

# A200 XP11

MOVING LIGHT CONTROLLER

## USER MANUAL

( Version Number: 3.0 )

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# 1 Summary

## 1.1 Function

A200XP2 Intelligent Fixtures Controller can connect up to 11 intelligent Fixtures with a maximum of 16 Channels each. It uses 16-bit X/Y control for absolutely precise movement. The new technology of the core microcomputer has strengthened the functions. They are more humanized.

- The intelligent Fixtures can be manually controlled and run multi Scenes and multi Chase programs to give out various combination effects.
- Up to 11 intelligent Fixtures may be connected with a maximum of 16 Channels each.
- The X/Y Channel of different intelligent Fixtures can be controlled by modulation Wheel.
- Able to store 22 Chase programs with a maximum of 100 Steps each.
- 1 Chase, 11 Scenes operated at one time. Up to 11 intelligent Fixtures can be selected simultaneously.
- Shape track control is provided to control such effects as circles, lines and shapes like 8, etc.
- DMX output with optical isolated, ensure the safety of controller.

## 1.2 Specification parameter

	A200 XP11
DMX512/1990 OUTPUT SIGNAL	Yes
CONTROLLABLE DMX512 CHANNEL	176
MAX FIXTURES	11
MAX FIXTURE CHANNELS	16
X/Y CONTROL (BIT)	16bit
DIRECT CALL OF SCENES	11
CHASE PROGRAM	22
MAX STEPS OF EACH CHASE	100
CHASE SPEED RANGE	0.03s~180s
CHASE TRIGGER MODE	AUTO
CHASE DIRECTION CONTROL	Forward / Inversion
SHAPE CONTROL	Yes
LCD MONITOR	Yes
DMX512 OUTPUT PORT	Optical isolated output port
ELECTRIC POWER SOURCE	Switch mode power, voltage range: 100~240VAC, frequency: 50/60Hz
POWER	4W
SIZE	482mm x 178mm x 70mm

## 2 Installation

A200XP2 Intelligent Fixtures Controllers' packing chest contents items as following:

- One A200XP2 Intelligent Fixtures Controller;  
Ps: to confirm the model of the controller, please check the model number and software version number displayed on the LCD monitor when run the controller.
- One feed cable; one user's guide.

The controller is of international 19" construction standard of installation. It can be in board installed or installed on the 19" stander or machine cabinet.

### 2.1 Safety caution

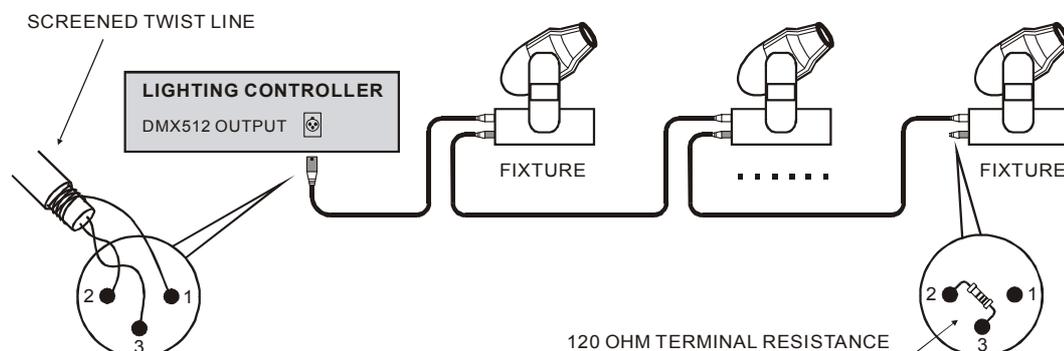
- The controller must be connected with the protective groundwire to ensure safety.
- The intelligent Fixtures controller is sophisticated electronics. Please mind the dust and moist.

### 2.2 Connect the power

Please check the supply power, ensure it in the suitable voltage range of the controller. The plug must connect with the protective groundwire to ensure the safety.

### 2.3 Connect intelligent Fixtures with digital Dimmer

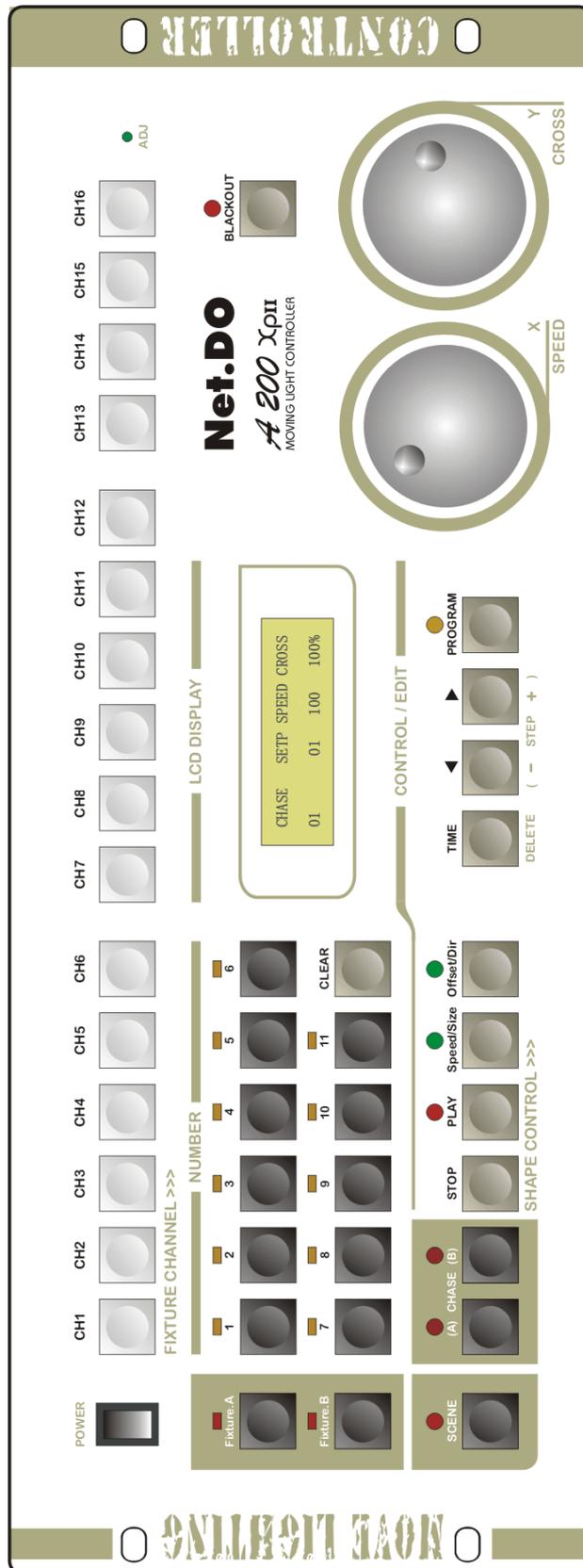
- There are two DMX512 XLR-D3F output sockets on the rear panel of the Controller, Pin 1 for signal ground, Pin 2 for negative, and Pin 3 for positive.
- DMX512 cable is screened twist wire. Each end of the cable should be joined to XLR plug by user. Pin 1 of XLR plug is connected to the screen net of the cable. Two wires of twist (distinguished by different colors) are connected to Pin 2 and Pin 3 of the plug respectively. Please do not confuse.



Pin number	Cable conductor
1	Shield
2	Negative pole
3	Positive pole

### 3 Operation Guide

#### 3.1 Panel plot



### 3.2 Useful glossary

- Scene: the concourse of Channel values of intelligent Fixtures' X/Y position, Shape track, brightness, gobo, color, etc.
- **Chase program:** every Chase program is composed of some Chase Steps, and every Step is a Scene indeed.

### 3.3 Keyboard

Some keys have corresponding **LED** indicators. When a **LED** indicator is on, the Controller is executing the key's function.

#### **FUNCTION KEYS:**

**Fixture.A** Function key for Manual control (Group A, control Fixture A1~A11 )

When buttons down, The controller enters the state of Manual, with number keys 1~11 for choosing intelligent Fixtures.

**Fixture.B** Function key for Manual control (Group B )

Reserve

**SCENE** Function key for Scenes

When button down, the controller enters the state of controlling Scenes, meanwhile number keys 1~11 are for choosing Scenes.

**CHASE.A** Function key for Chase (Group A, controls Chase program A1~A11)

**CHASE.B** Function key for Chase (Group B, controls Chase program B1~B11)

1. Used for choosing Chases:

When button down, The controller is in Chase running state. with number keys 1~11 to different Chases.

2. Used for checking the parameter of Chase

Press a number key to the very Chase when pressing a function key, the parameters of the very Chase can be viewed and transferred into without affecting current state.

#### **Number keys (1~11)**

There are 11 number keys on the controller. Under different states of different function keys, the keys give different effects. For example: when the LED of a number key is on, it means it's outputting a very Scene or a very Chase program.

#### **CHANNEL KEYS :**

**CH1~CH16** Channel keys

This is a group of buttons used for controlling the value of Channel 1~16. When pressing a Channel buttons, you can adjust the value of the very Channel with the use of wheel.

**CONTROL KEYS:****CLEAR** Clear key

Clear the whole choice of current number key.

**TIME** Controlling key for the Chase running time

When pressing the button, with the use of the wheel, the Speed and Cross of current Chase can be adjusted.

**◀ ▶** Chase direction key

When a Chase program is on, it can be used to change the directions.

**BLACKOUT** Blackout key(or cut light key)

To turn all lights down.

**Edit Keys:****PROGRAM** Program edit key

When in running state, press the button to enter the edit state. The LED indicator will flicker.

**DELETE** Delete key

Under the state of Chase programs, the keys are used for delete Chase Step.

**- STEP +** Chase Step number minus / plus key

When a Chase program is edited, is used to change the Step number of the current Chase program.

**Keys for Shape tracks:****STOP** Stop key for Shape track

Used for stop all the Shape generators, restore intelligent Fixtures to X/Y origin point.

**PLAY** Run and edit key of Shape tracks

Used for running the Shape track generator, and entering the edit state of Shapes.

**Speed / Size** Speed of Shape / Size of Shape key**Offset / Dir** Offset of Shape phase/ Direction edit key**VIEW** Calling key of Shapes

Used for viewing the calls of Shapes.

**3.4 X/Y wheel**

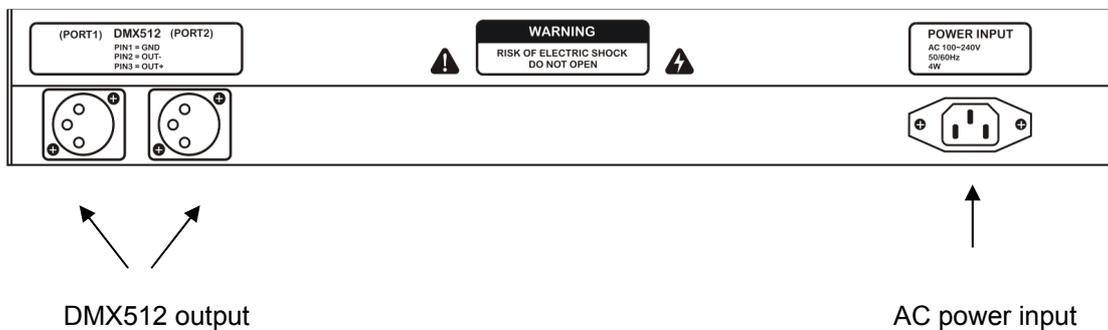
- X wheel used for setting the PAN of intelligent Fixtures, and Y wheel for TILT under the Manual mode.

- Used for adjusting the Chase Speed% & Cross% under the running state.
- Used for adjusting value of a very Channel when pressing a Channel key.
- X/Y wheels used for transferring and editing a very item under edit mode.
- X/Y wheels is of dead-band regulated mode, that is, the faster it roles, the adduction will increase by degrees.

### 3.5 Introduction to back board port

#### Introduction:

- The controller adopts two DMX512 output modules with optical isolated and the same output.
- When connected to the AC power, please make sure the controller is connected to the protective groundwire and ensure the voltage is suitable for safety concerned.



## 4 Settings of intelligent Fixtures

### 4.1 Know more about your intelligent Fixtures

When programming, the intelligent Fixtures user's guide should be at hand, for the number of Channels and the control parameters varies for different intelligent Fixtures. For example: the address code, the functions of each control Channel.

### 4.2 X/Y ( pan / tilt ) Channel Analysis

X Channel controls left/right (PAN) movement of the intelligent Fixtures, while Y Channel controls up/down (TILT) movement.

The controller can control the intelligent Fixtures with 8-bit or 16-bit resolution. To make the X/Y wheels fit for any intelligent Fixtures which adopt DMX512 protocol, receiving address code of every intelligent Fixture must be set in advance; then the X/Y Channel of each intelligent Fixture should input into the controller according to the serial number. If X/Y gradual movement (CROSS) and Shape track effects are wanted, the X/Y of the intelligent Fixtures must be set in advance.

The X of intelligent Fixtures with 16-bit resolution is controlled by two data Channels, and the Y the same; that is, they are controlled by the four Channels as follows: X coarse adjust Channel (Xh: high 8bit), X fine adjust Channel ( Xl: low 8bit), Y coarse adjust Channel (Yh: high 8bit), and Y fine adjust Channel ( Yl: low 8bit). The 8-bit intelligent Fixtures only have two: X coarse adjust Channel (Xh: high 8bit), Y coarse adjust Channel (Yh: high 8bit).

### 4.3 Allocation of DMX512 address & Setting of X/Y

#### 4.3.1 Fixed allocate addresses of intelligent Fixture

- The origin setup of the controllers is set for 11 intelligent Fixtures with 16 Channels for each Fixture.
- The method of data initialization is in chapter 10.
- The fixed intervals for each intelligent Fixture's DMX512 address are as follows:

Chart 1: Setting of the intelligent address switch when fixed intervals are acquiescent arranged

intelligent Fixtures NO.	DMX512 address	The switch value of address 123456789
01	1	10000000
02	17	10001000
03	33	10000100
04	49	10001100
05	65	10000010
06	81	10001010
07	97	10000110
08	113	10001110
09	129	10000001
10	145	10001001
11	161	10000101

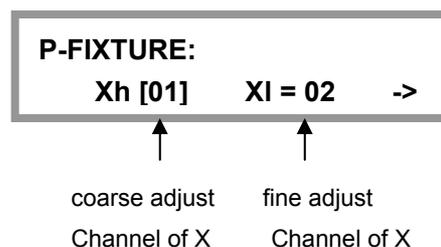
Ps: 0=OFF, 1=ON

The first address settings of different companies are varied, so the 512 Channels are expressed in two ways: 1<sup>st</sup>, 000~511; 2<sup>nd</sup>, 001~512. The addresses of above chart only fit for the second one. For the products from companies who use the first way, please minus 1 from each address in the above chart (for the equipment with binary system, only the first 1 need to be changed into 0).

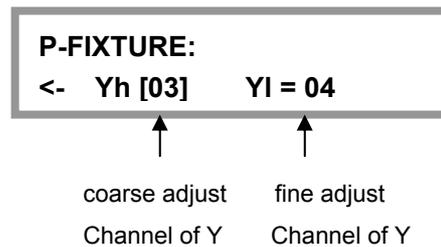
#### 4.3.2 Methods & steps of X/Y settings:

1. Press **PROGRAM** to enter edit state; the indicator on.
2. Press **Fixture.A** to enter setting state of intelligent Fixtures.
3. Use **number keys 1~11** to select the Fixture wanted.
4. Use **X wheel** to select items edited. (The items are in several pages, it will go to adjacent page when the [ ] moves to the right/left edge)
5. Use **Y wheel** to set the very value.
6. Repeat step 3~5 to set other intelligent Fixtures.
7. Press **PROGRAM** to escape from edit state.

The setting screen for X Channel:



The setting screen for Y Channel:



**Tips:**

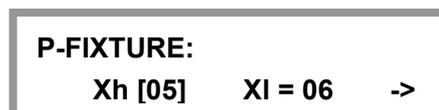
For 16-bit intelligent Fixtures, when only the Xh and Yh Channels are set with [no] for XI and YI Channel, the Fixtures will run in 8-bit resolution. Thus, the characters of 16-bit Fixtures such as precise position and smooth track cannot be displayed.

**Examples:**

1. Some 8-bit intelligent Fixture. X axis on Channel 5, Y axis on Channel 7



2. Some 16-bit intelligent Fixture. Xh on Channel 5, XI on Channel 6, Yh on Channel 7, YI on Channel 8



**The automatic setting for false X/Y settings:**

When Xh=no or Yh=no. the very XI, YI will become no according to the automatic setting.

**View setups for every intelligent Fixture:**

**Methods:**

1. Press **PROGRAM** to enter edit state; the indicator on.
2. Press **Fixture.A** to enter setting state of intelligent Fixtures.
3. Use **number keys 1~11** to select the Fixture wanted.
4. Repeat step 3, view the setups of each Fixture on LCD monitor.
5. Press **PROGRAM** to escape from edit state.

## 5 Manual mode of intelligent Fixtures

Set Channel value of brightness, X/Y, Shape... of a pointed intelligent Fixture under the Manual mode.

The items controlled by each Channels are different to different intelligent Fixtures. Knowledge of details about the items and Channels is necessary for skillful management.

Manual mode is adopted as the most advanced mode, the chosen intelligent Fixture will automatically escape from the current Scene and Chase when transferred into Manual mode. Manual run is also the basic run. It can store the Scenes. It is also the basic run for Chase program edit.

**Fixture.A** used with **number keys (1~11)** can enter the function of choosing Fixtures. When the indicators of number keys are on, the very intelligent Fixture is under choice mode. The chosen Fixture can be controlled by Channel Fader (CHANNEL) and **X/Y wheels**.

### 5.1 CHANNEL Faders & Wheel

The Channel value of intelligent Fixtures are set by key **CH1~CH16**. Pressing the Channel keys, roll the X/Y wheels, the very Channel value is adjusted. The value range is 0~255, the current value is displayed on the LCD screen.

The X Channel of intelligent Fixtures is set by X wheel, while Y wheel for Y Channel. No matter the X/Y is of 8-bit or 16-bit resolution, the value range of the wheels is 0~999, representing the entire movement range of the X axis and Y axis. For 16-bit Fixtures, X wheel controls Xh and Xi Channels at the same time, while Y wheel for Yh and Yi Channels; for 8-bit Fixtures, X wheel only controls Xh Channel, while Y wheel only for Yh Channel.

When the X/Y Channel is under the control of wheels, the very Channels are automatically locked. Only using wheels can change the X/Y position of the intelligent Fixtures.

### 5.2 Manual run of intelligent Fixtures

For different kinds of intelligent Fixtures, only one kind can be manually set at one time. It's a common run.

1. Press **Fixture.A** to enter the Manual state.
2. Press **number key (1~ 11)** to select one or more intelligent Fixtures.
  - Only the same type of intelligent Fixtures can be selected at the same time. The controller will automatically transfer into the current type of intelligent Fixtures, the former ones will be under the remaining state.
  - The Channels value of intelligent Fixtures under the remaining state (whose indicators flicker slowly) won't be changed. The remaining state can be transferred into choosing state by pressing the very key to make the indicator on)
3. Pressing **CH1~CH16** Channel key, roll the **Wheels** to set the Channels value. use wheels to adjust the X/Y position. (Shape generator can be called at the same time)
4. Press the very number key for the chosen intelligent Fixtures again, the indicators

will be flickering, that means they are under the remaining state.

5. Repeat steps 2~4, set other intelligent Fixtures.

**Tips: two number keys can be pressed at the same time to select from the intelligent Fixtures numbered between the two numbers.**

### **5.3 Cancel the Manual run of intelligent Fixtures**

Under the Manual mode of the intelligent Fixtures, press **CLEAR** to cancel the Manual runnings without saving the Channel values.

## 6 Edit of Scenes

To set suitable value for the brightness, color, X/Y Channels, Shapes of every intelligent Fixture, the needed light-beam-pattern will be displayed in the air. Accompanied with the call of Shape generators, a Scene is produced. Each Scene is a combination of the set Channel values of intelligent Fixtures. The controller can store 11 Scenes which can be run as you wish.

### 6.1 Important tips

To run multiple Scenes at one time, the different values of the same control Channel will be expressed according to HTP technique. Here are the advices:

1. Set the X/Y, brightness to 0, only leaving effects such as colors and Shapes in a Scene. (the Scene is called pure Scene)
2. Only control items such as X/Y, brightness are included in the Chase program, setting other Channel values to 0.

Notice: Because a Scene can call SHAPE, the Scene with SHAPE can be arranged at the last numbers for the convenience to distinction of pure Scenes.

### 6.2 Edit records' steps of Scenes

1. According to the Manual mode of intelligent Fixtures, select intelligent Fixtures and set the Channel values and X/Y position. (SHAPE can be called at well)
2. Press **PROGRAM** to enter edit state; the indicator flickers.
3. Press **SCENE** to enter Scene choosing state.
4. Use **number keys (1~ 11)** to select the Scene you want to save.
5. The controller will escape from the edit state after saving Scenes.

**P-SCENE:**  
**select Scene ...**

**Example:** Save the running of the intelligent Fixture as Scene 10.

Press **PROGRAM**, then press **SCENE**, then press **number key 10**, done!

### 6.3 Copy of Scenes

**Example:** Copy Scene 2 into Scene 10.

1. Firstly, present Scene 2.
2. Press **PROGRAM**, press **SCENE**, then press **number key 10**, done.

## 7 Edit of Chase program

The controller can store 22 Chase programs with up to 100 Steps each. The Steps of the total Chase program is 600, which is dynamic allocated by the controller automatically. The Chase program is composed of several Steps. Steps are similar to Scenes.

### 7.1 Edit the Chase program:

1. Press **PROGRAM** to enter edit state, indicator flickers.

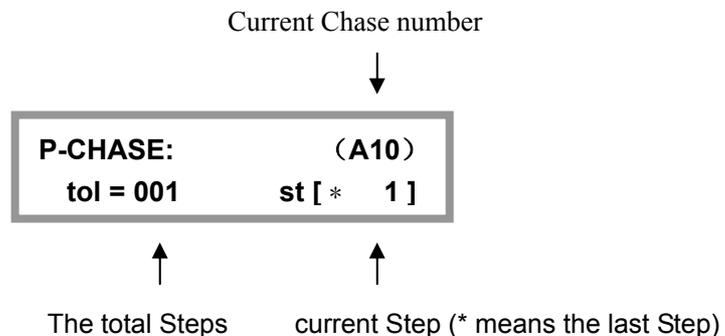


2. Press **CHASE.A** or **CHASE.B**, Select a group of Chase (A or B).
3. Use **number keys(1~11)** to select the number of the Chase wanted.

**Example:** If you want to edit Chase A10,  
press **number key 10**. If the Chase program is empty, the screen will display:



4. Press **STEP +** to add a Step.



- Ps:** - **STEP +** can be used to select Steps.
- If current Step is the last Step of the Chase, \* will be displayed.  
**Example:** The last Step of the Chase is Step 10, **st [\* 10]** will be displayed on the screen.
  - Pressing - **STEP +**, Steps can be chosen automatically.
  - If a new Step is wanted, move to the last Step (which is displayed with \*).  
press **STEP +**, a new Step with the same content is added.

5. Use **number keys (1~11)** to select intelligent Fixtures; use Manual mode, set the Channel values of all the intelligent Fixtures. (SHAPE generator can be used as well)

6. Repeat steps 4~5, edit next Chase Step.
7. Press **PROGRAM**, escape from edit state.  
(or repeat step 2~6 to edit another Chase program)

**Tips:**

- When press **STEP +** to add a Chase Step, the system will add a Step after the former one, and copy the content of the former one. Thus, only with some changes of values, a new content is edited.
- Press **DELETE** to delete current Step. (pressing the button without loose can continuously delete several Chase Steps)

## 8 Running

### 8.1 Run the Scenes

**Example 1:** run Scene 5, Scene 6, and Scene 7 at the same time.

1. Press function key **SCENE**, enter Scene state;  
Thus, the number keys (1~11) are used for controlling Scenes.
2. Press **number key 5, 6, 7** to run the needed Scenes.

### 8.2 Run the Chase

#### 8.2.1 Set the FADE mode for channels

When chase running, there are 2 FADE mode for channels:

- **Only X/Y:** Only X/Y channel as Fadeable, other channels set as Instant.  
(Default)
- **All CH:** All channels can be set as Fadeable.

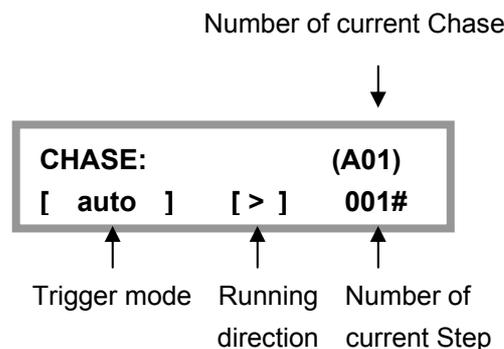
Setup Steps:

- 1) Under running state, keep **PROGRAM** key pressed for 3 seconds to convert the FADE mode.

**PROGRAM ...**  
**( Fade = only X/Y )**

- 2) Press **PROGRAM** key to quit.
- 3) Repeat Step 1~2 to convert the FADE mode again.

#### 8.2.2 How to run



**Example 1:** Run Chase A1 only.

1. Press **CHASE.A** to enter the state of Chase Group A;  
Thus, the number keys (1~11) are used to control Chase A.
2. Press **number key1**, run Chase A1.

**Tips:** When choosing a Chase, if the Chase is empty ( that is, without any Steps), the LCD screen will display “**Step is empty.**”

### 8.2.3 Check running conditions of each Steps of the Chase

When running a Chase, the parameter displayed on the LCD screen is of the last Chase. If parameter of other Chase needs change, the Chase which needs change must be presented on the LCD screen, that is, it must be called then. Pressing **CHASE.A** or **CHASE.B**, then press number keys of the wanted Chase, the wanted Chase can be viewed and controlled without affecting the state of the former Chase.

### 8.2.4 Synchronous trigger mode

Only one trigger mode for Chase programs:

- **Auto auto mode:**  
Chase programs are run by the values of SPEED% and CROSS%.

### 8.2.5 Adjust the SPEED % & CROSS% under the auto mode

**Speed%** The running speed of current Chase. Adjust range: 0%~100%, 0% the slowest, 100% the fastest.

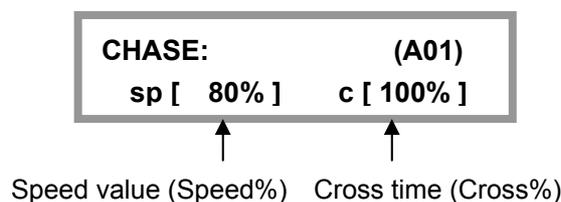
Corresponding time: 180~0.03s / each Chase Step.

**Cross%** The FADE time between Chase-Steps, range from 0% to 100%, 0% the lowest, 100% the fastest.

**Example:** Cross%=60%, that is, use 40% of the time for cross from former Step to later one, then the later Step will remain in the left 60% of the time.

**Adjusting methods:**

Pressing **TIME** key, Use **X wheel** to change the value of **Speed%**. Use **Y wheel** to change the value of **Cross%**.



## 9 Shape track

The function of Shape track is convenient for users to control intelligent Fixtures to have graphic movement such as circle, line, square on X/Y tracks. The function enables multi-intelligent Fixtures to produce various dynamic effects which are composed of different Shapes. Take making a circle for example, if Chase program is used for making a circle, each point of the circle needs an individual Step, and the resolution is limited. Besides, the size of the circle could not be changed for composing with other Shapes. But with the Shape track function, only with the parameter of the circle's speed, size, direction input, it will have the effect.

### 9.1 Shape track generator

The Shape generator can produce Shape tracks of different Shapes, various sizes and speeds for intelligent Fixtures. The controller has several individual generators which can work at the same time. Each generator can run several intelligent Fixtures, producing pattern effects of several lights phase excursion. The currently version of system's software offers 18 generators as follows:

- 5 circle ( circle )
- 3 fader circle ( fader&c )
- 2 8-shape ( eight )
- 2 Xline ( Xline )
- 2 Yline ( Yline )
- 2 triangles ( tri )
- 2 circles ranged in triangle shape (three&c )

**Tips:** The mechanical features of intelligent Fixtures may cause changes of shapes when the Fixtures are vertical. (For example: the circle might become 8-shape). Some intelligent Fixtures' responding speed might be so slow that the shapes will have a little change. An intelligent Fixture with faster responding speed will produce better shapes.

### 9.2 Call and edit of Shapes

Shape generator can be used under Manual mode, Scene and Chase to produce X/Y Shape tracks automatically. In Manual mode, the call of Shapes is basic skill.

#### **Call Shapes in Scenes:**

Record the Manual running with calls of Shapes into the preset Scene, the corresponding Shape will automatically call whenever the Scene is run.

**Call Shapes in Chases:**

Add calls of Shapes into Steps under Chase edit state, the corresponding Shape of each Step will be run automatically when running the Chase.

**Manual calls of Shapes:**

1. Select intelligent Fixtures wanted under Manual mode.
2. Set the X/Y origin point (the position of a Shape centre) of each intelligent Fixture.
3. Press **PLAY** in Shape edit mode. The indicator will become flickering.  
(Then, use **X/Y wheel** to select the Shape generator wanted. When the name of the Shape generator is **0.Null**, it's an empty call of Shape. This call can be used to delete other calls of Shapes)



Name of Shape generator

4. Press **Speed/Size** to change the Speed% and Size% value of current Shape if wanted; Indicators on.



Speed

Size

- Use **X wheel** to adjust Speed% (**sp**), Use **Y wheel** to adjust size% (**si**)
- Speed% is the speed of running Shapes, the larger the value, the faster the speed.
- Size% is the size of Shapes, for example: how large a circle is; how far a light-beam should move, etc.

5. Press **Offset/Dir** to change Offset% and direction if wanted, indicators on.



Offset

Running direction

- Use **X wheel** to change Offset%, use **Y wheel** to change direction.
- Offset% is offset of a Shape, that is, to set different positions of different

intelligent Fixtures in a Shape. For example, when a circle of 50% offset is set, Fixture 1 will be the beginner, Fixture 2 will be in the semi-circle behind it, and Fixture 3 will be in the position of Fixture 1. When a circle of 25% offset is set, Fixture 1 will be the beginner, Fixture 2 in the quart-circle behind it, Fixture 3 in the quart-circle behind Fixture 2, Fixture 4 behind Fixture 3 and a Fixture 5 in the position of Fixture 1, etc.

- DIR is the moving direction of Shapes.
6. Repeat step 1~5, edit other intelligent Fixtures.
  7. Press **PLAY** or other keys to escape from Shape edit state, the calls of Shapes will be confirmed and run continuously. Indicator of **PLAY** on.

**Tips:** Shape edit such as adjusting speed or sizes will affect all Fixtures the Shape uses, no matter whether the Fixtures are being chosen. That is, if you want to use a new circle generator when there are other Fixtures working of other direction or speed, you should call a new Shape for each change and use the changes in the corresponding Fixtures.

### 9.3 Stop & run the Shapes

Press **STOP**, very Shape generator will stop; all intelligent Fixtures will return to their X/Y origin point. Then press **PLAY**, the indicator of PLAY on with all Shapes run again.

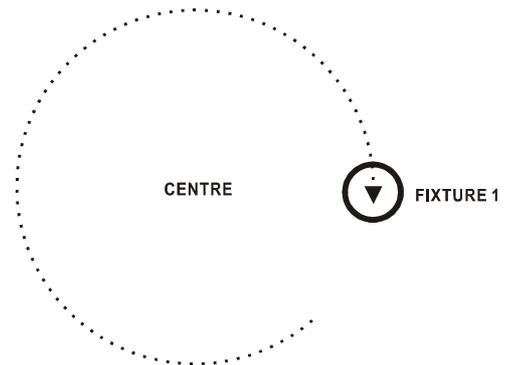
### 9.4 Cancel intelligent Fixture's call of Shape

Call the Shape generator named **0.Null**.

## 9.5 Skills of using Shapes

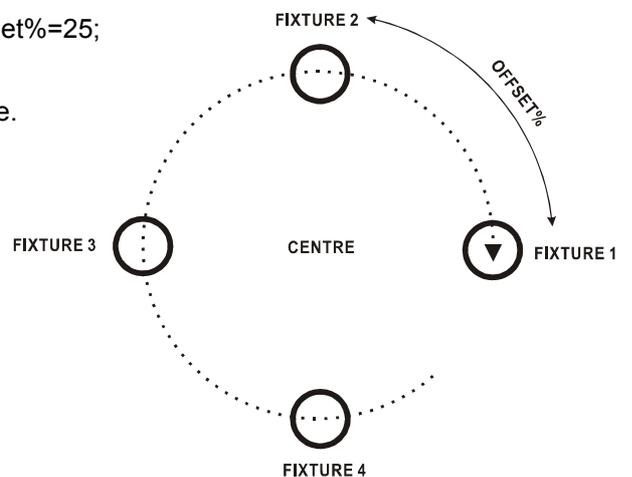
**Example 1:** Use intelligent Fixture 1 to draw a circle.

1. Select Fixture 1 under Manual mode.
2. Set the X/Y origin point (the position of the circle's centre).
3. Press **PLAY** to enter Shape edit state, indicator flickers.
4. Use **X/Y wheel** to select a Shape [**circle1**].
5. Press **Speed/Size** key.
  - Use **X wheel** to change the value of Speed%, such as 40%;
  - Use **Y wheel** to change the value of Size%, such as 25%;
6. Press **Offset/Dir** key.
  - Use **X wheel** Change the Offset%: Offset%=0;
  - Use **Y wheel** select the DIR;
7. Press **PLAY** to escape from Shape edit state.



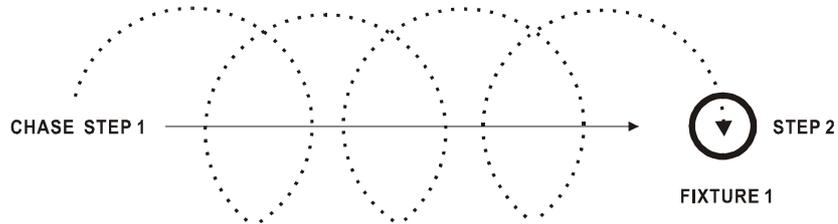
**Example 2:** Use 4 intelligent Fixtures to draw a circle.

1. Select four intelligent Fixtures under Manual mode (No need to select continuous numbers, but the install direction of the Fixtures should be the same)
2. Set the X/Y of chosen Fixtures, make all the luminous spots be at the same position. (the circle's centre)
3. Press **PLAY** to enter Shape edit state, indicator flickers.
4. Use **X/Y wheel** to select a Shape [**circle2**].
5. Press **Speed/Size** key.
  - Use **X wheel** to change the value of Speed%, such as 40%;
  - Use **Y wheel** to change the value of Size%, such as 25%;
6. Press **Offset/Dir** key.
  - Use **X wheel** Change the Offset%: Offset%=25%;
  - Use **Y wheel** select the DIR;
7. Press **PLAY** to escape from Shape edit state.



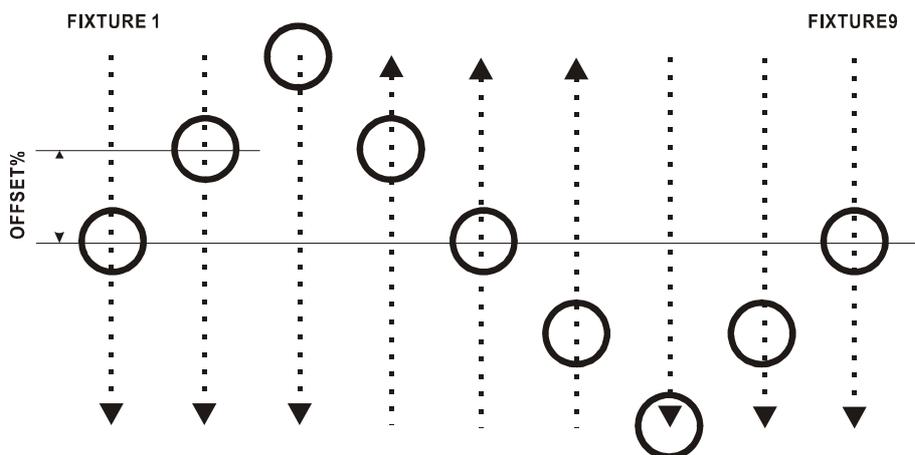
**Example 3:** move when drawing circle

To have the effect, call Shapes in Chase can be used. Use 2 Steps to move the centre of the circle, then call the same circle generator in the 2 Steps, parameter is up to you.



**Example 4:** Use several intelligent Fixtures to produce an up/down waving wave.

1. Select 9 intelligent Fixtures under Manual mode (No need to select continuous numbers, but the direction of the Fixtures should be the same).
2. Set the X/Y of chosen Fixtures, range the luminous spots in a line.
3. Press **PLAY** to enter Shape edit state, indicator flickers.
4. Use **X/Y wheel** to select a Shape [**Yline-1**].
5. Press **Speed/Size** key.
  - Use **X wheel** to change the value of Speed%, such as 40%;
  - Use **Y wheel** to change the value of Size%, such as 60%;
6. Press **Offset/Dir** key.
  - Use **X wheel** Change the Offset%: Offset%=25;
  - Use **Y wheel** select the DIR;
7. Press **PLAY** to escape from Shape edit state.



**Tips:** If the Shape uses horizontal line (**Xline**), an effect of left/right movement of lights will be produced.

## 10 Initialization of data

**Steps:**

1. Pressing **PROGRAM** and switch on the power till LCD screen displays  
“**=== PASSWORD ===**”
2. Press **number keys 1, 2, 3, 11** at the same time.
3. The system will restart automatically after initialization.

Notice: After the initialization, all data will return to the origin factory state.

## Special function

**Notice:** Please keep this paper. If you forget the password, please contact with the retail store to ask for help.

**(A) The steps of using password to start:**

1. Pressing **PROGRAM** and switch on the power.  
till LCD screen displays “**=== PASSWORD ===**”
2. Press **number keys 1, 2, 5, 6** at the same time.

**(B) The steps of canceling the starting password:**

Repeat the above two steps.

- When the password is enabled, every time when the controller is started the password is needed:

**Press number keys 1, 2, 5, 6 at the same time.**