



Aurora 246

DMX512 Lighting Controller

User's Manual

Ver 2.2

CODE Electronic Co., Ltd.
<http://www.codelight.com>

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1 Introduction

1.1 Introduction of functions

Aurora 246 DMX Lighting controller adopts international universal DMX512 digital format. It can control 18 unit 12-channels scanners and 30 conventional lighting channels. Multi scenes of scanners can be exported simultaneously. And multi scenes and multi chase programs of conventional light can be exported simultaneously. Its scanner control joystick can be used to control scanner manually.

Double DMX output ports in controller (two independent DMX output modules with optical isolated) make it run safely and free of maintenance in performance.

1.2 Technical specification

Digital output signal	DMX512/1990
Channel of scanner	1~216
Channel of lighting switch	217~234 (total to 18)
Channel of lighting Dimmer	235~246 (total to 12)
Amount of scanners	18
Amount of channels of a scanner	12
Amount of scenes	Total 432. 216 scanner scenes and 216 lighting scenes
Amount of chase program	Total 54. 36 scanner chase program and 18 lighting chase program
Amount of steps of a chase	120 steps
Advanced edit mode	Copy and paste of scene of scanner and lighting
Music synchronizing trigger	-10dB ~ +10dB auto lever
Control of chase direction	Positive / Negative
Lock mode of keyboard	Flash / latch / solo latch
Input of music control signal	Line input level of imbalance (1/4" mono audio socket) / pickup of inside microphone
Display mode	LCD screen, LED indicator
DMX512 output port	Optical isolated DMX output module x 2, XLR-D3F x 2
Power and fuse	90~240VAC, 50~60Hz, 1A fuse
Volume	485mm x 267mm x 85mm
Weight	4.7kg

1.3 Cautions for safety

- Aurora 246 DMX Lighting Controller must be connected to the earth to ensure the safety.
- When controller, scanners and digital dimmer are working, don't plug in or pull out DMX512 data cable with the power on.
- Don't splash any liquid to the controller.
- Controller is precision electric equipment. Please pay attention to moistureproof protection and dustproof protection.

2 Installation

Contents in the package of Aurora 246 DMX Lighting controller:

- Aurora 246 Lighting controller x 1
- Power supply Cable with plug x 1.
- User's Manual x 1.

Aurora 246 DMX Lighting controller adopts international standard 19" installing structure. It can be embedded in operation board or directly installed in 19" shelf or cabinet.

2.1 Connecting to power supply

The power of Aurora 246 controller has steady voltage in a wide range of power supply voltage. So it is adapted to the power supply of different countries. Before the power supply is connected, please check the voltage whether is in normal range. The power supply must be connected to the earth line to ensure the safety.

2.2 Connecting to Scanner and Dimmer

Aurora 246 DMX Lighting Controller can control scanners and digital dimmer simultaneously. DMX512 digital signals from the console can be connected to scanners, digital dimmer pack, digital switch dimmer pack, DMX512 multi channel decoders, and so on.

There are two DMX512 XLR-D3F output sockets on the rear panel of the console. Pin 1 is for signal earth, pin 2 for negative, and pin 3 for positive.

DMX512 cable is screened twist line. 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 lines of twist line (distinguished by different colors) are connected to pin 2 and pin 3 of the plug respectively. Please do not confuse.

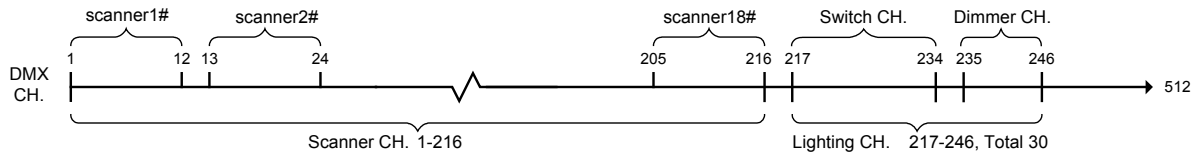
2.3 Connecting to audio source

Audio signal can be imported from audio Mixer and other audio player, or pick by inside microphone. The console picks the low frequency composition as music synchronizing trigger signal to chase program automatically. There is a 1/4" (6.35mm) imbalance mono audio input socket on the rear panel of console. The auto level range of audio input is -10dB ~ +10db. When a 1/4" audio plug is plugged in the socket, audio source is circuit level input. When the audio plug is pulled out, audio source comes from inside microphone.

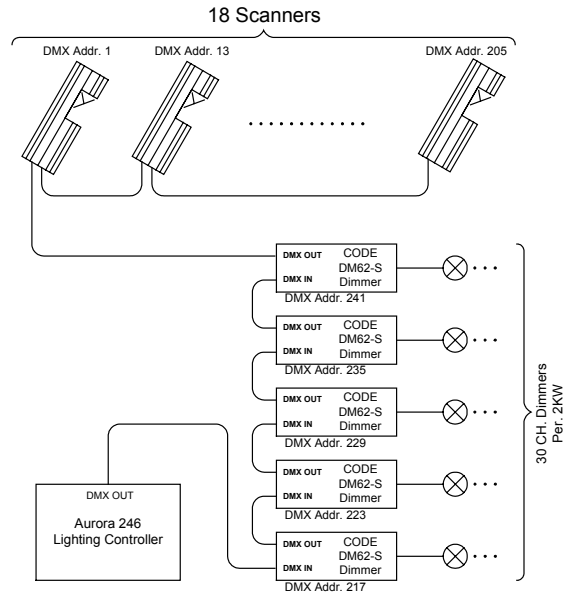
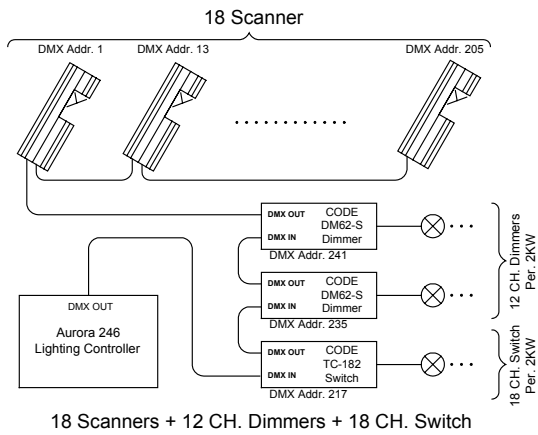
2.4 Distribution of DMX512 address

Aurora 246 DMX Lighting Controller uses channel 1-246 of DMX512 to transmit control signals to scanners and digital dimmer. Channels are used as following:

- Channels 1-216 are use by scanners. Each scanner has 12 fixed control channels.
- Channels 217-246 are use by lighting. Channels 217-234 are used for switch control and channels 235-246 for dimmer control. The values of these 30 light channels can be control by master fade.



2.5 Lighting System Connection



18 Scanners + 30 CH. Dimmers

3 Operation Guide

3.1 Introduction of items

- **Scanner scene:** it is the concurrence of channel values of scanners' X/Y position, brightness, gobo, color, and so on at the same time.
- **Light scene:** it is the concurrence of brightness values of some lighting channel at the same time.
- **Chase program:** every chase program is composed of some chase steps, and every step has a saved scene output.
- **X = Pan, Y = Tilt, Scanner = Fixture or Moving Light**

3.2 Part of Keyboard

There are 39 keys on the keyboard. Some keys have corresponding LED indicators. When a LED indicator is on, the console is executing the key's function or is exporting the key's object, like scene, chase program, one scanner, one lighting channel, and so on.

Some keys have two different color marks. These keys have different functions in different states.

3.2.1 Function key

Aurora 246 DMX Lighting Controller has two operation areas: **SCAN** area and **LIGHT** area. It totals to 9 function keys.

There are 5 function keys in **SCAN** area:

- **manual** manual control key.
- **sce.a** scanner scene A key. It controls scanner scene 1~18.
- **sce.b** scanner scene B key. It controls scanner scene 19~36.
- **chase.a** chase program A key. It controls chase program 1~18.
- **chase.b** chase program B key. It controls chase program 19~36.

There are 4 function keys in **LIGHT** area:

- **sce.a** light scene A key. It controls light scene 1~18.
- **sce.b** light scene B key. It controls light scene 19~36.
- **sce.c** light scene C key. It controls flash lighting scene 37~54 triggered by music rhythm.
- **chase** key of chase program. It controls chase program 1~18.

3.2.2 Number key

There are 18 number keys on the panel. Every number key has a yellow LED and a red LED. These 18 keys have different functions in different function key states. When yellow LED is on, scene or chase program corresponding to the number key is exported. When red LED is on, channel value of scanner or light corresponding to the number key is exported.

Except **chase.a**, **chase.b** keys of **SCAN** area, every function key can set lock mode of number key independently (**flash** = flash mode, **latch** = latch mode, **s-latch** = solo latch mode)

3.2.3 *blackout key*

The key exports special scene 215, in which all scanners and 30 light channels are in black state.

3.2.4 *s-reset key*

The key exports special scene 216, in which all scanners are reset.

3.2.5 *clear key*

Clear all output of current function key.

3.2.6 *release key*

Combined with other press key, fades and joystick, release key can execute different release function:

- ***release key + Fades***

Press and hold ***release*** key first, then push fade. The control of this fade is released.

For example, a chase program is running, scanner 1 is in manual state and fade ***CH3*** can change color of scanner 1. Press and hold ***release*** key first, then push fade ***CH3***. The control of this fade to color channel of scanner 1 is released. Color channel of scanner 1 change from manual control to chase program control.

- ***release key + joystick***

Press and hold ***release*** key first, then wag joystick. The control of joystick to X/Y channel is released.

For example, a chase program is running, scanner 1 is in manual state and joystick can change X/Y position of scanner 1. Press and hold ***release*** key first, then wag joystick. The control of joystick to scanner 1's X/Y position is released. X/Y channel of scanner 1 change from manual control to chase program control.

- ***release key + clear key***

This operation executes different release function according to the running function key:

1. When the running function key is in ***LIGHT*** area, this operation releases the control of fades to lighting channel ***CH1-CH12*** and clears the control values of fades. Then the LED indicator of channel ***CH1-CH12*** stops blinking.

2. When the running function key is in ***SCAN*** area, this operation releases the control of fades to channel ***CH1-CH12***, releases the control of ***joystick*** to X/Y channel, and clears the control values of fades and joystick. Then the LED indicator of channel ***CH1-CH12*** stops blinking and the LED indicator of ***joystick*** is off.

3.2.7 *auto key*

After ***auto*** key is pressed during chase program running, running speed of chase is controlled by ***speed*** fade. The key can work to chase program of scanner and light.

3.2.8 *music key*

After *music* key is pressed during chase program running, chase program is triggered by music rhythm. The key can work to chase program of scanner and light.

3.2.9 *** key

When chase program is edited, *** key is used to make the cycle mark. When a chase program runs to a chase step with cycle mark, it will go back to chase step 1 to restart. *** key and *music* key share a key.

3.2.10 *flash key and latch key and s-latch key*

Except *chase.a* , *chase.b* keys of **SCAN** area, every function key can set lock mode of number key independently.

After *flash* key is pressed, there is [F] on the up-right corner of LCD screen. Number keys are in flash mode: pressing with output and losing without output. In this mode, multi number keys can be pressed and holden at the same time, so multi scenes or multi chase programs can be exported simultaneously.

After *latch* key is pressed, there is [L] at the up-right corner of LCD screen. Number keys are in self latch mode: clicking a number key will export scene or chase program corresponding to this key, and clicking this number again will stop exporting. In this mode, multi number key can be clicked, so multi scenes or multi chase programs can be exported simultaneously.

After *s-latch* key is pressed, there is [S] at the up-right corner of LCD screen. Number keys are in mutual latch mode: clicking a number key will lock this number key and release other number keys. Then only one scene or chase program is exported.

3.2.11 ► key and ◀ key

These keys have multi purpose.

When a chase program is running, these keys can be used to change running direction of chase program: running with chase step increasing or decreasing. Running direction is displayed at right end of line 2 on LCD screen.

When a chase program is edited, these keys can be use to change current chase step.

3.2.12 *C key and P key*

When a scene is edited, these keys can be used to copy and paste a scene. **C** = copy, **P** = paste. **C** key and *flash* key share a key. **P** key and *latch* key are share a key.

3.2.13 + key and - key

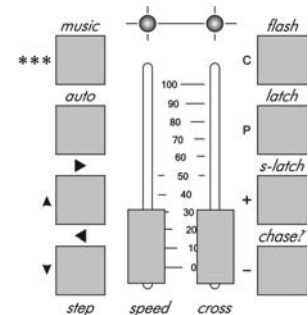
When a scene is edited, these keys can be used to change the current scene number.

+ key and **s-latch** key share a key. – key and **chase?** Key share a key.

3.2.14 chase? key

When a chase program is running, changes of running parameters made by keys or fades in the area of right figure will affect the scene displayed on the current LCD screen.

Press and hold **chase?** key, then press a number key, every running parameters of chase program can be checked and modified without exporting.



3.3 Part of Fades and Joystick

Aurora 246 lighting controller has 15 fades. Pushing up a fade will increase its control value, and pulling down will decrease. Some fade have two different color marks. These fade have different control functions in different states.

3.3.1 channels fade

Aurora 246 has 12 channel fades. These fades have two kind of functions:

- When function key of **SCAN** area is pressed down, these fades control values of scanner's channel 1-12. These fades are named as **CH1, CH2, ...CH12**, respectively. LED indicators of these fade are green.
- When function key of **LIGHT** area is pressed down, these fades also are named as **CH1, CH2, ...CH12**, respectively. They control brightness adjusting of DMX channel 235-246 (total to 12). LED indicators of these fades are red.

Each fade has a LED indicator. The brightness of LED simulates the output value (0-255) of the channel. When a fade is pushed to make control value equal to the output value of current channel, the brightness of LED simulates the output value and additional periodicity blink indicates that the channel is controlled by fade. Other channels not controlled by fades are controlled by current scene and chase program.

3.3.2 speed fade

In **auto** running state, **speed** fade controls chase speed of scanner chase program and light chase program.

3.3.3 *cross fade*

Cross fade controls the transition time of scene change or chase step change to control gradual change effects.

3.3.4 *master fade*

master fade controls the brightness of 30 lighting channels (DMX channel 217-246) overall. DMX channel 217-234 is switched by number key 1-18. Brightness value of DMX channel 235-246 is control by fade **CH1-CH12**. Output values of 30 channels can be controlled by **master** fade overall.

3.3.5 *joystick*

Joystick controls X/Y position of scanners more conveniently than fade does. Before **joystick** can be used to control X/Y position of scanner, X/Y control channel number of scanner to be controlled by **joystick** must be set first. Console will store setting automatically.

4 Part of scanner

4.1 Edit of scanner program

Scene is the basic of scanner program. So scene is edited first and then chase program is edited. Edit steps of scanner program are as following:

1. Understanding your scanners.
2. Setting of scanner's DMX512 address.
3. Setting of joystick's X/Y channel.
4. Edit of scanner scene.
5. Edit of scanner chase program.

After quitting from program edit, all setting are saved automatically and do not lose even when the controller is turn off.

4.1.1 Understanding your scanners

Since the amount of control channels and control parameters are different for different scanners, user's manual of scanner is a needed reference for program edit.

4.1.2 Setting of scanner's DMX512 address

CODE Aurora 246 arranges DMX512 digital signals as following:

- 1-216 is used as scanner control channels. Each scanner uses 12 scanner control channels.
- 217-234 (total to 18 channels) is used as light switch control channels.
- 235-246 (total to 12 channels) is used as dimmer channels.

If a scanner receives data of channel 1 of DMX512 when all address switches of DIP are close (00000000), the address switches of scanner can be set as table 1.

If a scanner receives data of channel 1 of DMX512 when the address switch of DIP is 1 (10000000), the address switches of scanner can be set as table 2.

Table 1 address setting of scanner (1)

No. of scanner	DMX Addr.	Value of switch 123456789
1	1	00000000
2	13	00110000
3	25	00011000
4	37	00100100
5	49	00001100
6	61	00111100
7	73	00010010
8	85	00101010
9	97	00000110
10	109	00110110
11	121	00011110
12	133	001000010
13	145	000010010
14	157	001110010
15	169	000101010
16	181	001011010
17	193	000000110
18	205	001100110

Table 2 address setting of scanner (2)

No. of scanner	DMX Addr.	Value of switch 123456789
1	1	10000000
2	13	10110000
3	25	10011000
4	37	10100100
5	49	10001100
6	61	10111100
7	73	10010010
8	85	10101010
9	97	10000110
10	109	10110110
11	121	10011110
12	133	101000010
13	145	100010010
14	157	101110010
15	169	100101010
16	181	101011010
17	193	100000110
18	205	101100110

Note: 0=OFF, 1=ON

4.1.3 Setting of joystick's X/Y channel

Before *joystick* can be used to control X/Y position of scanner, X/Y control channel of *joystick* must be set first.

Steps of setting joystick's X/Y channel can be seen in Fig. 1.

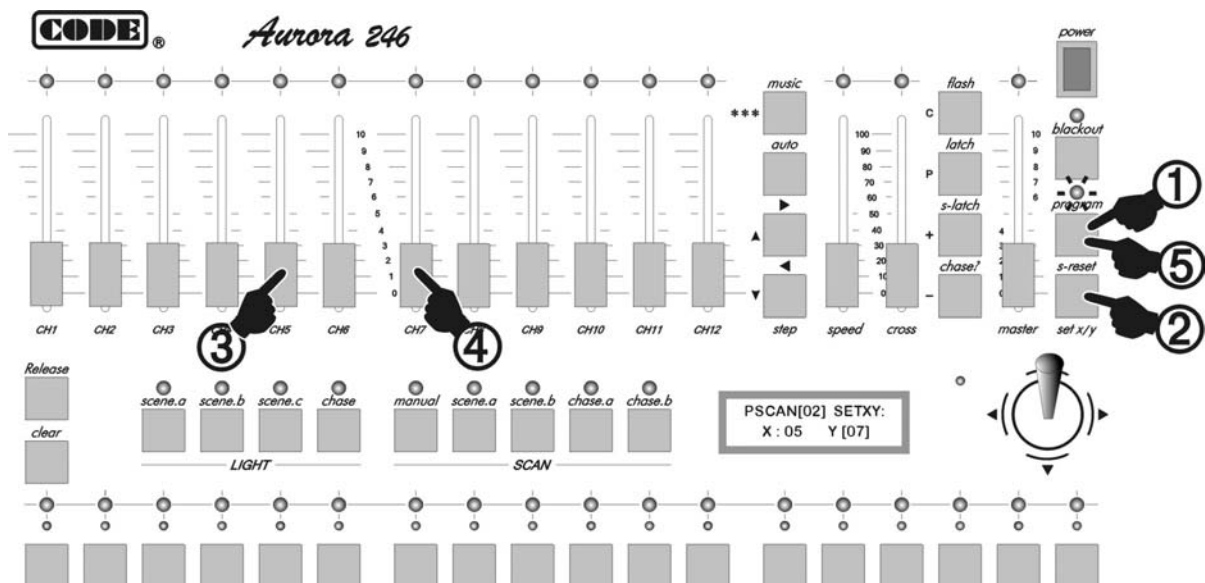


Fig. 1

Operation steps:

1.	Press program key to start program edit.
2.	Press set X/Y key to set joystick's X/Y channel. Joystick's X/Y channels which had been set are displayed on LCD screen.
3.	Push fade corresponding to X control channel of scanner to let joystick get the X channel number.
4.	Push fade corresponding to Y control channel of scanner to let joystick get the Y channel number.
5.	Press program key to quit program edit. Setting of Joystick's X/Y is saved automatically.

After setting above, when joystick is wagged, green LED indicator is on. X/Y channel value of current joystick is displayed on LCD screen.

If there multi kinds of scanner are use at the same time and their X/Y channels are different, please set X/Y channel parameters for scanner needing manual control frequently.

4.1.4 Manual control of scanner

Manual control of scanner can be seen in Fig. 2. It shows manual operation to scanner 1.

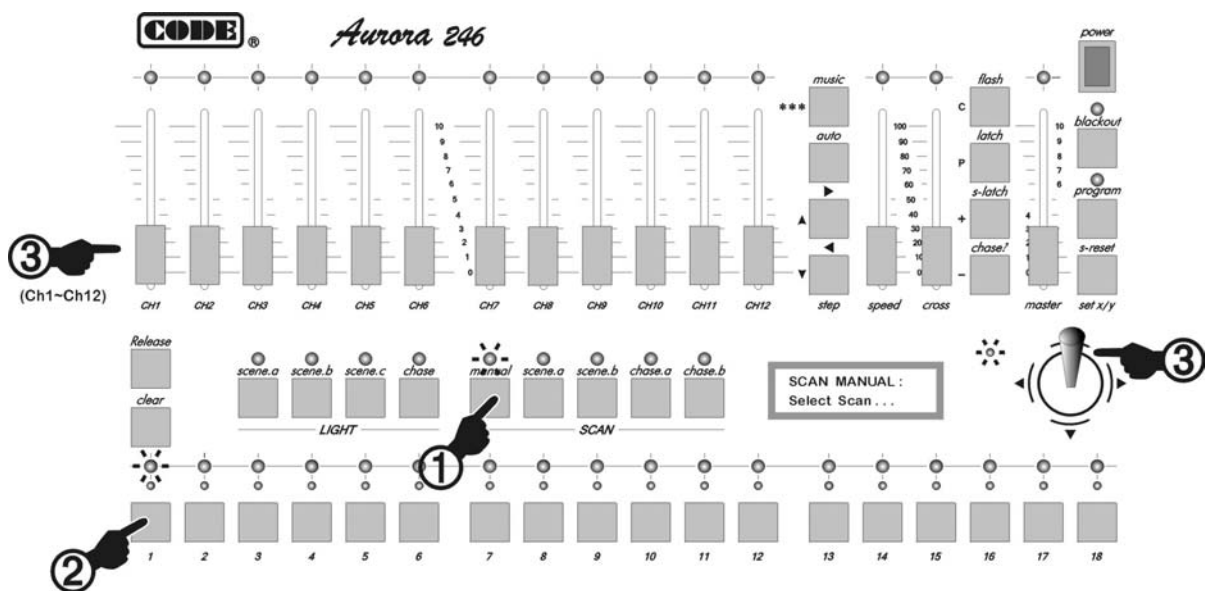


Fig. 2

Operation steps:

1.	Press manua key.
2.	Press number key to choose scanner to be controlled manually. Red LED corresponding to the number is on. In this example, press 1.
3.	Use fade CH1-CH12 to control scanner directly, or use joystick to control X/Y channel of scanner directly.

Operation tips:

- Manual control has precedence. Current running scene or scanner chase program can't control it transitorily.
- When fade is pushed and the number of fade displayed on LCD screen changes, fade is in effect. If the number of fade does not change transitorily, please push fade completely.

4.1.5 Edit of scanner scene

4.1.5.1 Edit method

Fig. 3 shows edit process of scanner scene 2 (only scanner 1 exports):

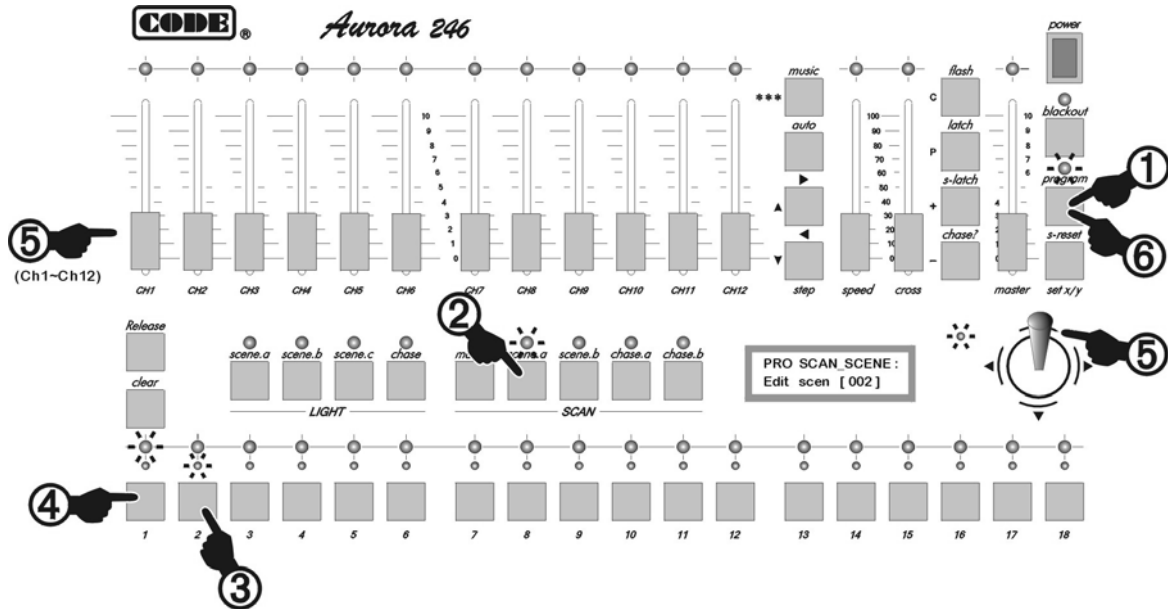


Fig. 3

Operation steps:

1.	Press program key.
2.	Press sec.a key of SCAN area.
3.	Use number key to choose scanner scene number to be edited. In this example, press 2. Repeat step 2-3 to choose scanner scene number in 1-18.
4.	Use number key to choose scanner to be control. In this example, press 1.
5.	Use faders to set color, gobo and brightness for scanner. Use joystick to set X/Y position.
6.	Press program key to quit.

Operation tips:

- If the scene is composed of multi scanners, please repeat step 4-5 and edit to every scanner.
- Repeat step 2-5 to edit other scenes.
- After **sec.a** key of **SCAN** area is pressed, 18 number keys are corresponding to scene 1-18. After **sec.b** key of **SCAN** area is pressed, 18 number keys are corresponding to scene 19-36. Using + key or - key can choose scene number in a wider range (1-216). This method must be used to edit scene above 37.

4.1.5.2 Copy and paste of scanner scene

When there are some similar scenes to be edited, using copy and paste functions can reduce workload of edit. The method is as following:

1. In scene edit state, choose source scene number first, then press **C** key to copy (The key and **flash** key share a key).
2. Choose target scene number to be pasted, then press **P** key to paste source scene to target scene (The key and **latch** key share a key).
3. Use channels fade to change channel values to built a new scene.

Steps of scanner scene copy can be seen in Fig. 4. In the figure, scanner scene 1 is copied to scanner scene 5.

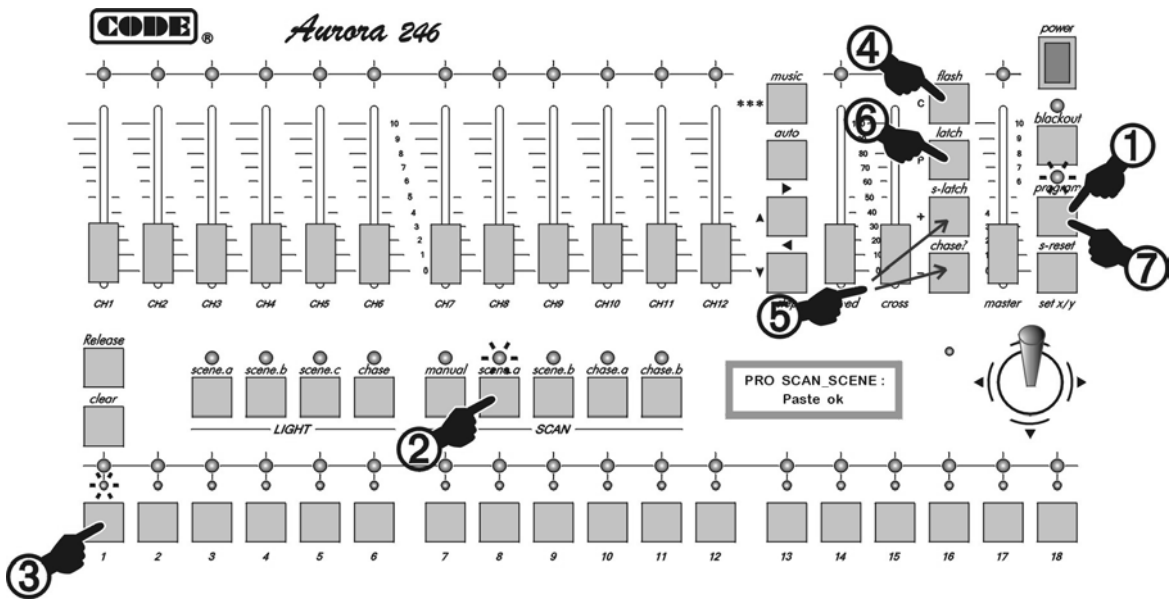


Fig. 4

Operation steps:

1.	Press program key.
2.	Press sce.a key of SCAN area.
3.	Use number key to choose source scene number. In the example, press number key 1. Use + or - key to choose scene number in a wider range (1-216).
4.	Press C key to copy.
5.	Use number key to choose target scanner scene number. In the example, press number key 5. Use + or - key to choose scene number in a wider range (1-216).
6.	Press P key to paste. After pasting, edit scene 5 using edit method of scanner scene.
7.	Press program key to quit.

Operation tips:

Copy and paste functions can be used in scanner scene edit.

4.1.5.3 Quick edit of scanner scene

Aurora 246 DMX Lighting Controller can make some scenes be added up and exported at the same time. To make program edit and operation convenient, a simple and agile method is specially recommended as following:

1. According to control object to arrange scene number:
 - Scene 1-18 is set as scene just with one kind of color (except scanner color channel, values of other channels=0).
 - Scene 19-36 is set as scene just with one kind of gobo (except scanner pattern channel, values of other channels=0).
 - Set X/Y position scene of chase program as 37-214. Each scene set a X/Y position. Except channels of scanner's X/Y and brightness, values of other channels=0.
2. Edit chase program, let each chase step use a scene (37-214) just with values of scanner's X/Y position and brightness. So the chase program just controls the motion of scanner's light beam, in spite of the changes of color and gobo.

When a scanner is operated, use method as following to add up the output and produce rich and colorful combination:

- Press **chase.a** or **chase.b** key of **SACN** area, use number to choose chase program 1-36.
- Press **sec.a** key of SACN area, use number 1-18 to add up scanner's color.
- Press **sec.b** key of SACN area, use number 1-18 to add up scanner's gobo.

4.1.5.4 Edit of scene 215, 216 for special purpose

blackout key and **s-reset** key on panel of Aurora 246 have special purpose.

Press **blackout** key, controller is in blackout state. It exports scene 215 to all scanners and exports black control signal to 30 lighting channels automatically. Please refer to edit method of scanner scene to edit scanner scene 215. Set brightness control channels of all scanners to be black. (Please refer to the user's manual of scanner)

When **s-reset** key is pressed, console just exports scanner reset scene 216 and does not change output values of lighting channels. Please refer to edit method of scanner scene to edit scanner scene 216. Set all scanners are in reset state. (Please refer to the user's manual of scanner)

4.1.6 Edit of scanner chase program

4.1.6.1 Cycle mark *** of scanner chase

In a chase program, it is needed to set a cycle mark ***. The function of the mark is that chase program starts from step 1 to step with mark ***, then goes back to step 1 to restart.

In edit state, the position of mark *** can be changed.

4.1.6.2 Edit steps of scanner chase program

Since scene output is used directly in chase program, scene used in a chase program must be edited first. Then chase program is edited and each chase step uses a scanner scene with appointed number.

Process of program edit can be seen in Fig. 5. In this figure, chase program being edited is chase program 1. Current chase step is step 3 and it exports scanner scene 38.

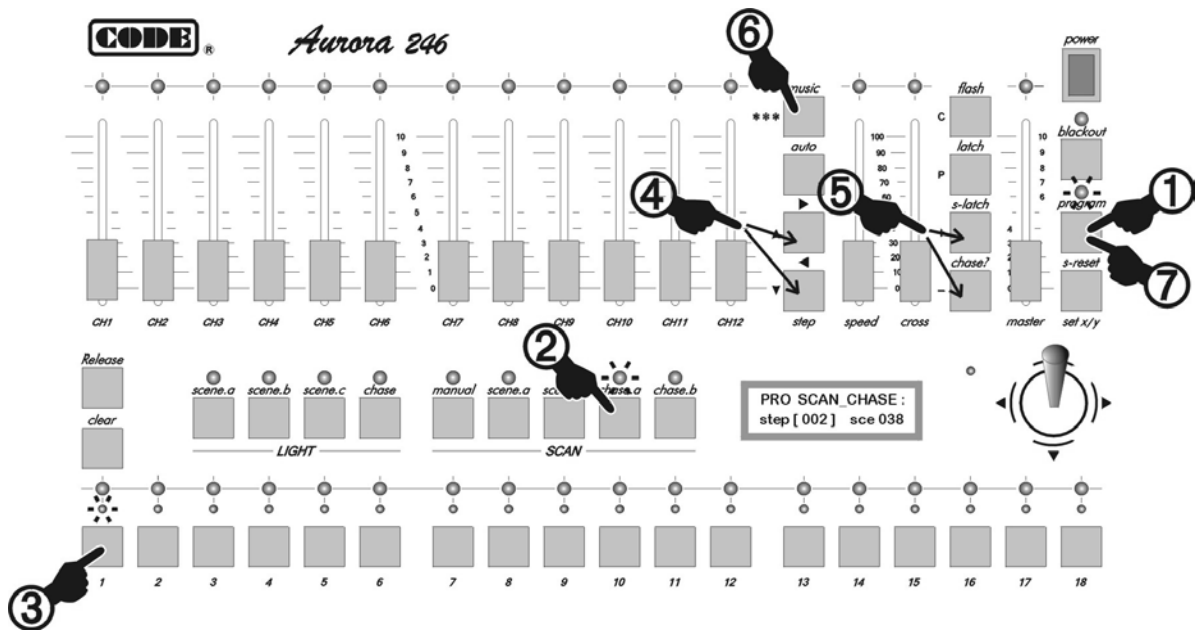


Fig 5

Operation steps:

1.	Press program key.
2.	Press chase.a key of SCAN area.
3.	Use number key to choose chase program number. In the example, press chase.a key, then press number key 1. So chase program 1 is to be edited. Repeat step 2-3 to choose chase program to be edited.
4.	Use ▲ or ▼ key to choose chase step (1-120) to be edited. In the example, press ▲ key until step[002] can be seen on LCD screen. If it has cycle mark set before, it is displayed step[***] on LCD screen.
5.	Use + or - key to choose chase scanner scene to be used by current chase step. In the example, press + key until sce 038 can be seen on LCD screen. It means that chase step 2 use scanner scene 38. It is proposed that the range of scene used by chase step is scene 37-214 (scene 1-18 is color scene, scene 19~36 is pattern scene, and scenes 215 and 216 are scenes for special purposes). Follow step 4 to check every edited chase step. Repeat step 4-5 to edit other chase steps.
6.	When the last chase step has been edited, press *** key. On LCD screen, the number of chase step is replaced by [***] and the original cycle mark is canceled automatically.
7.	Press program key to quit.

Note: If **chase.b** key of **SCAN** area is pressed in step 2, scanner chase program 19-36 can be edit.

4.2 Operation of scanner running

4.2.1 Outline of scanner running

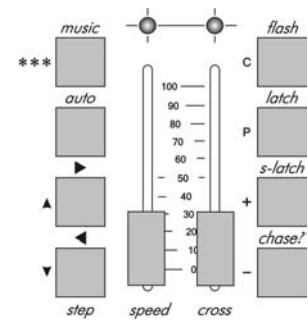
- When LED indicator of **blackout** is off, console is in running state.
When LED indicator of **blackout** is on, console exports black scene, namely scene 215.
- As long as not in program edit state (LED indicator of **program** is off), running control to scanner can be various and complex.
- Main points of output operation: press function key first, then press number key to run scene or chase program. Using this method can make multi functions run at the same time. For example, run a chase program and add up many scanner scenes.
- Using **flash / latch / s-latch** key can set the lock states of number keys. Cooperating with function keys, number keys in different lock states can make scene and chase program be added up and run at the same time.
- Manual operation has precedence. When a scanner is in manual state, its manual channel can't be control by running scene and chase program transitorily. After quitting from manual operation, scanner goes to normal running state automatically.

4.2.2 Running of scanner scene

- Press **sc.e.a** key of **SCAN** area, then press number key 1~18 to run scanner scene 1~18.
- Press **sc.e.b** key of **SCAN** area, then press number key 1~18 to run scanner scene 19~36.
- Using **flash / latch / s-latch** key to set the lock states of number keys can realize single scene running or multi scenes running at the same time.

4.2.3 Running of scanner chase program

- Press **chase.a** key of **SCAN** area, then press number key 1~18 to run scanner scene 1~18.
Press **chase.b** key of **SCAN** area, then press number key 1~18 to run scanner scene 19~36.
- After **auto** key is **pressed**, chase program runs on speed set by **speed** fade. Adjusting **speed** fade can change running speed of chase program.
- After **music** key is pressed, chase program is triggered by rhythm composition of music signals.
- Adjusting **cross fade** can change cross-time of chase program.
- Using **▶** and **◀** keys can choose increasing / decreasing direction of chase step running.
- When a chase program is running, changes of running parameters mad by keys or fade in the area of right figure will affect the scene displayed on the current LCD screen. Press and hold **chase?** Key, then press a number key, every running parameter corresponding to the number key can be checked and modified without stop. This is hidden change method.



4.2.4 Manual running of scanner

- Press **manual** key of **SCAN** area, use number key to choose scanner to be operated manually. Then use fade to control the state of scanner. Use joystick to control X/Y position of scanner. Only scanners with same X/Y channel can be chosen simultaneously.
- Using **flash / latch / s-latch** key to set the lock states of number keys can realize multi manual mode.

4.2.5 Various clear operation of scanner

- Press **sce.a** key of **SCAN** area, then press **clear** key to stop scanner scene 1-18.
- Press **sce.b** key of **SCAN** area, then press **clear** key to stop scanner scene 19-36.
- Press **chase.a** key of **SCAN** area, then press **clear** key to stop scanner chase program 1-18.
- Press **chase.b** key of **SCAN** area, then press **clear** key to stop scanner chase program 19-36.
- Press **manual** key of **SCAN** area, then press **clear** key to stop manual operation of scanner.

4.2.6 Various release operation of scanner

- Press and hold **release** key, then push any fade of channels, the control of this fade to scanner is released.
- Press and hold **release** key, then wag joystick , the control of joystick to scanner is released.
- Press and hold **release** key, then press **clear** key, the control of fades and joystick to scanner are released.

4.2.7 State check of scanner output

- Press **manual** key of **SCAN** area, scanners operated manual are indicated by red LED indicator. Its channel value is indicated by the brightness of blinking green LED indicator.
- Press **sce.a** key of **SCAN** area, scanner scene 1-18 being export is indicated by yellow LED indicator.
- Press **sce.b** key of **SCAN** area, scanner scene 19-36 being export is indicated by yellow LED indicator.
- Press **chase.a** key of **SCAN** area, scanner chase program 1-18 being export by yellow LED indicator.
- Press **chase.b** key of **SCAN** area, scanner chase program 19-36 being export by yellow LED indicator.

5 Part of lighting

5.1 Edit of lighting program

Aurora 246 can control 30 lighting channels dimming with master fade. 1-18 can be switch, **CH1~CH12** can be dimming.

Aurora 246 has characteristics as following:

- **sce.a** key of **LIGHT** area dominates light scene 1~18.
- **sce.b** key of **LIGHT** area dominates light scene 19~36.
- **sce.c** key of **LIGHT** area dominates light scene 37~54.
- **chase** key of **LIGHT** area dominates light chase 1~18.

sce.c key of **LIGHT** area includes a special design which can receive music rhythm to flash of lighting. When scene 37-54 is edited, this characteristic should be considered.

Aurora 246 can store 216 lighting scenes. Each light scene includes switch control of 1-18 and dimming of **CH1~CH12**. After quitting from program edit, all setting is saved automatically and do not lose even when the console is turn off.

Program edit of lighting is similar to that of scanner. Please process two steps as following:

1. Edit of lighting scene.
2. Edit of lighting chase program.

5.1.1 Edit of lighting scene

5.1.1.1 Edit method

Fig. 6 shows edit process of light scene. Light scene 1 is edited in the figure. The scene is composed of switch channel 3 and dimmer channel **CH2**.

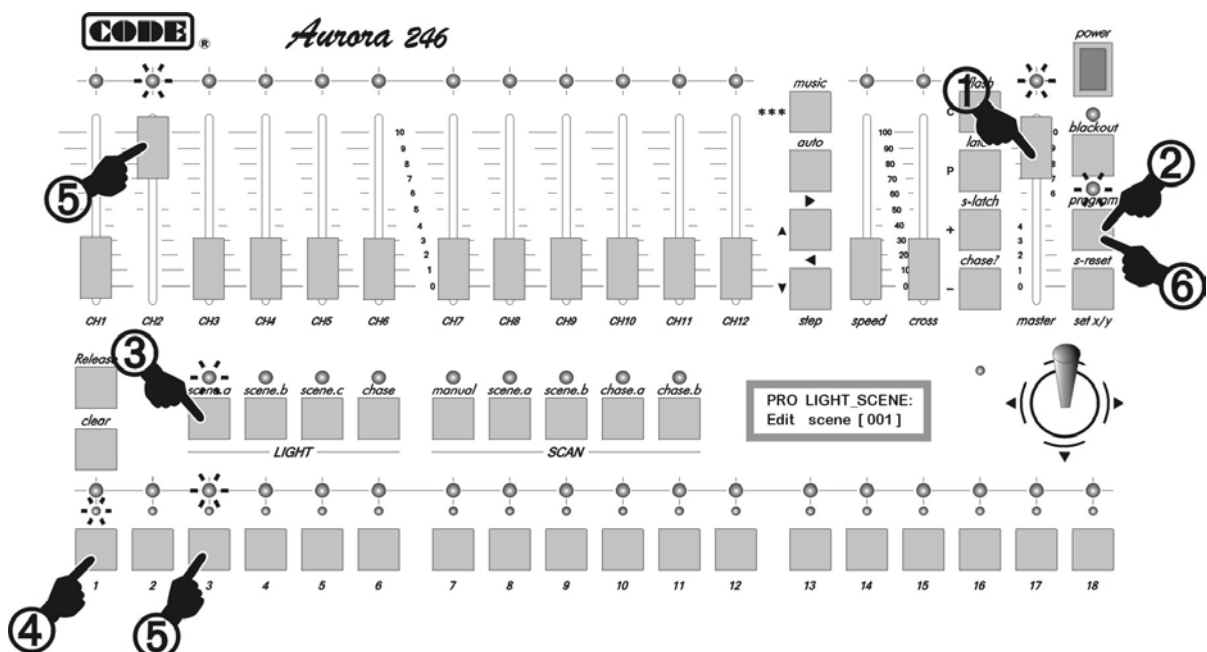


Fig. 6

Operation steps:

1.	Push master fade to maximum.
2.	Press program key.
3.	Press sce.a key of LIGHT area.
4.	Use number key to choose light scene number to be edited. In the example, press number key 1. Repeat step 3-4 to choose other scene number. Use + or - key to choose scene number in a wider range (1-216).
5.	Press number to set switch state of 1-18. Use channels fade to adjust the brightness of CH1~CH12 . In the example, press number key 3 and adjust CH2 fade to proper brightness. Repeat step 3-5 to edit other scene.
6.	Press program key to quit.

5.1.1.2 Copy and paste of light scene

When there are some similar scenes to be edited, using copy and paste functions can reduce workload of edit. The method is as following:

1. In scene edit state, choose source scene number first, then press **C** key to copy.
2. Choose target scene number to be pasted, then press **P** key to paste source scene to target scene. The contents of two scenes are same.
3. Use edit method of light scene to modify pasted scene to a new scene.

Steps of light scene copy can be seen in Fig. 7. In the figure, light scene 1 is copied to light scene 5.

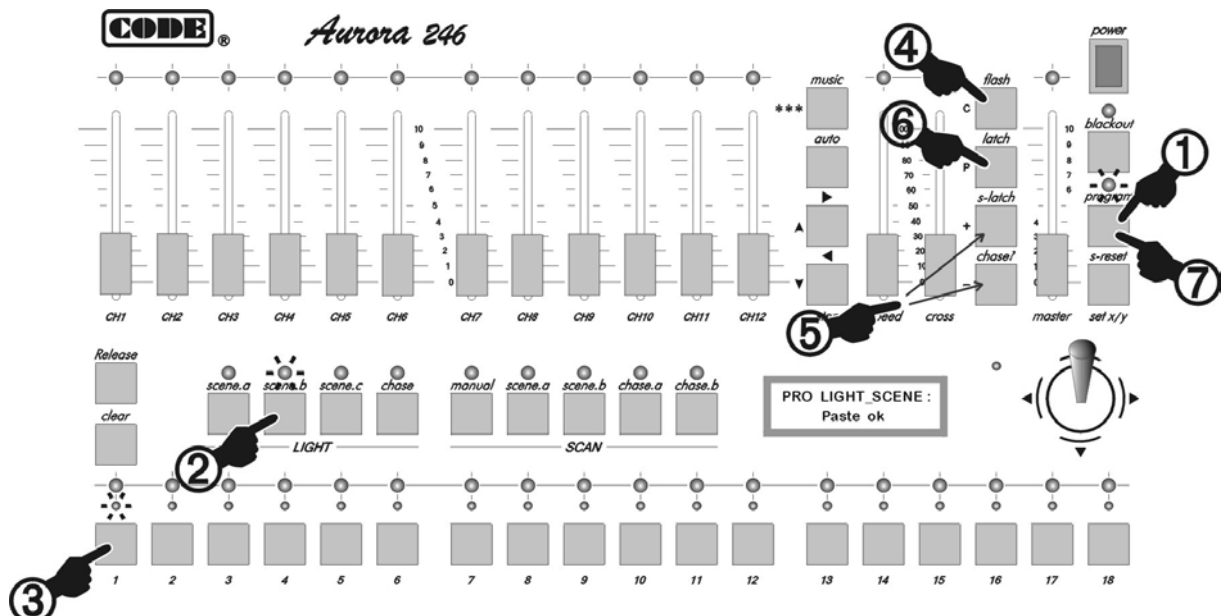


Fig. 7

Operation steps:

1.	Press program key.
2.	Press sce.a key of LIGHT area to edit lighting scene.
3.	Use number key to choose lighting scene number of source. In the example, press number key 1. Use + or - to choose scene number in a wider range (1-216).
4.	Press C key to copy.
5.	Use number key to choose light scene number of target. In the example, press number key 5. Use + or - key to choose scene number in a wider range (1-216).
6.	Press P key to paste. Then according to the edit method of lighting scene to modify scene 5.
7.	Press program key to quit.

5.1.2 Edit of light chase program

Aurora 246 can store 18 chase program (each chase program has 120 steps and each step exports a light scene). Scene is the basic of chase program. So scene is edited first and then chase program is edited.

Process of program edit can be seen in Fig. 8. In this figure, chase program being edited is chase program 3. Current chase step is step 5 and it exports lighting scene 99 (It is supposed that scene 99 includes outputs of lighting channels 1, 2, 3, 24, 25).

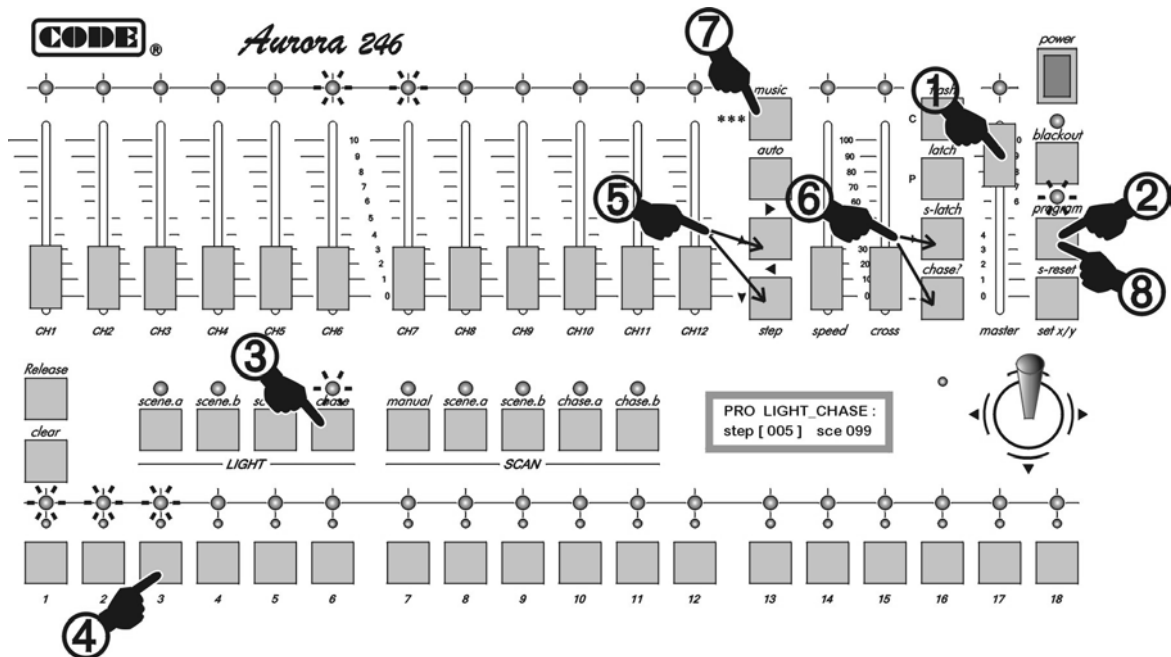


Fig. 8

Operation steps:

1.	Push master fade to maximum.
2.	Press program key.
3.	Press chase key of LIGHT area.
4.	Use number key to choose light program number to be edited. In the example, press number key 3. Repeat step 2-3 to choose other chase program number.
5.	Use ▲ or ▼ key to choose chase step to be edited. In the example, press ▲ key until step [005] is display on LCD screen. If chase step 5 has been set cycle mark before, step [***] is displayed on LCD screen. Follow step 4 to check every edited chase step.
6.	Use + or - key to choose scene number used in current chase step. In the example, press + key until sce 099 is display on LCD screen. Repeat step 4-5 to edit other chase steps.
7.	When the last chase step has been edited, press *** key. On LCD screen, the number of chase step is replaced by [***] and the original cycle mark is canceled automatically.
8.	Press program key to quit.

5.2 Operation of light running

5.2.1 Outline of light running

- When LED indicator of **blackout** is off, controller is in running state.
When LED indicator of **blackout** is on, controller runs black signal to light channel 1-30.
- When the console is not in program edit state (LED indicator of program is off), running of lighting channels can be various and complex.
- Main points of output operation: press function key first, then press number to export scene or chase program. Using this method can export multi functions at the same time. For example, 2 lighting chase programs+ 3 lighting scenes + **CH1~CH12** manual control at the same time.
- Use **flash / latch / s-latch** key to set locking states of number keys.
- Number keys in different lock states can realize scene and chase program being added up and running at the same time, running singly and running with flash.
- Master fade controls brightness of lighting channel overall.
- Manual operation has precedence. When lighting channel **CH1~CH12** is in manual state, it can't be controlled by running scene and chase program transitorily. After quitting from manual operation, it goes to normal running state automatically.

5.2.2 Running of lighting scene

- Press **sce.a** key of **LIGHT** area, then press number key to run lighting scene1-18.
- Press **sce.b** key of **LIGHT** area, then press number key to run light scene 19-36.
- Press **sce.c** key of **LIGHT** area, then press number key to running lighting scene 37-54.
- Use **flash / latch / s-latch** key to set locking states of numbers, multi running mode can be realized.

5.2.3 Running of light chase

- Press **chase** key of **LIGHT** area, then press number key, chase program 1-18 of light scenes is exported.
- Use **flash / latch / s-latch** key to set locking states of numbers, multi running mode can be realized.
- After **auto** key is pressed, chase program runs on the speed set by **speed** fade. Adjusting **speed** fade can change chase speed.
- After **music** key is pressed, chase program is triggered by music signal.
- Adjusting **cross** fade can change the cross time of gradual change between chase steps.
- Use ► and ◀ key to choose increasing / decreasing direction of chase step running.
- When **auto, music, ►, ◀** keys and **speed, cross** fade are set, the state of chase program is saved automatically.

5.2.4 Manual running of lighting dimming

When current function key is in **LIGHT** area, adjusting channels fade can control the brightness of **CH1~CH12** respectively.

5.2.5 Master fade

Adjust **master** fade, brightness of lighting can be control at the same time.

5.2.6 Various clear operation of lighting

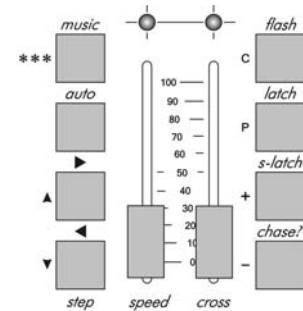
- Press **sce.a** key of **LIGHT** area, then press **clear** key, light scene 1-18 is stopped.
- Press **sce.b** key of **LIGHT** area, then press **clear** key, light scene 19-36 is stopped.
- Press **sce.c** key of **LIGHT** area, then press **clear** key, light scene 37-54 is stopped.
- Press **chasec** key of **LIGHT** area, then press **clear** key, light chase program 1-18 is stopped.

5.2.7 Various release operation of lighting

- Press and hold **release** key, then push any channel fade, the brightness control of this fade is released.
- Press and hold **release** key, then press **clear** key, the brightness control of channels fade are released.

5.2.8 State check of light

- Press **sce.a** key of **LIGHT** area, light scene 1-18 being exported is indicated by yellow LED indicator.
- Press **sce.b** key of **LIGHT** area, light scene 19-36 being exported is indicated by yellow LED indicator.
- Press **sce.c** key of **LIGHT** area, light scene 37-54 being exported is indicated by yellow LED indicator.
- Press **chase** key of **LIGHT** area, light chase program being exported is indicated by yellow LED indicator.
- When a chase program is running, parameter changes of running made by keys or fades in the area of right figure will affect the scene displayed on the current LCD screen. Press and hold **chase?** key, then press a number key, every running parameter corresponding to the number key can be checked and modified without stop. This is hidden change method.



LIGHT CHASE: [L]
[02] [auto] [←]

MEMO

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