



WALLRACK DIMMER

USER MANUAL



TINHAO®

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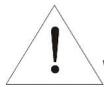
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Before You Begin

Immediately upon receiving a fixture, carefully unpack the carton; check the contents to ensure that all parts are present, and the equipment have been received in good condition. Notify the shipper immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture to be returned in the original factory box and packing.

Service

From the day buying the product, you own 1 year for warrant. In case there are technics problems or accessory damage, we offer free change. But except for the damage caused purposely or by mishandling. Contact us if there is any problem.



Warning

- ✦ Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.
- ✦ Always make sure that you are connecting to the proper voltage and that the line voltage you are connecting to is not higher than that stated on decal or rear panel of the fixture.
- ✦ This product is intended for indoor use only!
- ✦ To prevent risk of fire or shock, do not expose fixture to rain or moisture. Make sure there are no flammable materials close to the unit while operating.
- ✦ The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces. Be sure that no ventilation slots are blocked.
- ✦ Because Dimmer packs operate at potentially lethal high voltages, Installation should be carried by professional and experienced personnel
- ✦ Do not connect chassis Ground to Neutral, or operate without chassis ground, otherwise the user could be exposed to potentially lethal voltages.

Profile Description

FLYGEKO architecture intelligent dimmer is designed for meeting the increasing demands in the architecture field. It features of hard and soft patch available, neutral-lost warning, Dual DMX signal available, Light weight, excellent shock-proof and easy for maintenance.

The digital FLYGEKO absorbs the advanced technology and concept from international lighting controls, optimized inner wiring and structure. The electrostatic powder coating surface prevents the products from scratch, physical shock, abrasion, moisture and high temperature, helping to keep good appearance.

Elegant outlet with simple keypad, digital display and graceful lines, is more user-friendly. Strong and weak electricity are separately controlled, which efficiently lower anti-interference. Intelligent cooling system reduces inner temperature and noise. FLYGEKO has variety optional output to meet different needs.

FLYGEKO has high-performance microprocessor. It has 10 functions such as presetting dimming curves, pre-heating, etc (see below details). 4096(16bit) Fade accuracy, sensitive MCB in each channel for short-circuit and over-load protection. Intelligent channel checking system forces to auto-close when short-circuit occurred, alert for over-load and neutral-lost, guiding for a timely error correction.

Features

- * Available with 6x6kw, 12x3kw and 24x3kw version
- * Wall mount design, easy for installation and maintenance
- * Convention cooled, no fans, continually working for 24 hours
- * 110V~250V AC, 50Hz/60Hz, single / 3 phase 5 lines input
- * MCB protection for each channel
- * Dual DMX input
- * Softpatch available
- * Response time: quick, normal or slow, helping to prolong lamp's life
- * 5 User-selectable curves: Linear, Square, S-curve, Extraction or user defined
- * 3 working modes: normal, fix and switch
- * 50 scenes recordable, manual or auto running
- * Keep the last level or auto-run the recorded scenes when signal breaks
- * Fade in-out time settable from 0 to 99.9 seconds
- * All channels can be dimmed locally (individually or generally)
- * LCD display for easy operation
- * External control panel optional

- * Wireless infrared remote control and PIR switch
- * Support Interface Protocol of central equipments
- * Power self-checking warning system, output will be limited once over load or neutral lost to Project the equipment.
- * RS485, MIDI, RS-232 & DMX signal optional
- * Light weight and elegant outline

Technical parameter

- * Voltage : 160Vac ~ 240 Vac
- * Frequency : 45Hz ~ 65Hz
- * Fade accuracy: 4096 (16 bit)
- * Auto voltage compensation: effective with a 10% voltage variation input,output variation 1%
- * Power Consumption : 60W
- * Output : 6KW for 6 channel, 3KW for 12 channel,3KW for 24 channel
- * Signal : DMX-512
- * Dimming range : 0 ~ 100%
- * Dimming Curves: Linear, S-curve, square and extraction or user-defined
- * Dielectric intensity : 2500/1min
- * Response time : 23ms
- * Pre-heating : 0 ~ 25/255
- * Operating : 24 hours daily
- * IP Rating: IP 33
- * Dimensions : 824 x 405 x 158 mm
- *

Installation

a) Packing :

Save the carton and all packing materials, In the event that a fixture must be returned to the factory, for they are specially designed to protect the fixture during transportation.

b) Equipment List :

Unpack the carton, check the contents to ensure that all parts are present, if the packaging equipment does not match with the list, please do not use this equipment and contact the company or distributor immediately.

c) P Before installation

- ✦ Shut down the power before installation
- ✦ Must installed by qualified persons

- ✦ Make sure the power supply is consistent with the voltage appeared on the equipment.
- ✦ This product is intended for indoor use only
- ✦ Do not expose fixture to rain or moisture. Make sure there are no flammable materials close to the unit while operating.
- ✦ At least 50cm from adjacent surfaces. Be sure that no ventilation slots are blocked.
- ✦ The equipment must be grounded
- ✦ Working temperature: Above 2°C below 45°C
- ✦ Working humidity: between 35% to 85%

Notice: The dimmer must be grounded, otherwise the warranty is invalid.

Keypad Definition

- 1 .  ----- Display the main menu or last directory
- 2 .  ----- Enter the menu or confirm store
- 3 .  ----- Go to upper option
- 4 .  ----- Go to next option
- 5 .  ----- Reduce
- 6 .  ----- Increase

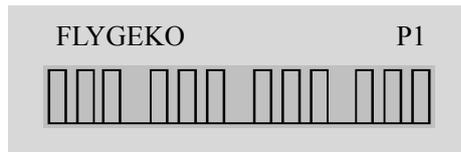
Menu Directory

There are 11 directories in FLYGEKO intelligent dimmer :

1. Lighting
2. Patch
3. Channel mode
4. Curve
5. Response
6. Voltage Limit
7. Pre-heat
8. Loop Test
9. Cue
10. Panel key
11. Setup

Normal Operation Status

When power on the fixture, red power indicator light on. There are another two indicators for DMX A and DMX B, indicator light of the connected port on. LCD of FLYGEKO will display the following starting status...



Starting...

P1 means 12 channel output.

The 4 groups of 12 columns show the related level of 12 channels.

Lighting

By this function, you can dim single or several channels manually, Level from 0-100% (255steps).

For example: to set 1 to 12 channels to be full level, below are the operation steps:

1. Press MENU



1. LIGHTING
2. PATCH

2. Press ENTER



Channel : 01-01
Value: 000

3. Use down arrow to choose the right No. , continually press right arrow to modify No. to be 12



4. Use down arrow to choose VALUE, press right arrow to set the lighting value to be 255



Patch

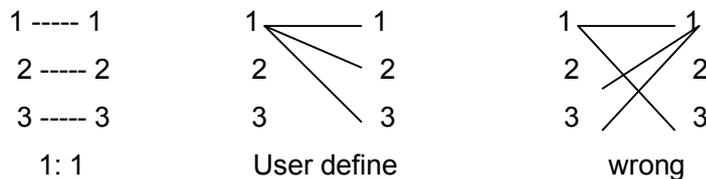
Patch allows dimmers to be allocated to various control channels. It has two functions:

1, one can assign channels in blocks of 6 [or12] by patching 1:1 [enter] and entering a start address [enter]

2, one can soft patch multiple dimmer channels to one dmx channel. [User define]

Here are some pictures and examples for guidance.

Pictures for Patch (Left-DMX signals, right-dimmer channels)



Example 1, to patch input A to be 1: 1, and start address is 6

1. Press MENU		
2. Press down arrow		
3. Press ENTER		
4. Press ENTER		
5. Press right arrow		
6. Press left arrow once to reduce		
7. Finish modification, press ENTER to save and quit		

Example 2: to patch input A to 1 to 3 (User define)

1. Enter the PATCH menu, press right arrow to USER DEFINE



2. ENTER into USER DEFINE



3. Use right arrow to choose dimmer channel 01 then



4. Use down arrow to choose DMX No. and use right arrow to change DMX No. 003



5. Press ENTER to save and quit

6. Repeat until all channels are allocated

Channel Mode

You can set NORMAL, SWITCH or FIX mode for each channel

NORMAL [±]- controlled by DMX signal. Could be fade in/fade out

SWITCH [±]- controlled by DMX signal, 0 or 100% output. The default value is 50%.

FIX ' ---not controlled by DMX signal, lights will be always on with set value, 0-100%, The default value is 50%.

For example, to set channel 2 to SWITCH mode, and value to be 51%

1. Select CHANNEL MODE



2. PATCH CHANNEL MODE

2. Press ENTER



CHANNEL : 01
MODE : NORMAL

3. Press right arrow to change 01 to 02



CHANNEL : 02
MODE : NORMAL

4. Press down arrow to 'MODE'  CHANNEL : 02
MODE : **NORMAL**
5. Press right arrow to change 'NORMAL' to 'SWITCH'  CHANNEL: 02 50%
MODE : **SWITCH**
6. Press down arrow to '50%' position  CHANNEL:02 **50%**
MODE : SWITCH
7. Press right arrow to change 50% to 51%  CHANNEL: 02 **51%**
MODE : SWITCH
8. Press ENTER to save and quit

Curve

There are 5 curves: Linear, S-curve, square and extraction or user-defined.

Settings are available: 1.set channel curve; 2.user define curve; 3, reset curve.

Input value is 255 grade (0-255), correspond to 4096 grade (0000-4096) dimming.

For example 1: to set channel 1 to be square:

1. Press down arrow to 'CURVE'  3. CHANNEL MODE
4. CURVE
2. Press ENTER  **CHANNEL CURVE**
USER CURVE
3. Press ENTER  CHANNEL : **01**
CURVE : LINEAR
4. Press down arrow and then right arrow  +  CHANNEL : 01
CURVE : **SQUARE**
5. Press ENTER to save and quit  CHANNEL : **02**
MODE : NORMAL

For example 2, to set the input value to 001 and output value to 0015:

1. Enter 'USER CURVE'

INPUT: 000
OUTPUT: 0000

2. Press right arrow, when change input to 001, output will be changed to be 0016 automatically



INPUT: 001
OUTPUT: 0016

3. Press down arrow and then left arrow



+



INPUT: 001
OUTPUT: 0015

4. ENTER to save and quit

For example 3: to reset user curve:

1. Enter 'RESET USER CURVE'



ARE YOU SURE?
YES NO

2. Press left arrow



ARE YOU SURE?
YES NO

3. Save and quit



Response

There are three response times settable: quick (20ms), normal (80ms) and slow (160ms). For those big tungsten lights, normally we should set it to be 'SLOW'. If there are few loads, you could set 'NORMAL' or 'QUICK'.

For example, to set channel 2 to 'SLOW'

1. Press down arrow



4. CURVE
5. RESPONSE

2. Press ENTER



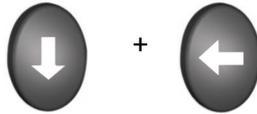
CHANNEL: 01
RESPONSE: QUICK

3. Press right arrow to change channel to '02'



CHANNEL: 02
RESPONSE: QUICK

4. Press down arrow and then left arrow to set 'SLOW'



CHANNEL: 02
RESPONSE: **SLOW**

5. ENTER to save and quit

Voltage Limit

Each dimmer channel could be set with different output voltage, from 110V to 250V.

For example, to set channel 2 to 119V:

1. Press down arrow



5. RESPONSE
6. VOLTAGE LIMIT

2. Press ENTER



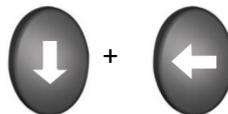
CHANNEL: **01**
LIMIT: 220V

3. Press right arrow to '02'



CHANNEL: **02**
LIMIT: 220V

4. Press down arrow and then left arrow to change



CHANNEL: 02
LIMIT: **119V**

5. ENTER to save and quit

Pre-heat

You can set pre-heat value to protect your illuminants, especially in winter.

For example, to set all channels value to be '002'

1. Press down arrow



6. LIMIT
7. PRE-HEAT

2. Press ENTER



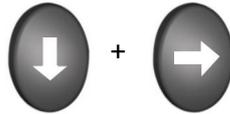
CHANNEL: **01**
PRE-HEAT: 000

Press left arrow to change to 'ALL'



CHANNEL: **ALL**
PRE-HEAT: 000

3. Press down arrow then right arrow to '002'



```
CHANNEL: ALL
PRE-HEAT: 002
```

4. ENTER to save and quit

Loop test

By it, you can find the connected lamp more easily.

For example:

1. Press down arrow



```
7. PRE-HEAT
8. LOOP TEST
```

2. Press ENTER and then right arrow to set '51%'



```
TEXT VALUE: 51%
```

3. Press ENTER then right arrow to set '02'



```
CHANNEL 02
```

4. ENTER to save and quit

CUE

There are 20 cues in FLYGEKO. In this directory there are 3 functions available: 1. Edit cue; 2.Run cue; 3.Clear all cue. The fade time between cues could be set from 0.001 to 999.9s. The last letter 'E' means it is in Editing condition, 'V' means in viewing condition.

For example, to edit cue 01:

1. Press down arrow



```
8. LOOP TEST
9. CUE
```

2. Press ENTER



```
1. EDIT CUE
2. RUN CUE
```

3. Press ENTER



```
CUE: 01      LINK: XX
TIME: 010.0S  V
```

4. Press ENTER



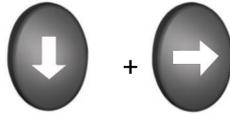
```
CUE: 01      LINK: XX
TIME 010.0S  E
```

5. Press right arrow to increase



CUE: 01 LINK: XX
TIME: 010.1S E

6. Press down arrow to 'LINK' to set the next cue you like to link



CUE: 01 LINK: XX
TIME: 010.1S E

7. Press ENTER twice to save and quit



RUN CUE

1. Press down arrow



1. EDIT CUE
2. RUN CUE

2. Press ENTER



CUE: 01
LINK: XX

CLEAR ALL CUES

1. Press down arrow



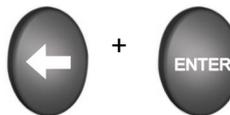
2. RUN CUE
3. CLEAR ALL CUE

2. Press ENTER



ARE YOU SURE?
YES NO

3. Press left arrow and ENTER



ARE YOU SURE?
YES NO

Panel key

Attribute control for the external panel keys.

There are 8 pre-set panel keys; their functions are defaulted to be closed.

Function attribute includes: **close, CUE, fade in; fade out, lock**

Close : to close the control function of external panel key

CUE : to control cue running by Panel key, with delay time from 0 to 99 seconds

Fade in : to control channel level fade in by panel key

Fade out : to control channel level fade out by panel key

Lock : to lock panel key, dimmer out of control of external panel. Hold the related panel key for 2 seconds to lock, hold it again to unlock.

For example 1, set the function of Panel key 1 to control CUE 2 delay 1 second :

1. Press MENU



1. Lighting
2. Patch

2. press down arrow , select Panel key



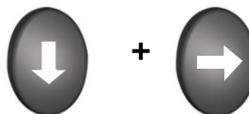
9. Cue
10. Panel key

3. Press ENTER



key: 01
function: close

4. Press down arrow, then press right arrow, edit close to CUE



key: 01
function: CUE

5 Press enter to select Cue, and then press right arrow edit CUE 1 to CUE 2



Cue: 02
delay: 00 S

6. Press down arrow, Move the cursor to delay position, then press right arrow edit to 01



cue: 02
delay: 01 S

6. Press enter to quit



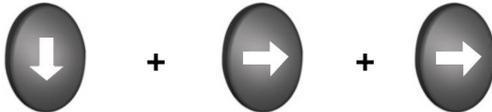
For example 2, set Panel key 2 control channel 2 lighting level fade in

1. Entre Panel key menu, press right arrow edit 1 to 2



key: 02
function: close

2. Press down arrow, then press right arrow twice, edit close to fade in



key: 02
function: fade in

3. Press enter to select channel, then press right arrow to edit channel 1 to channel 2



channel : 02

4. Press enter to save and quit



System Setup

In this directory, there are 10 functions:

- i. **Rack number**—name for the dimmer pack from 001 to 999
- ii. **Sys voltage**—display the current voltage of the three phases
- iii. **Sys frequency**—display the frequency of the system
- iv. **Signal break mode**—when there is no DMX signal, you can choose: 1.Keep the last value; 2.Run backup cues.
- v. **Over Load and neutral-lost**—you can set a safe range from 250V to 300V, or “OFF” alternatively.
- vi. **LED contrast**-You can set the LED contrast for display, range from 1 to 10
- vii. **Series number**—unique number to identify each fixture
- viii. **Language**-select the operation language of the dimmer
- ix. **Software edition**
- x. **Default**—go back to the factory default

If system administrator do not edit settings in 5 minutes, the system will automatically lock the keypad, in order to prevent others mis-settings or modify the setting. Hold the **ENTER** key for two seconds to unlock.

External panel wiring

FLYGEKO external panel connect port as below



GND: ground

5V : +5V power supply of external panel

UP : all lighting level up

DN : all lighting level down.

S8 : the 8th external panel key

S7 : the 7th external panel key.

S6 : the 6th external panel key.

S5 : the 5th external panel key

S4 : the 4th external panel key

S3 : the 3rd external panel key

S2 : the 2nd external panel key.

S1 : the 1st external panel key.

DMXB : DMX signal port B

DMXA : DMX signal port A.

+ : DMX signal anode port

- : DMX signal cathode port

G : DMX signal ground port

Connection Method:each end of external key connect with GND port,the other end connect with any port of (S1.....S8、 DN、 UP) ,see below:

