## LTECH

## Constant Voltage 4 Channel DMX/RDM Decoder

- Standard DMX/RDM interfaces; Set addresses via the digital display and buttons.
- RDM protocol; Browse parameters and change DMX addresses via a RDM master or via the mobile APP.
- DMX mode and customized mode can be switched.
- PWM frequency options: 300/600/1200/1500/1800/2400/3600/7200/10800/ 14400/18000Hz.
- 16 bit ( 65536 levels)/8bit ( 256 levels) gray scale optional.

- Two dimming mode options: standard and smooth dimming.
- Set $1 / 2 / 3 / 4$ DMX channel output.
- Provide 10 lighting effects, 8 speed levels of dynamic modes, and 255 brightness levels.
- Set screen timeout, LCD screen always on, and screen turning off after 30 s of inactivity.
- Short circuit, over-temperature, over-current protection and auto recovery.
- D4A has green terminal DMX interfaces, D4B has RJ45 DMX interfaces.

C FCC

## Product Parameters



## Product Size

Unit: mm


## Main Component Description



Digital display:


- Access Configuration: Long press the $M$ button for more than 2 s .
- Adjust Value: Short press $\wedge$ or $\vee$ button.
- Exit Menu: Long press $M$ button for $2 s$ again to save the setting, then exit the menu.
- Long press $\mathrm{M}, \wedge$ and $\vee$ button simultaneously for 2 s . When the screen displays RES, it has been reset to factory defaults.
- The display locks automatically after 15 seconds of inactivity.



## OLED Display Interface

DMX decoder mode


Long press $M$ and $V$ button simultaneously. When the screen displays " $L-1$ ", it enters the DMX decoder mode. Long press $M$ button for $2 s$ to enter the menu.

1. DMX address settings

2. Resolution

3. Dimming mode
4. PWM frequency

5. DMX channels



Press $\wedge$ or $\vee$ button to set the $D M X$ address.
DMX address range: 001~512

Short press M button to switch the menu to " $r$ ".
Press $\wedge$ or $\vee$ button to select resolution and the third value on the screen will display 1 or 2.
Options: r-1 (8bit)
$r-2$ (16bit)

Short press M button to switch the menu to " $F$ ".
Press $\wedge$ or $\vee$ button to select PWM frequency and the third value on the screen will display H or L.

| Options: $\mathrm{F}-4(1800 \mathrm{~Hz})$ | $\mathrm{F}-0(300 \mathrm{~Hz})$ | $\mathrm{F}-1(600 \mathrm{~Hz})$ | $\mathrm{F}-2(1200 \mathrm{~Hz})$ |
| ---: | :--- | :--- | :--- |
| $\mathrm{F}-3(1500 \mathrm{~Hz})$ | $\mathrm{F}-5(2400 \mathrm{~Hz})$ | $\mathrm{F}-6(3600 \mathrm{~Hz})$ | $\mathrm{F}-7(7200 \mathrm{~Hz})$ |
| $\mathrm{F}-8(10800 \mathrm{~Hz})$ | $\mathrm{F}-9(14400 \mathrm{~Hz})$ | $\mathrm{F}-\mathrm{A}(18000 \mathrm{~Hz})$ |  |

Short press M button to switch the menu to " $d$ ".
Press $\wedge$ or $\vee$ button to select the dimming mode and the third value on the screen will display 1 or 2 .
Options:
d-1 (Smooth dimming)
d-2 (Standard dimming)

Short press M button to switch the menu to " C ".
Press $\wedge$ or $\vee$ button to select the channels and the third value on the screen will display $1,2,3$ or 4 .
Options: C-4 (4 channel output occupies corresponding 4 DMX addresses)
C-1 (4 channel output occupies DMX address 1)
C-2 (1 and 3 channel output occupy DMX address 1, 2 and 4 channel output
occupy DMX address 2 )
C-3 (1 channel output occupies DMX address 1, 2 channel output occupies DMX address 2,3 and 4 channel output occupy DMX address 3)

Short press $M$ button to switch the menu to " $n$ ".
Press $\wedge$ or $\vee$ button to select screen timeout and the third value on the screen will
display 1 or 2.
Options: $\mathrm{n}-1$ (Screen stays on)
$\mathrm{n}-2$ (Screen turns off after 30 seconds of inactivity)

## Customized mode


3. Brightness


## Fault code



Long press $M$ and $V$ button simultaneously. When the screen displays " $L-2$ ", it enters the customized mode. Long press $M$ button for $2 s$ to enter the menu.

Short press $M$ button to switch the menu to " $E$ ".
Press $\wedge$ or $\vee$ button to select the lighting effect and the third value on the screen will display 1, 2, 3, 4, 5, 6, 7, 8, 9 or A.
Options:

| E-1 (No lighting effect) | E-6 (Purple) |
| :--- | :--- |
| E-2 (Red) | E-7 (Cyan) |
| E-3 (Green) | E-8 (White) |
| E-4 (Blue) | E-9 (7-color jumping) |
| E-5 (Yellow) | E-A (7-color gradient) |

Short press $M$ button to switch the menu to " S ".
Press $\wedge$ or $\vee$ button to select speed and the third value on the screen will
display 1, 2, 3, 4, 5, 6, 7 or 8 .
Default: S-5
Options: S-1/S-2..... S-7/S-8

Speed levels, speed increases one by one

Short press $M$ button to switch the menu to " $B$ ".
Press $\wedge$ or $\vee$ button to select the brightness level and the third value on the screen will display $1,2,3,4,5,6,7$ or 8 .
B00-BFF, 255 levels, default maximum level is 255
Options: B00 / B01.....BFF

Brightness levels, brightness increases one by one

Short press $M$ button to switch the menu to " $n$ ".
Press $\wedge$ or $\vee$ button to select screen timeout and the third value on the screen will
display 1 or 2.
Options: $\mathrm{n}-1$ (Screen stays on)
$\mathrm{n}-2$ (Screen turns off after 30 seconds of inactivity)

F-0: Over-temperature protection
F-1: Over-temperature warning
F-2: Short circuit/over-current protection

Address setting table

| Mode | C-1(Dimming) | C-2(CT/CT2) | C-3(RGB) | C-4(RGBW) |
| :---: | :---: | :---: | :---: | :---: |
| Channel 1 | 001 | 001 | 001 | 001 |
| Channel 2 | 001 | 002 | 002 | 002 |
| Channel 3 | 001 | 001 | 003 | 003 |
| Channel 4 | 001 | 002 | 003 | 004 |

## Load Parameters

At different PWM frequencies and different voltages, the max. load current and the total power of each channel vary. Before you do the wiring, please strictly follow the load parameters in the table below to operate.

| $\begin{aligned} & \begin{array}{l} \text { Max. current// Frequency } \\ \text { power } \end{array} \\ & \text { Voltage } \end{aligned}$ | $\begin{gathered} 300 \mathrm{~Hz} \\ (\mathrm{~F}=0) \end{gathered}$ | $\begin{aligned} & 600 \mathrm{~Hz} \\ & (\mathrm{~F}=1) \end{aligned}$ | $\begin{gathered} 1.2 \mathrm{kHz} \\ (\mathrm{~F}=2) \end{gathered}$ | $\begin{gathered} 1.5 \mathrm{kHz} \\ (\mathrm{~F}=3) \end{gathered}$ | $\begin{aligned} & 1.8 \mathrm{kHz} \\ & (\mathrm{~F}=4) \end{aligned}$ | $\begin{gathered} 2.4 \mathrm{kHz} \\ (\mathrm{~F}=5) \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 V | $\begin{aligned} & 6 \mathrm{~A} \times 4 \mathrm{CH} / 288 \mathrm{~W} \\ & 8 \mathrm{~A} \times 3 \mathrm{CH} / 288 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 6 \mathrm{~A} \times 4 \mathrm{CH} / 288 \mathrm{~W} \\ & 8 \mathrm{~A} \times 3 \mathrm{CH} / 288 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 6 \mathrm{~A} \times 4 \mathrm{CH} / 288 \mathrm{~W} \\ & 8 \mathrm{~A} \times 3 \mathrm{CH} / 288 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 6 \mathrm{~A} \times 4 \mathrm{CH} / 288 \mathrm{~W} \\ & 8 \mathrm{~A} \times 3 \mathrm{CH} / 288 \mathrm{~W} \\ & \hline \end{aligned}$ | $6 \mathrm{~A} \times 4 \mathrm{CH} / 288 \mathrm{~W}$ | $6 \mathrm{~A} \times 4 \mathrm{CH} / 288 \mathrm{~W}$ |
| 24 V | $\begin{aligned} & 6 \mathrm{~A} \times 4 \mathrm{CH} / 576 \mathrm{~W} \\ & 8 \mathrm{~A} \times 3 \mathrm{CH} / 576 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 6 \mathrm{~A} \times 4 \mathrm{CH} / 576 \mathrm{~W} \\ & 8 \mathrm{~A} \times 3 \mathrm{CH} / 576 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 6 \mathrm{~A} \times 4 \mathrm{CH} / 576 \mathrm{~W} \\ & 8 \mathrm{~A} \times 3 \mathrm{CH} / 576 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 6 \mathrm{~A} \times 4 \mathrm{CH} / 576 \mathrm{~W} \\ & 8 \mathrm{~A} \times 3 \mathrm{CH} / 576 \mathrm{~W} \end{aligned}$ | $6 \mathrm{~A} \times 4 \mathrm{CH} / 576 \mathrm{~W}$ | $6 \mathrm{~A} \times 4 \mathrm{CH} / 576 \mathrm{~W}$ |
| 36 V | $6 \mathrm{~A} \times 4 \mathrm{CH} / 864 \mathrm{~W}$ | $6 \mathrm{~A} \times 4 \mathrm{CH} / 864 \mathrm{~W}$ | $6 \mathrm{~A} \times 4 \mathrm{CH} / 864 \mathrm{~W}$ | $6 \mathrm{~A} \times 4 \mathrm{CH} / 864 \mathrm{~W}$ | $6 \mathrm{~A} \times 4 \mathrm{CH} / 864 \mathrm{~W}$ | $5 \mathrm{~A} \times 4 \mathrm{CH} / 720 \mathrm{~W}$ |
| 48 V | $6 \mathrm{~A} \times 4 \mathrm{CH} / 1152 \mathrm{~W}$ | $6 \mathrm{~A} \times 4 \mathrm{CH} / 1152 \mathrm{~W}$ | $6 \mathrm{~A} \times 4 \mathrm{CH} / 1152 \mathrm{~W}$ | $6 \mathrm{~A} \times 4 \mathrm{CH} / 1152 \mathrm{~W}$ | $6 \mathrm{~A} \times 4 \mathrm{CH} / 1152 \mathrm{~W}$ | $5 \mathrm{~A} \times 4 \mathrm{CH} / 960 \mathrm{~W}$ |


| Max. current/ Frequency <br> power | 3.6 kHz <br> $(\mathrm{F}=6)$ | 7.2 kHz <br> $(\mathrm{F}=7)$ | 10.8 kHz <br> $(\mathrm{F}=8)$ | 14.4 kHz <br> $(\mathrm{F}=9)$ | 18 kHz <br> $(\mathrm{F}=\mathrm{A})$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage | $6 \mathrm{~A} \times 4 \mathrm{CH} / 288 \mathrm{~W}$ | $4 \mathrm{~A} \times 4 \mathrm{CH} / 192 \mathrm{~W}$ | $3.5 \mathrm{~A} \times 4 \mathrm{CH} / 168 \mathrm{~W}$ | $3 \mathrm{~A} \times 4 \mathrm{CH} / 144 \mathrm{~W}$ | $2.5 \mathrm{~A} \times 4 \mathrm{CH} / 120 \mathrm{~W}$ |
| 12 V | $5 \mathrm{~A} \times 4 \mathrm{CH} / 480 \mathrm{~W}$ | $3.5 \mathrm{~A} \times 4 \mathrm{CH} / 336 \mathrm{~W}$ | $3 \mathrm{~A} \times 4 \mathrm{CH} / 288 \mathrm{~W}$ | $2.5 \mathrm{~A} \times 4 \mathrm{CH} / 240 \mathrm{~W}$ | $2.5 \mathrm{~A} \times 4 \mathrm{CH} / 240 \mathrm{~W}$ |
| 24 V | $4.5 \mathrm{~A} \times 4 \mathrm{CH} / 648 \mathrm{~W}$ | $3 \mathrm{~A} \times 4 \mathrm{CH} / 432 \mathrm{~W}$ | $2.5 \mathrm{~A} \times 4 \mathrm{CH} / 360 \mathrm{~W}$ | $2.5 \mathrm{~A} \times 4 \mathrm{CH} / 360 \mathrm{~W}$ | $2 \mathrm{~A} \times 4 \mathrm{CH} / 288 \mathrm{~W}$ |
| 36 V | $4 \mathrm{~A} \times 4 \mathrm{CH} / 768 \mathrm{~W}$ | $3 \mathrm{~A} \times 4 \mathrm{CH} / 576 \mathrm{~W}$ | $2.5 \mathrm{~A} \times 4 \mathrm{CH} / 480 \mathrm{~W}$ | $2.5 \mathrm{~A} \times 4 \mathrm{CH} / 480 \mathrm{~W}$ | $2 \mathrm{~A} \times 4 \mathrm{CH} / 384 \mathrm{~W}$ |
| 48 V |  |  |  |  |  |

## D4A Wiring Diagram



## D4B Wiring Diagram



* When more than 32 DMX decoders are connected, DMX signal amplifiers are needed and signal amplification should not be more than 5 times continuously. If you need to modify the parameter settings of connected DMX/RDM decoders that exceed 32 , you can add 1 RDM signal amplifier. Or you can add 1-5 DMX signal amplifiers after completing the parameter settings.
* If the recoil effect occurs because of long signal line or poor quality wires, please try to connect a $0.25 \mathrm{~W} 90-120 \mathrm{n}$ terminal resistor at the end of each line.


## Use with RDM Editor

D4A, D4B can work with the address editor that complies with standard RDM protocol.
It is recommended to use LTECH's RDM editor (model WiFi-RDM01), which can achieve more functions such as remote browsing and parameter setting. Wiring diagram as below:


## RDM editor App interface instruction

1.Download the App, setting the D4A, DAB parameters dimming range after well connecting the RDM editor, more details, please check the manual of WiFi-RDM01.

2. Well installation of products first, then working with WiFi -RDM01 to realize setting parameters and firmware upgrade by App.

a:Click"Add", edit the address in corresponding box. b: Click"ID", get more product details.
c: Click" ${ }^{2}$ ", ente edited interface. d: Click"No.", issue the recognizing command.


Supporting WiFi-RDM01 upgrade and DMX driver upgrade.

## Attentions

- This product must be installed and adjusted by a qualified professional.
- LTECH products are and not lightningproof non-waterproof (special models excepted). Please avoid the sun and rain. When installed outdoors, please ensure they are mounted in a water proof enclosure or in an area equipped with lightning protection devices.
- Good heat dissipation will extend the life the product. Please install the product in a environment with good ventilation.
- When you install this product, please avoid being near a large area of metal objects or stacking them to prevent signal interference.
- Please keep the product away from a intense magnetic field, a high pressure area or a place where lightning is easy to occur.
- Please check whether the working voltage used complies with the parameter requirements of the product.
- Before you power on the product, please make sure all the wiring is correct in case of incorrect connection that may cause a short circuit and damage the components, or trigger a accident.
- If a fault occurs, please do not attempt to fix the product by yourself. If you have any question, please contact the supplier.
* This manual is subject to changes without further notice. Product functions depend on the goods. Please feel free to contact our official distributors if you have any question.


## Warranty Agreement

Warranty periods from the date of delivery: 5 years.
Free repair or replacement services for quality problems are provided within warranty periods.
Warranty exclusions below:

- Beyond warranty periods.
- Any artificial damage caused by high voltage, overload, or improper operations.
- Products with severe physical damage.
- Damage caused by natural disasters and force majeure.
- Warranty labels and barcodes have been damaged.
- No any contract signed by LTECH.

1. Repair or replacement provided is the only remedy for customers. LTECH is not liable for any incidental or consequential damage unless it is within the law.
2. LTECH has the right to amend or adjust the terms of this warranty, and release in written form shall prevail.
