

Goddard Design Company

Release Notes for *Lil'*DMXter V2.10 Software and Addendum for the V2.00 manual

March 13, 2003

This note lists the difference between Lil'DMXter software V2.00 and V2.10. It is also intended as a supplement to our operating manual V2.00. Manuals are normally issued for major revisions. Major revisions are normally considered ones where the number after the decimal point is changed, such as versions V1.5x, V1.6x, V1.7x

Version 2.10 is primarily a bug fix and internal change revision. No major functional changes have been made. However, certain terminology has been changed to reflect the current naming conventions commonly used to identify parameters of DMX512. These changes are embodied in the proposed revision of DMX512. After the revision DMX512 will be an American National Standard. Its formal name will be, ANSI E1.11, Entertainment Technology - USITT DMX512-A

The terminology changes that have been made all involve using the term 'slot' for what was often called a DMX 'dimmer'. In draft DMX512-A a slot is "a sequentially numbered framed byte in a DMX512 packet. A single Universe contains a maximum of 513 Slots, starting at slot 0. Slot 0 is the START Code. Slots 1 through 512 are data slots."

MENU	OLD TERM	NEW TERM
VIEW LEVELS? - SEND/EDIT SNAPSHOT? - ShowSaver Edit Scene -	DIM: 1 2 . . . LEV% 100 75 . . .	SLT: 1 2 . . . LEV% 100 75 . . .
EDIT USER FLAVORS?	INTERFRAME TIME	INTERSLOT TIME
VIEW PARAMETERS?	BYTES PER PACKET	SLOTS PER PACKET
CHANGE SEND FLAVOR?	24 DIMMERS 8uS MAB	24 SLOTS 8uS MAB
	70uS BK 4uS MAB 20D	70uS BK 4uS MAB 20S
EDIT USER FLAVOR?	NUMBER OF DIMMERS	NUMBER OF SLOTS
	INTERFRAME TIME	INTERSLOT TIME
RCVR SCOPE TRIGGER?	BYTE TRIGGER	SLOT TRIGGER
FLICKER FINDER?	xx DIMMERS W/ERRORS	xx SLOTS W/ERRORS
	DIM: x ERRS: xxx	SLT: x ERRS: xxx
MULTI CHANNEL CONFIGURE FIXTURES?	STARTING CHANNEL #	STARTING SLOT #
	LAMP ON DIMMER NUMBR	LAMP ON SLOT NUMBER
	MORE THAN 512 DMRS	MORE THAN 512 SLOTS

For ease of use the term 'Dimmer' is still kept for three routines. (We just figure everyone will still use the old names, so why fight it!) These routines are; **ADJUST ONE DIMMER**, **AUTOFADE ONE DIMMER** and **ADJUST ALL DIMMERS**. Technically we should change dimmer to slot.

New Feature

Version 2.10 does add a new feature. This feature allows the hardware to automatically disable the **POWER OFF TIMER**. It also allows for the display backlite to be switched to constant operation when this is needed.

Normally the backlite switches off after one minute with no key presses. This saves the battery and extends the life of

the backlite. The electro-luminescent lamp used is very efficient. However, it has a finite life. Over time the light output drops. Therefore, it is not a good idea to leave the backlite on continuously unless one needs this feature.

A new menu item has been added to the **SETUP USER OPTIONS** menu. See the attached new manual pages for details.

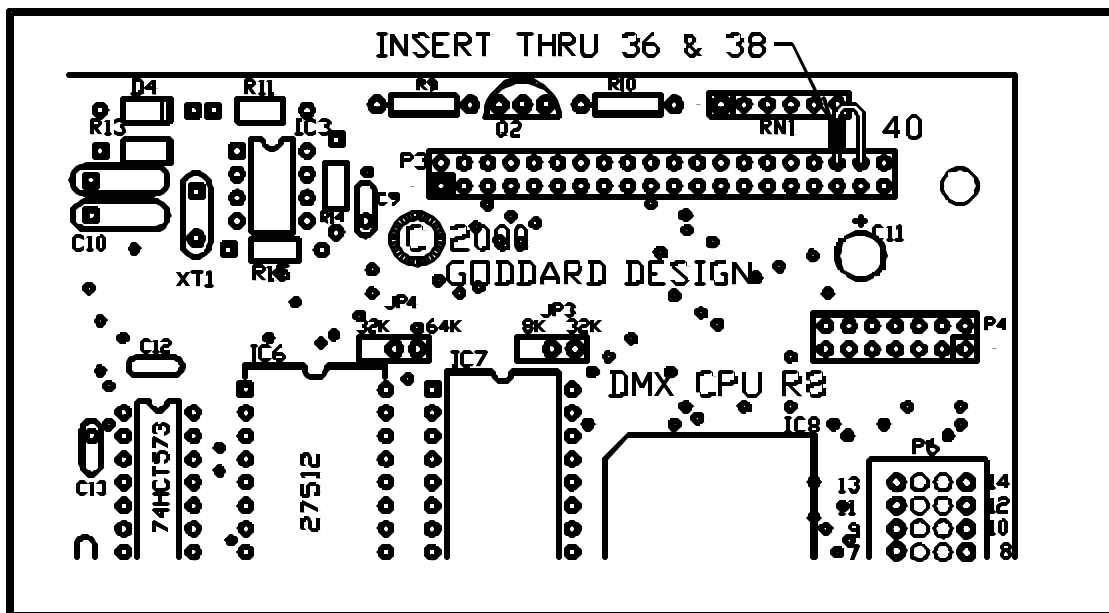
Bug fixes

Sometimes useful features get 'overlooked' when a version is updated. This happened when V1.73 was written. The feature that allowed a small external switch pendant to control current slot number in **ADJUST ONE DIMMER**, and **AUTOFADE ONE DIMMER** was disabled. This feature also allows the level to be remotely adjusted in **ADJUST ALL DIMMERS**. Details of the operation of this feature are found in section '13.10 BUILDING AN EXTERNAL SWITCH ADAPTOR' of the V1.70 manual. It is now fully operational again.

Swatted a bug that caused the VIEW LEVELS summary screen to report incorrectly how many slots were in a packet if that packet had either 255 or 511 slots. Also swatted one that caused **view captured levels in receive scope trigger** not to find slots higher than 199. Other internal tweaks have been done.

Hardware modification to activate AC sensing

This software will run on *Lil'DMXter* having one of three main boards. These are marked DMX CPU R6, R7 or R8. R6 should be able to run the software as is. R7 and R8 will require a simple modification. On these boards are pads for a dual in-line 40 pin header. It is unused. To activate AC sensing you must insert a resistor between pins 36 and 38 of this header. The preferred value is 2200 ohms. A resistor as high as 5600 ohms may be used. The drawing below should help in locating the required resistor.



New manual pages attached below

8.0 SETUP USER OPTIONS

The *Lil'DMXter* is intended to be versatile so we provide the opportunity for the user to set certain options that make life a little easier. These options affect more than one function or menu. The **AUTO POWER OFF TIMER** and the **DISPLAY BACKLITE** queries are only displayed the first time that <TOP> is pressed after the DMXter has been off (sleeping). So we have included both queries in the **SETUP USER OPTIONS** menu.

The entry point from the main menu is

```
FUNCTION SELECT MENU
SETUP USER OPTIONS?
```

8.1 POWER TIMER OPTION

If no keys have been pressed for 10 minutes, the **AUTO POWER OFF TIMER** (if enabled) turns the unit off. Depending on the current state of the timer you will see one of two displays.

```
| POWER TIMER DISABLED |           | POWER TIMER ENABLED |
|   DISABLE TIMER?   |           |   ENABLE TIMER?   |
```

Pressing <YES/Q> reverses the state of the timer and displays the appropriate message. Pressing <YES/Q> will not step you to the next menu entry; it just reverses the timer state. To step to the next menu item you will have to press <DOWN>. This will preserve the current state of the timer.

8.11 THE AUTO POWER OFF TIMER IS DISABLED BY AC MAINS (new V2.10)

Plugging the *Lil'DMXter* into the AC mains overrides the setting of POWER TIMER OPTION. When plugged in the AC mains your *Lil'DMXter* will continue to run until shut off. Plugging the unit into AC does not change the power off flag, it just prevents the unit from automatically powering down until the unit is unplugged.

Note: If this software is installed as an update to your *Lil'DMXter2* (model FD DMX-1B) you will need to do a simple hardware modification. See the software release notes.

8.2 BACK-LITE OFF OPTION

The next menu item is

```
| DO YOU WANT THE      |
|   Back-lite OFF?    |
```

Answer either <YES/Q> or <UP>/<DOWN> as you choose. Leaving this menu item by way of the <UP>/<DOWN> keys will turn the backlite on. The display will step to the next (or in the case of <UP> the previous) menu item.

8.25 DISABLING THE BACKLITE TIMER (new V2.10)

The next menu will be either of the following items.

```
| AC OFF                |           | AC ON - CHANGE TMR? |
| BCK LITE TIMER ON    |           | BCK LITE TIMER ON  |
```

If the *Lil'DMXter* is running on battery, you will see the first display. If it is plugged in the AC mains you will see the second display. When the unit is running on battery pressing <YES/Q> has no effect. If the DMXter is plugged into the AC mains pressing <YES/Q> will turn off the backlite timer and change the display to read:

```
| AC ON - CHANGE TMR? |
```

Pressing <YES/Q> again will return the timer to the 'on' state. When the electro-luminescent back lite is 'on' it will remain 'on' if the timer is 'off'. This can be useful when using the DMXter to do repeated measurements that do not require any keys pressed between measurements. This setting will persist until cleared either by this menu or by the operation of the DMXter from battery. Unplugging the DMXter while it is on turns the backlite timer 'on'. However, turning the DMXter 'off' does not turn 'on' the backlite timer.

Use this feature sparingly!

While this feature might be something that you would like to use frequently, we advise that you use it sparingly. The electro-luminescent panel that lights the display has a finite life. They don't burn out but they get dimmer and dimmer until . . . With the timer enabled the display turns off after one minute, so it is hard to have the display on for very long. Ten years later many *Lil'*DMXter's displays are just fine. However, if you have your *Lil'*DMXter on your test bench and leave it on as much as you leave your soldering iron on, disabling the backlite timer will cause you to have a dim backlite.

Note: If this software is installed as an update to your Lil' DMXter2 (model FD DMX-1B) you will need to do a simple hardware modification.

8.3 NUMBER FORMAT OPTION

The next menu item is the **NUMBER FORMAT OPTION**. Certain numbers may be displayed in any one of three formats: decimal (DEC), percent (%%), or hexadecimal (HEX). Dimmer levels may be displayed in all three formats. Decimal or hexadecimal notations are available for the start code and for the **FLICKER FINDER** compare limit. When the DMXter is set to percent mode the start code and the **FLICKER FINDER** compare limit will be displayed in decimal. Dimmer numbers and timing information are available in decimal notation only.

DISPLAY DATA IN
DEC <%%%= HEX

The current display format is the one pointed to by the filled arrows. To set the display format use <LEFT> or <RIGHT> keys to move the filled arrows so they point to the desired selection. The format will be set to whichever format is marked when you exit by pressing either <UP>, <DOWN> or <YES/Q>. The display format setting is stored in battery backup memory and is preserved when the unit is turned off. The default for this option is percent.

8.4 OPEN LINE DETECTOR OPTION

The next menu item is either:

OPEN LINE ENABLED OR OPEN LINE DISABLED
DISABLE DETECTOR? ENABLE DETECTOR?

The choice will depend on the current setting of this option. The unit is factory set to **OPEN LINE ENABLED**. Most users will want to leave this function enabled.

What is an Open Line Detector? The **OPEN LINE DETECTOR OPTION** is a proprietary Goddard Design Co. circuit to overcome a potential problem with the parent standard of DMX512, EIA485. In EIA485 it is possible to intermittently receive data from a cable that does not have connection of all of its pins. This can throw you off when trying to track down problems. Since the chance of passing data intermittently on a cable exists the *Lil'*DMXter incorporates the **OPEN LINE DETECTOR OPTION**. This circuitry flags seemingly good data when all the pins are not connected.

There are some manufacturers and suppliers in the theatrical lighting field that have DMX512 cables that deliberately do not have pin 1 connected at both ends. Following upon majority interpretation of the DMX512 Standard this is a practice that Goddard Design Co. does not endorse. If the *Lil'*DMXter is used on these cables the **OPEN LINE DETECTOR OPTION** will provide spurious 'bad cable' readings and so we provide the option to disable it.

The following functions use the **OPEN LINE DETECTOR OPTION**:

VIEW LEVELS - it is the feature we call 'BNW' for broken wire

VIEW PARAMETERS - error summary screen where it is also called 'BNW'

SINGLE ENDED CABLE TEST - the following message indicates that the error was caused by the open line detector

```
DATA ERRORS
PINS 2/3 MAYBE OPEN
```

DOUBLE ENDED CABLE TEST - it is inherent to this test and cannot be turned off. This test will not test cables where Pin 1 is not connected at both ends.

8.5 ENABLE EXTERNAL SWITCHES

In **ADJUST ONE DIMMER**, **AUTOFADE ONE DIMMER** and **ADJUST ALL DIMMERS** the software supports two user provided external switches. In **ADJUST ONE DIMMER**, and **AUTOFADE ONE DIMMER** the switches when present and enabled duplicate the unshifted functions of the **<RIGHT>** and **<LEFT>** keys. In **ADJUST ALL DIMMERS** the switches when present and enabled duplicate the unshifted functions of the **<UP>** and **<DOWN>** keys.

To use this feature you must reenable it every time you are going to enter the **TRANSMIT DMX512** menu. It is disabled any time the **<TOP>** key is pressed. So after enabling this function you must leave the **USER SETUP OPTIONS** menu by way of **TO FUNCTION MENU?** menu item, conveniently pressing **<YES/Q>** will step you to the **TO FUNCTION MENU?** item. The external switches will also be disabled whenever you leave the **TRANSMIT DMX512** menu.

8.6 COPYRIGHT NOTICE

Yes, we still have a copyright notice. It just doesn't scroll anymore.

The last menu item is

```
SETUP USER OPTIONS
TO FUNCTION MENU?
```

Pressing **<YES/Q>** takes you back to the function menu. Pressing **<UP>** takes you back to the previous item in the user options menu. Pressing **<DOWN>** takes you to the beginning of the user options menu.