#### 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 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	LightSync Dimmer Node	Output Address	DMX Output	DMX Channel
01	nn.01.01	Out 1	1	09	nn.09.01	Out 33	33
	nn.01.02	Out 2	2		nn.09.02	Out 34	34
	nn.01.03	Out 3	3		nn.09.03	Out 35	35
	nn.01.04	Out 4	4		nn.09.04	Out 36	36
02	nn.02.01	Out 5	5	0A	nn.0A.01	Out 37	37
	nn.02.02	Out 6	6		nn.0A.02	Out 38	38
	nn.02.03	Out 7	7		nn.0A.03	Out 39	39
	nn.02.04	Out 8	8		nn.0A.04	Out 40	40
03	nn.03.01	Out 9	9	0B	nn.0B.01	Out 41	41
	nn.03.02	Out 10	10		nn.0B.02	Out 42	42
<u> </u>	nn.03.03	Out 11	11		nn.0B.03	Out 43	43
0	nn.03.04	Out 12	12		nn.0B.04	Out 44	44
04	nn.04.01	Out 13	13	00	nn.0C.01	Out 45	45
	nn.04.02	Out 14	14		nn.0C.02	Out 46	46
	nn.04.03	Out 15	15	-	nn.0C.03	Out 47	47
	nn.04.04	Out 16	16		nn.0C.04	Out 48	48
05	nn.05.01	Out 17	17	0D	nn.0D.01	Out 49	49
	nn.05.02	Out 18	18		nn.0D.02	Out 50	50
~	nn.05.03	Out 19	19		nn.0D.03	Out 51	51
	nn.05.04	Out 20	20		nn.0D.04	Out 52	52
06	nn.06.01	Out 21	21	OE	nn.0E.01	Out 53	53
	nn.06.02	Out 22	22		nn.0E.02	Out 54	54
	nn.06.03	Out 23	23		nn.0E.03	Out 55	55
	nn.06.04	Out 24	24		nn.0E.04	Out 56	56
07	nn.07.01	Out 25	25	OF	nn.0F.01	Out 57	57
	nn.07.02	Out 26	26		nn.0F.02	Out 58	58
	nn.07.03	Out 27	27		nn.0F.03	Out 59	59
	nn.07.04	Out 28	28		nn.0F.04	Out 60	60
08	nn.08.01	Out 29	29	10	nn. 10.01	Out 61	61
	nn.08.02	Out 30	30		nn. 10.02	Out 62	62
3	nn.08.03	Out 31	31	29	nn. 10.03	Out 63	63
8	nn.08.04	Out 32	32		nn. 10.04	Out 64	64

### 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.** 

		out Map Rev 1.0	01 (None)	R							LM	L M	LM		
File Download Device Address: 01 V Device Range 1 / Switch Setting 0 V DMX Channel Dimmer Output															
Device Addres	s: 01 💌 🔃	vice Range: 1 / S	witch Setting: U	<b>_</b>	DMX Channel	Dimmer Out	put								
001	033	065	097	129	161	193	225	257	289	321	353	385	417	449	481
002	034	066	098	130	162	194	226	258	290	322	354	386	418	450	482
003	035 ····	067	099	131	163	195	227	259	291	323	355 ····	387	419	451	483
004	036	068	100	132	164	196	228	260	292	324	356	388	420	452	484
005 ····	037	069	101	133	165	197	229	261	293	325 ····	357	389	421	453	485
006	038	070	102	134	166	198	230	262	294	326	358	390	422	454	486
007	039	071	103	135	167	199	231	263	295 ····	327	359	391	423	455	487
008	040	072	104	136	168	200	232	264	296	328	360	392	424	456	488
009	041	073	105 ····	137	169 ···	201	233	265 ····	297	329 ···	361	393 ···	425	457	489 ···
010	042	074	106	138	170	202	234	266 ····	298	330	362 ····	394 ····	426	458 ····	490
011	043	075 ····	107	139	171	203 ····	235 ····	267 ····	299 ····	331	363	395 ···	427	459 ···	491
012	044	076 ····	108	140	172	204	236	268 ····	300	332	364	396 ···	428	460	492 ···
013	045 ····	077	109	141	173	205 ····	237	269 ····	301 ···	333	365 ····	397	429	461 ····	493 ···
014	046	078	110	142	174	206	238	270	302	334	366	398	430	462	494
015	047	079	111	143	175	207	239	271	303	335 ····	367	399	431	463	495
016	048	080	112	144	176	208	240	272	304	336	368	400	432	464	496
017	049	081	113	145	177	209	241	273	305	337	369	401	433	465	497
018	050	082 ···	114	146	178	210	242	274	306	338	370	402	434	466	498
019	051	083	115	147	179	211	243	275	307	339	371	403	435	467	499
020	052 ····	084	116	148	180	212	244	276	308	340	372	404	436	468	500
021	053	085	117	149	181	213	245	277	309	341	373	405 ····	437	469	501
022 ····	054 ····	086	118	150	182	214	246	278	310	342	374	406	438	470	502
023 ····	055 ····	087	119	151	183	215	247	279	311	343	375	407	439	471	503
024 ····	056 ····	088	120	152	184	216	248	280	312	344	376	408	440	472	504
025 ····	057 ····	089	121	153	185	217	249	281	313	345	377	409	441	473	505
026 ····	058 ····	090	122	154	186	218	250 ···	282 ····	314	346	378	410	442	474	506
027	059 ····	091	123	155	187	219	251	283	315	347	379	411	443	475	507
028 ····	060 ····	092	124	156	188	220	252 ····	284	316	348	380	412	444	476	508
029 ····	061 ····	093	125	157	189	221	253	285 ····	317	349	381	413	445	477	509
030	062 ····	094	126	158	190	222 ···	254 ····	286	318	350	382	414	446	478	510
031 ····	063	095 ···	127	159	191	223	255 ····	287	319	351 ····	383	415	447	479	511
032 ····	064	096 ····	128	160	192	224	256	288 ····	320	352	384	416	448	480	512

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.

Communications	<u> </u>
COM3  Download	
Firmware Revision	Close

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.

📱 ILC LightLEEDer DMX O	tput Map Rev 1.0	01 (None)			a 🛛					LH	R.			
File Download														
Device Address: 01 💌	evice Range: 1 / Sv	witch Setting: 0	•	DMX Channel	Dimmer Out	put					Clear Va	lues Cop	y Values	Sequence Values
												417		
001 ··· 033 ···		097 D:08.1	129	161	193 ···	225 ···	257 ···	289 ···	321 ···	353	385 ···		449	
		098 D:08.2	130	162	194	226	258	290	322	1	386	418	450	
003 ··· 035 ···		099 D:08.3	131	163	195 ····	227	259 ···	291	323	355 ···	387	419	451	
004 ··· 036 ···	,	100 D:08.4	132	164 ···	196 ···	228 ····	260 ···	292 ···	324 ···	356 ···	388 ···	420	452	
		101 D:09.1	133	165 ···	197		261	293	325 ···	357	389	421	453	
006 038	the second se	102 D:09.2	134	166 ····	198	230	262	294	326	358	390	422	454	
007 ··· 039 ···		103 D:09.3	135 ···	167	199 ···	231 ···	263 ···	295 ···	327	359 ···	391 ···	423	455	
008 040		104 D:09.4	136	168 ···	200 ···	232 ···	264	296 ···	328 ···	360	392 ···	424	456	
009 D:01.1 041 D:01		105 D:0A.1	137	169	201	233	265	297	329	361	393	425	457	
010 042		106	138	170	202	234	266	298 ····	330	362 ····	394 ····	426	458	
011 D:04.4 043 ···	1	107	139	171	203 ···	235 ···	267	299 ····	331 ···	363	395 ···	427	459	
012 D:05.1 044 ···	, or o he rearry	108	140	172	204 ····	236 ····	268 ····	300 ····	332	364	396 ····	428	460	1.00
013 D:05.2 045 ···	,	109	141	173	205 ···	237	269 ····	301 ···	333 ····	365 ····	397	429	461	,
014 D:05.3 046		110	142	174 ···	206 ···	238 ···	270	302 ···	334 ···	366 ···	398 ···	430 ···	462	
015 D:05.4 047 ···	June (monetaria	111	143	175 ···	207	239 ····	271	303	335 ····	367	399 ···	431	463	,
016 D:06.1 048 ···		112	144	176 ···	208 ····	240 ····	272	304 ···	336 ····	368 ····	400	432	464	
017 D:06.2 049 ···	1	113	145 ···	177	209 ···	241	273 ···	305 ····	337 · · ·	369 ···	401 ···	433 ···	465	
018 D:06.3 050 ···	, see person	114	146	178 ···	210	242 ···	274	306 ···	338 ····	370 ···	402	434	466 ···	
019 D:06.4 051 ···	,	115	147	179	211	243	275	307 ····	339 ···	371	403	435 ····	467	
020 D:07.1 052 ···	,	116	148 ····	180 · · ·	212 ···	244	276 ···	308 ····	340 ···	372 ···	404 ···	436 ···	468 ···	,
021 D:07.2 053 ···	)	117	149 ···	181	213	245 ····	277	309 ····	341 ···	373 ···	405 ····	437	469	
022 D:07.3 054 ···	,	118	150	182	214	246 ····	278	310	342	374	406 ····	438 ····	470	
023 D:07.4 055 ···	,	119	151	183 ···	215 ···	247 ···	279	311 ···	343 ···	375 ···	407	439 ···	471	,
024 D:08.1 056 ···	)	120	152	184 ···	216 ···	248 ···	280 ···	312 ···	344	376 ···	408	440	472	
025 D:08.2 057 ···	1 and 1 and 1	121	153	185 ····	217	249 ···	281 ····	313 ···	345 ····	377	409 ····	441 ····	473	,
026 D:08.3 058 ···	,	122 ···	154	186 ····	218 ····	250 ····	282 ····	314	346 ····	378 ····	410 ···	442 ····	474	,
027 ··· 059 ···		123 ···	155 ····	187	219 ···	251 ···	283 ····	315 ····	347	379 ···	411	443	475	
028 ··· 060 ···	1 and 1 and 1	124	156	188 ····	220	252 ····	284 ····	316	348	380 ····	412	444	476	
029 ··· 061 ···		125 ····	157	189 ····	221	253 ····	285 ····	317	349 ····	381 ····	413 ···	445 ····	477	
030 ··· 062 ···	1	126 ····	158	190 ···	222 ····	254 ····	286 ····	318 ···	350 ····	382 ····	414	446	478	
031 ··· 063 ···		127	159	191	223 ····	255 ····	287 ····	319	351 ···	383 ····	415 ····	447	479	
032 ··· 064 ···	096 D:07.4	128	160	192 ···	224	256 ····	288	320	352 ····	384	416	448	480	512

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  $\blacktriangleright$  OUTPUT, and then  $\forall$  or  $\blacktriangle$  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  $\blacktriangleright$  FADE RATE, and then  $\forall$  or  $\blacktriangle$  to set time from 0 to 300 seconds. For relay control, press  $\blacktriangleright$  FADE/RELAY, select % ON/OFF levels, relay, and control.

Minimum and Maximum Output Levels: Output levels for each end of the scale.

Press  $\blacktriangleright$  MIN OUTPUT LEVEL or MAX OUTPUT LEVEL, select  $\blacktriangleright$  MODE, and then  $\forall$  or  $\blacktriangle$  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  $\blacktriangleright$  POWER-ON LEVEL and then  $\forall$  or  $\blacktriangle$  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  $\blacktriangleright$  CONTROL OPTIONS and then  $\forall$  or  $\blacktriangle$  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