Showdesigner 512

ORDERCODE 50721

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The Showtec Showdesigner 512 brings excitement to any venue. Whether you want simple plug-&-play action or a sophisticated DMX show, this product provides the effect you need.

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We design and manufacture professional light equipment for the entertainment industry.
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So next time, turn to Showtec for more great lighting equipment.
Always get the best -- with Showtec !

Thank you!

Showtec

Showtec Showdesigner 512™ Product Guide

WARNING

```
                    CAUTION!
     Keep this device away from rain and moisture!
```

**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY
BEFORE YOUR INITIAL START-UP!**

SAFETY INSTRUCTIONS

Every person involved with the installation, operation and maintenance of this device has to:
- be qualified
- follow the instructions of this manual

```
     CAUTION! Be careful with your operations.
       With a dangerous voltage you can suffer
  a dangerous electric shock when touching the wires!
```

Before your initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the device.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

This device contains no user-serviceable parts. Refer servicing to qualified technicians only.

IMPORTANT:
> *The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.*

- Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution!
- Never remove warning or informative labels from the unit.
- Do not open the device and do not modify the device.
- Do not insert objects into air vents.
- Do not connect this device to a dimmerpack.
- Do not switch the device on and off in short intervals, as this would reduce the device's life.
- Only use device indoor, avoid contact with water or other liquids.
- Avoid flames and do not put close to flammable liquids or gases.
- Always disconnect power from the mains, when device is not used or before cleaning! Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.
- Make sure that the device is not exposed to extreme heat, moisture or dust.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power-cord is never crimped or damaged. Check the device and the power-cord from time to time.
- If device is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- If your Showtec device fails to work properly, discontinue use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Showtec dealer for service.

- Repairs, servicing and electric connection must be carried out only by Showtec.
- For replacement use fuses of same type and rating only.
- This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.
- WARRANTY: Till one year after date of purchase.

OPERATING DETERMINATIONS

This device is not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.

If this device is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.

Any other operation may lead to dangers like short-circuit, burns, electric shock, lamp explosion, crash etc.

You endanger your own safety and the safety of others!

Improper installation can cause serious damage to people and property !

Description of the device

Features
The Showdesigner is a light controller from Showtec and features:
• 512 DMX control channels, compatible with DMX512/ 1990 standard.
• Control up to 32 fixtures, each with up to 16 channels.
• 16 Sliders on the frontpanel 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 simultaneous running.
• Speed and slope of each chase can be adjusted either separate or together.
• Up to 200 steps in each chase; a maximum of 1700 steps can be stored
• 32 groups of chases run simultaneously, each with up to 48 chases; fade time and speed of each step are adjustable.
• 3-pin DMX in/ out x 4 in, 2-sets.
• Photoelectric isolated data output, safe for up to 3kVdc, preventing the controller from damage by eventual electric leakage from a defective fixture.
• All the pan/ tilt channels in different fixtures can be assigned to the jog wheels.
• When a chase is running, the slope channel can be configured as one with fixed pan/ tilt slope. The gobo/ color channels can be set without slope to avoid unexpected effects.
• Built in microphone and audio input for sound activation.
• Built in switching power supply, suitable for all countries.

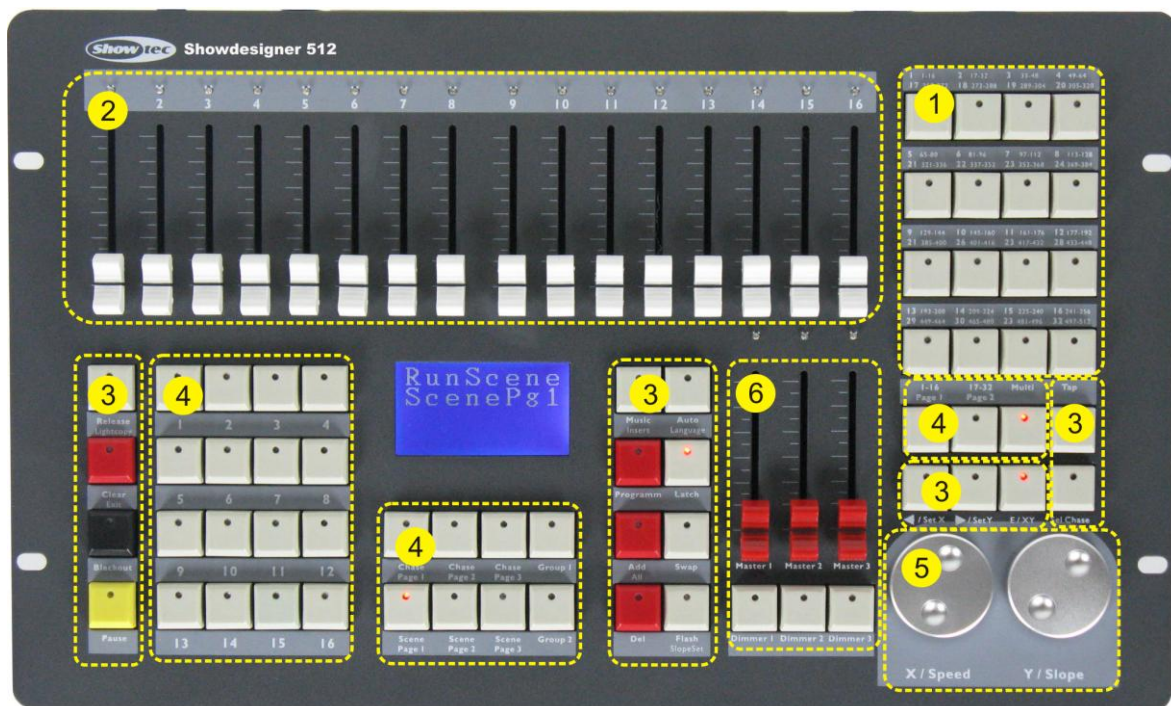NOTE: Knowledge of DMX is required to fully utilize this unit.

Overview

Fig. 1

Controller Front

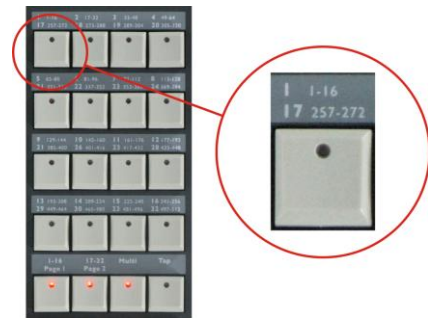## 1) Fixture selection buttons

There are 16 buttons in Page 1-16 and Page 17-32, all for
Fixture selection. You can select up to 32 fixtures.
16 DMX channels can be assigned to each fixture.
If a fixture is selected, the LED indicator in the button
will light.
If the LED indicator of the fixture selection button blinks,
the LED indicator of the according fader will show the
status of the fixture.
Either one or several fixtures at the same time can be
activated or deactivated. E.g.: to activate
fixture 4, 5, 6, 7, 8, 9 and 10 simultaneously, press and
hold button 4 and press button 10. Now fixture 4, 5, 6, 7,
8, 9 and 10 are all selected.

2) Sliders and LED indicators

The unit has 16 faders, each with a LED indicator.
By using the Fixture buttons and the faders you can
control all 512 channels in real time.
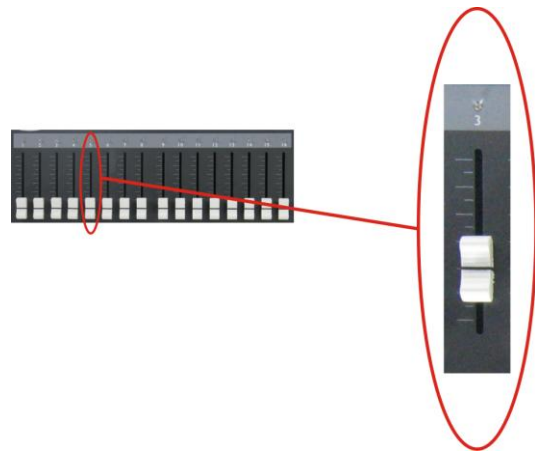
3) Function buttons

Release:
During playback of a chase moving faders will not have any effect.
If you want to use the fader anyway, press release.

LightCopy:
Use this button for copying data from one fixture to another.
First, adjust the channels of one fixture by adjusting the faders, then press and hold
LightCopy + the current fixture selection until the LCD display shows "**Copy OK**".
Press and hold **LightCopy** again + the button of the target fixture until the display
Shows "**Paste OK**". Now you've copied the data of one fixture to another.

Clear:
The function of this button varies with the state of the device.

Exit:
Use this button to exit the **program** or **delete** mode.

Blackout:
Use this button to kill all output.

Pause:
Press this button to pause all running chases.

Program:
Press this button to enter Program-mode.

Add:
Press this button to add a step while programming a chase or chase group.

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

Del:
Use this button to delete a scene/ chase/ chase group/ step while programming.

Latch:
Press this button to latch two or more scenes/ chases/ chase groups to run simultaneously.

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

Flash:
Press and hold this button, then select a scene, chase or chase group to run it As long as the flash button is pressed.

SlopeSet:
Press this button to assign a slope to a channel. The pan/ tilt channels controlled by the jog wheels have a fixed slope.

Music:
When a chase is running, press this button to activate the sound mode.

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

Auto:
Auto mode is the default chase running mode. Use this button to switch between sound mode and auto mode with preset speed and slope.

Language:
Press the **program** button first and then press this button to switch between English and Chinese language.

E/XY:
Use this button to switch between either speed/slope or pan/tilt function for the jog wheels:
Speed/slope mode: LED is off.
Pan/ tilt mode: LED is on.
The speed/ slope for a chase group can only be adjusted by **X/speed**.
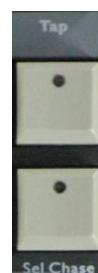
<=/SETX, =>/SETY:
Use this button to change the direction of a running chase. Or use this button to switch between pan/tilt movement of the jog wheels.

SelChase:
Press this button to select a running chase in order to change the settings.

TAP:
Tap this button to set the tempo of the running chase.

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4) 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 of 48 scenes.

Group1 & Group2:
2 groups, each with 16 chase groups, total 32 chase groups.

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

Multi:
Press this button to select two or more fixtures (LED indicator on).
If the LED indicator of this button is off, only one fixture can be
Selected.
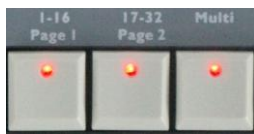
Page 1-16 and Page 17-32:
Page buttons. When the LED indicator of the page button is
lit, the fixtures stored in the page numbers are ready for selection.
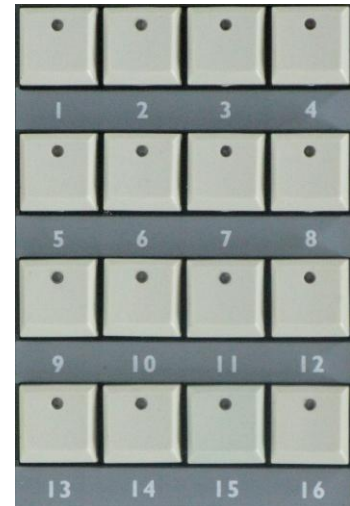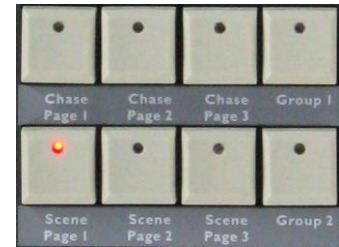
5) Jog Wheels

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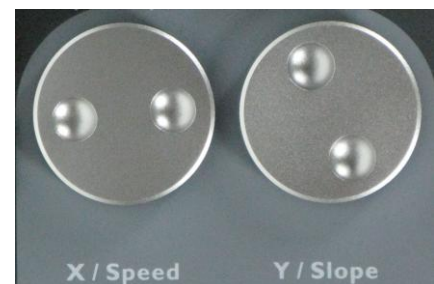
6) Master control

The master control buttons **Dimmer1, Dimmer2 & Dimmer3**
are respectively used to enable/disable and setup the
three master controls.

Master sliders **Master1**, **Master2** & **Master3** are used to
control the maximum output value of the assigned channels.
They only work when **Dimmer1**, **Dimmer2** & **Dimmer3** are
enabled (LED indicator on).

7
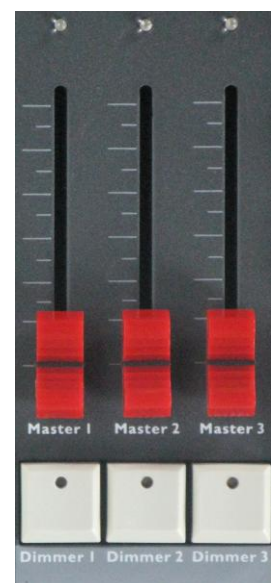
Controller Backside

Fig. 2

1) DMX OUT 1: This connector sends your DMX value to the DMX fixture or DMX pack.
2) DMX OUT 2: This connector sends your DMX value to the DMX fixture or DMX pack.
3) DATA: Data port (only used by Showtec to read out an error logfile).
4) Microphone.
5) Audio Input: This jack accepts a line level audio input signal ranged from 100 mV to 1Vpp.
6) MIDI In: Not activated in the current software version.
7) MIDI Thru: For linking MIDI equipment.
8) Main Fuse T1,5A/250V.
9) Power ON/ OFF.
10) IEC Connector.

Installation

Remove all packing materials from the Showdesigner 512. Check that all foam and plastic padding is removed. Screw the equipment into a 19" rack. Connect all cables.

Always disconnect from electric mains power supply before cleaning or servicing.
Damages caused by non-observance are not subject to warranty.

Set Up and Operation

Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 120V specification product on 230V power, or vice versa.

2.1 General Operations

2.1.1 Power on:

After powering on, the device will reset itself. The LED indicators will blink.

2.1.2 Fixture selection:

After power on, the fixture buttons are deactivated and the sliders will not work. Press the fixture selection buttons to select the fixtures. If **Multi** is activated (LED on), two or more fixtures can be selected. Otherwise only one fixture at a time can be selected. When **Page1-16** is activated, fixture 1-16 are ready for selection If **page17-32** is selected, fixture 17-32 are ready for selection. If both **Page 1-16** and **Page 17-32** are active, two fixtures at a time will be selected. E.g. **Page1-16** and **Page17-32** are both active. Selecting fixture1 will select both fixture 1 and fixture 17.
   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 deactivated simultaneously. E.g. If you want to activate or deactivate 10 fixtures, press and hold the first button and then press the 10th button, now fixture1-10 will be either activated or deactivated simultaneously.

2.1.3 Manual control:

After activating the fixtures, you can both 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 faders' LED indicators give an indication of the output value. If 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 be released.

Note:

Press and hold **release**, then push a fader to release the channel and the LED indicator will dim. On the other hand if there is a scene/ chase or 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 dim.

Manual output is prior to the output of a running scene/ chase/ chase group.

2.1.4 Clear

If one of the LED indicators of **sc1**, **sc2**, **sc3**, **chase1**, **chase2**, **chase3**, **group1** or **group2** is lit, press **clear** once, this will clear all manual output.
If one of the LED indicators of **sc1**, **sc2** or **sc3** is lit, press **clear** and hold for about one second. It will clear all manual output and close all running scenes.
If one of the LED indicators of **chase1**, **chase2** or **chase3** is lit, press **clear** and hold for about one second. It will clear all manual output and close all running chases.
If one of the LED indicators of **group1** or **group2** is lit, press **clear** and hold for about one second. It will clear all manual output and close all running chases.

2.2 Create a scene

Step	Description
1	Select the desired fixtures.
2	Move the faders to adjust the lighting effects.
3	Press **Program** to enter programming mode.
4	Select **sc1**, **sc2** or **sc3** to store the scene.
5	Select a 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 faders with manual output will be lit or flashing (output value = 0). The values will all be saved into the scene. However, if the LED indicators are of, they will not be saved. If you don't want to save the value of a certain channel, press and hold release and the push the fader to release the channel, the LED indicator of the fader will dim. It is recommended to release the unnecessary channels to avoid unexpected lighting effects.
If the display prompts error while saving a scene, it means there is an existing scene running in the number button, or a new scene is blank not for save.

2.3 Run a scene

Step	Description
1	Select **sc1**, **sc2** or **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 light. This means the scene is running. The LED indicators of the faders will be lit. The brightness will depend on the output value.

Note:
If the running scene is using channels that are also active in manual control, the output will be controlled by the value of the manual control. To activate the scene channel value, you'll have to release the manual output: press and hold **release** and then push the fader to release manual output.

2.4 Create a chase

There are three ways to create a chase:

A. Create the chase by adjusting the faders.

B. Create scenes first and then select the scenes into the chase.

C. Use a mix of the two ways described above.

A: Create a chase by adjusting the faders.

Step	Description
1	Press **program** to enter programming mode
2	Select **chase1**, **chase 2** or **chase 3** to store the chase.
3	Select a number from **1--16** to as the number of the chase, If the LED indicator of the number button is lit, there is already a chase stored in that number.
4	Select one or more fixtures.
5	move the faders to obtain the desired light effect.
6	If the LED indicator of **E/XY** is lit, the pan/tilt value can be adjusted by rotating the jog wheels. If the LED indicator of **E/XY** dims, the speed/slope of the scene can be adjusted by rotating the jog wheels. Shortly press **clear/ exit** once to clear the fader output. Press and hold **clear/ exit**, to exit programming mode. Press **release**, the move a fader 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 light effect into the selected chase. The device will automatically jump to the next step. Repeat step 4-7 to edit a new light effect.
8	Press **Program** to save the chase and exit the programming mode.

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

Step	Description
1	Create scenes (see "Create a scene").
2	Press **program** to enter programming mode.
3	Select **Chase1**, **Chase2** or **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 lit, there is already a chase stored in that number.
5	Select **SC1**, **SC2** or **SC3** by the order of the scenes' saving time.
6	If the LED indicator of the number button is on, it means there is already an existing scene stored in the number. Select the scene you want to add in the chase. At this time the selected scene is running as a preview, but is not added yet. The default speed is 3 seconds, which can be changed by the jog wheel is the **E/XY** LED is not lit.
7	After selecting a scene, press **ADD** to add the scene to the chase. The device will automatically jump to the next step. Repeat step 5-7 to add a new scene.
8	Press **DEL** in order to delete a scene in the chase. Press **Insert** to insert a scene. Press **<=/SETX** or **=>/SETY** to edit the previous or next scene in the chase. If the next scene is blank, it will not move further.
9	Press **exit** for a few seconds to exit the programming mode.
10	Press **Program** to save and exit.

C: Create the scenes first and then add the scenes into a chase.

Step	Description
1	Create scenes (see "Create a scene").
2	Press **program** to enter programming mode.
3	Select **Chase1**, **Chase2** or **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 lit, there is already a chase stored in that number.
5	Now, the light effect can be selected in the scenes or created by adjusting the faders. To select one of the scenes, press **SC1**, **SC2** or **SC3**. Now select the desired scene to add to the chase. To create an effect by adjusting the faders, select the desired fixture and adjust the faders in order to get the right effect. It is also possible to edit a selected scene.
6	After selecting a scene, press **ADD** to add the scene to the chase. The device will automatically jump to the next step. Repeat step 5-6 to add a new scene.
8	Press **DEL** in order to delete a scene in the chase. Press Insert to insert a scene. Press **<=/SETX** or **=>/SETY** to edit the previous or next scene in the chase. If the next scene is blank, it will not move further.
9	Press **exit** for a few seconds to exit the programming mode.
10	Press **Program** to save and exit.

Note:
While creating a scene or chase, the LED indicators of the relevant faders should be off. If not, you can press and hold **release** and then move the fader to release them. Any channel with an output value will be stored into the chase.

2.5 Run a chase

Step	Description
1	Select group **Chase1**, **Chase2** or **Chase3** for the desired chase.
2	The LED indicators of a number button holding a chase will blink.
3	Select the desired number button to run the chase. The LED indicator will slow down the blink rate, thus showing that the selected chase is running. If several chases are running simultaneously, the LED indicator of the previous running chase will dim.

Note:
Different blinking frequency of the number button shows the different status. A high blinking rate means there is an existing chase stored in the button, but is not running. Full on means the chase is running and cannot be edited. A slow blinking rate means the chase is running and ready for editing.

Following parameters can be edited while a 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** (jog wheel) to adjust the running speed. **Y/Slope** is for slope adjustment. If **ALL** is not selected, the adjustment is for the speed/ slope of a single scene step. Before adjustment, please make sure **E/XY** is deactivated (LED indicator off).

Adjust the running speed by tapping the **Tap** button twice.

Press **Clear** and hold for about 1 second to exit all chases. If a chase is running and you are using manual control, the manual control will have priority.

2.6 Create a chase group
The controller can store up to 48 chase groups with up to 48 steps. The running time of each step can be adjusted from 0,5 seconds to 10 minutes. To create a chase group, please follow the steps below:

Step	Description
1	Press **program** to enter programming mode.
2	Select **Group1** or **Group2**
3	Select a number from **1--16** as the number of the chase group. If the LED indicator of the number button is lit, there is already a chase group stored in that number.
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 to the chase group. Once selected, the chase will start running. Up to 48 steps can be added. Inactive **E/XY** (LED indicator off), then adjust the running speed by the **X/Speed** jog wheel.
6	After selecting a scene, press **ADD** to add the scene to the chase. The device will automatically jump to the next step.
7	Repeat step 5-6 to add a new step.
8	Press **Program** to save and exit.

Note:
To Exit the programming mode, press clear for a few seconds.

2.7 Run a chase group

Step	Description
1	Press **Group1** or **Group2**.
2	The LED indicator of the number button containing a chase group will blink at a higher rate.
3	Select the desired number button to run the chase group. The LED indicator's blinking rate will slow down, which means that the chase group is running now.

Note:
Press **clear** to exit all running chase groups.

2.8 Jog wheel assignment
The pan/tilt channel of the fixtures can be assigned to the jog 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	Move the fader of the pan/tilt channel until the LED indicator is lit.
5	Press **<=/SETX** or **=>/SETY** again to save and exit

2.9 Using the jog wheels
The channel assigned to the jog wheel can be controlled by the jog 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 jog wheels.

2.10 Setup of slope channels
The channels that have been assigned to the jog wheels will automatically have a slope assigned when the chase is running. Other channels can be set up with a slope also.

Step	Description
1	Press **program** to enter programming mode.
2	Press **SlopeSet**
3	Select the desired fixture.
4	Push the channels you want to setup with slope until the LED indicators of the faders are lit. Press **Release** and move the fader to release the selected channel.
5	Press **SlopeSet** again. Now setup is finished. The channels will have a slope when running.

Example:
To assign a slope to channel 5 & 6 of fixture 1:
Press **Program** -> **SlopeSet** -> Select Fixture **1** -> move the faders of CH5 & CH6 until the LED indicators are lit. -> **SlopeSet**. Ok.

2.11 Delete

Step	Description
1	Press **Del**.
2	Select the item 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 deleting. (not for **<=/SETX**, **=>/SETY** or **Slopeset**)
4	Item is deleted.

Example: Delete the chase stored in number button 2 of Chase 1.
        Press **Del** -> **Chase1** -> **2**. Ok.

2.12 Create a master control

Step	Description
1	Press **program** to enter programming mode.
2	Select one of the three master control buttons **Dimmer1**, **Dimmer2** or **Dimmer3**.
3	Select the DMX address code of the dimmer pack.
4	Move the faders you like to add in the master control until the LED indicator of the fader is lit. Repeat this for al desired faders.
5	Press **Dimmer1**, **Dimmer2** or **Dimmer3** again to save the master control.

Example: We have an 8-channel dimmer pack. The DMX address is 25 which is the start address of the second fixture in the controller. Follow the steps below to program it into the **Dimmer**:

Program -> **Dimmer1** -> Fixture selection button **2** -> Push fader Ch1-Ch8 until their indicators are lit -> **Dimmer1** -> Ok.

Now, a master control is ready. Fader Master1 will control the maximum output of Ch1 – Ch8 in fixture 2.

Maintenance

The Showtec Showdesigner 512 requires almost no maintenance. However, you should keep the unit clean. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Do not use alcohol or solvents.
Keep connections clean. Disconnect electric power, and then wipe the DMX and audio connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

Troubleshooting

Showtec Showdesigner 512
This troubleshooting guide is meant to help solve simple problems. If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

1. Fixture does not respond to controller: Check the DMX-address of the fixture and the controller. Make sure they match. Make sure the connections are correct.
2. Interference between chases; If the same channel is assigned to different running chases, the one with the highest channel value will be put out.
3. Note: when in programming mode, as long as the LED indicator is lit, the value will be stored, even if the value is zero.
4. Except for the channels assigned to the jog wheels and the channels set with slope, slope is not assigned to the other channels.
5. For the master controlled channels, the master sliders are valid only when the dimmer buttons are activated (LED indicator is on). If some channels can't be controlled, please check if they are assigned to master control.
6. If the device does not operate properly, unplug the device.
7. Check power from the wall, all cables, the fuse, the settings (return to default), etc.
8. If all of the above appears to be O.K., plug the unit in again.
9. If nothing happens after 30 seconds, unplug the device.
10. Return the device to your Showtec dealer.

Product Specification

Model: Showtec Showdesigner 512
Power input : AC 100V-240V, 50/60Hz, 30W.
DMX-Output: 3-pin female XLR
MIDI-Signal: 5-pin standard interface
Audio Input: 100 mV~1Vpp.
Fuse: F1.5A 250V 5x20 mm
Dimensions : 480 x 290 x 95 mm (LxWxH)
Weight : 5,6 kg

Design and product specifications are subject to change without prior notice.

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