

LT- 880 DMX512 Decoder

User's Manual



(Please read this manual carefully before use)

Forward

Thanks for choosing our LT-880 DMX512 decoder. Before installation and usage, we strongly recommend you to read through this manual carefully.

After-Sales

From the day you purchase our products within a year, if being used properly in accordance with the instruction, and quality problems occur, we provide free repair or replacement services except the following cases:

1. Any defects caused by wrong operations..
2. Any damages caused by inappropriate power supply or abnormal voltage.
3. Any damages caused by unauthorized removal, maintenance, modifying circuit, incorrect connections and replacing chips.
4. Any damages due to transportation, breaking, flooding water after the purchase.
5. Any damages caused by earthquake, fire, flood, lightning strike etc force majeure of natural disasters.
6. Any damages caused by negligence, inappropriate storing at high temperature and humidity environment or near harmful chemicals.
7. Product has been updated.

Safety warnings

1. Please don't install this controller in lightening, intense magnetic and high-voltage fields.
2. To reduce the risk of component damage and fire caused by short circuit, make sure correct connection
3. Always be sure to mount this unit in an area that will allow proper ventilation to ensure a fitting temperature.
4. Check if the voltage and power adapter suit the controller (please select DC12-24V power supply with constant voltage)
5. Don't connect cables with power on, make sure a correct connection and no short circuit checked with instrument before power on.
6. Please don't open controller cover and operate if problems occur.

The manual is only suitable for this model, any update is subject to change without prior notice.

Product Brief

Thanks for choosing our LT-880 DMX512 decoder, LT-880 DMX512 decoder converts the universal standard DMX512/1990 signal into PWM signal to drive LED. It creates exclamatory, soft&perfect color fade effect by adopting special L-PWM program technology, which makes the LED more colorful and vivid.

I . Product Parameter:

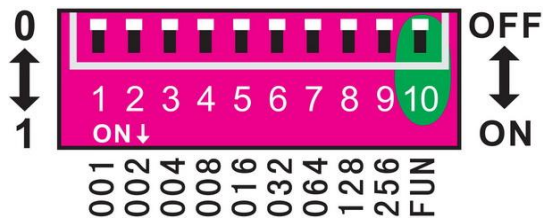
Input Power	DC12V~DC24V
Max current	3A/CH × 24
Max Output power	860W@12V/1720W@24V
Grey scale	256 levels
Signal input	DMX512/1990
Output load	24 CH CV PWM
Temperature range	-30℃—70℃
Product size	L260×W120×H40mm
Package size	L290×W130×H46mm
Weight(GW)	860g

II Basic Features:

1. Special L-PWM program technology, with more functions.
2. 24 output channels, which can connect signal color or RGB full-color lamps
3. 0-100% smooth brightness adjusting, 256 grey steps per channel
4. Universal standard DMX512 input protocol, addresses can be set up by DIP switch.
5. Working voltage from DC12V~DC24V
6. With 10 auto testing modes and 8 speed ajusting modes.

III. Decoder address setting

FUN at “OFF” is DMX512 signal mode FUN at “ON” is auto testing mode



Picture 1

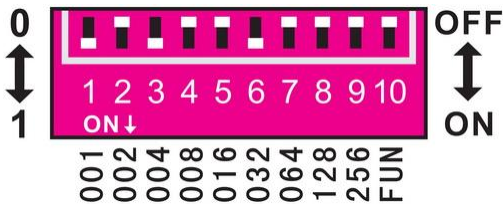
1. DMX initial address setting

FUN at “OFF” (the10th DIP switch is upward) is DMX512 signal mode, pic 1		
DIP Switch	Value	Remark
1	001	This decoder adopts Dip switch to set the address, the Dip switches from 1 to 9 are a kind of binary value coding switches which used for setting DMX512 initial address code, the correlative bits is the 1-9 bits of the DIP switch, the 1 st bit is LSC, the 9 th bit MSC , 511 addresses totally. DMX512 initial address is the total amount of the Dip switches’ number from 1 to 9, press Dip switch downward (ON: at position “1”), user can get the number of its position, if pressing upward (at position “0”), the number of its position is 0.
2	002	
3	004	
4	008	
5	016	
6	032	
7	064	
8	128	
9	256	



Example 1: Set initial address to 37

Set the 1st, 3rd, 6th, bit of the DIP switch downward to “1”, the rest to “0” (picture 2), the summation from 1 to 9 is 1+4+ 32, so the DMX512 initial address code is 37.

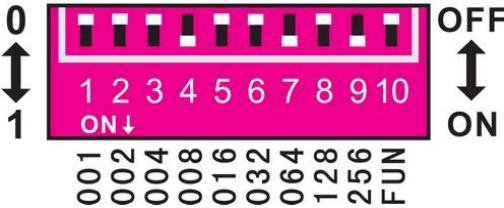


Picture 2



Example 2: Set initial address to 328

Set the 4th, 7th, 9th, bit of the DIP switch downward to “1”, the rest to “0” (as picture 3), the summation from 1 to 9 is 8+64+ 256, so the DMX512 original address code is 328.



Picture 3

2. Testing function

Such as FUN at “ON” (the 10th DIP switch is downward) is testing function.
DIP switch 1-9 at “OFF” is Black

DIP1	DIP2	DIP3	DIP4	DIP5	DIP6	DIP7	DIP8	DIP9
Red	Green	Blue	Yellow	Purple	Cyan	White	Scan	Color changing

0

↑

1

1

2

3

4

5

6

7

8

9

10

ON ↓

OFF

↑

ON

DIP8/DIP9 at “ON” (the 8th/9th DIP switc is downward) is changing mode.

DIP switch 1-7 has 8 levels speed changing, DIP 7 is the fastest speed.

DIP switch 1-7 at “OFF” is speed 0

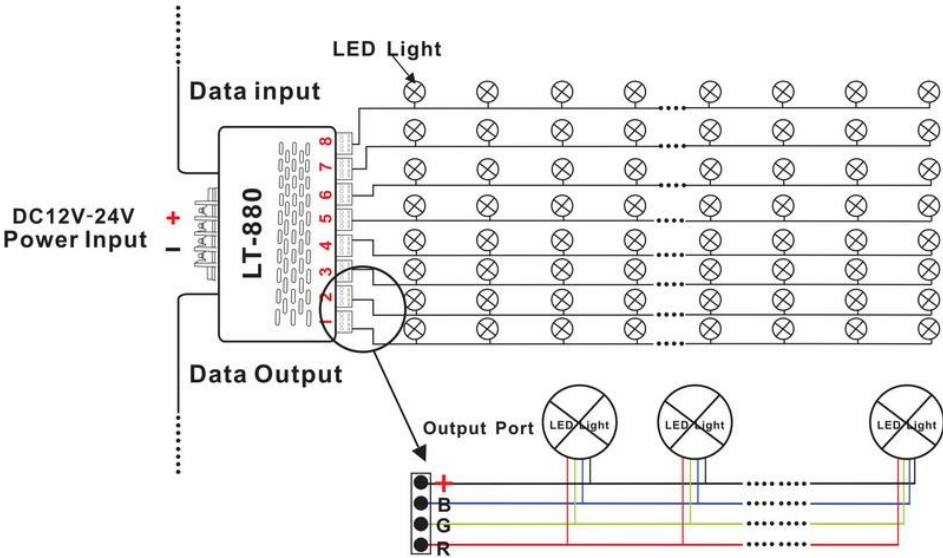
DIP1	DIP2	DIP3	DIP4	DIP5	DIP6	DIP7
Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Speed 6	Speed 7

As the above pic, if several DIP switch at “ON”, it is subject to the maximum value.

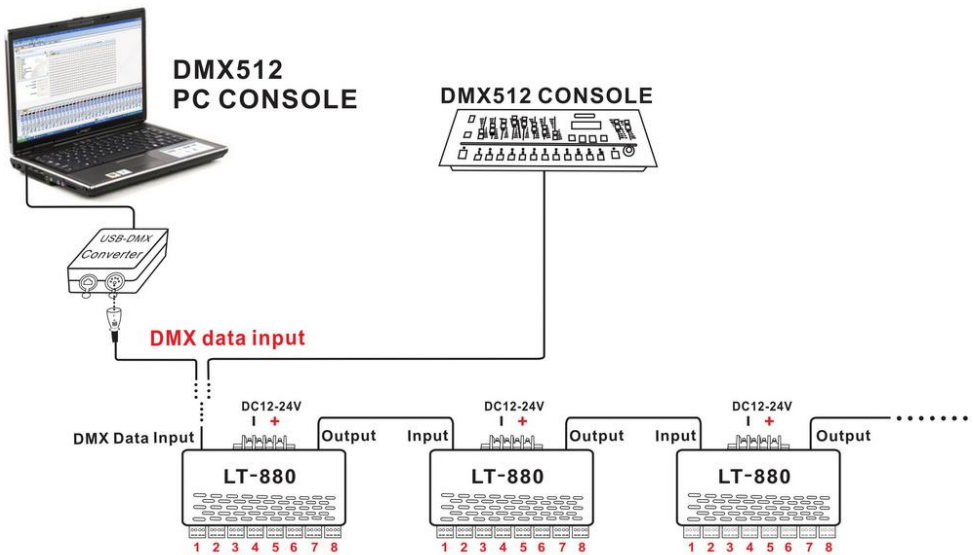
if all DIP switch at “ON”, it is color fade effect of testing function, the speed is 7.

IV . Conjunction Diagram

1. Connecting LED lamp



2. DMX console connection



NOTE: According to DMX512 protocol, in order to ensure a steady DMX data transmission, you should weld a **metalster**(Metal Thin Film resistor, 90-120Ω 1/4 W)at the end of each layout of DMX data cable(between Foot 2 and Foot 3, Data + and Data -), please also refer to your DMX console manual to select a correct resistor.

Appendix: DMX Address Setting Table

DIP SWITCH	DMX ADDR	DIP SWITCH	DMX ADDR	DIP SWITCH	DMX ADDR
123456789	NUMBER	123456789	NUMBER	123456789	NUMBER
100000000	001	100110000	025	100011000	049
010000000	002	010110000	026	010011000	050
110000000	003	110110000	027	110011000	051
001000000	004	001110000	028	001011000	052
101000000	005	101110000	029	101011000	053
011000000	006	011110000	030	011011000	054
111000000	007	111110000	031	111011000	055
000100000	008	000001000	032	000111000	056
100100000	009	100001000	033	100111000	057
010100000	010	010001000	034	010111000	058
110100000	011	110001000	035	110111000	059
001100000	012	001001000	036	001111000	060
101100000	013	101001000	037	101111000	061
011100000	014	011001000	038	011111000	062
111100000	015	111001000	039	111111000	063
000010000	016	000101000	040	000000100	064
100010000	017	100101000	041	100000100	065
010010000	018	010101000	042	010000100	066
110010000	019	110101000	043	110000100	067
001010000	020	001101000	044	001000100	068
101010000	021	101101000	045	101000100	069
011010000	022	011101000	046	011000100	070
111010000	023	111101000	047	111000100	071
000110000	024	000011000	048	000100100	072

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123456789	NUMBER	123456789	NUMBER	123456789	NUMBER
100100100	073	100001100	097	100111100	121
010100100	074	010001100	098	010111100	122
110100100	075	110001100	099	110111100	123
001100100	076	001001100	100	001111100	124
101100100	077	101001100	101	101111100	125
011100100	078	011001100	102	011111100	126
111100100	079	111001100	103	111111100	127
000010100	080	000101100	104	000000010	128
100010100	081	100101100	105	100000010	129
010010100	082	010101100	106	010000010	130
110010100	083	110101100	107	110000010	131
001010100	084	001101100	108	001000010	132
101010100	085	101101100	109	101000010	133
011010100	086	011101100	110	011000010	134
111010100	087	111101100	111	111000010	135
000110100	088	000011100	112	000100010	136
100110100	089	100011100	113	100100010	137
010110100	090	010011100	114	010100010	138
110110100	091	110011100	115	110100010	139
001110100	092	001011100	116	001100010	140
101110100	093	101011100	117	101100010	141
011110100	094	011011100	118	011100010	142
111110100	095	111011100	119	111100010	143
000001100	096	000111100	120	000010010	144

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123456789	NUMBER	123456789	NUMBER	123456789	NUMBER
100010010	145	100101010	169	100000110	193
010010010	146	010101010	170	010000110	194
110010010	147	110101010	171	110000110	195
001010010	148	001101010	172	001000110	196
101010010	149	101101010	173	101000110	197
011010010	150	011101010	174	011000110	198
111010010	151	111101010	175	111000110	199
000110010	152	000011010	176	000100110	200
100110010	153	100011010	177	100100110	201
010110010	154	010011010	178	010100110	202
110110010	155	110011010	179	110100110	203
001110010	156	001011010	180	001100110	204
101110010	157	101011010	181	101100110	205
011110010	158	011011010	182	011100110	206
111110010	159	111011010	183	111100110	207
000001010	160	000111010	184	000010110	208
100001010	161	100111010	185	100010110	209
010001010	162	010111010	186	010010110	210
110001010	163	110111010	187	110010110	211
001001010	164	001111010	188	001010110	212
101001010	165	101111010	189	101010110	213
011001010	166	011111010	190	011010110	214
111001010	167	111111010	191	111010110	215
000101010	168	000000110	192	000110110	216

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DIP SWITCH	DMX ADDR	DIP SWITCH	DMX ADDR	DIP SWITCH	DMX ADDR
123456789	NUMBER	123456789	NUMBER	123456789	NUMBER
100110110	217	100011110	241	100100001	265
010110110	218	010011110	242	010100001	266
110110110	219	110011110	243	110100001	267
001110110	220	001011110	244	001100001	268
101110110	221	101011110	245	101100001	269
011110110	222	011011110	246	011100001	270
111110110	223	111011110	247	111100001	271
000001110	224	000111110	248	000010001	272
100001110	225	100111110	249	100010001	273
010001110	226	010111110	250	010010001	274
110001110	227	110111110	251	110010001	275
001001110	228	001111110	252	001010001	276
101001110	229	101111110	253	101010001	277
011001110	230	011111110	254	011010001	278
111001110	231	111111110	255	111010001	279
000101110	232	000000001	256	000110001	280
100101110	233	100000001	257	100110001	281
010101110	234	010000001	258	010110001	282
110101110	235	110000001	259	110110001	283
001101110	236	001000001	260	001110001	284
101101110	237	101000001	261	101110001	285
011101110	238	011000001	262	011110001	286
111101110	239	111000001	263	111110001	287
000011110	240	000100001	264	00001001	288

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123456789	NUMBER	123456789	NUMBER	123456789	NUMBER
100001001	289	100111001	313	100010101	337
010001001	290	010111001	314	010010101	338
110001001	291	110111001	315	110010101	339
001001001	292	001111001	316	001010101	340
101001001	293	101111001	317	101010101	341
011001001	294	011111001	318	011010101	342
111001001	295	111111001	319	111010101	343
000101001	296	000000101	320	000110101	344
100101001	297	100000101	321	100110101	345
010101001	298	010000101	322	010110101	346
110101001	299	110000101	323	110110101	347
001101001	300	001000101	324	001110101	348
101101001	301	101000101	325	101110101	349
011101001	302	011000101	326	011110101	350
111101001	303	111000101	327	111110101	351
000011001	304	000100101	328	000001101	352
100011001	305	100100101	329	100001101	353
010011001	306	010100101	330	010001101	354
110011001	307	110100101	331	110001101	355
001011001	308	001100101	332	001001101	356
101011001	309	101100101	333	101001101	357
011011001	310	011100101	334	011001101	358
111011001	311	111100101	335	111001101	359
000111001	312	000010101	336	000101101	360

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123456789	NUMBER	123456789	NUMBER	123456789	NUMBER
100101101	361	100000011	385	100110011	409
010101101	362	010000011	386	010110011	410
110101101	363	110000011	387	110110011	411
001101101	364	001000011	388	001110011	412
101101101	365	101000011	389	101110011	413
011101101	366	011000011	390	011110011	414
111101101	367	111000011	391	111110011	415
000011101	368	000100011	392	000001011	416
100011101	369	100100011	393	100001011	417
010011101	370	010100011	394	010001011	418
110011101	371	110100011	395	110001011	419
001011101	372	001100011	396	001001011	420
101011101	373	101100011	397	101001011	421
011011101	374	011100011	398	011001011	422
111011101	375	111100011	399	111001011	423
000111101	376	000010011	400	000101011	424
100111101	377	100010011	401	100101011	425
010111101	378	010010011	402	010101011	426
110111101	379	110010011	403	110101011	427
001111101	380	001010011	404	001101011	428
101111101	381	101010011	405	101101011	429
011111101	382	011010011	406	011101011	430
111111101	383	111010011	407	111101011	431
000000011	384	000110011	408	000011011	432

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123456789	NUMBER	123456789	NUMBER	123456789	NUMBER
100011011	433	100100111	457	100001111	481
010011011	434	010100111	458	010001111	482
110011011	435	110100111	459	110001111	483
001011011	436	001100111	460	001001111	484
101011011	437	101100111	461	101001111	485
011011011	438	011100111	462	011001111	486
111011011	439	111100111	463	111001111	487
000111011	440	000010111	464	000101111	488
100111011	441	100010111	465	100101111	489
010111011	442	010010111	466	010101111	490
110111011	443	110010111	467	110101111	491
001111011	444	001010111	468	001101111	492
101111011	445	101010111	469	101101111	493
011111011	446	011010111	470	011101111	494
111111011	447	111010111	471	111101111	495
000000111	448	000110111	472	000011111	496
100000111	449	100110111	473	100011111	497
010000111	450	010110111	474	010011111	498
110000111	451	110110111	475	110011111	499
001000111	452	001110111	476	001011111	500
101000111	453	101110111	477	101011111	501
011000111	454	011110111	478	011011111	502
111000111	455	111110111	479	111011111	503
000100111	456	000001111	480	000111111	504

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DIP SWITCH	DMX ADDR	DIP SWITCH	DMX ADDR	DIP SWITCH	DMX ADDR
123456789	NUMBER	123456789	NUMBER	123456789	NUMBER
100111111	505				
010111111	506				
110111111	507				
001111111	508				
101111111	509				
011111111	510				
111111111	511				