in which the scene is stored.
2	The LED indicators of the number buttons with existing scenes will rapidly flash.
3	Select a number button to run a scene. Once selected, the LED indicator of the number button will be on, which means the scene is now running, and the LED indicators of the sliders will be on; brightness changes with the output values.

Note:

- If the running scene is using the same channel under manual control, the output will be by manual but not by the scene. If you want to output the scene, press and hold Release and then push the slider to release the manual output.

VII. Create a Chase

There are different ways to create a chase: Create scenes first and then select the scenes into the chase; create the chase by directly adjusting the sliders; or, mix the first two ways.

A: Create a chase by adjusting sliders: This is the simplest way to create a chase.

Step	Description
1	Press Program to enter programming mode
2	Select one of Chase1, Chase2 and Chase3 to store the chase.
3	Select a number from 1--16 as the number of the chase. If the LED indicator of the number button is on, it means there is an existing chase in it.
4	Select one or more desired fixtures.
5	Push the sliders to adjust the desired lighting effects.
6	If the LED indicator of E/XY is on, the pan/tilt value can be adjusted by the function wheels. If the LED indicator E/XY is off, the speed/slope of the scene can be adjusted by the function wheels. Shortly press clear/exit once to clear the slider output. Press and hold clear/exit, to exit programming mode. Press Release, then push a slider to release the channel. Press <=/SETX or =>/SETY to edit the previous or next step of the scene. Press Del to delete a step. Press Insert to insert a step.
7	Press ADD to save the lighting effect into the chase. It will automatically jump to the next step. Repeat Step 4—7 to edit a new lighting effect.
8	Press Program save the chase and exit the programming mode.

B: Create the scenes first and then add the scenes into the chase:

Step	Description
1	Create scenes (See "Create a Scene").
2	Press Program to enter programming mode
3	Select one of Chase1, Chase2 and Chase3 to store the chase.
4	Select a number from 1--16 as the number of the chase. If the LED indicator of the number button is on, it means there is an existing chase in it.
5	Select one of SC1, SC2 and SC3 by the order of the scenes' saving time.
6	If the LED indicator of the number button is on, it means there is an existing scene in the number. Select a scene that you want to add into the chase. At this time the selected scene is running as preview, but it has not yet been added. The default speed is 3 seconds, which can be changed by the function wheel if E/XY is off.
7	After selecting a scene, press ADD to add the scene into the chase. It will automatically jump to the next step. Repeat Step 5---7 to add a new scene.
8	Press DEL to delete a scene in the chase; Press Insert to insert a step of scene; Press <=/SETX or =>/SETY to edit the previous or next scene in the chase. When the next scene is blank, it will not move further.
9	Anytime press exit for some seconds to exit the programming mode.
10	Press Program to save and exit.

C: Create a chase by mixing Method A & B

Step	Description
1	Create scenes (See "Create a Scene").
2	Press Program to enter programming mode
3	Select one of Chase1, Chase2 and Chase3 to store the chase.
4	Select a number from 1--16 as the number of the chase. If the LED indicator of the number button is on, it means there is an existing chase in it.
5	Now, the lighting effect can be selected in the scenes or created by adjusting the sliders. To select from the scenes, press one of SC1, SC2 and SC3, and then select the desired scene to add into the chase. To create the effect by adjusting the sliders, select the desired fixture and push the sliders to adjust the effect. You can also edit the selected scene, too.
6	After making the effect, press ADD to add it into the chase. It will automatically jump to the next step. Repeat Step 5---6 to add a new scene into the chase.
7	Press DEL to delete a scene in the chase; Press Insert to insert a step of scene; Press <=/SETX or =>/SETY to edit the previous or next scene in the chase. When the next scene is blank, it will not move further.
8	Anytime press exit for some seconds to exit the programming mode.
9	Press Program to save and exit.

Note:

- In making the lighting effects, the LED indicators of the irrelevant sliders should be off. If not, you can press and hold Release and then push the slider to release them. Any channel with output value will be stored into the chase.

VIII. Run a Chase

Step	Description
1	Select one of Chase1, Chase2 and Chase3, in which the desired chase is in.
2	The LED indicator of the number button with an existing chase will flash rapidly.
3	Select the desired number button to run the chase. The LED indicator will slow down the flash, which means that the chase is now running. If more chases are running simultaneously, then the LED indicator of the previous running chase number button will stop flashing.

Note:

- Different flashes of the number button LED indicator means different status. Rapid flash means that there is an existing chase in the number button but not running. Full on means the chase is running and not for editing. Slow flash means the chase in running and ready for editing.

The followings can be edited when the chase is running:

Press =>/SETY	Chase runs forward
Press <=/SETX	Chase runs backward
Press Auto	Chase runs under auto mode
Press Music	Chase runs under sound activation mode
Press ALL	Then adjust X/Speed (function wheel) to adjust the running speed. Y/ Slope is for slope adjustment. If ALL is not pressed, the adjustment is for the speed/slope of a single scene step. Before adjustment, please make sure E/XY is inactivated (LED indicator off).

Press Clear and hold for about 1 second to close all chases.
If the running chase and the manual control are using the same channel, only the manual output will be sent.

IX. Create a Chase Group

The controller can store up to 16 chase groups, each group with up to 48 steps. The running time of each step can be adjusted from 0.5 second to 10 minutes.

To create a chase group, please follow the steps below:

Step	Description
1	Press Program to enter programming mode
2	Select Group
3	Select a number from 1--16 as the number of the chase group. If the LED indicator of the number button is on, it means there is an existing chase group in it.
4	Once the number button is selected, it will immediately jump to Chase1 for chase selection. A flashing LED indicator on the number button indicates an existing chase.
5	Select the desired chases to add into the chase group. Once selected, the chase will start running. Up to 48 steps can be added. Inactivate E/XY (LED indicator off), then adjust running speed by the X/Speed function wheel.
6	Press ADD to add the selected chase into the chase group. It will automatically jump to the next step and close the running chases.
7	Repeat Step 5-6 to add a new step.
8	Press Program to save the chase group and exit.

Note:

- Anytime press Clear for a certain time, it will exit and cancel the programming.

X. Run a Chase Group

Step	Description
1	Press Group to select a chase group.
2	The LED indicator of the number button with an existing chase group will flash rapidly.
3	Select the desired number button to run the chase group. The LED indicator will slow down the flash, which means that the chase group is now running.

Note:

- Press Clear, it will close all the running chase groups.

XI. Master Control Assignment

There are up to 16 master controls in the controller, each can be assigned with any channels.

Step	Description
1	Press Program to enter programming mode.
2	Press Master to select a master control.
3	Select one of the number buttons from 1—16, as the number to store the master control.
4	Push the channel sliders that you want to assign to the master control till the LED indicators of the sliders are on.
5	Once assigned, press the number button in Step 3 again to save and exit.

XII. Run a Master Control

Step	Description
1	Press Master to select a master control
2	Select the number button in which there is a master control. If the LED indicator is on, it means it has been selected.
3	Run the master control by pushing the master slider.

Note:

- The 16 master sliders are the 17^{th} to 32^{nd} channel sliders.

XIII. Function Wheel Assignment

The pan/tilt channel of the fixtures can be assigned to the function wheels on the controller for easy control.

Step	Description
1	Press Program to enter programming mode
2	Select <=/SETX or =>/SETY
3	Select the desired fixture.
4	Push the slider of the pan/tilt channel of the fixture till the LED indicator is on.
5	Press <=/SETX or =>/SETY again to save and exit.

XIV. The Use of Function Wheel

The channel that has been assigned to the function wheel can be controlled by the function wheel.

Step	Description
1	Press E/XY, make sure the LED indicator is on.
2	Select the desired fixtures.
3	Control the fixture with the function wheels.

XV. Setup of Slope Channels

The channels that have been assigned to the function wheels will automatically with slope when the chase is running. Other channels can also be set up with slope, too.

Step	Description
1	Press Program to enter programming mode
2	Press SlopeSet.
3	Select the desired fixture.
4	Push the channels that you want to set up with slope till the LED indicators of the sliders are on. Press Release, and then push the slider, to release the selected channels.
5	Press SlopeSet again. Then, the setup is finished. Slope will be with the channels when chase is running.

Example:

To set Channel 5 & 6 of Fixture 1 with slope:

Press Program -> SlopeSet -> Select Fixture 1 -> Push the sliders of CH5 & CH6 till the LED indicators are on -> SlopeSet. OK.

XVI. Delete

Step	Description
1	Press Del
2	Select what you want to delete from SC1, SC2, SC3, Chase1, Chase2, Chase3, Group1, Group2, <=/SETX or SlopeSet
3	Select the number buttons from 1—16 for delete. (<=/SETX, =>/SETY and SlopeSet do not need to press number button).
4	Deleted.

Note:

- Example: To delete the chase in number button 2 of Chase 1
  Press Del-> Chase1-> 2, OK.

XVII. Troubleshooting

a) Fixture does not response to the controller: Check the address code of the fixture and in the controller. Make sure they are the same. And, make sure the connections are correct.

b) Interference between chases: If a same channel is in different simultaneously running chases, the one with the maximum channel value will be output.

c) Note: When in programming mode, as long as the LED indicator is on, the value will be stored, even the value is zero.

d) Except for the channels assigned to the function wheels and the channels set with slope, slope is not with other channels.