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	58	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
	nn.03.03	Out 11	11		nn.0B.03	Out 43	43
	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	2.4	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
	nn.08.03	Out 31	31	29	nn. 10.03	Out 63	63
	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.**

ILC LightLEEDer DMX Output Map Rev 1.01 (None)								
File Download								
Device Address: 01 V Device Range: 1 / Switch Setting: 0 V DMX Channel Dimmer Output								
001 032 005 007	100		221					
			321 333 1					
	101 102 105	220 230 230	322 334					
	122 164 196	227 235 237 237	224 256 256	400 400 400 400 400				
	132 165 197	229 261 293	325 357	389 421 453 485				
	134 166 198	230 262 294	326 358	390 422 454 486				
	135 167 199	231 263 295	327 359	391 423 455 487				
		232 264 296	328 360	392 424 456 488				
	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 3	397 429 461 493				
014 ··· 046 ··· 078 ··· 110 ···	142 174 206	238 ··· 270 ··· 302 ···	334 ··· 366 ··· 3	398 ···· 430 ···· 462 ···· 494 ····				
015 ··· 047 ··· 079 ··· 111 ···	143 ··· 175 ··· 207 ···	239 ··· 271 ··· 303 ···	335 ··· 367 ··· 1	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	X
COM3 Download	

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.

X ILC LightLEEDer DMX Output Map Rev 1.01 (None)	are are are are							
File Download								
Device Address: 01 Device Range: 1 / Switch Setting: 0 DMX Channel Dimmer Output		Clear Values	Copy Values Sequence Values					
001 033 065 097 0.081 129 161 193 225 257	289 321 353	385 · · · 41	7 449 481					
002 034 066 098 D:08.2 130 162 194 226 258	··· 290 ··· 322 ··· 354 ···	386 ··· 41	8 450 482					
003 ··· 035 ··· 067 ··· 099 D.08.3 131 ··· 163 ··· 195 ··· 227 ··· 259	··· 291 ··· 323 ··· 355 ···	387 ··· 41	9 ··· 451 ··· 483 ···					
004 ···· 036 ···· 068 ···· 100 D:08.4 132 ···· 164 ··· 196 ··· 228 ··· 260	···· 292 ···· 324 ···· 356 ····	388 ··· 42	20 · · · 452 · · · 484 · · ·					
005 ···· 037 ···· 069 D:01.1 101 D:09.1 133 ···· 165 ···· 197 ···· 229 ···· 261	···· 293 ···· 325 ···· 357 ····	389 ··· 42	21 453 485					
006 ···· 038 ···· 070 D:01.2 102 D:09.2 134 ···· 166 ··· 198 ··· 230 ··· 262	···· 294 ···· 326 ···· 358 ····	390 ··· 42	2 454 486					
007 ··· 039 ··· 071 D:01.3 103 D:09.3 135 ··· 167 ··· 199 ··· 231 ··· 263	···· 295 ···· 327 ··· 359 ···	391 ··· 42	23 ··· 455 ··· 487 ···					
008 ···· 040 ···· 072 D:01.4 104 D:09.4 136 ···· 168 ··· 200 ··· 232 ··· 264	···· 296 ···· 328 ···· 360 ···	392 ··· 42	4 456 488					
009 D:01.1 041 D:01.1 073 D:02.1 105 D:0A.1 137 ··· 169 ··· 201 ··· 233 ··· 265	297 329 361	393 ··· 42	25 457 489					
010 042 074 0.02.2 106 138 170 202 234 266	298 330 362	394 ··· 42	26 458 490					
	299 331 363	395 ··· 42	27 459 491					
	300 332 364	336 42	460 432					
	202 224 265	337 42	401 403					
	302 304 300	399 43	402 404					
016 D:06.1 048 ···· 080 D:03.4 112 ··· 144 ··· 176 ··· 208 ··· 240 ··· 272	304 336 368	400 ··· 43	464 496					
017 D:06.2 049 ··· 081 D:04.1 113 ··· 145 ··· 177 ··· 209 ··· 241 ··· 273	··· 305 ··· 337 ··· 369 ···	401 43	3 · · · 465 · · · 497 · · ·					
018 D:06.3 050 ··· 082 D:04.2 114 ··· 146 ··· 178 ··· 210 ··· 242 ··· 274	··· 306 ··· 338 ··· 370 ···	402 ··· 43	4 · · · 466 · · · 498 · · ·					
019 D:06.4 051 ··· 083 D:04.3 115 ··· 147 ··· 179 ··· 211 ··· 243 ··· 275	••• 307 ••• 339 ••• 371 •••	403 43	85 ··· 467 ··· 499 ···					
020 D:07.1 052 ···· 084 D:04.4 116 ···· 148 ···· 180 ···· 212 ···· 244 ···· 276	··· 308 ··· 340 ··· 372 ···	404 43	86 468 500					
021 D:07.2 053 ··· 085 D:05.1 117 ··· 149 ··· 181 ··· 213 ··· 245 ··· 277	···· 309 ···· 341 ···· 373 ···	405 ··· 43	87 469 501					
022 D:07.3 054 ··· 086 D:05.2 118 ··· 150 ··· 182 ··· 214 ··· 246 ··· 278	··· 310 ··· 342 ··· 374 ···	406 43	8 470 502					
023 D:07.4 055 ··· 087 D:05.3 119 ··· 151 ··· 183 ··· 215 ··· 247 ··· 279	···· 311 ··· 343 ··· 375 ···	407 43	39 ··· 471 ··· 503 ···					
024 D:08.1 056 ···· 088 D:05.4 120 ··· 152 ··· 184 ··· 216 ··· 248 ··· 280	312 344 376	408 44	0 472 504					
025 0.08.2 057 009 0.06.1 121 153 185 217 249 281	313 345 377	409 44	473 505					
	314 346 378	410 44	2 4/4 506					
	310 347 379	411 44	4/5 50/					
	317 346 380	44	5 477 509					
100 ··· 100 ··· 220 ··· 230 ··		414 44	478 510					
031 063 095 0:07.3 127 159 191 223 255 287	319 351 383	415 44	7 479 511					
032 ··· 064 ··· 096 D:07.4 128 ··· 160 ··· 192 ··· 224 ··· 256 ··· 288	320 352 384	416 44	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