LightSync DMX Driver Module Programming

The LightSync DMX Driver Module (shown in Figure 1) is designed to control DMX channels from the lighting control system. This is done using the dimming controls programming menu in the LightLEEDer controller. Each dimmer node address has 4 outputs or channels that will map the controls to the DMX channels. The dimmer may be used in conjunction with a photo sensor controller (or slider) for programmable daylight harvesting, or controlled using Timers, Inputs or LL Presets from the lighting controller. Outputs are programmed to respond to up to 16 control instances per channel. The device programmed using the lighting control panel's keypad or through the intuitive LightLEEDer Configuration software provided.

Note: The dimming resolution for this device is +/- 1% due to the conversion from 0-100% of the LightSync dimmer to the 8 bit/255 steps required for DMX.

The DMX Driver Module, 0-10V Dimming Modules, and Line Voltage Dimmers share a set of node addresses, so the addresses are unique to these modules. These devices can be installed together on one controller on the local data line.

The module can be configured using a dip switch on the module to map LightSync dimmer control channels 1 – 64 directly to 1 – 64 DMX channels. It can also be configured so the 64 LightSync dimmer control channels can be programmed to control any of the DMX channels (or multiple channels) using the ILC LightLEEDer DMX Output Map software.

Note: The LightSync dimming control channels start with the first device enabled. If the DMX Driver Module is set for 1 to 1 control, and addressed at a base node address of 1, the channels will be as shown as in Table 1. If the module is addressed at address 2, outputs will start at nn.02.01 – nn.02.04 for DMX channels 1 – 4 and so on beyond that.
The control channels programmed using the ILC LightLEEDer DMX Output Map software works in the same fashion.

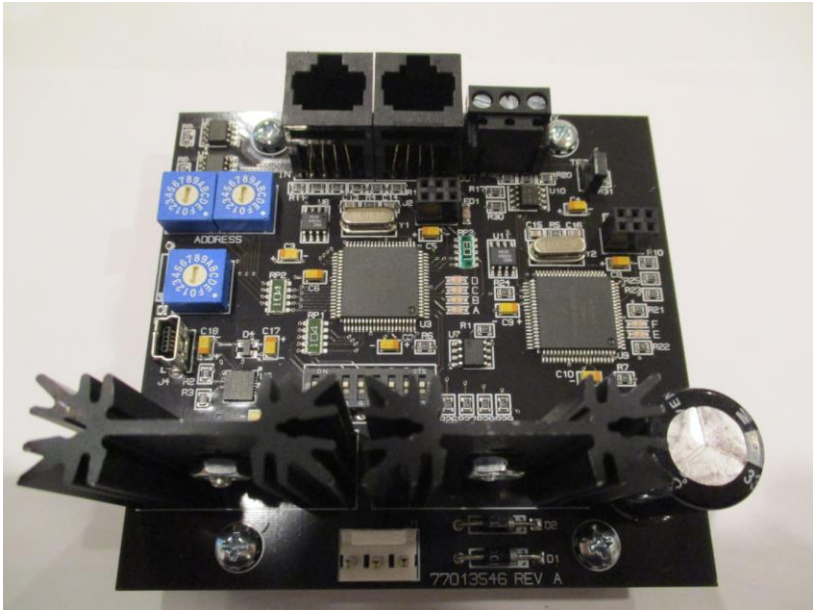

Figure 1 LightSync DMX Output Module

LightSync Dimmer Node	Output Address	DMX Output	DMX Channel
01	nn.01.01	Out 1	1
	nn.01.02	Out 2	2
	nn.01.03	Out 3	3
	nn.01.04	Out 4	4
02	nn.02.01	Out 5	5
	nn.02.02	Out 6	6
	nn.02.03	Out 7	7
	nn.02.04	Out 8	8
03	nn.03.01	Out 9	9
	nn.03.02	Out 10	10
	nn.03.03	Out 11	11
	nn.03.04	Out 12	12
04	nn.04.01	Out 13	13
	nn.04.02	Out 14	14
	nn.04.03	Out 15	15
	nn.04.04	Out 16	16
05	nn.05.01	Out 17	17
	nn.05.02	Out 18	18
	nn.05.03	Out 19	19
	nn.05.04	Out 20	20
06	nn.06.01	Out 21	21
	nn.06.02	Out 22	22
	nn.06.03	Out 23	23
	nn.06.04	Out 24	24
07	nn.07.01	Out 25	25
	nn.07.02	Out 26	26
	nn.07.03	Out 27	27
	nn.07.04	Out 28	28
08	nn.08.01	Out 29	29
	nn.08.02	Out 30	30
	nn.08.03	Out 31	31
	nn.08.04	Out 32	32
09	nn.09.01	Out 33	33
	nn.09.02	Out 34	34
	nn.09.03	Out 35	35
	nn.09.04	Out 36	36
0A	nn.0A.01	Out 37	37
	nn.0A.02	Out 38	38
	nn.0A.03	Out 39	39
	nn.0A.04	Out 40	40
0B	nn.0B.01	Out 41	41
	nn.0B.02	Out 42	42
	nn.0B.03	Out 43	43
	nn.0B.04	Out 44	44
0C	nn.0C.01	Out 45	45
	nn.0C.02	Out 46	46
	nn.0C.03	Out 47	47
	nn.0C.04	Out 48	48
0D	nn.0D.01	Out 49	49
	nn.0D.02	Out 50	50
	nn.0D.03	Out 51	51
	nn.0D.04	Out 52	52
0E	nn.0E.01	Out 53	53
	nn.0E.02	Out 54	54
	nn.0E.03	Out 55	55
	nn.0E.04	Out 56	56
0F	nn.0F.01	Out 57	57
	nn.0F.02	Out 58	58
	nn.0F.03	Out 59	59
	nn.0F.04	Out 60	60
10	nn.10.01	Out 61	61
	nn.10.02	Out 62	62
	nn.10.03	Out 63	63
	nn.10.04	Out 64	64

Table 1 Dimmer/DMX 1 to 1 Addressing and Control

Software Programming Procedure:

The ILC LightLEEDer DMX Output Map software is provided to create custom programming for the DMX channels in the module. Channels can be programmed to control one or all of the DMX channels. Once the software has been configured, it can be saved, and then downloaded directly into the module via a USB cable. The software has the capability to copy channel outputs to multiple DMX channels, the ability to sequence multiple DMX channels, or to clear multiple DMX channels. **Note: Dip switch 1 on the module is required to be in the ON position.**

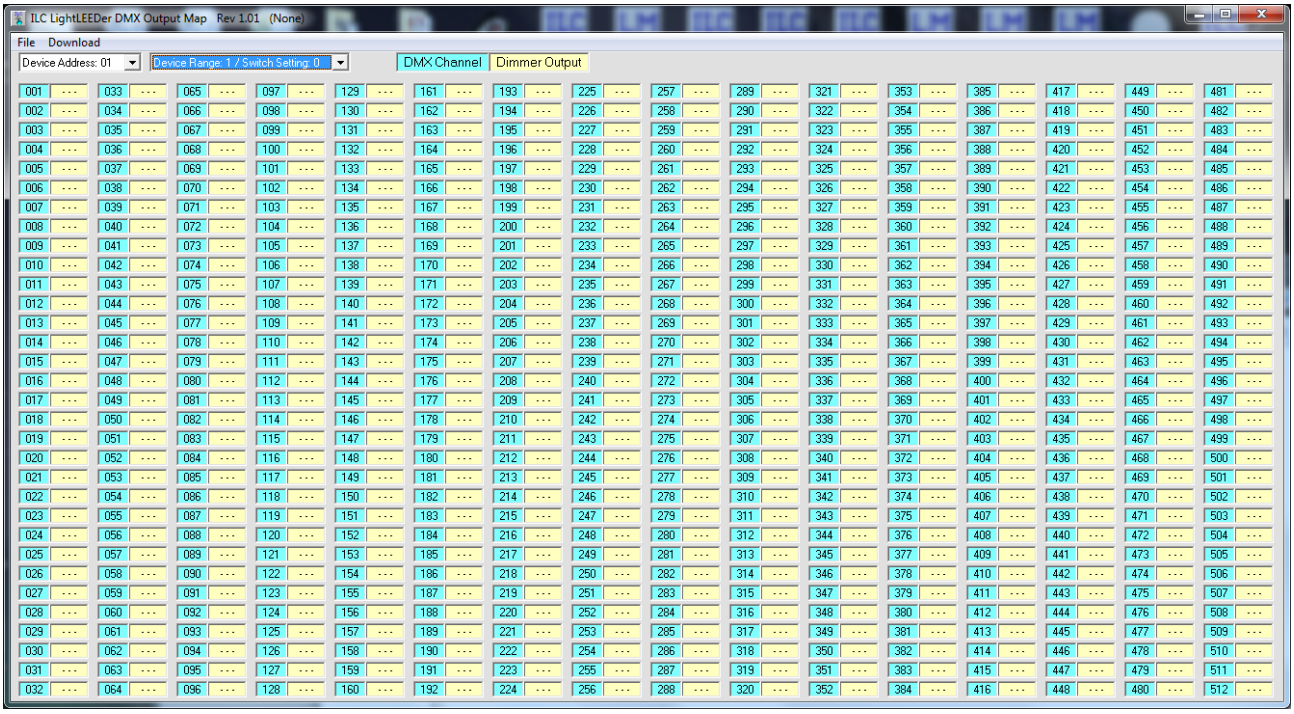

Figure 1 Opening Software Screen

Programming a DMX Channel to a Control Channel:

1. From the opening screen as shown in Figure 1, select the device address of the DMX Output module. This should match the address switches on the module.
2. From the pull-down menu, select the “Device Range”. This should match the “Range” switch on the module.
3. Select the DMX channel to be programmed, and then from the pull-down menu select the output control address desired. Do this for the desired DMX channels to be controlled.
4. Once all desired DMX channels are configured, from the menu bar select “File”, and then “Save As”. Enter a name for the file and the save.
5. Connect the PC to the DMX Output Module using the USB cable provided to J4 programming port on the module located directly below the Range switch.
6. From the opening screen of the software, select “Download”, select the communications port, and then click “Download” to send the program to the module as shown in Figure 2.

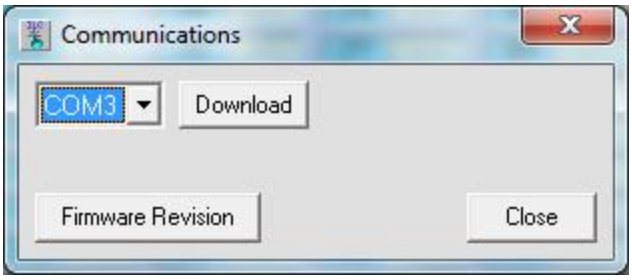

Figure 2 Download Screen

Copy, Sequence, or Clear Values:
This software has the ability to copy control output channels for consecutive DMX channels. It also has the ability to sequence output channels for consecutive DMX channels. Both of these options allow for clearing consecutive DMX channels of all output channels.

1. From the opening software screen select the DMX channel and set the control channel.
2. Right click on this cell. This will grey-out all of the DMX channels as shown in Figure 3.

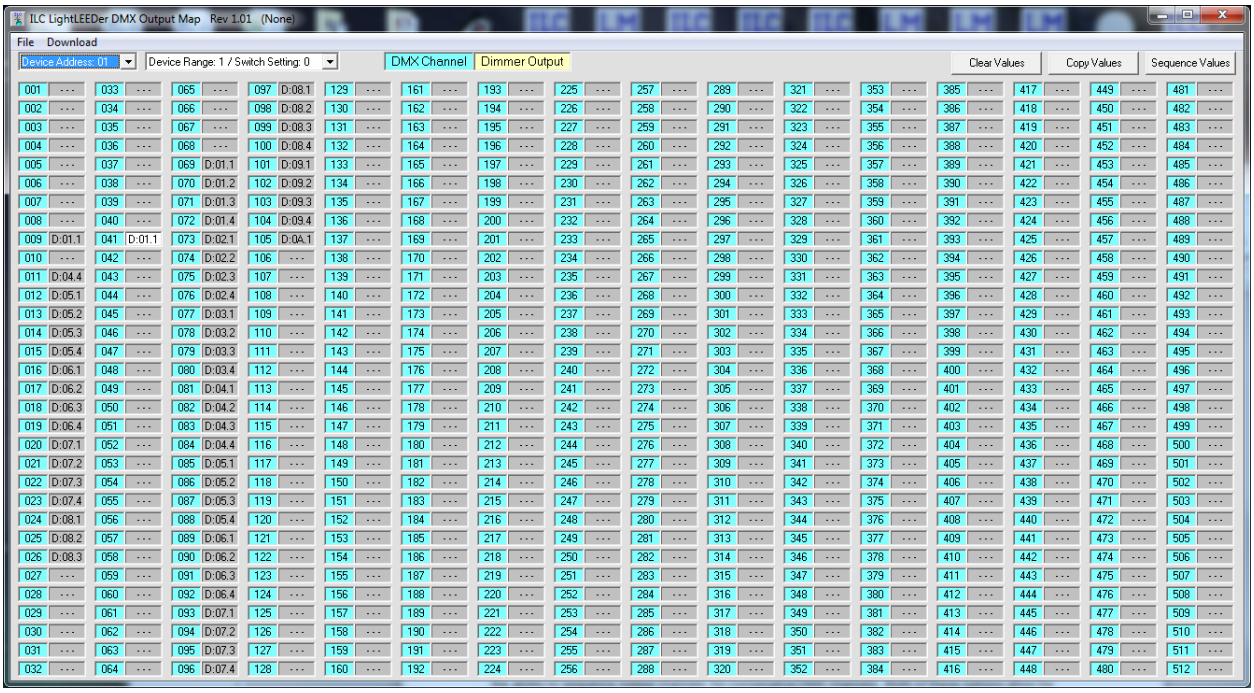

Figure 3 Copy, Sequence Screen

3. Next, hold Shift, and then right click the last DMX channel that you want to copy, sequence, or clear. This will activate the channels between the starting and ending channels and will turn them yellow to show their active for an action.
4. From the upper right side of this screen, select the action desired.

- **Copy Values:** This option copies all selected cells with the same channel output value as the first cell.

- **Sequence Values:** This option sequences all selected cells starting with the first cell down to the last cell.
- **Clear Values:** This option clears all channel outputs in the selected cells.

Keypad Programming Procedure For LightSync Dimmer Outputs

1. From the home screen as shown in figure 1, press ►EDIT **(Networked Panels connect through the Network Controller to the panel node)**
2. Press ▼until OTHER DEVICES appears
3. Press ►OTHER DEVICES
4. Press ►DIMMER OUTPUTS
5. Press ▼or ▲to select the dimmer address (set with the rotary switches on the hardware)
6. Press ►ACTIVE to enable the device (if not enabled) Communications should state COM OK.
7. Press ► OUTPUT, and then ▼or ▲ to select one of the 4 outputs.
8. Press ►CONFIGURE to access settings for:

Photocell Tracking: For setting the dimming to track lighting levels.
Press ►PC TRACKING, then TRACKING (Select 2 point, 3 point or set-point) Note: This overrides any other control points.

Fade Rate: The time it takes the dimmer to transition.
Press ► FADE RATE, and then ▼or ▲ to set time from 0 to 300 seconds. For relay control, press ► FADE/RELAY, select % ON/OFF levels, relay, and control.

Minimum and Maximum Output Levels: Output levels for each end of the scale.
Press ►MIN OUTPUT LEVEL or MAX OUTPUT LEVEL, select ► MODE, and then ▼or ▲ to set the fixed value from 0 to 100% for each option.

Power-On Levels: Dimming level at panel power up.
Press ▼until POWER-ON LEVEL appears
Press ►POWER-ON LEVEL and then ▼or ▲ to set power-on level for that channel.

Control Options: Allows up to 16 instances per channel to control the dimming.
Press ▼until CONTROL OPTIONS appears
Press ► CONTROL OPTIONS and then ▼or ▲ for an unused control.
PRESS ► TYPE to set a type of control (Timer, Input, or Preset) and then set a source and an action.

DMX Control: This option is used for receiving DMX and not for sending DMX.

Dimmer Status/Control: Status and control of each dimming output.
Press ▼until STATUS/CONTROL appears
Press ► STATUS/CONTROL, and then press ►RAISE or ►LOWER to control the channel.
Press HOME to exit

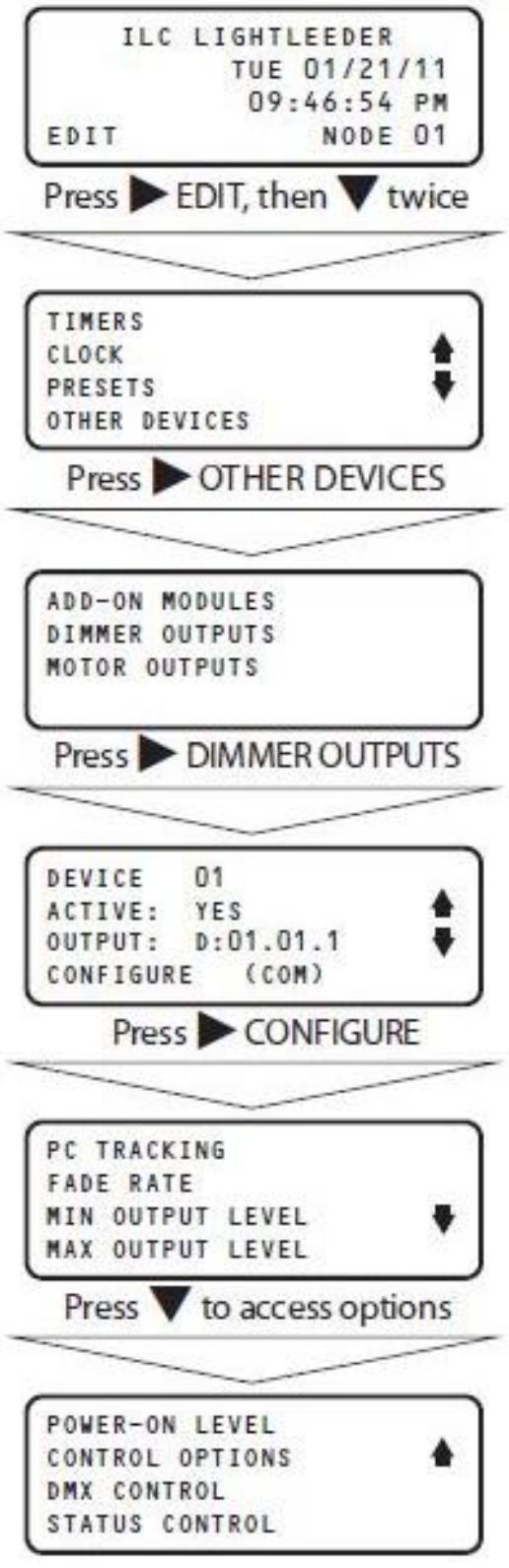

Figure 1 Programming Navigation