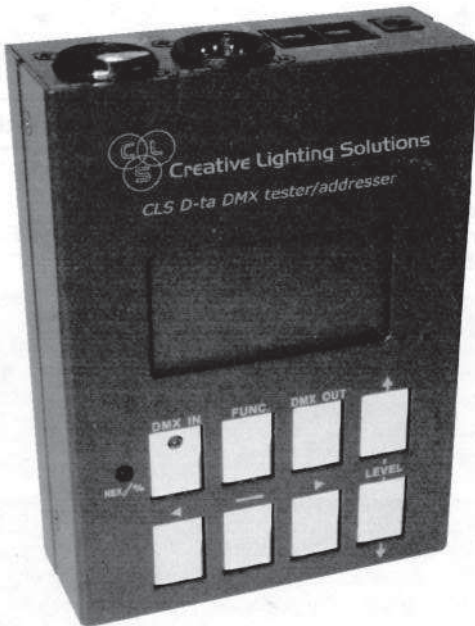


CLS D-ta DMX tester/addresser



Creative Lighting Solutions



CLS D-ta DMX tester/addresser

Version 1.0 December 2008



CLS D-ta DMX tester/addresser

INTRODUCTION

Thank you for selecting the CLS D-ta DMX tester/addresser. The CLS D-ta DMX tester/addresser has a synchronic DMX signal output for testing the DMX channels.

Included items

The CLS D-ta DMX tester/addresser is shipped in one package containing the following items:

- 1 x CLS D-ta DMX tester/addresser
- 1 x Power supply 12VDC
- 1 x DMX test module
- 1 x XLR connector XLR 5 to XLR 3
- 1 x XLR connector XLR 3 to XLR 5

NOTE: It is important to read this manual before you install this product.

SAFETY INFORMATION

Warning! This product is for professional use only, not for domestic use.

Read this manual before powering up or installing the CLS D-ta DMX Tester. Follow the instructions listed below and observe all warnings in this manual.

Protection from electric shock

- Disconnect the power supply from AC power before installing, dismantling or maintaining the unit.
- Make sure all connectors are connected properly.
- Use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault protection.
- Refer all service to a qualified technician.

Protection from burns and fire

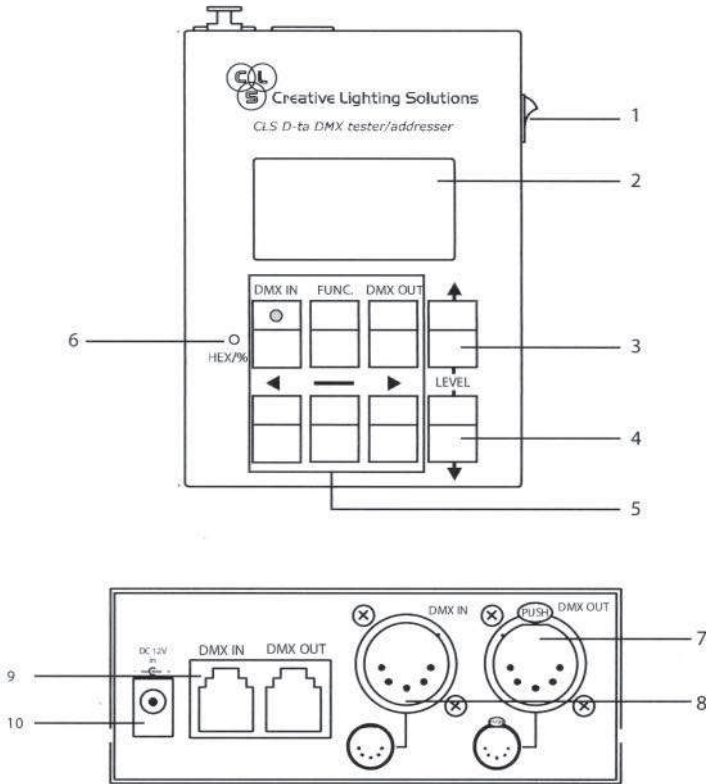
- Do not install the CLS D-ta DMX tester/addresser near a heat source.
- Do not install the CLS D-ta DMX tester/addresser in a corrosive, flammable or explosive area.
- Do not modify the CLS D-ta DMX tester/addresser, or install other than genuine parts.
- Do not operate the CLS D-ta DMX tester/addresser if the ambient temperature exceeds 40° C.

Protection from injury due to falls

- Verify that all covers and mounting hardware is securely fastened.
- Block the access around the work area whenever installing or removing the unit.

INSTRUCTION

This section shows how to operate the CLS D-ta DMX Tester.



- 1 Power Switch
- 2 LCD Display
- 3 LEVEL UP Key
- 4 LEVEL DOWN Key
- 5 Function Keys

- 6 Hex / Decimal / Percent Button
- 7 DMX Signal Output: XLR 5 PIN
- 8 DMX Signal Input: XLR 5 PIN
- 9 DMX Signal Input / Output
- 10 Power Supply Input.

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OPERATION

DMX out

STEP-1 Press DMX OUT, the LCD will display:

DmxOut 175us 20/s
C001-----= 00 ^H
no DMX in

STEP-2 Press [▶] and [◀] keys to select channel.

DmxOut 175us 20/s
C002-----= 00 ^H
no DMX in

STEP-3 To set a range of consecutive channels at the same level, use the [—] key. For example, to set channel 1 through 5, press [—] and the LCD will display:

DmxOut 175us 20/s
C001-002= 00 ^H
no DMX in

Press [▶] key until the LCD displays:

DmxOut 175us 20/s
C001-005= 00 ^H
no DMX in

Press [▶] and [◀] keys to set the DMX channel.

You can also hold [▶] and press [◀] key or hold [◀] and press [▶] to quickly increase or decrease the DMX channel.

DmxOut 175us 20/s
C001-005= 01 ^H
no DMX in

You can also hold [▲] and press [▼] key or hold [▼] and press [▲] to quickly increase or decrease the DMX level. C001 to C005 are output at 1BH.

```
DmxOut 175us 20/s (■■■)
C001-005= 1BH
-----
no DMX in
```

Hold [▲] and press [▼] key or hold [▲] and press [▼] key to quickly set the level at 0%, 50% and 100%.

STEP-5 The LCD readout in DMX level: Hex, Decimal or Percent. Press [HEX/%] button to select.

```
DmxOut 175us 20/s (■■■)
C001-005= 11%
-----
no DMX in
```

STEP-6 Three DMX send frequencies are available when generating DMX from the tester.

```
DmxOut 175us 20/s (■■■)
C001-005= 11%
-----
no DMX in
```

DMX send frequency 20/S

```
DmxOut 175us 40/s (■■■)
C001-005= 11%
-----
no DMX in
```

DMX send frequency 40/S

```
DmxOut 175us 44/s (■■■)
C001-005= 11%
-----
no DMX in
```

DMX send frequency 44/S

20/s DMX Send Frequency: 20 times per second. (20/s)

40/s DMX Send Frequency: 40 times per second. (40/s),

can be used to test devices at a faster rate should that rate be required for your application.

44/s DMX Send Frequency: 44 times per second. (44/s),

can be used to test devices at a faster rate should that rate be required for your application.

(For more information, please refer to 2-9 DOut protocol.)

STEP-7 When DMX OUT mode, if there is a DMX signal input, the LCD will display:

```
DmxOut 175us 20/s (■■■)
C001-005= 11%
-----
C001: 2F.00.00.00.00.
```

Above means the received DMX IN channel 1 is 2FH and channel 2-5 is 00H.

This function can be used to test the cable. Plug the male and female ends of the data cable into the DMX OUT and DMX IN ports individually, if the data was received is the same with the data was sent, it means the cable is in good condition. LCD readout for DMX IN is in Hex. It is irrelevant for FadeOut.

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Autofade

Setting Signal channel or a range of consecutive channels automatically fade.

STEP-1 In DMX OUT mode press [DMX OUT] to enter AutoFade function and the LCD will display:

```
FadeOut 175us 20/s [DMX OUT]
C001-----= 00%
-----
no DMX in
```

STEP-2 DMX level automatically ramping from 0 to 100% and back.

```
FadeOut 175us 20/s [DMX OUT]
C001-----= 10%
-----
no DMX in
```

STEP-3 Press [▲] and [▼] keys to set autofade speed.

STEP-4 Press [▶] and [◀] keys to select AutoFade channel.

```
FadeOut 175us 20/s [DMX OUT]
C002-----= 20%
-----
no DMX in
```

STEP-5 To AutoFade a range of successive channels, follow below:

Press [] key and the LCD will display:

```
FadeOut 175us 20/s [DMX OUT]
C002-003= 20%
-----
no DMX in
```

The operation for the AutoFade will be: C002: 0% --> 100% --> 0%
 C003: 0% --> 100% --> 0%
 C002: 0% --> 100% --> 0%.

STEP-6 Press **[▶]** and **[◀]** keys to select AutoFade end channel,
If pressing **[▶]**, the LCD will display as below:

```
FadeOut 1.75us 20/s [||||]
-----
C002-004= 20%
-----
no DMX in
```

You can also hold **[▶]** and press **[◀]** key or hold **[◀]** and press **[▶]** to quickly increase or decrease the DMX channel.

STEP-7 Press **[◀]** to decrease the AutoFade end channel. The LCD will display as below:

```
FadeOut 1.75us 20/s [||||]
-----
C002-003= 20%
-----
no DMX in
```

2. Setting AutoFade Send Frequency

Three AutoFade send frequency are available: 20/s, 40/s and 44/s.

```
FadeOut 1.75us 20/s [||||]
-----
C001-----= 10%
-----
no DMX in
```

DMX send frequency:20/s

```
FadeOut 1.75us 40/s [||||]
-----
C001-----= 00%
-----
no DMX in
```

DMX send frequency:40/s

```
FadeOut 1.75us 44/s [||||]
-----
C001-----= 00%
-----
no DMX in
```

DMX send frequency:44/s

(For more information, please refer to 2-9 DOut protocol.)

3. DMX IN in AUTO FADE Mode

STEP-1 In AUTO FADE mode, if there is a DMX signal input, LCD will display:

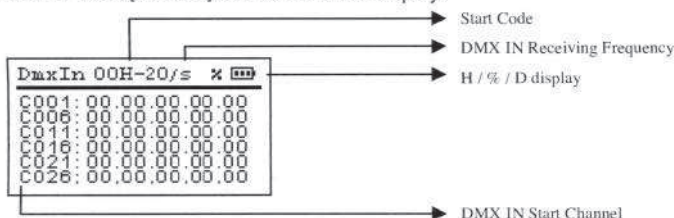
```
FadeOut 1.75us 20/s [||||]
-----
C002-004= 20%
-----
C001: 00.34.34.34.00.
```

Above means channel 2 to 4 for DMX IN are 34H (20%)
LCD readout for DMX IN is in Hex. It is irrelevant for FadeOut.

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DMX IN

STEP-1 Press [DMX IN] and the LCD will display:



Start Code: DMX IN start code level which is received.

DMX IN Receiving Frequency: It shows how many times DMX IN signal are received. When DMX IN signal is received over than 99 times, it will switch to Frequency. (How many times per second.)

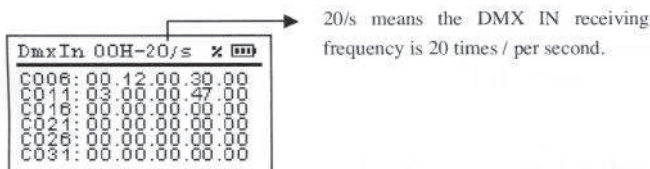
%/H/D: Percent/ Hexadecimal or Decimal.

C001: DMX IN start channel.

While receiving DMX IN data, the LED in the DMX IN button will be lighted.

STEP-2 Press [▶] and [◀] or [▲] and [▼] keys to select start channel.

Press [▼] and the LCD will display:



Clearing DMX IN levels

To clear DMX IN levels, first remove the DMX IN XLR then press [DMX IN] and the LCD will display

DmxIn	00H-00	%	[00]
C006:	00.00.00.00.00		
C011:	00.00.00.00.00		
C016:	00.00.00.00.00		
C021:	00.00.00.00.00		
C026:	00.00.00.00.00		
C031:	00.00.00.00.00		

Cable test mode

STEP-1 Press [FUNC] to enter Menu and the LCD will display:

Function	
▶ F1: Cable test	
F2: Code Mode	
F3: Backlight	
F4: Battery	
F5: Din Protocol	
F6: DOut Protocol	

STEP-2 Press [▲] and [▼] to select F1: Cable Test.

Function	
▶ F1: Cable test	
F2: Code Mode	
F3: Backlight	
F4: Battery	
F5: Din Protocol	
F6: DOut Protocol	

STEP-3 Press [FUNC] again to enter and the LCD will display:

Cable Test	
-out-	-in-
▶ 1:Gnd	1:Gnd
2:D-	2:D-
3:D+	3:D+
4:No	4:No
5:No	5:No

STEP-4 Plug the male and female ends of the data cable into the DMX OUT and DMX IN ports individually, the LCD will display:

Cable Test	
-out-	-in-
▶ 1:Gnd	✓ 1:Gnd
2:D-	2:D-
3:D+	3:D+
4:No	4:No
5:No	5:No

STEP-5 Press [▼] to test next cable and the LCD will display:

Cable Test	
-out-	-in-
1:Gnd	1:Gnd
▶ 2:D-	✓ 2:D-
3:D+	3:D+
4:No	4:No
5:No	5:No

Cable Test	
-out-	-in-
1:Gnd	1:Gnd
▶ 2:D-	2:D-
3:D+	3:D+
4:No	4:No
5:No	5:No

Cable Test	
-out-	-in-
1:Gnd	1:Gnd
▶ 2:D-	2:D-
3:D+	✓ 3:D+
4:No	4:No
5:No	5:No

the cable (D-) is connected.

the cable (D-) is disconnected.

the signal cable is abnormal.

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STEP-7 If the male and female ends of the data cable can not plug into the DMX OUT and DMX IN ports, you can use a test module, please use as below:

Plug the male end of the data cable into the DMX OUT ports and plug the female end of the data cable into the test module.

Cable Test	
-out-	-in-
▶ 1:Gnd	✓ 1:Gnd
2:D-	2:D-
3:D+	3:D+
4:Nc	4:Nc
5:Nc	5:Nc

STEP-8 Connecting with a test module and choose "1:GND", if the first LED on the left is lighted, it means the connection is correct. You can use the same way to test D+ and D-.

Code mode

STEP-1 Press [FUNC] to enter Menu and the LCD will display:

Function
▶ F1: Cable test
F2: Code Mode
F3: Backlight
F4: Battery
F5: DIn Protocol
F6: DOut Protocol

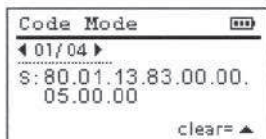
STEP-2 Press [▲] and [▼] to select F2: Code Mode.

Dmx Break Set
F1: Cable test
▶ F2: Code Mode
F3: Backlight
F4: Battery
F5: DIn Protocol
F6: DOut Protocol

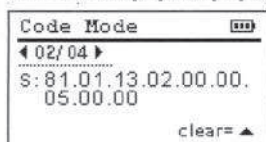
STEP-3 Press [FUNC] again to enter and the LCD will display:

Code Mode
◀ 01/00▶
S:
clear= ▲

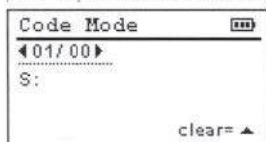
STEP-4 If connecting a fixture, press scene [1] key. Press scene [OFF] key and the CLS D-ta DMX Tester LCD will display:



STEP-5 Press [▶] and [◀] to choose a code.

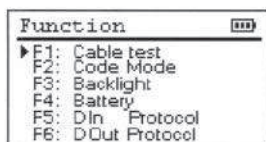


STEP-6 Press [▲] to clear and the LCD will display.

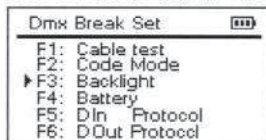


LCD backlight

STEP -1 Press [FUNC] to enter Menu and the LCD will display:

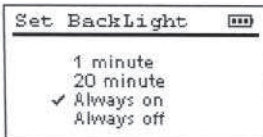


STEP-2 Press [▲] and [▼] to select F3: Backlight



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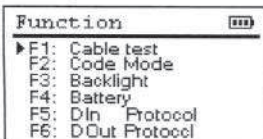
STEP-3 Press [FUNC] again to enter and the LCD will display:



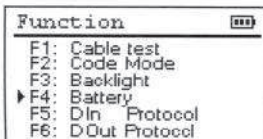
1 minute: If stopped using, backlight will automatically turn off after 1 minute.
 20 minute: If stopped using, backlight will automatically turn off after 20 minutes.
 Always on: Backlight always ON
 Always off: Backlight always OFF

Battery Display

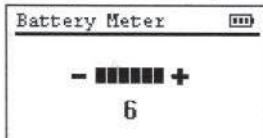
STEP-1 Press FUNC to enter Menu and the LCD will display:



STEP-2 Press [▲] and [▼] to select F4: Battery.

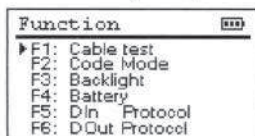


STEP-3 Press [FUNC] again to enter and the LCD will display:

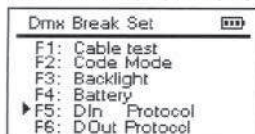


Dim control

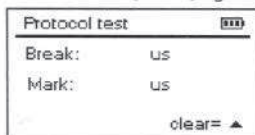
STEP-1 Press [FUNC] to enter Menu and the LCD will display:



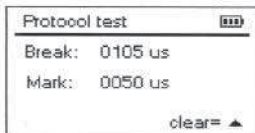
STEP-2 Press [▲] and [▼] to select F5: DIN Protocol.



STEP-3 Press [FUNC] again and the LCD will display:



STEP-4 When extending a DMX IN signal and the LCD will display:



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Dout control

STEP-1 Press [FUNC] to enter Menu and the LCD will display:

Function	---
▶ F1: Cable test	
F2: Code Mode	
F3: Backlight	
F4: Battery	
F5: DIn Protocol	
F6: DOut Protocol	

STEP-2 Press [▲] and [▼] to select F6: DOut Protocol.

Function	---
F1: Cable test	
F2: Code Mode	
F3: Backlight	
F4: Battery	
F5: DIn Protocol	
▶ F6: DOut Protocol	

STEP-3 Press [FUNC] again and the LCD will display:

Dmx Break Set	---
▶ Break:	Freq:
176us	20/s

STEP-4 Press [▲] and [▼] to adjust break time.

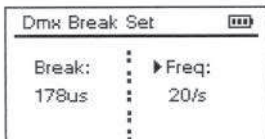
Dmx Break Set	---
▶ Break:	Freq:
178us	20/s

Press [▲] to increase Break time, up to 300Us, Press [▼] to decrease Break time, down to 60uS.

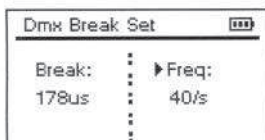
STEP-5 Press [▶] and [◀] and the LCD will display:

Dmx Break Set	---
Break:	▶ Freq:
178us	20/s

STEP-6 Press [▲] and [▼] keys to adjust DMX send frequency: 20/s, 40/s and 42/s.



DMX Send Frequencies: 20s



DMX Send Frequencies: 40s

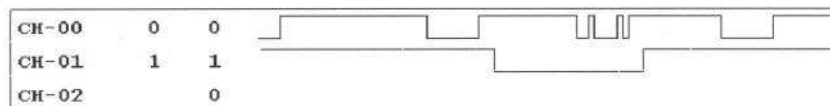
SYNCHRONAL SIGNAL OUTPUT

STEP-1 For further analysis of the DMX signal, the tester can be connected to a scope.

STEP-2 If the CLS D-ta DMX tester/addresser receives a CH001 = 42H DMX IN signal, you can measure from SYNC of TO SCOPE to RX ground, as the wave below:

CH-00 in circle is the DMX wave of RX ground.

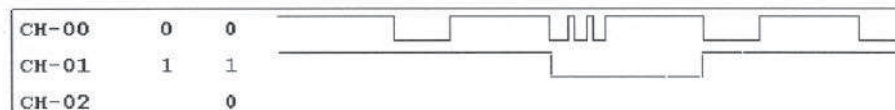
CH-01 in circle is the synchronal signal wave of SYNC.



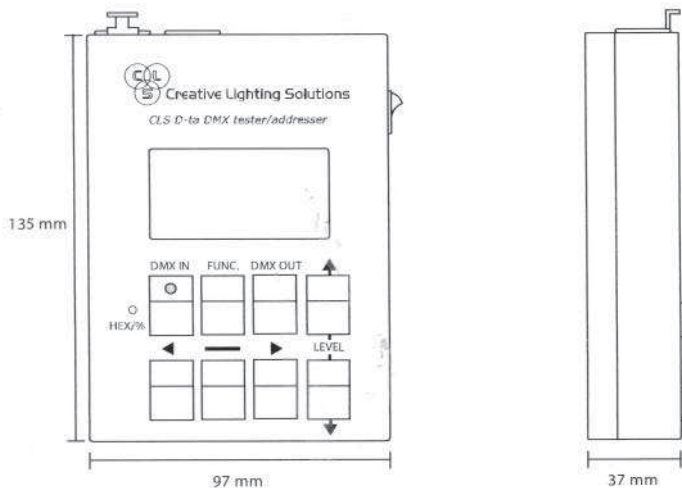
STEP-3 If the CLS D-ta DMX Tester sent a CH001 = 42H DMX IN signal, you can measure from SYNC of TO SCOPE to TX ground, as the wave below:

CH-00 in circle is the DMX wave of TX ground.

CH-01 in circle is the synchronal signal wave of SYNC.



MEASUREMENTS



TECHNICAL SPECIFICATIONS

Power supply:	12 VDC
Power consumption:	1A
Housing:	Aluminum
Weight:	0,75 Kg
Shipping Weight:	1,2 Kg
Measurements:	135 x 97 x 37 (hxwx d)
Shipping Dimensions:	80 x 240 x 170 mm (hxwx d)
DMX input:	DMX512
DMX output channels:	512 channels
DMX Signal connector:	XLR 5 pin (x2) Phone jack RJ11 (x2)
Ambient Temperature:	max. 40° C

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