DMXter4 RDM software release notes
September 14, 2009
Software V4.06

These notes are a supplement to V4.00 manual. They are in addition to changes made in version V4.05.

**General**
- The <OFF> key allows the user to back up one menu level Normally it leaves you at the entry point for the menu you were just in. However, the <OFF> does not jump out of the RDM menu.

- The <OFF> key only turns the unit off when it is in the Main Menu. The quick way to turn off the unit is <Top> then <OFF>.

- Improved Colortran support.

In most menus the combination of <UP><DN> will jump to the first item in that menu.

**DMX**
- The items to save and load show data for either ShowSaver or ShowPlayer have been moved from the SETUP menu, to the ShowSaver menu or the ShowPlayer menu.

- Other than the above, only minor changes were made to the DMX menus. Stay tuned. . . Changes that were made were of a cosmetic or internal nature.

**RDM**
RDM is where the work is centered and it also contains the newest code, so it get the most tweaking.

**New RDM controller features released in V4.06 include:**
- When selecting a current device, <DW> selects the next device while <YES/Q><DW> selects the first device of the next manufacturer. In the same manner <YES/Q><UP> selects the last device of the previous manufacturer.

- Basic sub-device support is added. However the sub-devices must support the DEVICE_INFO PID.

- Triggering preset recoding and playback is supported.

- RDM now uses one of 4 flavors: one is fixed and 3 are the DMX user favors . This allows very flexible timing control.

- In RDM USER OPTIONS there is now an option to "Retry lost/bad packets" . The user may set the number of retries from 0 to 4.

**Changes to the RDM controller:**

- The RDM termination network is disabled on reset and when exiting the RDM menu.

- The controller now verifies the Command Class and PID in RDM responses.

- The DMXter now allows the user to end discovery after bad Discovery Unique Branch response.
- The display during discovery is improved, showing the current bottom search boundary.

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■      The cached DEVICE_INFO data is updated if the Responder's Personality is changed.

■      The RDM controller will warn you if the responder is in "Boot Loader" mode during discovery.  This is important for a user to know, since a responder that needs a firmware update may not work properly until it gets new firmware.

**RDM ADVANCED**

●      A configurable Auto-Fade of Null START Code data may now be selected
.

●      When selecting a current device, we added a jump to Next/Prev manufacturer. CURRENT

●      A flag is now set in the packet history every time a new MIN or MAX timing value is recorded

●      The Packet History reports good and bad checksums on Discovery Unique Branch responses.

●      Discovery error reporting has been improved.

●      A 'Single Discovery Packet' item is added to the Discovery menu.

●      The DMXter no longer allows the RDM interleave to be set to zero.

●      We have improved the display of DUB packet statistics during send-repeatedly.

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These notes are a supplement to V4.00 manual

        8  SETUP OPTIONS
We have added the following to the Setup Options menu:
1) A sub menu that either stores or retrieves ShowSaver or ShowPlayer scenes in flash memory. Up to 8 complete sets of named cues or test data can be stored. They are stored and restored from a sub menu in SETUP OPTIONS menu.

```
│    LOAD AND STORE    │  │    LOAD AND STORE    │
│  SHOWPLAYER SHOWS?   │  │   SHOWSAVER SHOWS?   │
```

This submenu replaces a single item to erase ShowPlayer Scenes. (This item was not documented in the V4.00 manual.)

2) A sub menu that lets you choose to erase: the EEPROM;  the flash memory; or that shuts down the unit and reloads  RAM with default values.

15.1  Discover Devices -
We have made the following changes to the Discover menu:

1) Any key-press will interrupt and terminate discovery.

2) **LOAD RIG** - The DMXter can now store up to 8 named Table Of Devices. This item lets you load the TOD of your choice.

3) **STORE RIG** - This is the item that stores the TOD. Use the <DWN> key to scroll thru the stored TOD's. A used memory is named. Note that a blank line is a memory that someone didn't bother to name; empty memories are labeled  (EMPTY). Once the data is stored you will be able to label the memory using our new text editor. It described below.

4) **DELETE RIG** - I hope this one is fairly obvious.

5) A bug in Discovery that could cause an improperly functioning responder to crash the DMXter was found and fixed.

Advanced RDM adds or improves the following Discovery items:
6) **ADD UID MANUALLY?**
7) **REMOVE UID MANUALLY?**
The above had a problem that could cause a random number of devices to be deleted.

8) **DISCOVER WITH W/O UNMUTE?**

9) **MUTE DEVICE?**
Mutes the current device

10) **UNMUTE DEVICE?**

11) **UMUTE ALL**

15.3  Device Information

The following additional PIDs are supported by the Device Information Submenu:

Device Power State - Lamp State -  Lamp Mode -  Supported PIDs - Comms Status

A new menu item is SEND/EDIT DEVICE

```
|SLT   1/ 36  10@ 50%|
|Fan Speed           |
```

SEND/EDIT DEVICE  shows you the number of slots a device uses (here 36), the current slot viewed (here 1), the DMX address of that slot (here 10), the current level of that slot (here 50%) , and finally the slot description if supported (here - Fan Speed). The <UP> and <DOWN> keys may be used to raise or lower that slot value, using the standard shortcuts.  You may change the level display from percent, to decimal, to hex by the standard short cut. <LEFT> and <RIGHT> will move you thru all the slots of the device.

15.11.2 View Raw Captured Request Packet
15.11.3 View Raw Captured Response Packet
15.11.4 View Raw Previous Request Packet
15.11.5 View Raw  Previous Response  Packet
15.11.7 Build a Custom Request Packet (the last entry display)

All of the above are items that let you view a raw packet generated by either the DMXter4 controller or the DUT responder.  In V4.05 all of these items can switch from showing slot number to showing slot description as shown below.

```
|SLT:   1   2   3   4|   |    SUB STARTCODE   |
|RDM:  0h 28h 47h 44h|   |RDM:  0h 28h 47h 44h|

|SLT:   3   4   5   6|   |     DEST. UID5     |   |SLT:   3   4   5   6|
|RDM: 47h 44h 00h 40h|   |RDM:  'G' 'D''█' '@'|   |RDM:  'G' 'D''█' '@'|
```

Pressing <UP><DOWN> switches between a numeric top line and a description of the data in left most slot. Using the <RIGHT><UP> combination cycles you thru decimal, hex and **ASCII** data formats.

One other addition to RDM packet displays is that you can now view the Start code slot, a.k.a. slot zero. This display is a bit jarring for old DMXter users, but in this mode slot 0 falls between slot 512 and slot 1. See below.

```
|SLT:   0   1   2   3|
|RDM: CCh  0h 28h 47h|
```

15.11.7 Build a Custom Request Packet (Improved)

This routine helps you build any packet you choose. It guides you thru modifying labeled RDM fields. Then it will let you view and edit the raw data. The raw data may be viewed in decimal, hex or ASCII using  <RIGHT><UP>**.**

**Text String Editor**

The Text editor edits ASCII text for use by the DMXter. It allows entry by two different methods. Text may be entered from the DMXter front panel, or the text may be typed on your PC and entered via the USB port. Both methods are available at the same time.

For entry from the DMXter front panel the character set is upper and lower case letters, numbers, and the following list: (.) (,) ( **-** ) **(?)  (!)  (%)  (#)  (&)** .

From a PC any ASCII character can be entered; however, the backslash (\) prints as a Yen sign and the (~) does not display at all.

The following key combinations work from the DMXter's front panel:

<UP> Increments thru the alphabet from 0 - 9 -A - Z and then the punctuation.

<DOWN> Decrements thru the punctuation and then Z- A - 9 - 0.
<YES/Q><UP> Switches the character at the cursor from upper case to lower case or the reverse.
<YES/Q><DOWN> Switches the character at the cursor from upper case to lower case or the reverse.
<UP><DOWN> Erase the character under the cursor.
<LEFT> Cursor left.
<YES/Q><LEFT> Backspaces, erases one character, moving the characters to the right back one space.
<RIGHT> Cursor right.
<YES/Q> <RIGHT> Insert a blank at the cursor moving the rest of the line over.
<LEFT><RIGHT> Returns the cursor to the first position.
<RIGHT><UP> Clears at the cursor and to the end of the line.
<RIGHT><DOWN> Clears at the cursor and to the end of the line.
<YES/Q><DOWN>Held  Asks you if wish to clear the whole line.

Entry from the PC via the USB is a bit simpler. The old text is not printed on the PC.  When the editor is started, the PC prompts 'Enter a string:'.  Anything typed on the PC is viewed on the PC and is inserted on the DMXter display. While entering <backspace> and <Delete> will delete the last character and move both cursors (PC& DMXter) back one space. <Enter> terminates entry as if <Yes/Q> was pressed on the DMXter.

Menu Navigation - It's changed!

As of V4.05 if you are in a menu,  pressing <OFF+> moves you up one level in the menu tree.  The <OFF+> key only functions as on off key if you are in the Main Menu loop.

A menu item is either in the form of a question, ending with a question mark or as an entry item with a cursor controlled choice.

Items that are neither questions nor cursor controlled are generally the real test routines.  The routines are exited by pressing the <YES/Q> key. Some of these routines may now be aborted (exited without changing anything) by pressing the <OFF+> key.  At the present, this is not universal across all menus.  (We're working on it....)

RED Key works in I&M(!)

In Intercept & Modify the RED key functions as a second release key.  As of this writing, this is the only function of the RED key.  (But it proves that it works.....)

15.11.7 Build a Custom Request Packet
This routine lets you build a custom packet or modify a preprogramed one. The last request packet sent is loaded into the routine on entry. How you set and modify the packet has not changed greatly since v4.00. The Send Packet Repeatedly routine is considerably improved. The amount of data shown has increased and the UI is more flexible. The top line of each display counts the number of packets sent and whether the routine is sending or paused. Either the <LEFT> or <RIGHT> keys will cause the display to switch in and out of the paused mode.

```
|PKT: 1234 SENDING   |   |PKT: 1234 PAUSED    |
|COR:    0 TOUT:    0|   |COR:    0 TOUT:    0|
```
The first display shows how many CORrupt packets, and  how many Timed OUT  responses were seen.
<UP> and <DOWN> will cycle you through the following displays.

```
|PKT: 1234 SENDING   |
|NAK:    0 ACKT:    0|
```
The next display shows how many packets were  NAKed, and  how many packets were  ACK Timered.

```
|PKT: 1234 SENDING   |
|ACK:      ACKO:     |
```
This display shows the number of packets that were ACKed, and how many got an ACK OVERFLOW response.

```
|PKT: 1234 SENDING     |
|          Captured: 1235|
```
This display shows how may packets met the capture requirements.

You can pause the routine at any time and scroll up and down through the above displays.

```
|PKT: 1234 SENDING     |
|PDL Range  16 to  16|
```
What was the shortest and longest Parameter Data Length seen?

There are many minor changes to the UI that we hope are improvements. User comments appreciated.