CX-1B

DMX TESTER

【User Manual】

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VER：1.0

1.   LAYOUT

1.1   MAIN FEATURES

- **LIGHT & HANDY, PORTABLE.**

- **AVAILABLE FOR TESTING SYNCHORNIZED SIGNAL DMX IN、DMX OUT。**

- **Built-in battery, it can work for several hours continuously. (Charge it 5 hours , it can work 3 hours or waiting 100 hours)**

- **LCD background lighting economizes on power to extend battery life.**

- **Sleeping device：Stop working in 5 minutes running, it will be in the mode of sleeping to extend battery life.**

1.2   TECHNICAL SPECIFICATIONS

- **Power Supply：DC 12V / 1A**

- **DMX INPUT：DMX512**

- **DMX OUTPUT CHANNELS：512 CHANNELS**

- **DMX SIGNAL CONNECTOR：XLR 5PIN（ ╳ 2）、PHONE JACK RJ11（ ╳ 2）**

- **OUTSIDE DIMENSIONS：100 (W) x 50 (H) x 133 (L) mm**

- **WEIGHT：750 g**

1.3   FACEPLATE MANUAL
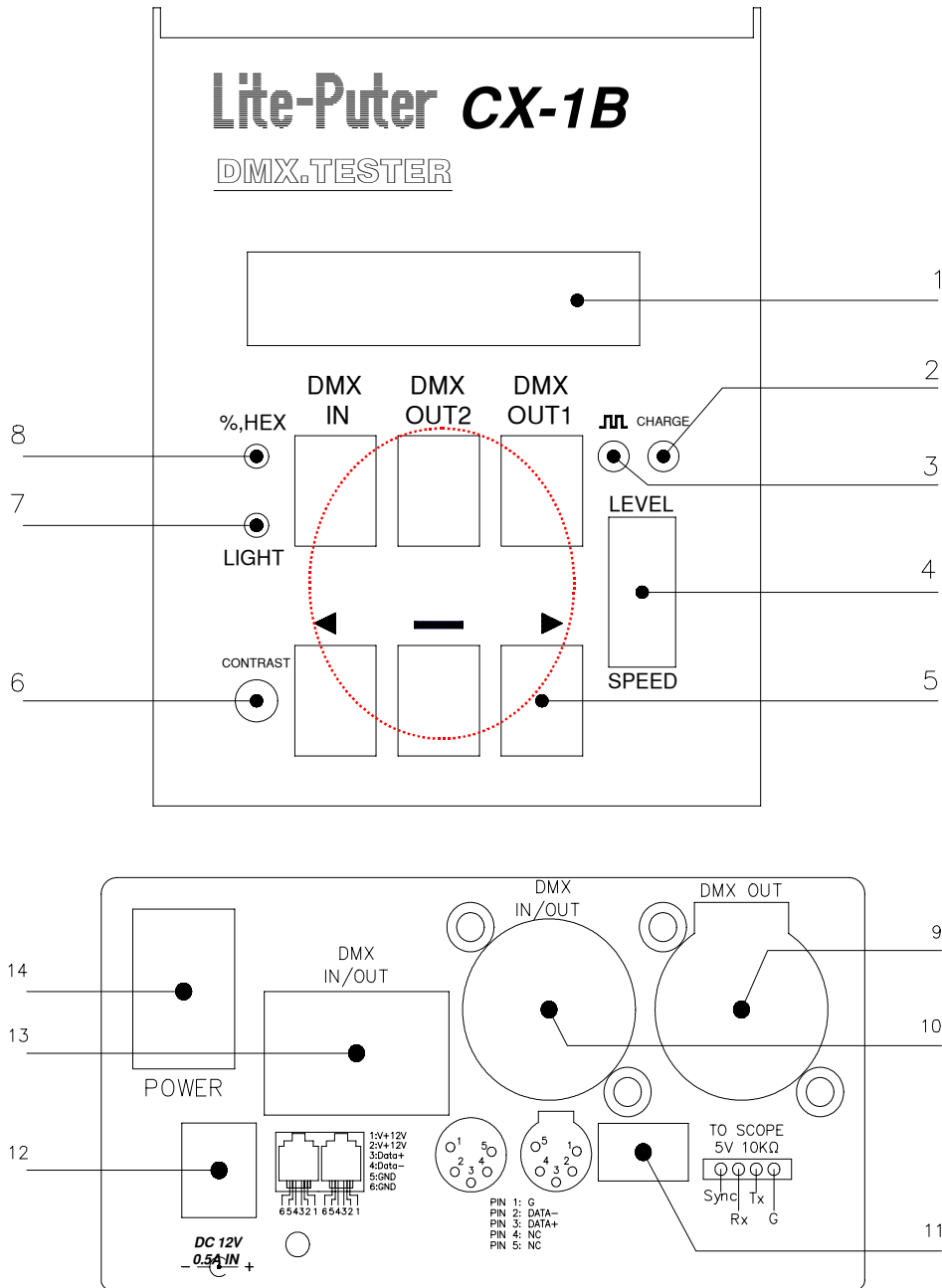
1	LCD display	8	Hexadecimal / percent alternate button
2	Baterry chrage indicator	9	DMX signal output：XLR 5 PIN
3	External power indicator	10	DMX signal input / output : XLR 5 PIN
4	Level revolving button	11	Synchronal signal output connector
5	FUNCTION OPTION	12	Power supply input DC 12V/1A
6	LCD display contrast button	13	DMX signal output：PHONE JACK RJ11
7	LCD background light turn-on button	14	Power switch

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1.4   DIMENSIONS

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2.   CX-1B OPERATING MANUAL

2.1   DMX OUT

1.Single channel、successive multi-channels DMX OUT set-up

STEP-1： Turn on Power to go to function DMX OUT .   Or you can press button
 DMX OUT 1 in other function mode to go to DMX OUT , LCD will display :

→ **DMX sending frequency**

→ **The said channel level**

→ **Current control dmx DMX channel**
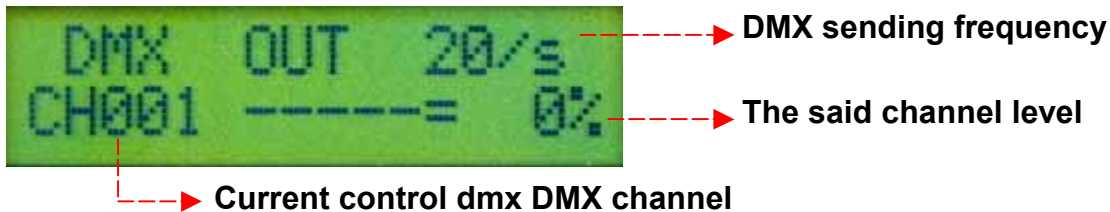
STEP-2： If you need to change the level of current channel , you can push the
revolving button to make adjustment .   (Up goes to level increase , down goes to level
decrease)

STEP-3 ： If you would like to change the channel , press button ◄ or ► ;   For
   example , you would like to change to CH002 , press button ► , LCD will display :

CH002 will output 10%

STEP-4 ： If you need to control successive multi-channels in the same time, you
choose initial channel you require then press button ─ , LCD display :

CH002、CH003 will output 10%

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STEP-5： At the same time you press button ◄ or ► , you can choose ending channel .You press button ► again , LCD display :

DMX OUT 20/s
CH002 -004-= 10%

CH002、CH003、CH004 will output 10% .

STEP-6： You can also press button ◄ to reduce ending channel , when you press button ◄ , LCD display :

DMX OUT 20/s
CH002 -003-= 10%

2. DMX OUT sending frequency set-up

2 kinds of sending frequency are available for CX-1B , they are 20/S、40/S respectively :
1、20/S is the DMX 512 signal sending 20 times of every second , it is for normal dimmer pack to test data receiving .
2、40/S is the DMX 512 signal sending 40 times of every second , it is for dimmer pack to test high speed data receiving .

DMX OUT 20/s   DMX OUT 40/s
CH001 -----= 0%   CH001 -----= 0%

DMX sending frequency is 20/S   **DMX sending fre- quency is 40/S**

STEP-1： In the mode of 20/S , press button DMX OUT 1 to go to function AUTO FADE
(refer to 2.2) , then press button DMX OUT 1 again to go back to the function of
DMX OUT , but at the same time you will find that LCD display :

DMX OUT 40/s
CH001 -----= 0%

DMX sending fre- quency is 40/S

STEP-2： In the same way , in the mode of 40/S , press continuously button DMX OUT 1 twiceto go to function of 20/S DMX OUT .

3. In the mode of DMX OUT , display of DMX IN

The picture below shows the positions of communication outlets :

In the mode of DMX OUT and AUTO FADE , the socket of DMX OUT continuously send out DMX 512 signal . The socket of DMX IN / OUT will also send out DMX OUT signal when no other DMX signal input , once it suspects DMX 512 signal of the socket coming from other controllers , it will be automatically defined as DMX IN to receive controller's signal .

STEP-1： In the mod of DMX OUT , DMX IN / OUT socket receives DMX signal , LCD displays :

The upper row of LCD displays receiving DMX signal from CH001~CH004 , the level is 69%、95%、40% , in the mean while LED on DMX IN is lighted , it means that now we have DMX IN signal input .

STEP-2：It is also available to test signal cable is working well or not . Insert the one side of the signal cable into DMX OUT socket of CX-1B , the other side is inserted into DMX IN / OUT socket of CX-1B , as picture below :

STEP-3： The LCD display as below , the lower row is DMX OUT signal , the upper row is DMX IN signal . If the signal cable is normal , the level of DMX OUT and DMX IN will be equal .

If no DMX signal is received , or the level of receiving is different from level of sending , it means that signal cable is abnormal .

2.2   AUTO FADE

1.   Signal channel、 successive multi-channels AUTO FADE set-up

STEP-1： In the mode of DMX OUT , press button DMX OUT 1 to go into function of AUTO FADE , LCD will displays :

→ **DMX sending frequency**

→ **The said channel current level**

→ **Current control DMX channel**

STEP-2： You'll find the current channel level (CH001) is flowing
(0% → FL → 0% ……) .

STEP-3： The speed of AUTO FADE can be changed by LEVEL adjustment . Push up to expedite AUTO FADE speed , push down to reduce AUTO FADE speed .

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STEP-4 ： If you wish to amend channel , press button ◀ or ▶ . While you press button ▶ , LCD displays :

```
AUTO FADE 20/s
CH002 ----> 20%
```

CH002 will proceed with AUTO FADE .

STEP-5 ： If you require successive multi-channels to proceed with AUTO FADE , you choose initial channel first then press button ── , LCD displays :

```
AUTO FADE 20/s
CH002 -003-> 20%
```

While AUTO FADE is operating as below :
   CH002 : 0% → 100% → 0% → CH003 : 0% → 100% → 0% → CH002 : 0% → 100% → 0% …………

STEP-6 ： Press button ◀ or ▶ , you can change ending channel . When you press button ▶ LCD displays :

```
AUTO FADE 20/s
CH002 -004-> 20%
```

When you press button   ▶ , the ending channels are increasing .

STEP-7 ： In the same way , while you press button ◀ to decrease ending channels . When you press button ◀ , LCD displays :

```
AUTO FADE 20/s
CH002 -003-> 20%
```

2. AUTO FADE sending frequency setup

※ AUTO FADE has 2 kinds of sending frequency , 20/S & 40/S .

```
AUTO FADE 20/s          AUTO FADE 40/s
CH001 ----> 00%         CH001 ----> 00%
```

DMX sending frequency 20/S   **DMX sending frequency 40/S**

※ Press continuously button ⬚DMX OUT 1⬚ , you can switch between (DMX OUT 20/S)、(AUTO FADE 20/S)、(DMX OUT 40/S) and (AUTO FADE 40/S) .
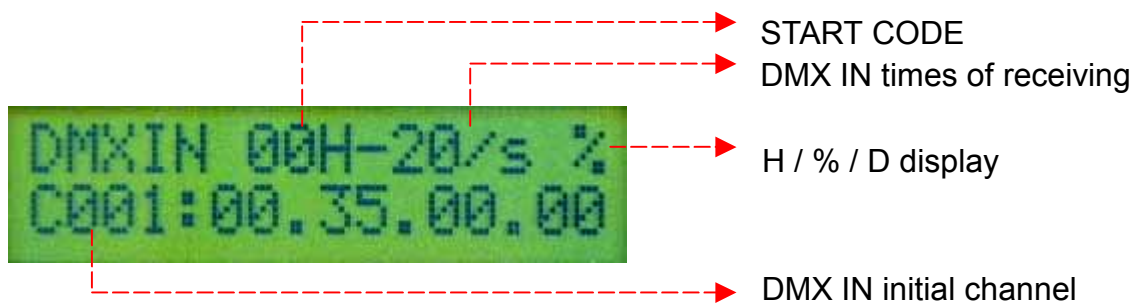
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3. DMX IN display in the mode of AUTO FADE

⬚STEP-1⬚： In the mode of AUTO FADE , when DMX IN / OUT socket receive other DMX signal , the way of LCD display is the same as in the mode of DMX OUT :

```
C001:69.00.00.00
CH001 ------= 69%
```

2.3   DMX IN

⬚STEP-1⬚： Press button ⬚DMX IN⬚ to go to the function DMX IN , LCD displays :

                                              ─ ─ ─ ─ ─ ─▶ START CODE
                                         ─ ─ ─ ─ ─ ─ ─▶ DMX IN times of receiving

```
DMXIN 00H-20/s %    ─ ─ ─▶  H / % / D display
C001:00.35.00.00
```
                                              ─ ─ ─ ─ ─▶ DMX IN initial channel

    START CODE : It is the DMX IN start code level which is received .
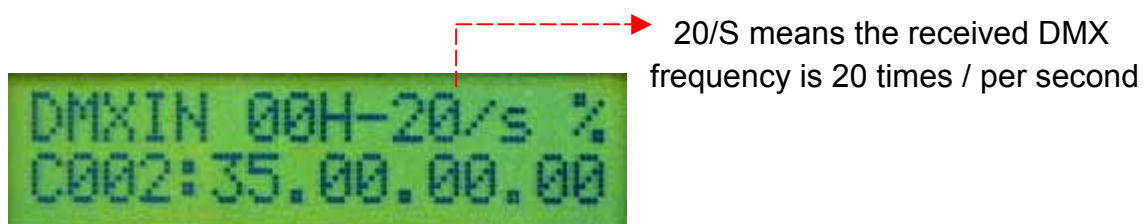   **DMX IN times of receiving :** It shows how many times DMX IN signal are received .
                  When the numbers of DMX IN receiving are higher than
                  99 , it will be switch to received DMX IN frequency .
    % / H / D : It shows the current unit is **Hexadecimal** or **Percent** or **Decimal** .
    C001 : It means that the current DMX IN initial channel .

※ While the channel receives DMX IN signal , LED of button ⬚DMX IN⬚ will be lighted .

⬚STEP-2⬚： If you would like to change the current initial channel , press button ◀ or When you press button ▶ , LCD display :

                                         ─ ─ ─ ─ ─▶ 20/S means the received DMX
                                                         frequency is 20 times / per second
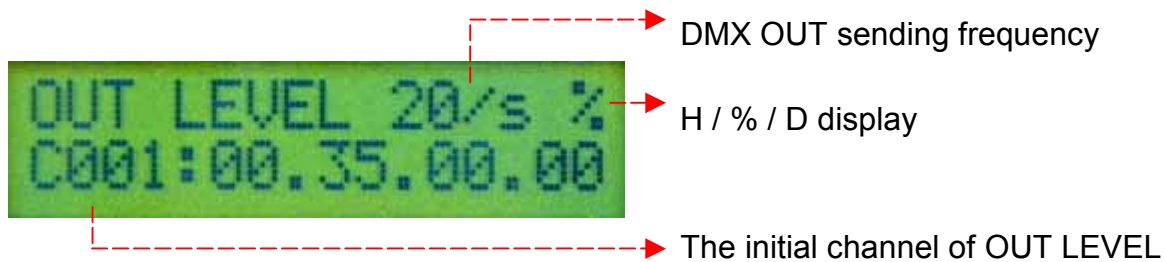
```
DMXIN 00H-20/s %
C002:35.00.00.00
```

_____

※ In the mode of DMX IN , CX-1B will remain previous status if you move the input
     DMX signal away , you can press button DMX IN again to clean the received DMX IN
     memories , LCD displays :

```
DMXIN 00H-00/s %
C002:00.00.00.00
```

2.4   OUT LEVEL SET

Basically OUT LEVEL SET and DMX OUT have the same function , they output a DMX
512 signal to control the dimming pack . The only one difference is that OUT LEVEL
SET can set different output level for individual channel from CH001 to CH512 , but
DMX OUT can only set the same output level for successive channels .

STEP-1： Press button DMX OUT 2 to go to function OUT LEVEL SET , LCD display :

```
OUT LEVEL 20/s %          ┄┄┄► DMX OUT sending frequency
C001:00.35.00.00          ───► H / % / D display

                          ───► The initial channel of OUT LEVEL
```
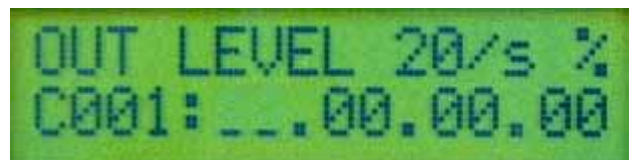
   20/S : DMX OUT sending frequency (this remains original DMX OUT frequency) .
   % / H / D: It shows the current unit is **Hexadecimal** or **Percent** or **Decimal**.
   C001 : It means the current initial channel of OUT LEVEL .

STEP-2： You will find 00 in the first place is shinning , it means the current controllable
channel .

```
OUT LEVEL 20/s %          OUT LEVEL 20/s %
C001:00.00.00.00          C001:__.00.00.00
```

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STEP-3： Push LEVEL revolving button to adjust output level .

For example , adjust LEVEL to be 37 , the DMX OUT signal of the first channel will output 37% .

STEP-4：Press button ◀ or ▶ to adjust controllable channel.　When you press button ▶ 3 times continuously , LCD displays :

You'll find that CH004 becomes the current controllable channel . To put LEVEL revolving button to change output level of the said channel .

STEP-5：To press button ▶ again , LCD displays :

CH005 becomes the current controllable channel (You'll find that initial channel of OUT LEVEL becomes C002)

STEP-6： You can clean the set levels of all channels the set-up by pressing and holding the button DMX OUT 2 2 seconds , after that LCD displays :

2.5　Hexadecimal、Percent、Decimal DISPLAY SETTING UP

STEP-1： In the mode of DMX OUT , it shows as percent , LCD displays :

STEP-2：Press button H / % to switch to Hexadecimal , LCD will display：

```
DMX  OUT  20/s
CH001 -----= 1AH
```

STEP-3：Then press button H / % to switch from Hexadecimal to Decimal , LCD will display：

```
DMX  OUT  20/s
CH001 -----=026D
```

※ **The way to set up the display of Decimal and Hexadecimal and Percent is the same in AUTO FADE、DMX IN and OUT LEVEL SET .**

## 2.6   LCD BACKGOUND LIGHTING

STEP-1：   Press button LIGHT to turn on the LCD background light .

STEP-2：CX-1B will automatically turn off background light after it does not work in 10 seconds in order to enlarge battery life.

2.7   MODE OF SLEEPING

STEP-1：   To enlarge battery life , CX-1B will get into the mode of sleeping after it does not work in 5 minutes , LCD displays :

```
SLEEPING
PUSH 'OUT' WAKE
```
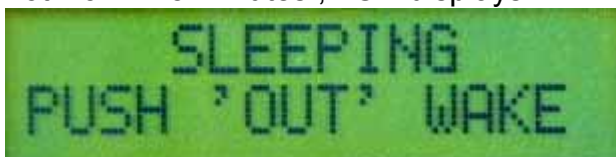
STEP-2：   Press button DMX OUT to wake up CX-1B , it will resume working.

STEP-3：   If you would like to turn off SLEEPING , to press and hold button LIGHT then turn on the power . The function sleeping will be switched off , LCD displays :

```
KEEP WAKE UP
LITE-PUTER CX-1B
```
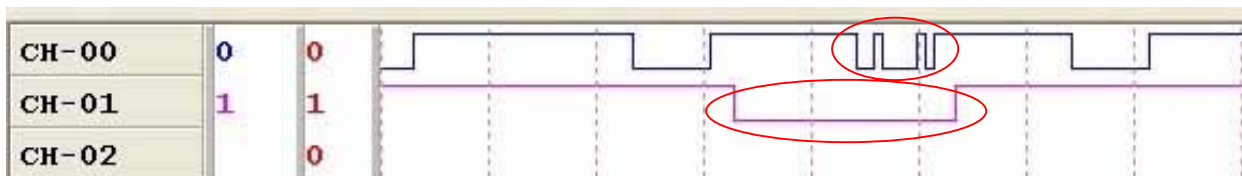
2.8   SYNCHRONAL SIGNAL OUTPUT

CX-1B can output DMX IN、DMX OUT synchronal signal to proceeding observation by Wave display .

Synchronal signal ← ... → GND
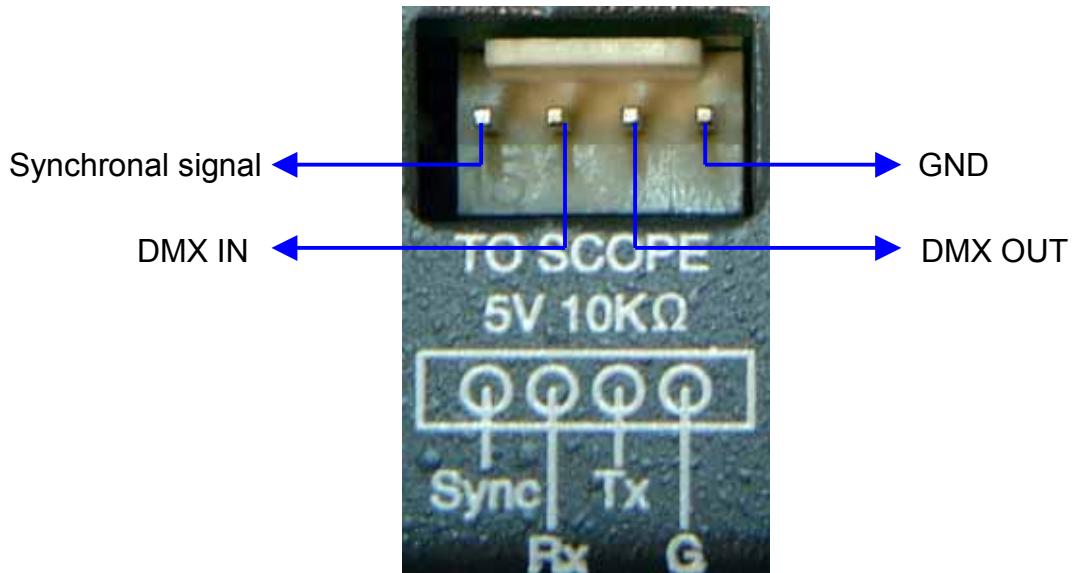
DMX IN ← ... → DMX OUT

STEP-1：When you would like to observe DMX OUT signal , you can use wave display to measure SYNC of TO SCOPE (synchronal signal measurement connector) and TX ground (please refer to picture below) .

STEP-2：For example , CX-1B sent signal CH001 = 42H DMX IN , you can use wave Display to measure from SYNC of TO SCOPE (synchronal signal connector) to TX ground , you can see the wave as below , CH-00 in red circle is the DMX wave of TX ground , CH-01 in red circle is the synchronal signal wave of SYNC .

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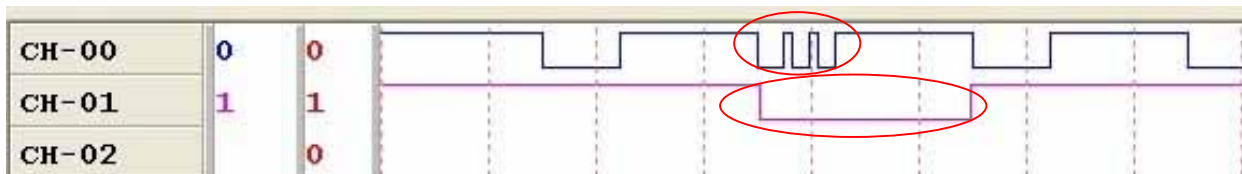
2.9   Low power indication

STEP-1： When the battery of CX-1B is in low power , the first line of LCD will switch between normal function and "BATTER LOW" , it displays in the mode of DMX OUT :

STEP-2： Then you can charge CX-1B , otherwise CX-1B will be in the mode of low power sleeping after 1 minute , LCD displays :

STEP-3： If you would like to operate CX-1B in low power , you can press button DMX OUT1 to wake it up to be back to work . CX-1B will be in the mode of low power sleeping after 1 minute .