



DMX 10-VDC Output Board

Version 1.1 -2011

Overview

The DMX VDC board provides up to 4 or 8 Ch's of 10-VDC Switched ON/OFF Output Control Voltage when connected to a DMX controlled network.

The board Base Address may be set between 1 and 505.
Board Requires 12 VDC @ 1.0 Amp Supply.



Setup

Connections

The board requires a 12V DC supply at 1.0 Amps.

Connect the VDC board to the DMX network using 5-pin XLR connectors. If the DMX VDC board is the last item on the network, place a jumper over the pins marked TRM. This will improve the performance of the DMX network, acting as a DMX Network Termination.

Connect your loads / devices to the relevant output 1-8 wire terminal blocks . (See output setup and application example pages for details). Each output channel is rated at 10-VDC, 30mAmp

NOTE: 10VDC Out = Positive Common connections and Switched On/Off 1-8 Negative outputs.

Settings - (See **DMX 512 Address Chart** for details)

Set the base address of VDC Output - No. 1 as follows: (when not in byte mode - see below)

Add the value of the address DIP switches set to the **ON** position to calculate the base address.

Example: DIP switches 16 and 32 set to **ON** position, the base address is now 48, this setting is used to determine the starting address output of CH-1, in DMX Multiple Channel Control, the next channel would be address 49 for CH-2, and the next 50 for CH-3, etc. Use this same process for setting the base address in Single Channel Control but Byte Output Switch 10 is set to ON and a Control Byte Value Number is added to the DMX output for control of all the 8 outputs. (see pages on Addressing for more details on Byte - Binary addressing)

Control Syntax - (See Pages on Control / Addressing)

Byte Output switch (DIP Switch 10) set to **OFF**: (Multiple DMX control channels)

The output on a particular channel will go high (ON) when the DMX transmitted value for that channel selected (0= OFF, 0% and 255= ON, 100%). Each channel 1-8 has it's own channel assigned with the base number + a channel position number added to determine the address for each channel output.

DMX LED- **ON** when a suitable DMX signal is being received or a flashing LED when **NO** valid DMX signal stream is being received by the 4/8-Ch DMX VDC board.

The jumper next to the input power socket should be set to the V position at all times.

NOTE: Using Brookshire VSA Software

When using VSA software, the actual physical addressing on a DMX board should be address as +1 (addition) value setting. VSA Software starts at Addressing 0 and not at Addressing 1

Example: VSA Software Address = 48

Actual Physical Address setting on DMX board = 49

Example: VSA Software Address = 223

Actual Physical Address setting on DMX board = 224

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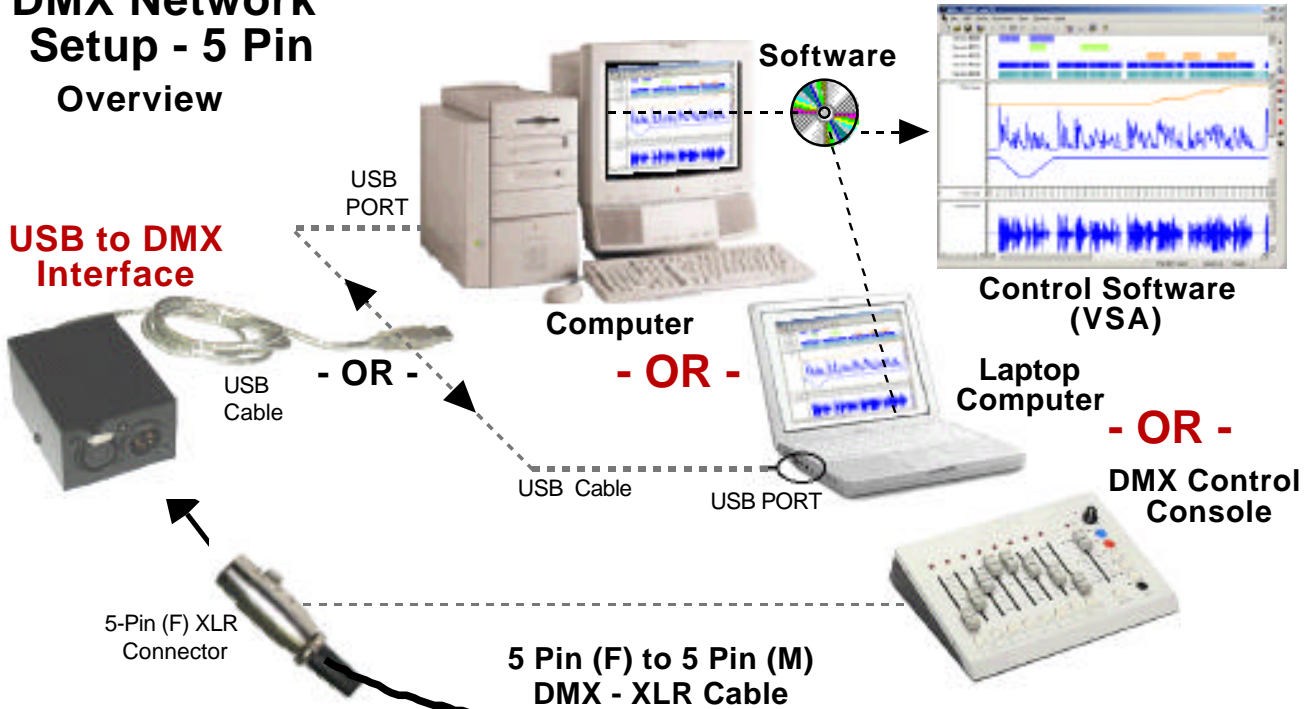
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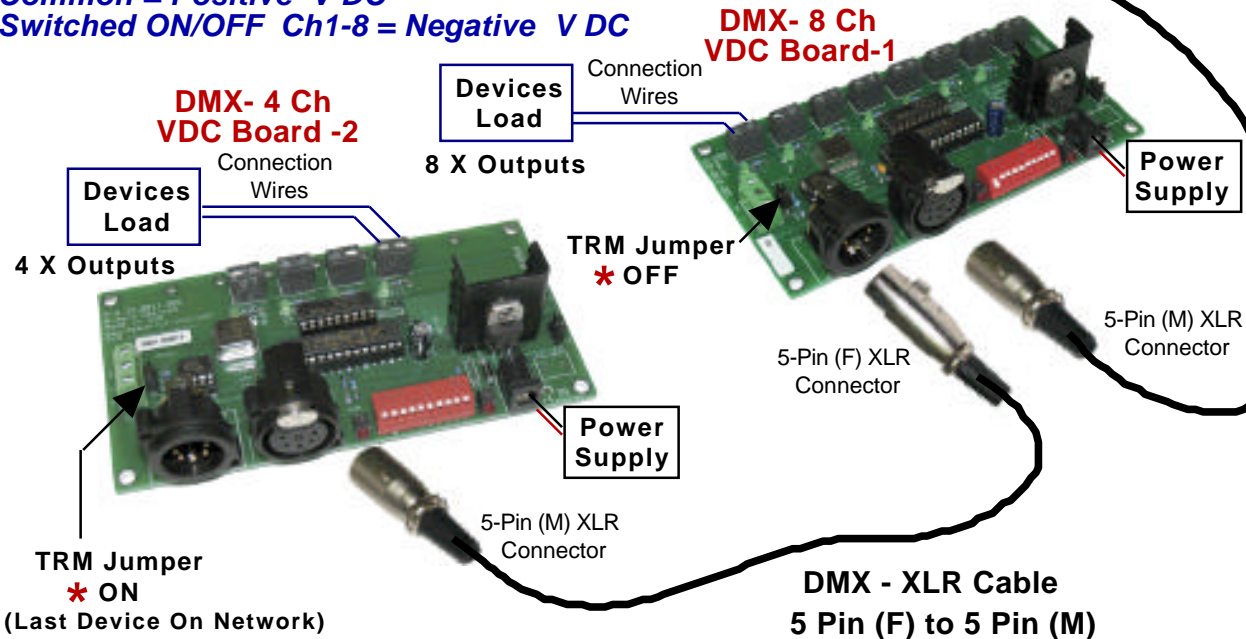
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DMX 10-VDC Output Board

DMX Network Setup - 5 Pin Overview



0-10 VDC Volts Output at 200 mAmp
Common = Positive V DC
Switched ON/OFF Ch1-8 = Negative V DC



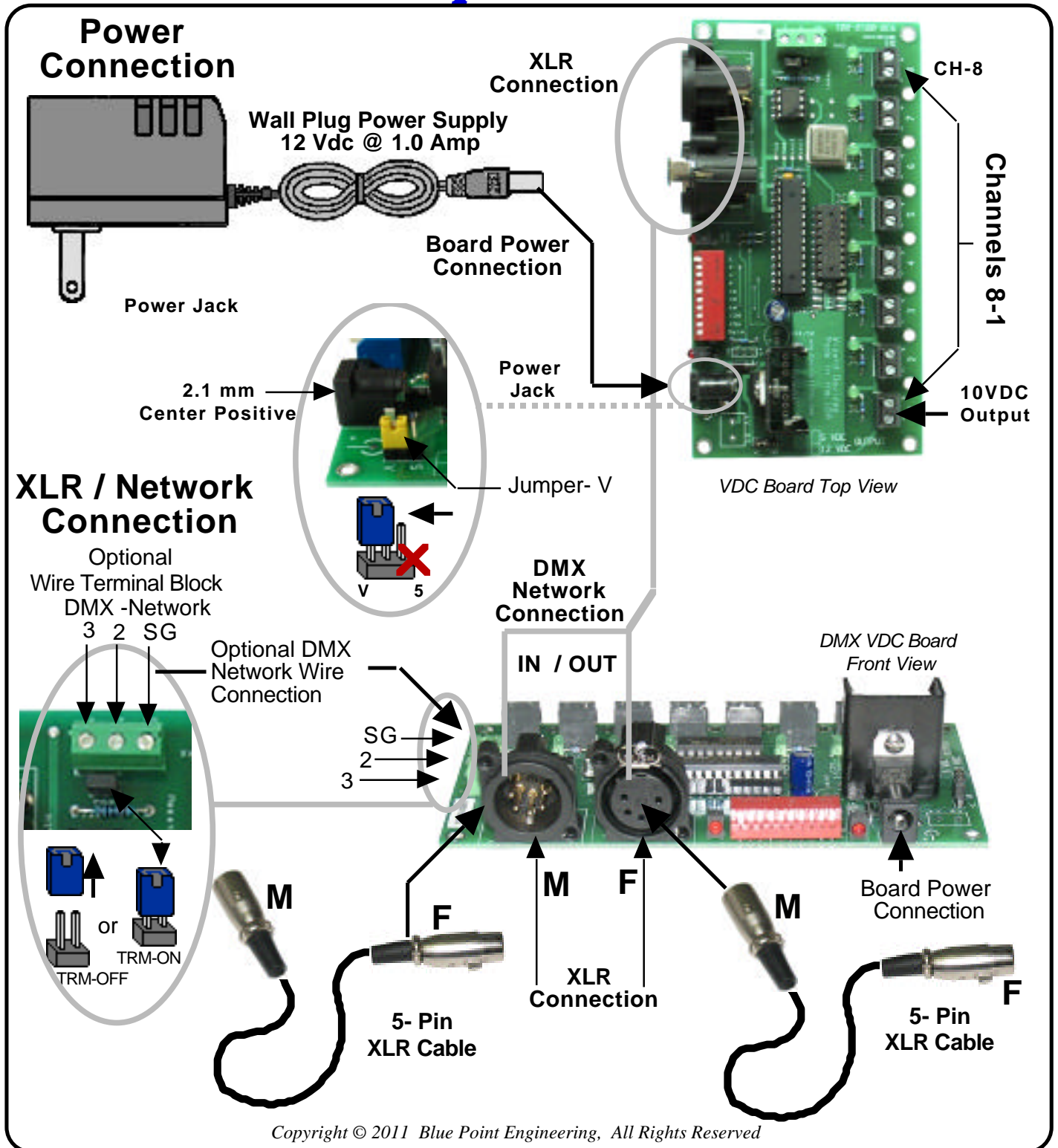
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DMX 10-VDC Output Board



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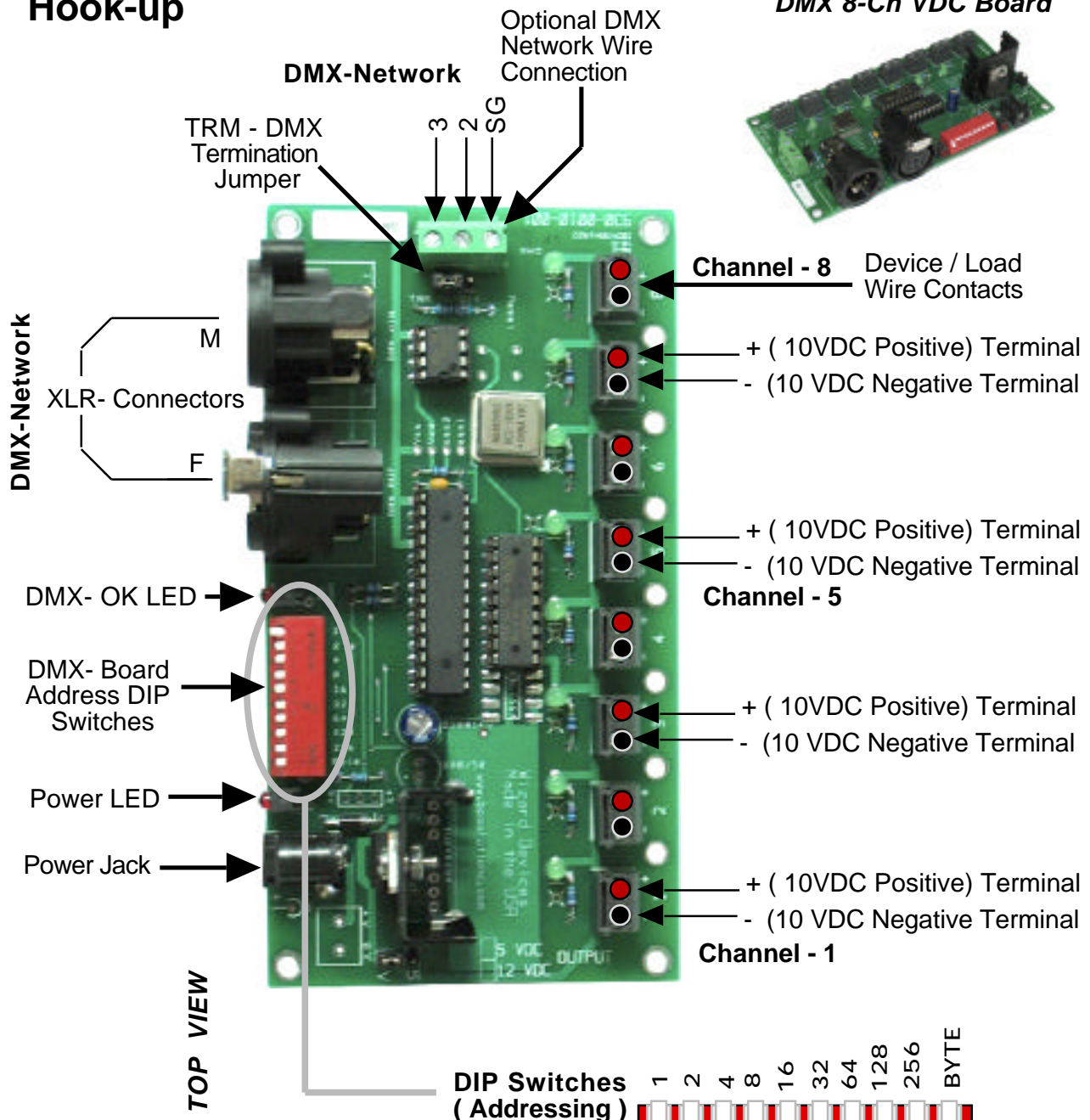
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DMX 10-VDC Output Board

Hook-up



0-10 VDC Volts Output at 200 mAmp
 Common = Positive V DC
 Switched ON/OFF Ch1-8 = Negative V DC

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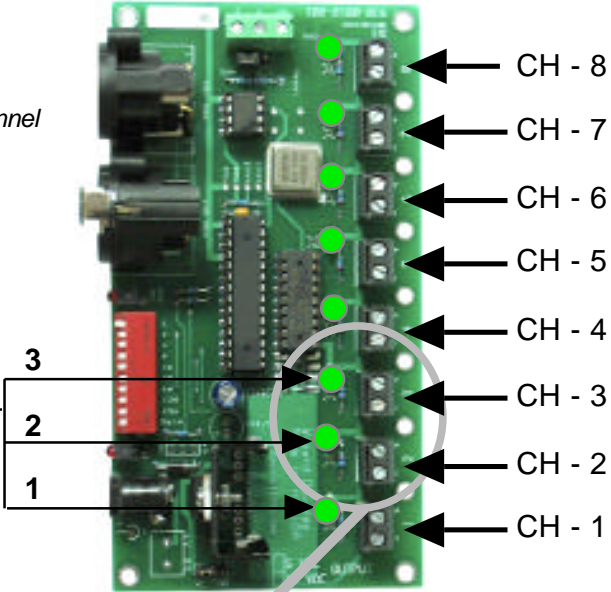
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DMX 10-VDC Output Board

Output Connection

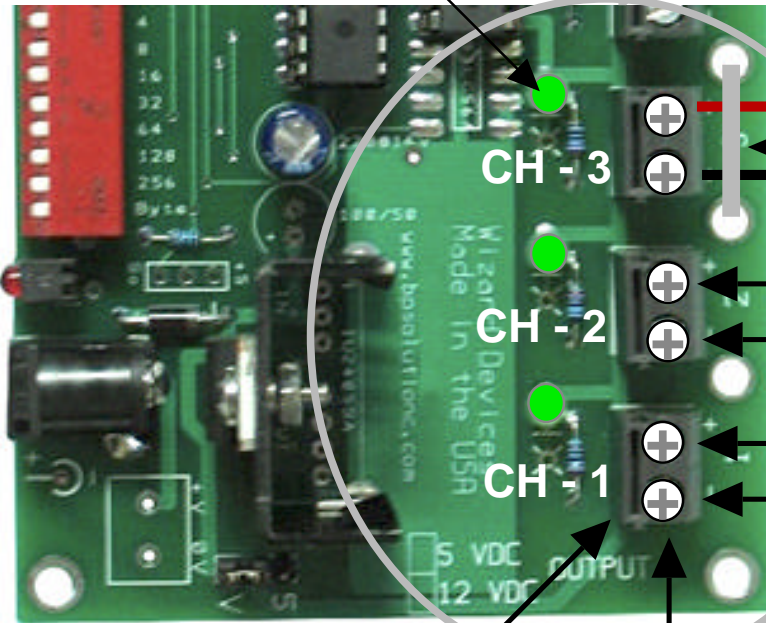
DMX 8-Channel VDC Board

Channel - ON LEDs (1-8)



Output Connections

Channel - ON LEDs (1-8)



Wire Connection

Wire Terminal Blocks

Wire Ties

+ Output ●

- Output ●

+ Output ●

- Output ●

Output Connections

To Device or Load

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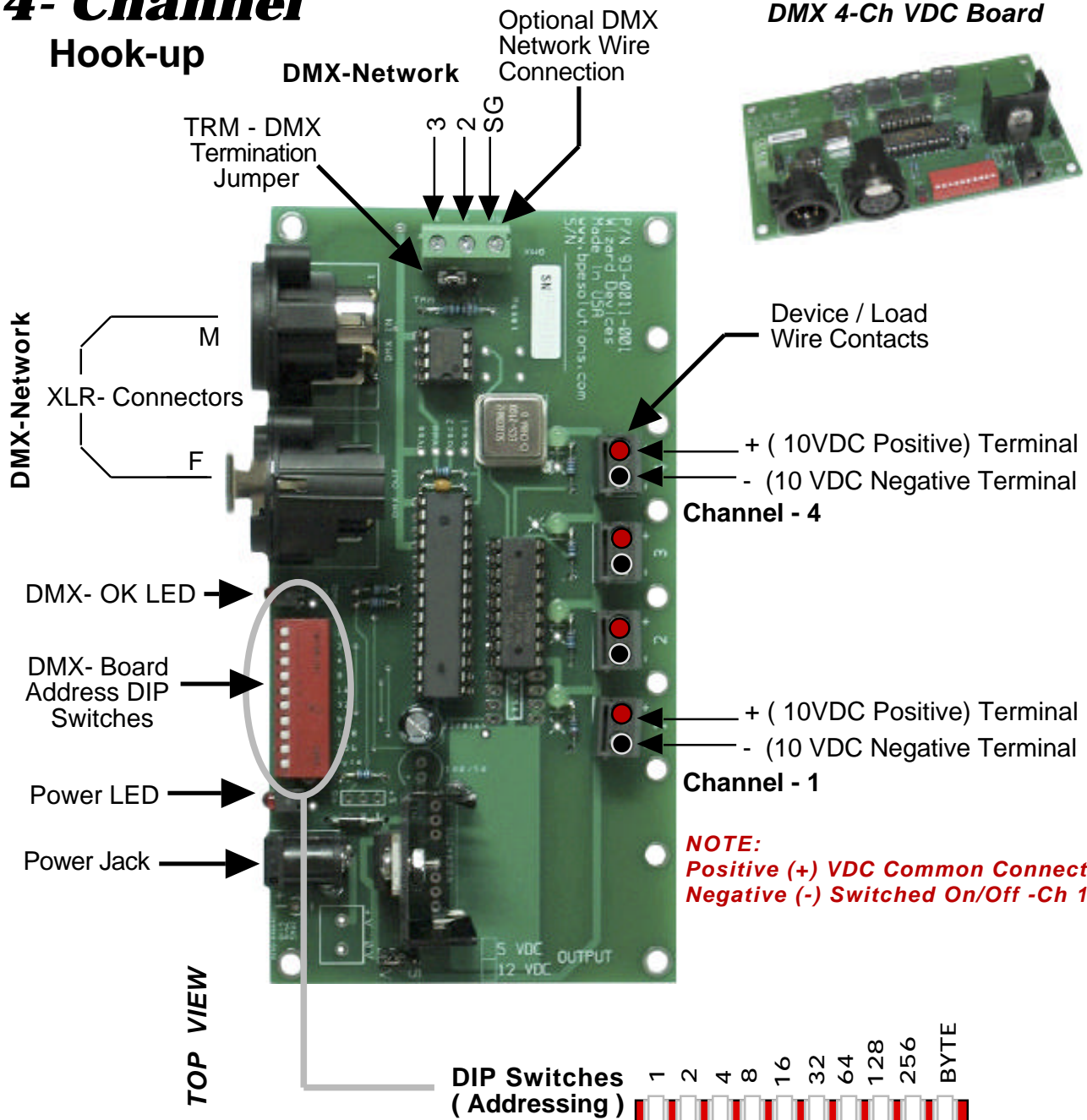
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DMX 10-VDC Output Board

4- Channel Hook-up



0-10 VDC Volts Output at 200 mAmp
 Common = Positive V DC
 Switched ON/OFF Ch1-8 = Negative V DC

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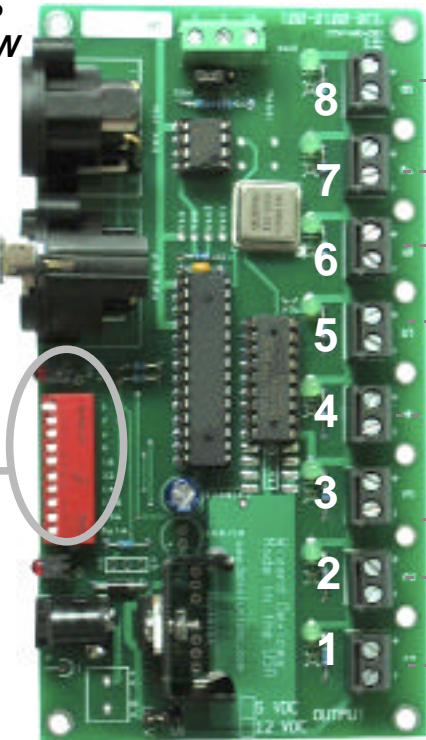
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DMX 10-VDC Output Board

Board Address
DMX - Value Mode
Byte Mode- OFF

TOP VIEW



CH-8 Example
(CH=55)
(Value= 0)
(CH = OFF) **0 VDC**

CH-7 = Ch 54

CH-6 = Ch 53

CH-5 = Ch 52

CH-4
(CH=51)
(Value= 255)
(CH = ON) **10 VDC**

CH-3 = Ch 50

CH-2 = Ch 49

CH-1
(CH=48)
(Value= 255)
(CH = ON) **10 VDC**

0-10 VDC Volts Output at 200 mAmp
Common = Positive V DC
Switched ON/OFF Ch1-8 = Negative V DC

Switch Number	Switch Position (ON or OFF)	Switch Value
1	ON	1
2	ON	2
3	ON	4
4	ON	8
5	ON	16
6	ON	32
7	ON	64
8	ON	128
9	ON	256
10	OFF	BYTE

16+32 = 48

DMX Value 0-255 = 0-100%
255= ON, 0= OFF

Setting the base address of Channe Outputs when not in byte mode - Switch 10 set to OFF

Add the value of the address DIP switches set to the ON position to calculate the base address.
 Example(CH): DIP switches 5 and 6 set to ON position, the base address is now 48, (16+32) this setting is used to determine the starting address output of CH1, the next channel would be address 49 for CH2, and the next 50 for CH3, 51 for CH4, 52 for CH5, etc.

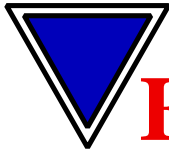
Control Syntex - (See DMX512 Chart Chart for Values)

Byte Output switch (DIP Switch 10) set to OFF: (Multiple DMX control channels)
 The output on a particular channel will go high (ON) when the DMX transmitted value for that channel exceeds 224.
0= OFF (0%) and 255= ON (100%)

Example

- Dip Switch 5 and 6 ON = **Base Address 48 = CH No.1** (CH1- Base Address starting at 48)
- Byte Output Switch 10 = OFF**
- CH1 **ON** at DMX value 255 **10 VDC** CHANNEL - 1
- CH1 **OFF** at DMX value 0 **0 VDC**
- Dip Switch 5 and 6 ON = **Base Address 48 + 3 = 51 = CH No.4** (CH1- Base Address Plus next 3 Channels)
- Byte Output Switch 10 = OFF**
- CH4 **ON** at DMX value 255 **10 VDC** CHANNEL - 4
- CH4 **OFF** at DMX value 0 **0 VDC**
- Dip Switch 5 and 6 ON = **Base Address 48 + 7 = 55 = CH No.8** (CH1- Base Address Plus next 7 Channels)
- Byte Output Switch 10 = OFF**
- CH8 **ON** at DMX value 255 **10 VDC** CHANNEL - 8
- CH8 **OFF** at DMX value 0 **0 VDC**

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DMX 512 Address Chart

Chart A - US
Standard DMX 512

Ch - Switches	Ch - Switches	Ch - Switches	Ch - Switches	Ch - Switches
1 = 1	53 = 1, 3, 5, 6	105 = 1, 4, 6, 7	157 = 1, 3, 4, 5, 8	209 = 1, 5, 7, 8
2 = 2	54 = 2, 3, 5, 6	106 = 2, 4, 6, 7	158 = 2, 3, 4, 5, 8	210 = 2, 5, 7, 8
3 = 1, 2	55 = 1, 2, 3, 5, 6	107 = 1, 2, 4, 6, 7	159 = 1, 2, 3, 4, 5, 8	211 = 1, 2, 5, 7, 8
4 = 3	56 = 4, 5, 6	108 = 3, 4, 6, 7	160 = 6, 8	212 = 3, 5, 7, 8
5 = 1, 3	57 = 1, 4, 5, 6	109 = 1, 3, 4, 6, 7	161 = 1, 6, 8	213 = 1, 3, 5, 7, 8
6 = 2, 3	58 = 2, 4, 5, 6	110 = 2, 3, 4, 6, 7	162 = 2, 6, 8	214 = 2, 3, 5, 7, 8
7 = 1, 2, 3	59 = 1, 2, 4, 5, 6	111 = 1, 2, 3, 4, 6, 7	163 = 1, 2, 6, 8	215 = 1, 2, 3, 5, 7, 8
8 = 4	60 = 3, 4, 5, 6	112 = 5, 6, 7	164 = 3, 6, 8	216 = 4, 5, 7, 8
9 = 1, 4	61 = 1, 3, 4, 5, 6	113 = 1, 5, 6, 7	165 = 1, 3, 6, 8	217 = 1, 4, 5, 7, 8
10 = 2, 4	62 = 2, 3, 4, 5, 6	114 = 2, 5, 6, 7	166 = 2, 3, 6, 8	218 = 2, 4, 5, 7, 8
11 = 1, 2, 4	63 = 1, 2, 3, 4, 5, 6	115 = 1, 2, 5, 6, 7	167 = 1, 2, 3, 6, 8	219 = 1, 2, 4, 5, 7, 8
12 = 3, 4	64 = 7	116 = 3, 5, 6, 7	168 = 4, 6, 8	220 = 3, 4, 5, 7, 8
13 = 1, 3, 4	65 = 1, 7	117 = 1, 3, 5, 6, 7	169 = 1, 4, 6, 8	221 = 1, 3, 4, 5, 7, 8
14 = 2, 3, 4	66 = 2, 7	118 = 2, 3, 5, 6, 7	170 = 2, 4, 6, 8	222 = 2, 3, 4, 5, 7, 8
15 = 1, 2, 3, 4	67 = 1, 2, 7	119 = 1, 2, 3, 5, 6, 7	171 = 1, 2, 4, 6, 8	223 = 1, 2, 3, 4, 5, 7, 8
16 = 5	68 = 3, 7	120 = 4, 5, 6, 7	172 = 3, 4, 6, 8	224 = 6, 7, 8
17 = 1, 5	69 = 1, 3, 7	121 = 1, 4, 5, 6, 7	173 = 1, 3, 4, 6, 8	225 = 1, 6, 7, 8
18 = 2, 5	70 = 2, 3, 7	122 = 2, 4, 5, 6, 7	174 = 2, 3, 4, 6, 8	226 = 2, 6, 7, 8
19 = 1, 2, 5	71 = 1, 2, 3, 7	123 = 1, 2, 4, 5, 6, 7	175 = 1, 2, 3, 4, 6, 8	227 = 1, 2, 6, 7, 8
20 = 3, 5	72 = 4, 7	124 = 3, 4, 5, 6, 7	176 = 5, 6, 8	228 = 3, 6, 7, 8
21 = 1, 3, 5	73 = 1, 4, 7	125 = 1, 3, 4, 5, 6, 7	177 = 1, 5, 6, 8	229 = 1, 3, 6, 7, 8
22 = 2, 3, 5	74 = 2, 4, 7	126 = 2, 3, 4, 5, 6, 7	178 = 2, 5, 6, 8	230 = 2, 3, 6, 7, 8
23 = 1, 2, 3, 5	75 = 1, 2, 4, 7	127 = 1, 2, 3, 4, 5, 6, 7	179 = 1, 2, 5, 6, 8	231 = 1, 2, 3, 6, 7, 8
24 = 4, 5	76 = 3, 4, 7	128 = 8	180 = 3, 5, 6, 8	232 = 4, 6, 7, 8
25 = 1, 4, 5	77 = 1, 3, 4, 7	129 = 1, 8	181 = 1, 3, 5, 6, 8	233 = 1, 4, 6, 7, 8
26 = 2, 4, 5	78 = 2, 3, 4, 7	130 = 2, 8	182 = 2, 3, 5, 6, 8	234 = 2, 4, 6, 7, 8
27 = 1, 2, 4, 5	79 = 1, 3, 4, 7	131 = 1, 2, 8	183 = 1, 2, 3, 5, 6, 8	235 = 1, 2, 4, 6, 7, 8
28 = 3, 4, 5	80 = 5, 7	132 = 3, 8	184 = 4, 5, 6, 8	236 = 3, 4, 6, 7, 8
29 = 1, 3, 4, 5	81 = 1, 5, 7	133 = 1, 3, 8	185 = 1, 4, 5, 6, 8	237 = 1, 3, 4, 6, 7, 8
30 = 2, 3, 4, 5	82 = 2, 5, 7	134 = 2, 3, 8	186 = 2, 4, 5, 6, 8	238 = 2, 3, 4, 6, 7, 8
31 = 1, 2, 3, 4, 5	83 = 1, 2, 5, 7	135 = 1, 2, 3, 8	187 = 1, 2, 4, 5, 6, 8	239 = 1, 2, 3, 4, 6, 7, 8
32 = 6	84 = 3, 5, 7	136 = 4, 8	188 = 3, 4, 5, 6, 8	240 = 5, 6, 7, 8
33 = 1, 6	85 = 1, 3, 5, 7	137 = 1, 4, 8	189 = 1, 3, 4, 5, 6, 8	241 = 1, 5, 6, 7, 8
34 = 2, 6	86 = 2, 3, 5, 7	138 = 2, 4, 8	190 = 2, 3, 4, 5, 6, 8	242 = 2, 5, 6, 7, 8
35 = 1, 2, 6	87 = 1, 2, 3, 5, 7	139 = 1, 2, 4, 8	191 = 1, 2, 3, 4, 5, 6, 8	243 = 1, 2, 5, 6, 7, 8
36 = 3, 6	88 = 4, 5, 7	140 = 3, 4, 8	192 = 7, 8	244 = 3, 5, 6, 7, 8
37 = 1, 3, 6	89 = 1, 4, 5, 7	141 = 1, 3, 4, 8	193 = 1, 7, 8	245 = 1, 3, 5, 6, 7, 8
38 = 2, 3, 6	90 = 2, 4, 5, 7	142 = 2, 3, 4, 8	194 = 2, 7, 8	246 = 2, 3, 5, 6, 7, 8
39 = 1, 2, 3, 6	91 = 1, 2, 4, 5, 7	143 = 1, 2, 3, 4, 8	195 = 1, 2, 7, 8	247 = 1, 2, 3, 5, 6, 7, 8
40 = 4, 6	92 = 3, 4, 5, 7	144 = 5, 8	196 = 3, 7, 8	248 = 4, 5, 6, 7, 8
41 = 1, 4, 6	93 = 1, 3, 4, 5, 7	145 = 1, 5, 8	197 = 1, 3, 7, 8	249 = 1, 4, 5, 6, 7, 8
42 = 2, 4, 6	94 = 2, 3, 4, 5, 7	146 = 2, 5, 8	198 = 2, 3, 7, 8	250 = 2, 4, 5, 6, 7, 8
43 = 1, 2, 4, 6	95 = 1, 2, 3, 4, 5, 7	147 = 1, 2, 5, 8	199 = 1, 2, 3, 7, 8	251 = 1, 2, 4, 5, 6, 7, 8
44 = 3, 4, 6	96 = 6, 7	148 = 3, 5, 8	200 = 4, 7, 8	252 = 3, 4, 5, 6, 7, 8
45 = 1, 3, 4, 6	97 = 1, 6, 7	149 = 1, 3, 5, 8	201 = 1, 4, 7, 8	253 = 1, 3, 4, 5, 6, 7, 8
46 = 2, 3, 4, 6	98 = 2, 6, 7	150 = 2, 3, 5, 8	202 = 2, 4, 7, 8	254 = 2, 3, 4, 5, 6, 7, 8
47 = 1, 2, 3, 4, 6	99 = 1, 2, 6, 7	151 = 1, 2, 3, 5, 8	203 = 1, 2, 4, 7, 8	255 = 1, 2, 3, 4, 5, 6, 7, 8
48 = 5, 6	100 = 3, 6, 7	152 = 4, 5, 8	204 = 3, 4, 7, 8	256 = 9
49 = 1, 5, 6	101 = 1, 3, 6, 7	153 = 1, 4, 5, 8	205 = 1, 3, 4, 7, 8	257 = 1, 9
50 = 2, 5, 6	102 = 2, 3, 6, 7	154 = 2, 4, 5, 8	206 = 2, 3, 4, 7, 8	258 = 2, 9
51 = 1, 2, 5, 6	103 = 1, 2, 3, 6, 7	155 = 1, 2, 4, 5, 8	207 = 1, 2, 3, 4, 7, 8	259 = 1, 2, 9
52 = 3, 5, 6	104 = 4, 6, 7	156 = 3, 4, 5, 8	208 = 5, 7, 8	260 = 3, 9

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DMX 512 Address Chart Cont.

DMX 8-Channel VDC Board

Ch - Switches

261 = 1, 3, 9
 262 = 2, 3, 9
 263 = 1, 2, 3, 9
 264 = 4, 9
 265 = 1, 4, 9
 266 = 2, 4, 9
 267 = 1, 2, 4, 9
 268 = 3, 4, 9
 269 = 1, 3, 4, 9
 270 = 2, 3, 4, 9
 271 = 1, 2, 3, 4, 9
 272 = 5, 9
 273 = 1, 5, 9
 274 = 2, 5, 9
 275 = 1, 2, 5, 9
 276 = 3, 5, 9
 277 = 1, 3, 5, 9
 278 = 2, 3, 5, 9
 279 = 1, 2, 3, 5, 9
 280 = 4, 5, 9
 281 = 1, 4, 5, 9
 282 = 2, 4, 5, 9
 283 = 1, 2, 4, 5, 9
 284 = 3, 4, 5, 9
 285 = 1, 3, 4, 5, 9
 286 = 2, 3, 4, 5, 9
 287 = 1, 2, 3, 4, 5, 9
 288 = 6, 9
 289 = 1, 6, 9
 290 = 2, 6, 9
 291 = 1, 2, 6, 9
 292 = 3, 6, 9
 293 = 1, 3, 6, 9
 294 = 2, 3, 6, 9
 295 = 1, 2, 3, 6, 9
 296 = 4, 6, 9
 297 = 1, 4, 6, 9
 298 = 2, 4, 6, 9
 299 = 1, 2, 4, 6, 9
 300 = 3, 4, 6, 9
 301 = 1, 3, 4, 6, 9
 302 = 2, 3, 4, 6, 9
 303 = 1, 2, 3, 4, 6, 9
 304 = 5, 6, 9
 305 = 1, 5, 6, 9
 306 = 2, 5, 6, 9
 307 = 1, 2, 5, 6, 9
 308 = 3, 5, 6, 9
 309 = 1, 3, 5, 6, 9
 310 = 2, 3, 5, 6, 9
 311 = 1, 2, 3, 5, 6, 9
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 314 = 2, 4, 5, 6, 9
 315 = 1, 2, 4, 5, 6, 9
 316 = 3, 4, 5, 6, 9
 317 = 1, 3, 4, 5, 6, 9
 318 = 2, 3, 4, 5, 6, 9
 329 = 1, 2, 3, 4, 5, 6, 9
 320 = 7, 9
 321 = 1, 7, 9

Ch - Switches

322 = 2, 7, 9
 323 = 1, 2, 7, 9
 324 = 3, 7, 9
 325 = 1, 3, 7, 9
 326 = 2, 3, 7, 9
 327 = 1, 2, 3, 7, 9
 328 = 4, 7, 9
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 330 = 2, 4, 7, 9
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 342 = 2, 3, 5, 7, 9
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 372 = 3, 5, 6, 7, 9
 373 = 1, 3, 5, 6, 7, 9
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 376 = 4, 5, 6, 7, 9
 377 = 1, 4, 5, 6, 7, 9
 378 = 2, 4, 5, 6, 7, 9
 379 = 1, 2, 4, 5, 6, 7, 9
 380 = 3, 4, 5, 6, 7, 9
 381 = 1, 3, 4, 5, 6, 7, 9
 382 = 2, 3, 4, 5, 6, 7, 9

Ch - Switches

383 = 1, 2, 3, 4, 5, 6, 7, 9
 384 = 8, 9
 385 = 1, 8, 9
 386 = 2, 8, 9
 387 = 1, 2, 8, 9
 388 = 3, 8, 9
 389 = 1, 3, 8, 9
 390 = 2, 3, 8, 9
 391 = 1, 2, 3, 8, 9
 392 = 4, 8, 9
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 394 = 2, 4, 8, 9
 395 = 1, 2, 4, 8, 9
 396 = 3, 4, 8, 9
 397 = 1, 3, 4, 8, 9
 398 = 2, 3, 4, 8, 9
 399 = 1, 2, 3, 4, 8, 9
 400 = 5, 8, 9
 401 = 1, 5, 8, 9
 402 = 2, 5, 8, 9
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 415 = 1, 2, 3, 4, 5, 8, 9
 416 = 6, 8, 9
 417 = 1, 6, 8, 9
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 419 = 1, 2, 6, 8, 9
 420 = 3, 6, 8, 9
 421 = 1, 3, 6, 8, 9
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 427 = 1, 2, 4, 6, 8, 9
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 431 = 1, 2, 3, 4, 6, 8, 9
 432 = 5, 6, 8, 9
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 434 = 2, 5, 6, 8, 9
 435 = 1, 2, 5, 6, 8, 9
 436 = 3, 5, 6, 8, 9
 437 = 1, 3, 5, 6, 8, 9
 438 = 2, 3, 5, 6, 8, 9
 439 = 1, 2, 3, 5, 6, 8, 9
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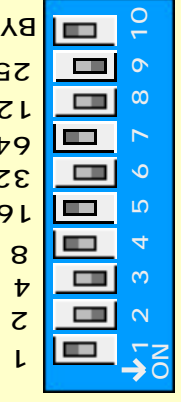
Ch - Switches

444 = 3, 4, 5, 6, 8, 9
 445 = 1, 3, 4, 5, 6, 8, 9
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 447 = 1, 2, 3, 4, 5, 6, 8, 9
 448 = 7, 8, 9
 449 = 1, 7, 8, 9
 450 = 2, 7, 8, 9
 451 = 1, 2, 7, 8, 9
 452 = 3, 7, 8, 9
 453 = 1, 3, 7, 8, 9
 454 = 2, 3, 7, 8, 9
 455 = 1, 2, 3, 7, 8, 9
 456 = 4, 7, 8, 9
 457 = 1, 4, 7, 8, 9
 458 = 2, 4, 7, 8, 9
 459 = 1, 2, 4, 7, 8, 9
 460 = 3, 4, 7, 8, 9
 461 = 1, 3, 4, 7, 8, 9
 462 = 2, 3, 4, 7, 8, 9
 463 = 1, 2, 3, 4, 7, 8, 9
 464 = 5, 7, 8, 9
 465 = 1, 5, 7, 8, 9
 466 = 2, 5, 7, 8, 9
 467 = 1, 2, 5, 7, 8, 9
 468 = 3, 5, 7, 8, 9
 469 = 1, 3, 5, 7, 8, 9
 470 = 2, 3, 5, 7, 8, 9
 471 = 1, 2, 3, 5, 7, 8, 9
 472 = 4, 5, 7, 8, 9
 473 = 1, 4, 5, 7, 8, 9
 474 = 2, 4, 5, 7, 8, 9
 475 = 1, 2, 4, 5, 7, 8, 9
 476 = 3, 4, 5, 7, 8, 9
 477 = 1, 3, 4, 5, 7, 8, 9
 478 = 2, 3, 4, 5, 7, 8, 9
 479 = 1, 2, 3, 4, 5, 7, 8, 9
 480 = 6, 7, 8, 9
 481 = 1, 6, 7, 8, 9
 482 = 2, 6, 7, 8, 9
 483 = 1, 2, 6, 7, 8, 9
 484 = 3, 6, 7, 8, 9
 485 = 1, 3, 6, 7, 8, 9
 486 = 2, 3, 6, 7, 8, 9
 487 = 1, 2, 3, 6, 7, 8, 9
 488 = 4, 6, 7, 8, 9
 489 = 1, 4, 6, 7, 8, 9
 490 = 2, 4, 6, 7, 8, 9
 491 = 1, 2, 4, 6, 7, 8, 9
 492 = 3, 4, 6, 7, 8, 9
 493 = 1, 3, 4, 6, 7, 8, 9
 494 = 2, 3, 4, 6, 7, 8, 9
 495 = 1, 2, 3, 4, 6, 7, 8, 9
 496 = 5, 6, 7, 8, 9
 497 = 1, 5, 6, 7, 8, 9
 498 = 2, 5, 6, 7, 8, 9
 499 = 1, 2, 5, 6, 7, 8, 9
 500 = 3, 5, 6, 7, 8, 9
 501 = 1, 3, 5, 6, 7, 8, 9
 502 = 2, 3, 5, 6, 7, 8, 9
 503 = 1, 2, 3, 5, 6, 7, 8, 9
 504 = 4, 5, 6, 7, 8, 9

Ch - Switches

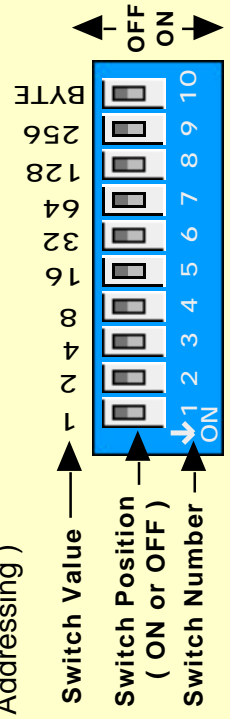
505 = 1, 4, 5, 6, 7, 8, 9

Example $2 + 4 + 32 + 128 + 256 = 422$



Address 422
 Address = 422
 Switch ON = 2, 3, 6, 8, 9

DIP Switches (Addressing)



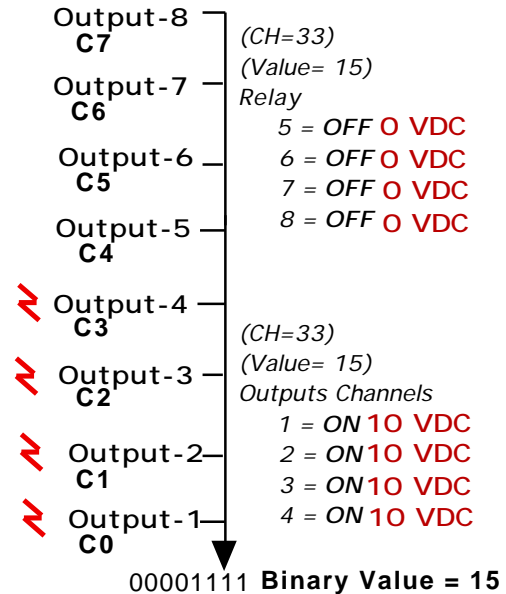
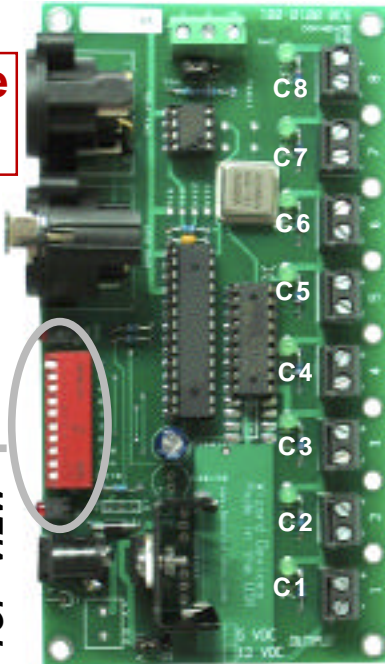
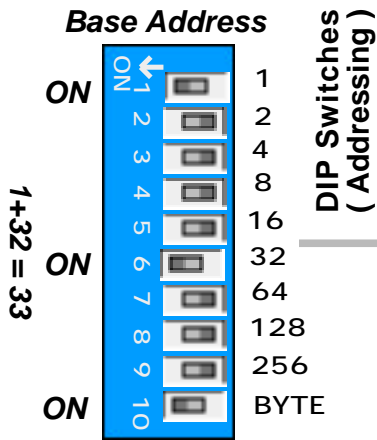
Switch Value
 Switch Position (ON or OFF)
 Switch Number

DMX 10-VDC Output Board

Board Address

Example

Binary Value Mode
Byte Mode - ON



Setting the base address of Channel Outputs when in byte mode - Switch 10 set to ON

Add the value of the address DIP switches set to the ON position to calculate the base address.

Example: DIP switches 6 and 1 set to ON position, the base address is now 33. (Single DMX control channel)

Control Syntax - (See Binary Chart for Values)

The DMX output values now act as a binary representation of the data on the base address channel. Example, if the base address is set to 33 and the value (Binary) on DMX channel 33 is 240

(Example: 11110000 in binary) then Channels 5 through 8 would be energised and Channels 1 through 4 OFF.

Example CHANNELS - 1-4 =ON, 5-8 =OFF

If the base address is set to 33 and the dmX value (Binary) on DMX channel 33 is 15 then Channels 1 through 4 would be ON and Channels 5-8 OFF.

00001111

00001111
Binary Value

CHANNELS - 1,3,7 =ON, 2,4,5,6,8 =OFF

If the base address is set to 33 and the dmX value (Binary) on DMX channel 33 is 162 (10100010) then Channels 1,3,7 would be ON and Channels 2,4,5,6,8 OFF.

CHANNELS - 2,4,6,8 =ON, 1,3,5,7 =OFF

If the base address is set to 33 and the dmX value (Binary) on DMX channel 33 is 85 (01010101) then Channels 2,4,6,8 would be ON and Channels 1,3,5,7 OFF.

CHANNELS - 1-8 =ALL ON

If the base address is set to 33 and the dmX value (Binary) on DMX channel 33 is 255 (11111111) then Channels 1 through 8 would be ON.

CHANNELS - 1-8 =All OFF

If the base address is set to 33 and the dmX value (Binary) on DMX channel 33 is 0 (00000000) then Channels 1 through 8 would be OFF.

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Binary Value Chart

8=R8
7=R7
6=R6
5=R5
4=R4
3=R3
2=R2
1=R1

Page 1 of 2

CHANNELS 8-1 or Outputs 8-1								
O=OFF	R8	R7	R6	R5	R4	R3	R2	R1
1=ON	O or 1	O or 1	O or 1	O or 1	O or 1	O or 1	O or 1	O or 1

Channel 8-1	Digit	Channel 8-1	Digit	Channel 8-1	Digit	Channel 8-1	Digit	Channel 8-1	Digit
00000000	= 0	00110011	= 51	01100110	= 102	10011001	= 153	11001100	= 204
00000001	= 1	00110100	= 52	01100111	= 103	10011010	= 154	11001101	= 205
00000010	= 2	00110101	= 53	01101000	= 104	10011011	= 155	11001110	= 206
00000011	= 3	00110110	= 54	01101001	= 105	10011100	= 156	11001111	= 207
00000100	= 4	00110111	= 55	01101010	= 106	10011101	= 157	11010000	= 208
00000101	= 5	00111000	= 56	01101011	= 107	10011110	= 158	11010001	= 209
00000110	= 6	00111001	= 57	01101100	= 108	10011111	= 159	11010010	= 210
00000111	= 7	00111010	= 58	01101101	= 109	10100000	= 160	11010011	= 211
00001000	= 8	00111011	= 59	01101110	= 110	10100001	= 161	11010100	= 212
00001001	= 9	00111100	= 60	01101111	= 111	10100010	= 162	11010101	= 213
00001010	= 10	00111101	= 61	01110000	= 112	10100011	= 163	11010110	= 214
00001011	= 11	00111110	= 62	01110001	= 113	10100100	= 164	11010111	= 215
00001100	= 12	00111111	= 63	01110010	= 114	10100101	= 165	11011000	= 216
00001101	= 13	01000000	= 64	01110011	= 115	10100110	= 166	11011001	= 217
00001110	= 14	01000001	= 65	01110100	= 116	10100111	= 167	11011010	= 218
00001111	= 15	01000010	= 66	01110101	= 117	10101000	= 168	11011011	= 219
00010000	= 16	01000011	= 67	01110110	= 118	10101001	= 169	11011100	= 220
00010001	= 17	01000100	= 68	01110111	= 119	10101010	= 170	11011101	= 221
00010010	= 18	01000101	= 69	01111000	= 120	10101011	= 171	11011110	= 222
00010011	= 19	01000110	= 70	01111001	= 121	10001100	= 172	11011111	= 223
00010100	= 20	01000111	= 71	01111010	= 122	10101101	= 173	11100000	= 224
00010101	= 21	01001000	= 72	01111011	= 123	10101110	= 174	11100001	= 225
00010110	= 22	01001001	= 73	01111100	= 124	10101111	= 175	11100010	= 226
00010111	= 23	01001010	= 74	01111101	= 125	10110000	= 176	11100011	= 227
00011000	= 24	01001011	= 75	01111110	= 126	10110001	= 177	11100100	= 228
00011001	= 25	01001100	= 76	01111111	= 127	10110010	= 178	11100101	= 229
00011010	= 26	01001101	= 77	10000000	= 128	10110011	= 179	11100110	= 230
00011011	= 27	01001110	= 78	10000001	= 129	10110100	= 180	11100111	= 231
00011100	= 28	01001111	= 79	10000010	= 130	10110101	= 181	11101000	= 232
00011101	= 29	01010000	= 80	10000011	= 131	10110110	= 182	11101001	= 233
00011110	= 30	01010001	= 81	10000100	= 132	10110111	= 183	11101010	= 234
00011111	= 31	01010010	= 82	10000101	= 133	10111000	= 184	11101011	= 235
00100000	= 32	01010011	= 83	10000110	= 134	10111001	= 185	11101100	= 236
00100001	= 33	01010100	= 84	10000111	= 135	10111010	= 186	11101101	= 237
00100010	= 34	01010101	= 85	10001000	= 136	10111011	= 187	11101110	= 238
00100011	= 35	01010110	= 86	10001001	= 137	10111100	= 188	11101111	= 239
00100100	= 36	01010111	= 87	10001010	= 138	10111101	= 189	11110000	= 240
00100101	= 37	01011000	= 88	10001011	= 139	10111110	= 190	11110001	= 241
00100110	= 38	01011001	= 89	10001100	= 140	10111111	= 191	11110010	= 242

DMX 10-VDC Output Board

Binary Value Chart - Cont.

Page 2 of 2

00100111	= 39
00101000	= 40
00101001	= 41
00101010	= 42
00101011	= 43
00101100	= 44
00101101	= 45
00101110	= 46
00101111	= 47
00110000	= 48
00110001	= 49
00110010	= 50

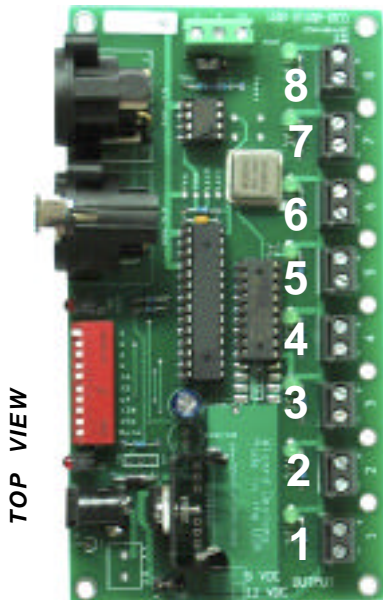
01011010	= 90
01011011	= 91
01011100	= 92
01011101	= 93
01011110	= 94
01011111	= 95
01100000	= 96
01100001	= 97
01100010	= 98
01100011	= 99
01100100	= 100
01100101	= 101

10001101	= 141
10001110	= 142
10001111	= 143
10010000	= 144
10010001	= 145
10010010	= 146
10010011	= 147
10010100	= 148
10010101	= 149
10010110	= 150
10010111	= 151
10011000	= 152

11000000	= 192
11000001	= 193
11000010	= 194
11000011	= 195
11000100	= 196
11000101	= 197
11000110	= 198
11000111	= 199
11001000	= 200
11001001	= 201
11001010	= 202
11001011	= 203

8=R8	11110011	= 243
7=R7	11110100	= 244
6=R6	11110101	= 245
5=R5	11110110	= 246
4=R4	11110111	= 247
3=R3	11111000	= 248
2=R2	11111001	= 249
1=R1	11111010	= 250
	11111011	= 251
	11111100	= 252
	11111101	= 253
	11111110	= 254
	11111111	= 255

	CHANNELS 7-0 or OUTPUTS 8-1 (O)								DMX - Channel					
	O8	O7	O6	O5	O4	O3	O2	O1						
O=OFF - 1=ON	O or 1	O or 1	O or 1	O or 1	O or 1	O or 1	O or 1	O or 1	Binary Value					
	C7	C6	C5	C4	C3	C2	C1	C0	Channel / Port					
	128	64	32	16	8	4	2	1	Decimal Value					
Channels / Ports					Binary Action					Binary Value				
0= Channel / Port / Output OFF = 0 VDC					0 = All Channels / Ports OFF = 0 VDC					255 = All Channels / Ports ON = 10 VDC				
1= Channel / Port / Output ON = 10VDC														



Output No	Channel No	Decimal Value	Binary Value	Alpha Value
O-8	Ch7	128	0or1	H
O-7	Ch6	64	0or1	G
O-6	Ch5	32	0or1	F
O-5	Ch4	16	0or1	E
O-4	Ch3	8	0or1	D
O-3	Ch2	4	0or1	C
O-2	Ch1	2	0or1	B
O-1	Ch0	1	0or1	A

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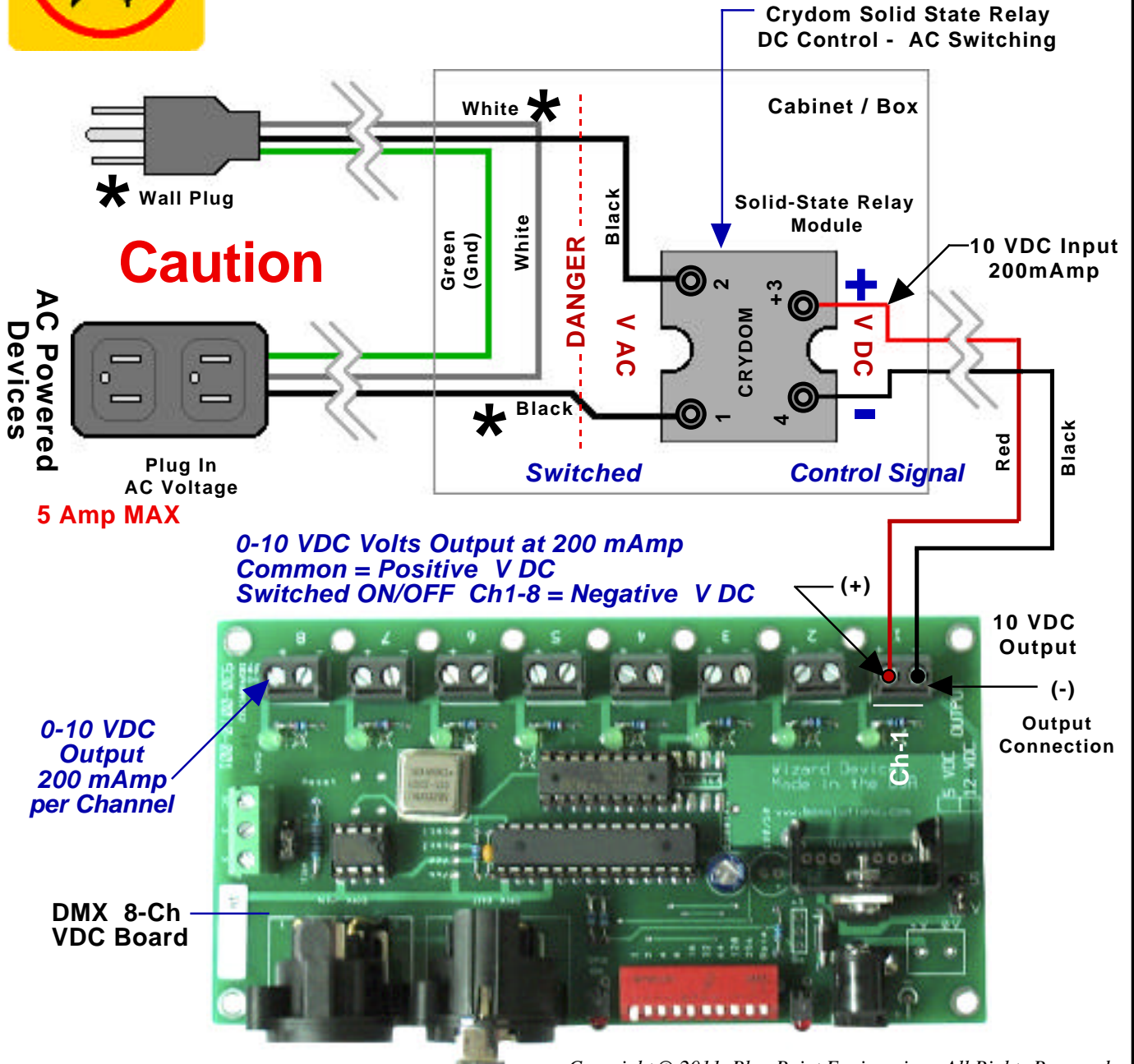
DMX 10-VDC Output Board



*

Large AC Power Control

Use caution when working with AC Voltage. Touching or incorrectly wiring this circuit could cause serious personal injury, death or damage to equipment.

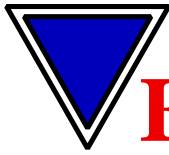


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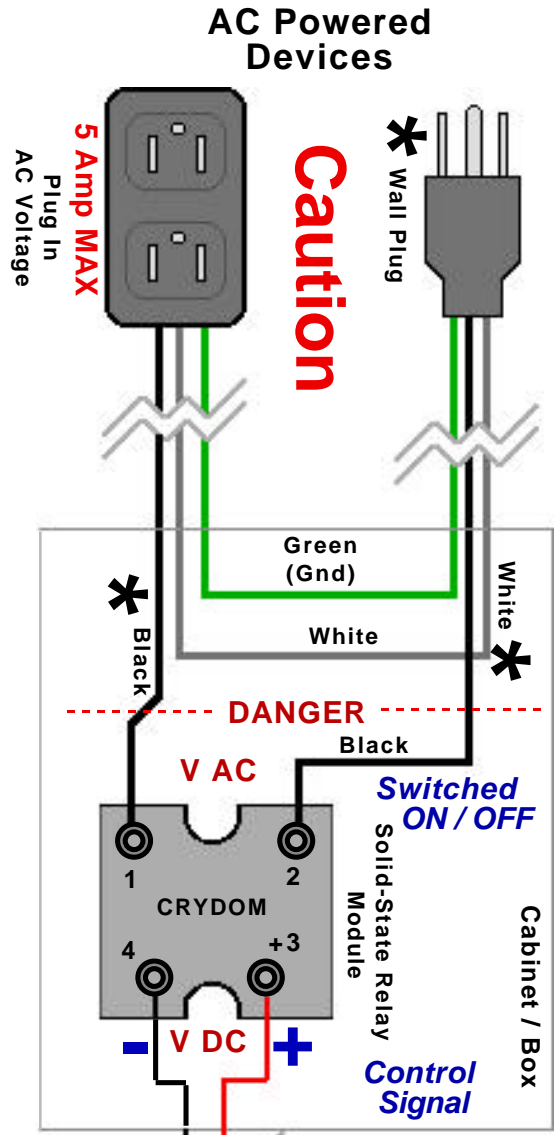
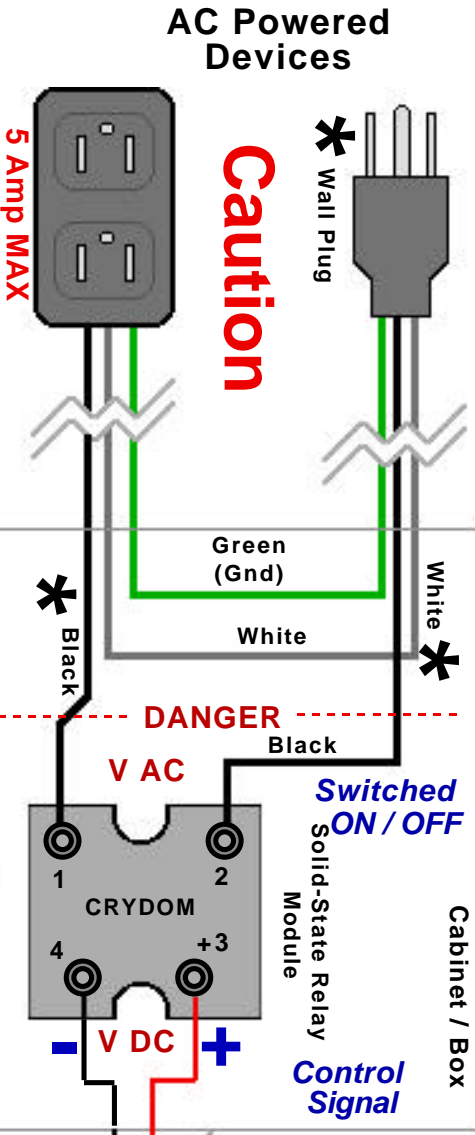
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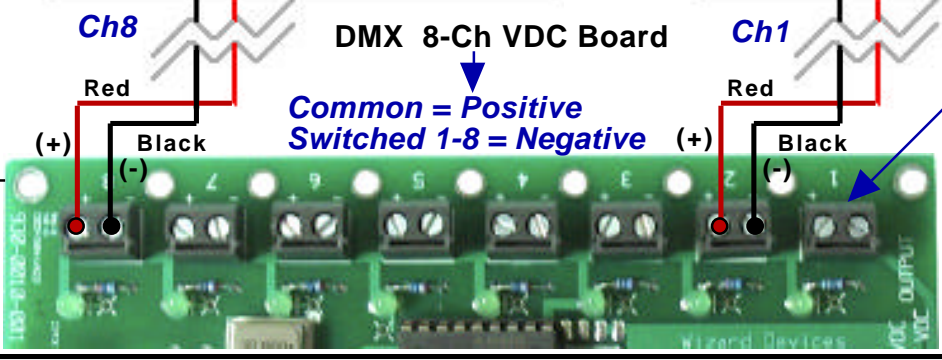


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DMX 8-Ch VDC Board

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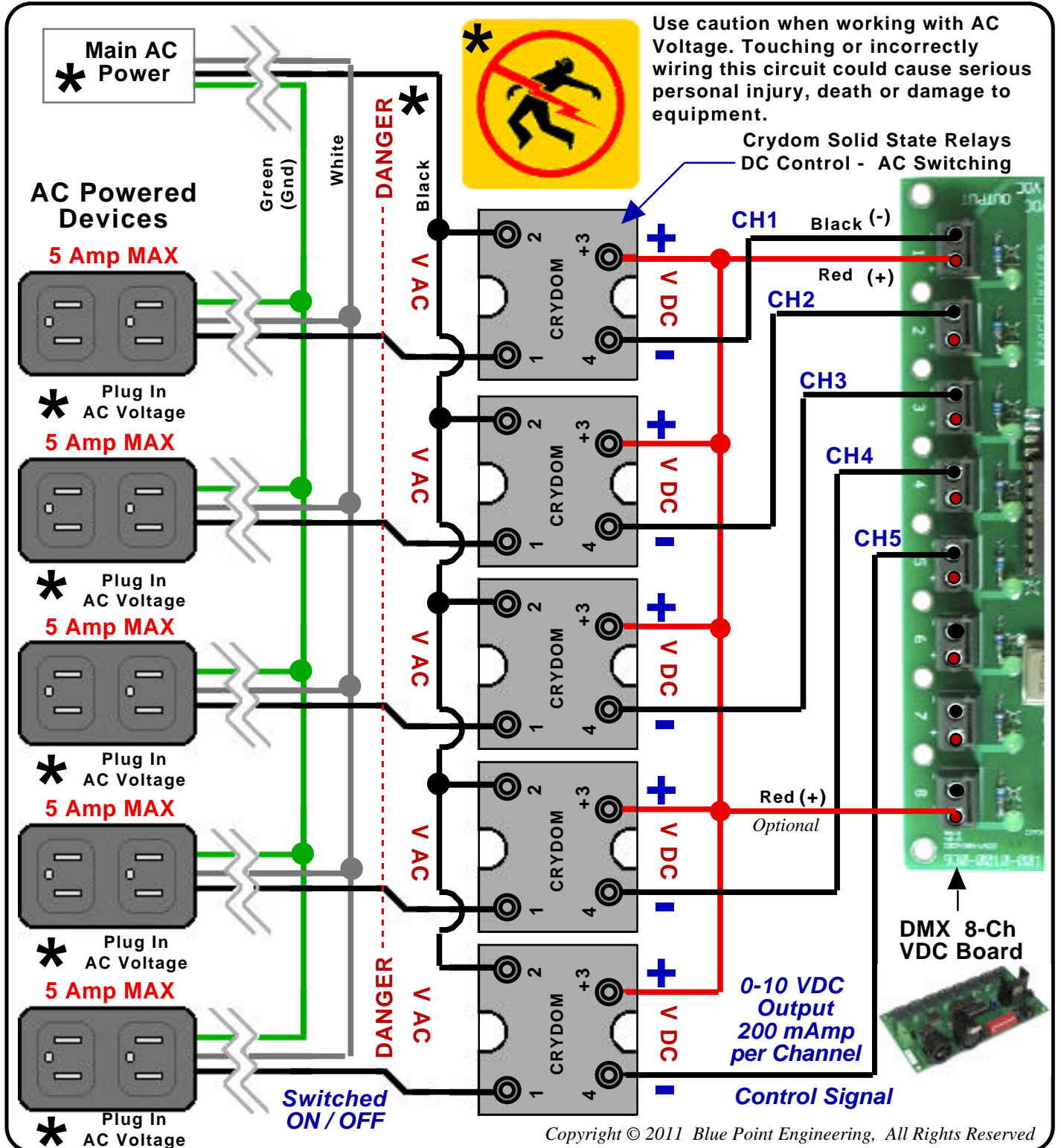


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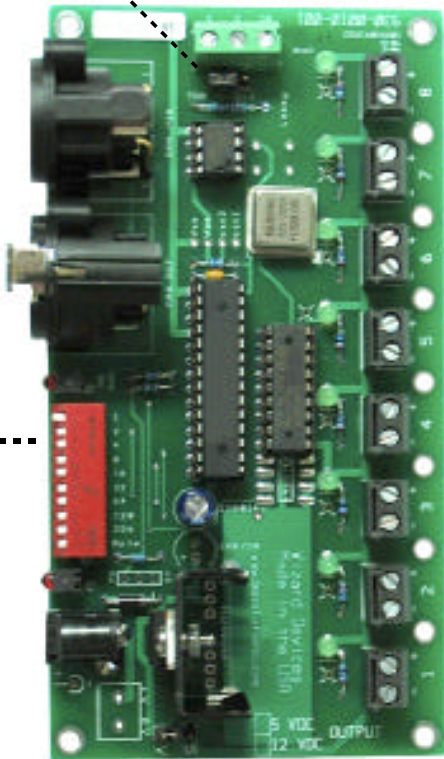
Notes / Worksheet:

0-10 VDC Volts Output at 200 mAmp
 Common = Positive V DC
 Switched ON/OFF Ch1-8 = Negative V DC

DMX RELAY BOARD NO: _____

DMX RELAY BOARD Application: _____

TRM = (ON / OFF) _____



0-10 VDC Output
200 mAmp / channel

Output Application

Addressing

Output -8

Output -7

Output -6

Output -5

Output -4

Output -3

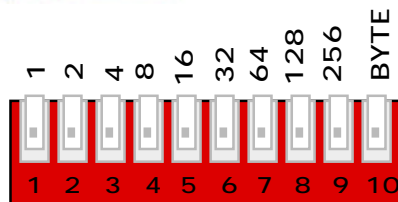
Output -2

Output -1

Value	0	1
	OFF	ON

- SW-1
- SW-2
- SW-3
- SW-4
- SW-5
- SW-6
- SW-7
- SW-8
- SW-9
- SW-10

Addressing



- 1 = Relay ON
- 0 = Relay OFF

Addressing

DMX Position