$\overline{\underline{OXO}}$

# *Khamsin*

# USER'S MANUAL



Ch.1 Ch.2 Ch.3 Ch.4 Ch.5 Ch.6
OXO
1 2 3 4 5 6
Power
DMX
Nep
6 Ch DMX Dimmer Pack

*Khamsin*

Up  Down  Enter  Cancel
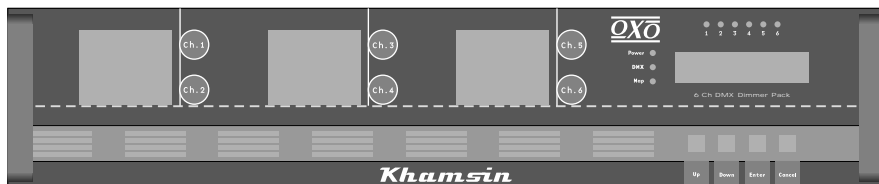
**Please read before use**

# Contents

# Features

Thank you for your purchasing. This product features include:

- 6 DMX channels, 24 map in DMX channels

- 24 programmable scenes

- 10 shows from 24 programmed scenes

- 90 built-in chase programs

- Each channel can be programmed with preheat level(0-20%), maximum output level(30-100%), control curve(linear,square and switch) and fade time(0.0s-999s).

- Each scene can be programmed with the current output and fade time

- 24 map in DMX channels can be preset mapped to any of 24 scenes, 10 shows and 90 chase programs.

- DMX only and Map only can be selectable

- Several units can be linked in Master/Slave mode

- 50% cut down of output in the event of over temperature

- LCD display

- Power failure memory

# General Instructions

Please read through this operating instructions before installing or using your new product. After you have finished reading the instructions, put them away in a safe place for future reference.

⚠ **WARNING!**

This product must be earthed.

To prevent fire or shock hazard, do not expose this product under high temperature or moisture area.

Do not make any inflammable liquids, water or metal objects enter the unit.

No user serviceable parts inside, do not attempt repairs. Should you product fail, contact your local dealer.

⚠ **CAUTION!**

This product is intended for indoor use only.

Provide occasional ventilation during use.

Disconnect the power when not use for extended period.

Do not use the unit in places subject to excessive humidity, vibration or bumps.

Do not dismantle or modify the unit.

# Overview
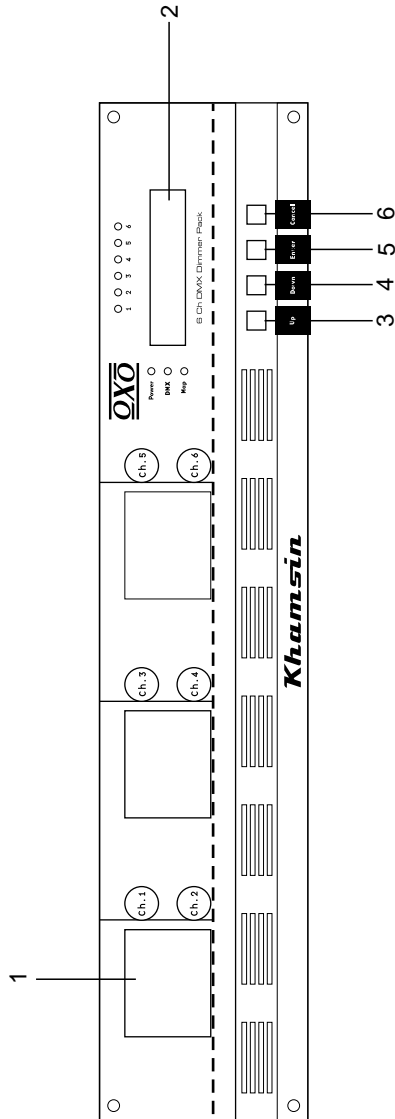
# Overview

**1. Circuit Breaker 16A**

**2. LCD Display**
Shows the current activities or adjustments of menus.

**3. UP Button**
Scroll through the menus or increase the values.

**4. DOWN Button**
Scroll through the menus or decrease the values.

**5. YES Button**
Enter a submenu or store the settings.

**6. NO Button**
Leave the settings unchanged or go back one level of the menus.

# Overview
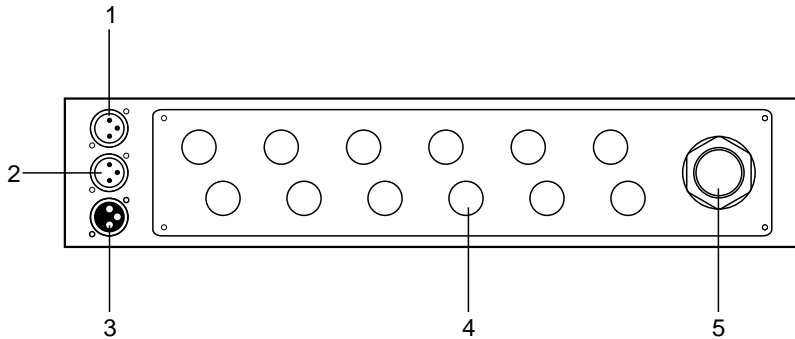
1. DMX INPUT
   This connector accepts DMX input signal.

2. MAP INPUT
   This connector is used to map in 24 DMX channel to control scene 1-24, show 1-10 or program 1-90.

3. DMX OUTPUT
   This connector sends DMX signal through to the next DMX device.

4. Terminal Output

5. Power Input
   Single phase input or three-phase input

   (For details, please refer to the wiring diagram printed on the top cover.)

# Overview

## Rear View

**SINGLE PHASE CONNECTION**

AC INPUT

L1 · L2 · L3 · N · L

LOADING

CH.1 · CH.2 · CH.3 · CH.4 · CH.5 · CH.6

**THREE-PHASE CONNECTION**

AC INPUT

L1 · L2 · L3 · N

LOADING

L1 · 1 · 2 · L2 · 3 · 4 · L3 · 5 · 6

DMX IN

MAP IN

DMX OUT

1=Ground
2=Data -
3=Data +

**SINGLE**  CE  CHINA

**PHASE**

POWER INPUT: AC 230V~50-60Hz
OUTPUT: 10A per channel, Total 60A
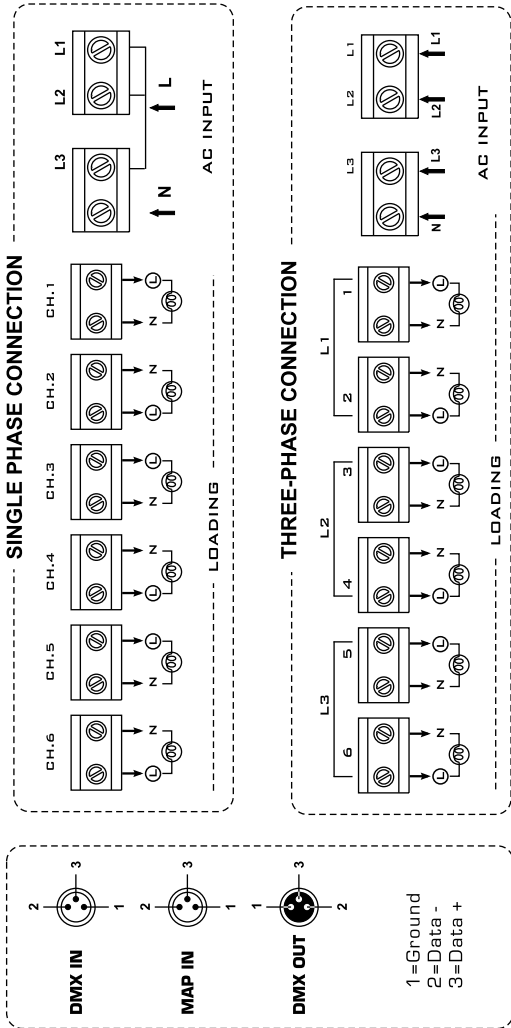
POWER INPUT: AC 220V~50-60Hz
OUTPUT: 16A per channel, Total 60A

1. Either three-phase four-wire input or single phase input is allowed.
2. When single phase input, L1, L2, L3 must be short-circuited via wires.
3. When three phase input, neutral wire must be securely connected.

**THREE**  CE  CHINA

**PHASE**

POWER INPUT: AC 230V~50-60Hz
OUTPUT: 10A per channel, 20A per phase

POWER INPUT: AC 220V~50-60Hz
OUTPUT: 16A per channel, 32A per phase

**CAUTION**

Risk of Electric Shock Disconnect Input Power Before Opening

N'ouvrez pas, risque de choc electrique

Warning :This apparatus must be earthed

# Set-up

## Power Up

When power is applied to your dimmer, a self-test is performed, as indicated by its LCD. The LCD reads "DMX ABSENT/ DMX RECEIVED OK/ DMX SIGNAL ERROR" or "OVER TEMPERATURE".

After these initial test, a text message begins to scroll through the LCD. By default these messages are "DIGITAL DIM PACK ......". You may change these text using menu item 71.

## Menu System

Tap the UP/DOWN button to scroll through this menu system. There are total 9 main menus, the table below shows every main menu and also gives you an explanation.

| MAIN MENU | | FUNCTION | |
|---|---|---|---|
| ▲ / ▼ | 1  SET DMX ADDR | 11  START ADDRESS | Start Channel ( 1~512 ) |
| | | 12  PATCH ADDRESS | Individual Channel ( 1~512 ) |
| | 2  SET CHANNELS | 21 SET PREHEAT | All or 1-6 Channel ( 0%~20% ) |
| | | 22 SET MAX OUT | All or 1-6 Channel ( 30%~100% ) |
| | | 23 SET CURVES | Linear, Square, Switch |
| | | 24 SET FADE TIMES | All or 1-6 Channel ( 0.0s~999s ) |
| | 3  SET SCENES | 31 PLAY SHOW | Scene 1~24, Show 1~10, PROG 1~90 |
| | | 32 RECORD | Get Scene 1~24 or clear all scene |
| | | 33 DMX FAIL | All off, Last held, Scene 24, Go no DMX, Go MAP |
| | | 34 PRESET MAP | 1-24 Channel Scene 1~24, Show 1~10 or PROG 1~90 |
| | | 35 FADE TIMES | All or 1~24 Scene ( 0.0s~999s ) |
| | | 36 NO DMX SCENE | Scene 1~24, Show 1~10 or PROG 1~90 |
| | 4  TEST CHANNELS | 41 CH[A] Y= TEST | All or 1-6 Channel Test |
| | 5  SET INPUTS | 51 [ DMX ONLY ], [ MAP ONLY ] | DMX / MAP |
| | 6  UNIT SETUP | 61 [ MASTER ], [SLAVE ] | MASTER / SLAVE |
| | 7  SET TEXT | 71 TEXT | ASCII |
| | 8  SOFTWARE REV | 81 REVISION | |
| YES (✓) | 9  READ INFO | 91 HOURS USED | 00000~99999 Hours |
| | | 92 TEMPERATURE | Max, Min, Now, Reset |
| | | 93 DMX LEVELS | Channel (1-6) = 0~255 |
| | | 94 MENU ACCESS | Unlock / Lock |
| | | 95 SET DEFAULTS | Factory Settings |

| UP ( ▲ ):<br>Scroll through Menu or  increase the value.<br>DOWN ( ▼ ):<br>Scroll through Menu or decrease the value | YES ( ✓ ):<br>Enter Sub-Menu store settings or display information etc.<br>No ( ✗ ):<br>Go back one level of menu or leave setting. |
|---|---|

# Set-up

## 1. SET DMX ADDRESS?

1. Tap the UP/DOWN button to scroll to "1 SET DMX ADDR?".

```
1 SET DMX ADDR?
```

2. Press YES to enter next menu level, Start Address and Patch Address are selectable using UP/DOWN.

### Start Address

I. Tap UP/DOWN to scroll to the sub-menu "11 START ADDR?", the LCD shows

```
1 SET DMX ADDR?
11 START ADDR?
```

II. Press YES, the LCD shows

```
1 SET DMX ADDR?
111 START [  1]
```

III. Tap UP/DOWN to select desired DMX address(1~512) for the start channel, its default address is 1.

IV. Press YES to store your setting, the LCD shows

```
1 SET DMX ADDR?
STORED OK
```

### Patch Address

I. Tap UP/DOWN to scroll to the sub-menu "12 PATCH ADDR?", the LCD shows

```
1 SET DMX ADDR?
12 PATCH ADDR?
```

II. Press YES, the LCD shows

```
1 SET DMX ADDR?
121 CHANNEL [1]
```

You may select the desired channel using UP/DOWN.

III. Press YES again, the LCD shows

```
1 SET DMX ADDR?
1211 ADDR [  1]
```

# Set-up

## 1. SET DMX ADDR?

### Patch Address

IV. Tap UP/DOWN to select desired DMX Address(1~512).

V. Press YES to store your setting, the LCD shows

```
1 SET DMX ADDR?
STORED OK
```

VI. Repeat steps II~V until every DMX channel has a separate address.

## 2. SET CHANNEL?

1. Tap UP/DOWN to scroll to "2 SET CHANNELS?"

```
2 SET CHANNELS?
```

2. Press YES to enter next menu level, you may select 21 SET PREHEAT
   / 22 SET MAX OUT/ 23 SET CURVES/ 24 SET FADE TIME using UP/DOWN.

### SET PREHEAT

I. Tap UP/DOWN to scroll to the sub-menu
"21 SET PREHEAT?', the LCD shows

```
2 SET CHANNELS?
21 SET PREHEAT?
```

II. Press YES, the LCD shows

You may select all or channel 1-6
using UP/DOWN, default=A(all channels).

```
2 SET CHANNELS?
211 CHANNEL [A]
```

# Set-up

## 2. SET CHANNELS?

III. Press YES again, the LCD shows

| 2 SET CHANNELS? |
|---|
| 2111 [-0-%] |

You may select desired value using
UP/DOWN, default=0%.

IV. Press YES to store your setting, the
LCD shows

| 2 SET CHANNELS? |
|---|
| STORED OK |

## SET MAXIMUM OUTPUT

I. Tap UP/DOWN to scroll to the sub-menu
"22 SET MAX OUT?", the LCD shows

| 2 SET CHANNELS? |
|---|
| 22 SET MAX OUT? |

II. Press YES, the LCD shows

| 2 SET CHANNELS? |
|---|
| 221 CHANNEL [A] |

You may select all or channel 1-6 using
UP/DOWN, default=A(all channels).

III. Press YES again, the LCD shows

You may select desired value using
UP/DOWN, default=100%.

| 2 SET CHANNELS? |
|---|
| 2211 [100%] |

IV. Press YES to store your setting,
the LCD shows

| 2 SET CHANNELS? |
|---|
| STORED OK |

# Set-up

## 2. SET CHANNELS?

### SET CURVES

I. Tap UP/DOWN to scroll to the sub-menu
"23 SET CURVES?", the LCD shows

```
2 SET CHANNELS?
23 SET CURVES?
```

II. Press YES, the LCD shows

```
2 SET CHANNELS?
231 CHANNEL [A]
```

  You may select all or channel 1-6 using
  UP/DOWN, default=A(all channels).

III. Press YES again, the LCD shows

```
2 SET CHANNELS?
2311 CURVE [LIN]
```

  You may select desired curve mode from
  Linear/ Square/ Switch using UP/DOWN,
  default=Linear.
  Use linear for normal dimming, square for greater subtlety at the lower end
  and switch for ON/OFF applications.

IV. Press YES to store your setting, the LCD shows

```
2 SET CHANNELS?
STORED OK
```

### SET FADE

I. Tap UP/DOWN to scroll to the sub-menu
"24 SET FADE?", the LCD shows

```
2 SET CHANNELS?
24 SET FADE?
```

II. Press YES, the LCD shows

  You may select all or channel 1-6 using
  UP/DOWN, default=A(all channels).

```
2 SET CHANNELS?
241 CHANNEL [A]
```

# Set-up

## 2. SET CHANNELS?

### SET FADE

III. Press YES again, the LCD shows

```
2 SET CHANNELS?
2411 [0.0S]
```

    You may adjust fade time within 0.0s~999s
using UP/DOWN, default=0.0s.

IV. Press YES to store your setting, the LCD shows

```
2 SET CHANNELS?
STORED OK
```

## 3. SET SCENES?

1. Tap UP/DOWN to scroll to "3 SET SCENES?"

```
3 SET SCENES?
```

2. Press YES to enter next menu level, you may select 31 PLAY SHOW/
   32 RECORD/ 33 DMX FAIL/ 34 PRESET MAP/ 35 FADE TIMES/ 36 NO
   DMX SCENE using UP/DOWN.

### PLAY SHOW

I. Tap UP/DOWN to scroll to the sub-menu
"31 PLAY SHOW?", the LCD shows

```
3 SET SCENES?
31 PLAY SHOW?
```

II. Press YES, the LCD shows

```
3 SET SCENES?
311 GO [SCEN 1]
```

    You may select scene 1-24/ show 1-10/
program 1-90 using UP/DOWN,
default=GO [SCEN 1](play scene 1).

III. Press YES to store your setting, the LCD shows

```
3 SET SCENES?
STORED OK
```

# Set-up

## 3. SET SCENES?

### RECORD

I. Tap UP/DOWN to scroll to the sub-menu
"32 RECORD?", the LCD shows

```
3 SET SCENES?
32 RECORD?
```

II. Press YES, the LCD shows

```
3 SET SCENES?
321 GET [SCEN 1]
```

   You may select Get scenes 1-24/ Clear scenes
   using UP/DOWN, default=1(scene 1).

III. When you select Get scenes, press YES
   to store your setting, the LCD shows

```
3 SET SCENES?
STORED OK
```

   When you select Clear scenes, press YES,
   the LCD shows

```
3 SET SCENES?
ARE YOU SURE?
```

   Press YES again, all scenes will be cleared,
   the LCD shows

```
3 SET SCENES?
ALL SCEN CLEARED
```

### DMX FAIL

I. Tap UP/DOWN to scroll to the sub-menu
   "33 DMX FAIL", the LCD shows

```
3 SET SCENES?
33 DMX FAIL?
```

II. Press YES, the LCD shows

```
3 SET SCENES?
331 [ALL OFF]
```

   You may select ALL OFF/ LAST HELD/
   SCENE 24/ GO NO DMX/ GO MAP using
   UP/DOWN, default=LAST HELD.

# Set-up

## DMX FAIL

[ALL OFF]:         all channels go to zero output.

[LAST HELD]:        the last signal received is held in the outputs.

[SCENE 24]:        scene 24 is output.

[GO NO DMX]:    menu 36 "NO DMX SCN" is recalled.

[GO MAP]:          map in signal is held in the outputs.

III. Press YES to store your setting, the LCD shows

```
3 SET SCENES?
STORED OK
```

## PRESET MAP

I. Tap UP/DOWN to scroll to the sub-menu
   "34 PRESET MAP", the LCD shows

```
3 SET SCENES?
34 PRESET MAP?
```

II. Press YES, the LCD shows

```
3 SET SCENES?
341 CHANL [ 1]
```

You may select channel 1-24using
UP/DOWN, default=CHANL [1] (channel 1).

III. Press YES again, the LCD shows

```
3 SET SCENES?
3411 DO [SCEN 1]
```

You may select scene 1-24/ show 1-10/
program 1-90 using UP/DOWN,
default=SCEN[ 1] (scene 1).

IV. Press YES to store your setting, the LCD shows

```
3 SET SCENES?
STORED OK
```

# Set-up

## 3. SET SCENES?

### SET FADE TIME

I. Tap UP/DOWN to scroll to the sub-menu
   "35 FADE TIME?", the LCD shows

```
3 SET SCENES?
35 FADE TIME?
```

II. Press YES, the LCD shows

   You may select all or scene 1-24 using
   UP/DOWN, default=A(all scenes).

```
3 SET SCENES?
351 SCEN [A]
```

III. Press YES again, the LCD shows

   You may select fade time(0.0s~999s)
   using UP/DOWN, default=0.0s.

```
3 SET SCENES?
3511 TIME [0.0s]
```

IV. Press YES to store your setting, the LCD shows

```
3 SET SCENES?
STORED OK
```

### NO DMX SCENE

I. Tap UP/DOWN to scroll to the sub-menu
   "36 NO DMX SCN?", the LCD shows

```
3 SET SCENES?
36 NO DMX SCN?
```

II. Press YES, the LCD shows

   You may select scene 1-24/ show 1-10/
   program 1-90 using UP/DOWN,
   default=DO [SCEN 1].

```
3 SET SCENES?
361 DO [SCEN 1]
```

III. Press YES to store your setting, the LCD shows

```
3 SET SCENES?
STORED OK
```

# Set-up

## 4. TEST CHANNELS?

1. Tap UP/DOWN to scroll to "4 TEST CHANLS?"

> 4 TEST CHANNELS?

2. Press YES, the LCD shows

> 4 TEST CHANNELS?
> 41 CH [A]

   You may select all or channel 1-6
   using UP/DOWN, default=A(all channels).

3. Press YES once, the appropriate channel(s) will be fully on;
   press YES twice, the appropriate channel(s) will be half on;
   press YES three times, the appropriate channel(s) will go out.

## 5. SET INPUTS?

1. Tap UP/DOWN to scroll to "5 SET INPUTS?"

> 5 SET INPUTS?

2. Press YES, the LCD shows

> 5 SET INPUTS?
> 51 [DMX ONLY]

   You may select DMX ONLY/ MAP ONLY
   using UP/DOWN, default=DMX ONLY.

3. Press YES to store your setting, the LCD shows

> 5 SET INPUTS?
> STORED OK

# Set-up

## 6.  UNIT SETUP?

1. Tap UP/DOWN to scroll to "6 UNIT SETUP?"

```
6 UNIT SETUP?
```

2. Press YES, the LCD shows

```
6 UNIT SETUP?
61 [SLAVE]
```

   You may select MASTER/ SLAVE
   using UP/DOWN, default=SLAVE.

3. Press YES to store your setting, the LCD shows

```
6 UNIT SETUP?
STORED OK
```

## 7.  SET TEXT?

1. Tap UP/DOWN to scroll to "7 SET TEXT?"

```
7 SET TEXT?
```

2. Press YES, the LCD shows

```
7 SET TEXT?
WELCOME        [W]
```

   You may change the blinking character using
   UP/DOWN followed by YES.
   When you've finished the new text, tap UP/DOWN until [END] appears,
   press YES to store the new text.
   If you press YES without [END], the new text won't be stored into memory.
   If you want to clear all these characters, tap UP/DOWN until [CLR] appears,
   press YES, the text will be cleared.

# Set-up

## 8. SOFTWARE REV?

1. Tap UP/DOWN to scroll to "8 SOFTWARE REV?".

```
8 SOFTWARE REV?
```

2. Press YES, the LCD shows the software revision.

```
8 SOFTWARE REV?
REV1.0    05-26-01
```

## 9. READ INFO?

1. Tap UP/DOWN to scroll to "9 READ INFO?".

```
9 READ INFO?
```

2. Press YES to enter next menu level, you may select 91 HOUR USED/
   92 TEMPERATURE/ 93 DMX LEVEL/ 94 MENU ACCESS/ 95 SET DEFAULT
   using UP/DOWN.

### HOUR USED

I. Tap UP/DOWN to scroll to the sub-menu
   "91 HOUR USED?", the LCD shows

```
9 READ INFO?
91 HOUR USED?
```

II. Press YES, the LCD shows total hours used.

```
9 READ INFO?
911 00000 HOURS
```

# Set-up

## 9. READ INFO?

### TEMPERATURE

I. Tap UP/DOWN to scroll to the sub-menu
   "92 TEMPERATURE", the LCD shows

```
9 READ INFO?
92 TEMPERATURE
```

II. Press YES, the LCD shows

```
9 READ INFO?
921 [MAX]        --C
```

You may select MAX/ MIN/ NOW/ temperature
or RESET using UP/DOWN.

III. When the LCD shows RESET, press YES to reset the maximum and minimum
     temperature to now temperature.

### DMX LEVELS

I. Tap UP/DOWN to scroll to the sub-menu
   "93 DMX LEVELS?", the LCD shows

```
9 READ INFO?
93 DMX LEVELS?
```

II. Press YES, the LCD shows

```
9 READ INFO?
931 CH [1]=XXX
```

You may select channel 1-6 using UP/DOWN.

# Set-up

## 9. READ INFO?

### MENU ACCESS

I. Tap UP/DOWN to scroll to the sub-menu
"94 MENU ACCESS?", the LCD shows

```
9 READ INFO?
94 MENU ACCESS?
```

II. Press YES, the LCD shows the default
setting "UNLOCKED". You may select
UNLOCK/LOCK using UP/DOWN.

```
9 READ INFO?
941      [UNLOCKED]
```

III. When you select LOCK, press YES, the
LCD shows

```
CONFIRM
TO   LOCK?
```

IV. If you are sure to lock, press YES, the
LCD shows

```
9 READ INFO?
LOCK  STORED  OK
```

If you are not sure, press NO to go back.

V. When the LCD shows

```
9 READ INFO?
941        [LOCKED]
```

If you want to unlock the menu, tap UP/
DOWN, the LCD shows

```
PLEASE  PRESS  KEY
TO  CONFIRM!
```

Keep pressing UP for 5 seconds, tap DOWN
once, the LCD shows

```
9 READ INFO?
941        [LOCK]
```

# Set-up

## 9. READ INFO?

### MENU ACCESS

VI. Use UP/DOWN to scroll to UNLOCK,
   press YES, the LCD shows

```
    CONFIRM
 TO   UNLOCK?
```

VII. Press YES, the LCD shows

```
9 READ INFO?
UNLOCK STORED OK
```

   If you are not sure, press NO several
   times until the LCD shows

```
 DO   YOU   WANT
    TO   EXIT?
```

   then press YES to leave the setting unchanged.

### SET DEFAULTS

I. Tap UP/DOWN to scroll to the sub-menu
   "95 SET DEFAULT?", the LCD shows

```
9 READ INFO?
95 SET DEFAULT?
```

II. Press YES, the LCD shows

```
 DO   YOU   WANT   TO
   SET   DEFAULTS?
```

III. Press YES again, the LCD shows

```
 ARE   YOU   SURE
     !   !   !
```

IV. Press YES to set defaults to your dimmer.

# Additional Information

## Fan Cooling

The unit's fan is used to improve heat dissipation.

If the power is turned on, the cooling fan will automatically run. When the power is turned off, it will stop.

## Over Temperature Solving

A. When the recorded maximum temperature exceeds 75° Celsius and the ambient temperature is below 75° Celsius, the LCD shows "OVER TEMPERATURE" and only 50% of output remains. You may make RESET adjustment using menu 92 to resume normal output.

B. When the recorded maximum temperature exceeds 75° Celsius and the ambient temperature is also over 75° Celsius, the LCD shows "OVER TEMPERATURE" and only 50% of output remains. You can not make any adjustments until over temperature is solved.

C. In normal use, whenever over temperature occurs, the LCD should show " OVER TEMPERATURE" immediately and only 50% of output remains.

# Additional Information

## Master/Slave Link Up

A. You can set up communications between several units using Master/Slave link up, the first unit serves as the Master, and the others are Slaves.
(See menu 6 UNIT SETUP.)

B. The Master unit transfers the DMX signal and Map input signal to the Slave unit using DMX cables, the Slave transfers the DMX input signal only but not the Map input signal.

## Lock the buttons

After power on, the LCD shows general status and test messages. Press and hold down YES and NO buttons simultaneously for three seconds, the LCD should show "L" in the down right corner indicating all the buttons are locked.
Press the two buttons for three seconds again, the "L" character disappears and the buttons are unlocked.

In menu 311, you may also lock or unlock the buttons as described above.

In menu 311 or 41, if you don't make any adjustments within 10 minutes, the buttons should be locked automatically, you may press and hold down YES and NO buttons for three seconds to unlock the buttons and go on your setting.
In other menus, if you don't make any adjustments within 10 minutes, the buttons should be locked automatically,  the LCD shows the status messages and you should restart your menu adjustments.

# Technical Specifications

Power Input ................................................ AC 230V~50-60Hz, 60A

Channel Output(Single phase)..................... 10A/CH., Total 60A(CE)

16A/CH., Total 60A(CHINA)

Channel Output(Three phases)................... 10A/CH., Total 20A(CE)

16A/CH., Total 32A(CHINA)

DMX Output ............................................. 3 pin female XLR socket

DMX Input ................................................ 3 pin male XLR socket

Map Input ................................................ 3 pin male XLR socket

Dimensions ............................................ 482x390x90mm

Weight(appro.) ....................................................... 9.0 kg

24-004-0998