DMX 15-LED Dimmer 120 A, 20 V

DMX 15-LED Dimmer 120 A, 30 V

DMX 30-LED Dimmer 120 A, 30 V

DMX 30-LED Dimmer 120 A, 100 V

http://www.soh.cz

User's manual

DMX LED DIMMER   Introduction

Universal 30-channel board for controlling the intensity of powerful LEDs, 12 V LED strips, any light sources powered by 1 to 30 V or for controlling other technologies. It is only necessary to connect the board to your power supply (1-30 V) according to the needs of the connected lighting techniques and then the user can control each of the 30 outputs independently through DMX. The initial address is selectable from 1 to 511 (see table DMX addresses).

Warning! To avoid or reduce the risk of electrical shock, or fire, do not expose the dimmer to rain or high humidity.

Please recycle the shipping container of the product, if possible.

DMX LED DIMMER   Package contents

DMX 15-LED Dimmer 120 A, 20 V

Board DMX 15-LED Dimmer

Manual

DMX 30-LED Dimmer 120 A, 30 V

Board DMX 30-LED Dimmer

Manual

DMX 30-LED Dimmer 120 A, 100 V

Board DMX 30-LED Dimmer

Manual

The following picture shows how to connect the cable. The grounding outlet of the XLR connector is not used for grounding. Therefore do not connect the shield to the metal connector cover; it can cause a short circuit or unexpected behavior. The shield should be connected to pin number 1.
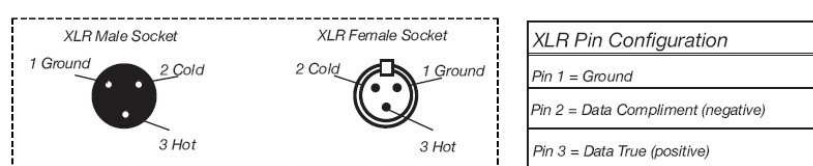

Connection of the DMX512 cable
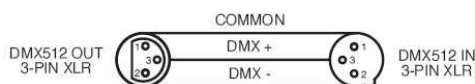
When connecting longer cables, it is necessary to use a terminator (for impedance adaptation of the wiring) at the end of the wiring. Terminator is 120 Ohms resistor, ¼ W connecting pins 2 and 3 on the XLR connector socket (DATA+ to DATA-). The resistor can be soldered in to the XLR socket and connected to the last DMX unit. This lowers the probability of unexpected behavior of units.

Some manufactures use a 5-pin XLR DMX connector for data transfer instead of a 3-pin one. A standard 5-pin XLR connector can be implemented. into a 3-pin one using cable adapter. Connection of pins for a 5 and 3-pin XLR connector is shown in the following table.

Conductor	3-Pin XLR Female	5-Pin XLR Male (In)
Ground	Pin 1	Pin 1
Data Compliment (- signal)	Pin 2	Pin 2
Data True (+ signal)	Pin 3	Pin 3
Not Used		Do Not Use

DMX LED DIMMER   Connection of the RGB LED stripe
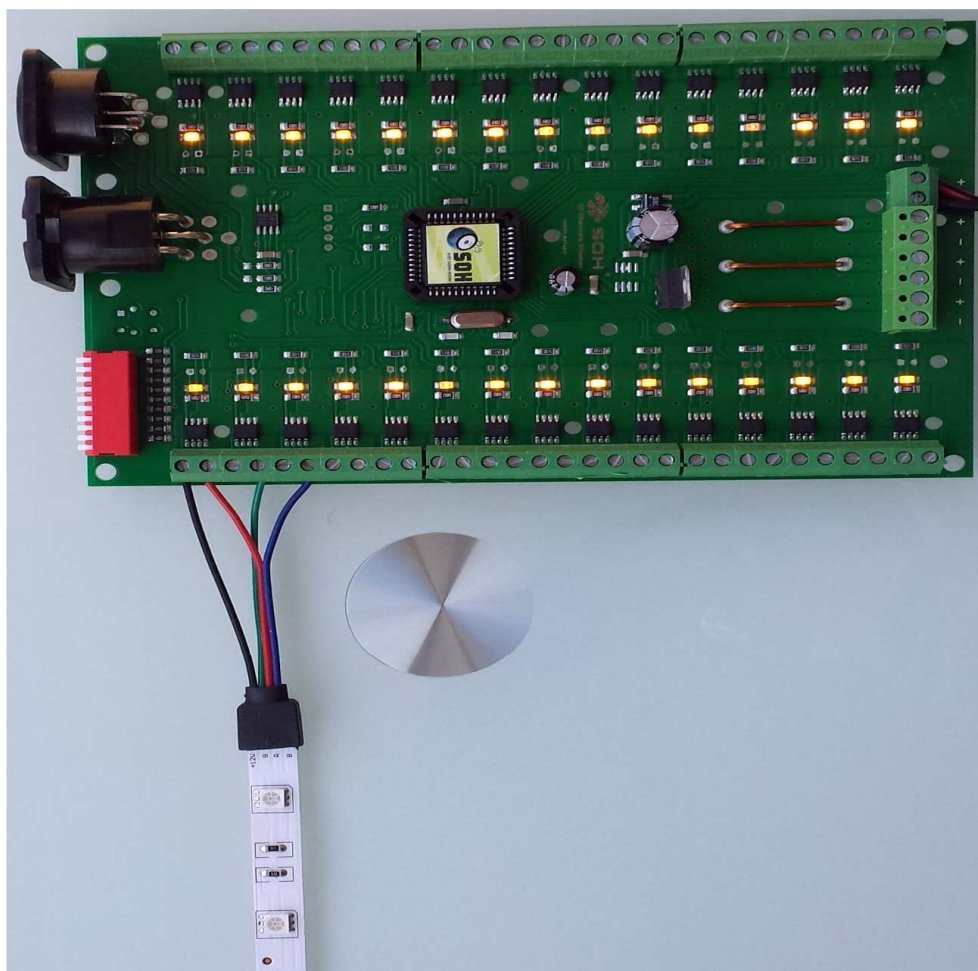
DMX LED DIMMER   Connection of the DMX512 units

Any hardware working with the DMX512 protocol can be connected with the DMX 30-LED DIMMER. Interconnection of the individual modules is done as a data bus, where a terminator has to be connected to the last unit. Do not connect devices in a star topology or other unsuitable one. The control of units is independent and their address is set up according to a table provided by the manufacturer.
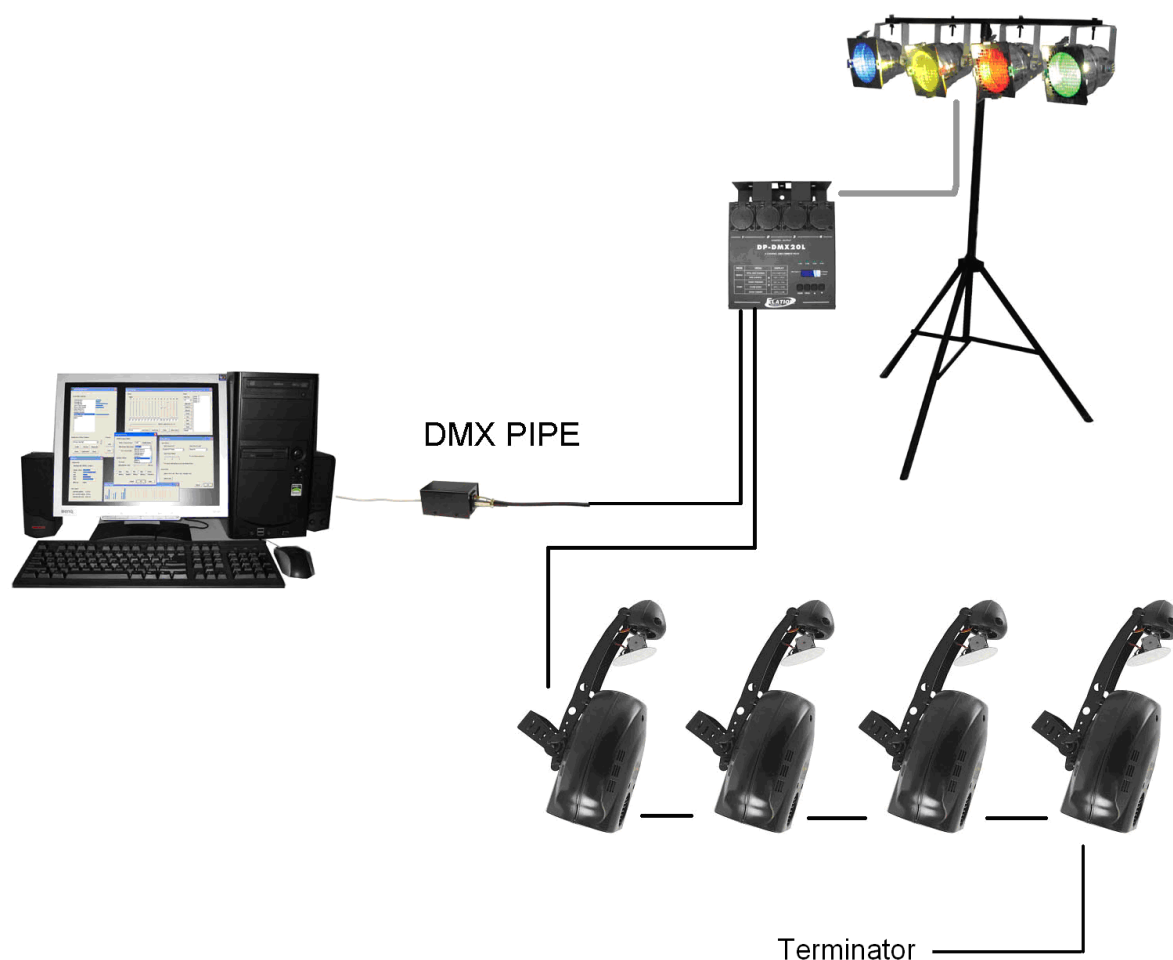
DMX PIPE

Terminator

Diagram of a connection using DMX512

DMX LED DIMMER   Setting of DMX address

The following table shows the values of dip switches for setting the beginning address from 1 to 511. It is necessary to set up the address before switching on the dimmer. The change of address will take effect after the next power-on or resetting the dimmer.

DIP SWITCHES

DMX DIP Switch Settings
X = OFF
O = ON

Dip Switch Position

#9	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O
#8	X	X	X	X	O	O	O	O	X	X	X	X	O	O	O	O
#7	X	X	O	O	X	X	O	O	X	X	O	O	X	X	O	O
#6	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O

Dip Switch Position (#1–#5) / DMX Address

| #1	#2	#3	#4	#5																
X	X	X	X	X		32	64	96	128	160	192	224	256	288	320	352	384	416	448	480
O	X	X	X	X	1	33	65	97	129	161	193	225	257	289	321	353	385	417	449	481
X	O	X	X	X	2	34	66	98	130	162	194	226	258	290	322	354	386	418	450	482
O	O	X	X	X	3	35	67	99	131	163	195	227	259	291	323	355	387	419	451	483
X	X	O	X	X	4	36	68	100	132	164	196	228	260	292	324	356	388	420	452	484
O	X	O	X	X	5	37	69	101	133	165	197	229	261	293	325	357	389	421	453	485
X	O	O	X	X	6	38	70	102	134	166	198	230	262	294	326	358	390	422	454	486
O	O	O	X	X	7	39	71	103	135	167	199	231	263	295	327	359	391	423	455	487
X	X	X	O	X	8	40	72	104	136	168	200	232	264	296	328	360	392	424	456	488
O	X	X	O	X	9	41	73	105	137	169	201	233	265	297	329	361	393	425	457	489
X	O	X	O	X	10	42	74	106	138	170	202	234	266	298	330	362	394	426	458	490
O	O	X	O	X	11	43	75	107	139	171	203	235	267	299	331	363	395	427	459	491
X	X	O	O	X	12	44	76	108	140	172	204	236	268	300	332	364	396	428	460	492
O	X	O	O	X	13	45	77	109	141	173	205	237	269	301	333	365	397	429	461	493
X	O	O	O	X	14	46	78	110	142	174	206	238	270	302	334	366	398	430	462	494
O	O	O	O	X	15	47	79	111	143	175	207	239	271	303	335	367	399	431	463	495
X	X	X	X	O	16	48	80	112	144	176	208	240	272	304	336	368	400	432	464	496
O	X	X	X	O	17	49	81	113	145	177	209	241	273	305	337	369	401	433	465	497
X	O	X	X	O	18	50	82	114	146	178	210	242	274	306	338	370	402	434	466	498
O	O	X	X	O	19	51	83	115	147	179	211	243	275	307	339	371	403	435	467	499
X	X	O	X	O	20	52	84	116	148	180	212	244	276	308	340	372	404	436	468	500
O	X	O	X	O	21	53	85	117	149	181	213	245	277	309	341	373	405	437	469	501
X	O	O	X	O	22	54	86	118	150	182	214	246	278	310	342	374	406	438	470	502
O	O	O	X	O	23	55	87	119	151	183	215	247	279	311	343	375	407	439	471	503
X	X	X	O	O	24	56	88	120	152	184	216	248	280	312	344	376	408	440	472	504
O	X	X	O	O	25	57	89	121	153	185	217	249	281	313	345	377	409	441	473	505
X	O	X	O	O	26	58	90	122	154	186	218	250	282	314	346	378	410	442	474	506
O	O	X	O	O	27	59	91	123	155	187	219	251	283	315	347	379	411	443	475	507
X	X	O	O	O	28	60	92	124	156	188	220	252	284	316	348	380	412	444	476	508
O	X	O	O	O	29	61	93	125	157	189	221	253	285	317	349	381	413	445	477	509
X	O	O	O	O	30	62	94	126	158	190	222	254	286	318	350	382	414	446	478	510
O	O	O	O	O	31	63	95	127	159	191	223	255	287	319	351	383	415	447	479	511

DMX Address

DMX LED DIMMER   Demo mode setting

Setting the 10th pin to ON enables the demo mode. The other dip-switches turn on the demos according to the table. (X = ON, O =OFF):

#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	Describing of demo mode
O	O	O	O	O	O	O	O	O	X	All on
O	O	O	O	O	O	O	O	X	X	Two parallel running outputs
O	O	O	O	O	O	O	X	X	X	Running output back and forth
O	O	O	O	O	O	X	X	X	X	Around running output
O	O	O	O	O	X	X	X	X	X	Gradual rising and falling outputs
O	O	O	O	X	X	X	X	X	X	6 running outputs (direction toggles after one minute)
O	O	O	X	X	X	X	X	X	X	Gradual blending of first and second half of outputs
O	O	X	X	X	X	X	X	X	X	Gradual blending of three segments of outputs (RGB blending)
O	X	X	X	X	X	X	X	X	X	Same as the previous mode + strobe
X	X	X	X	X	X	X	X	X	X	Glowing ember effect
O	O	O	O	O	O	O	O	O	O	Stand-by mode (strobo 2 Hz) – waiting for DMX address

DMX LED DIMMER   Connection of the board connectors

DMX 15-LED DIMMER 120 A   DMX 30-LED DIMMER 120 A   Side 7
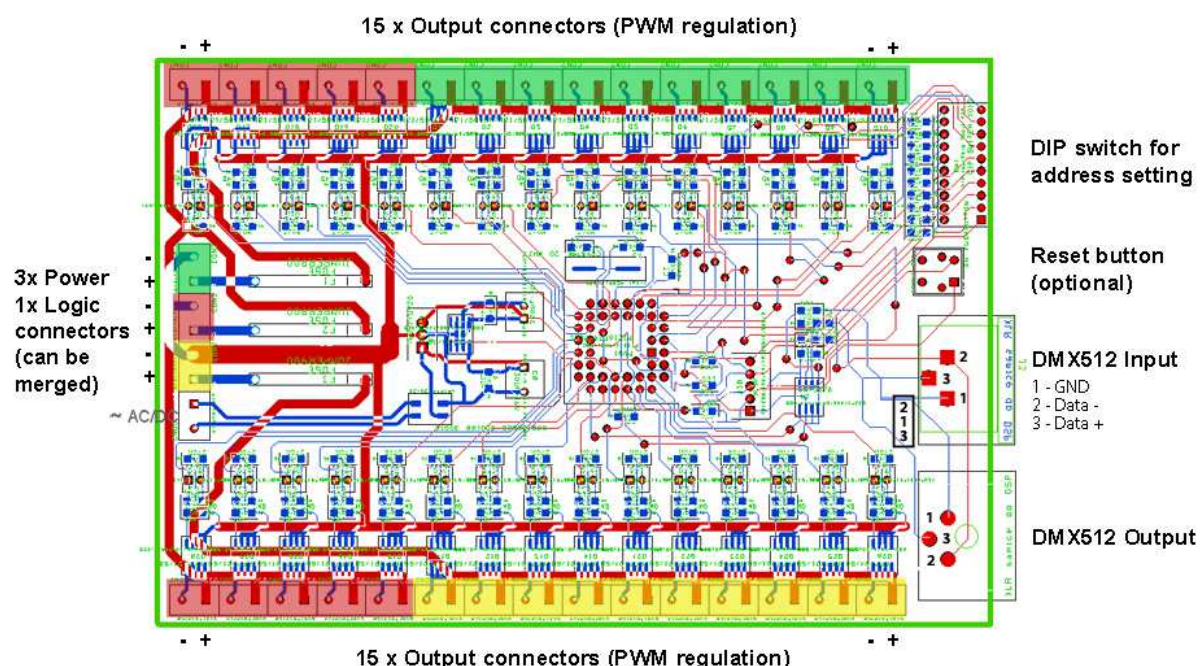
DMX 15-LED Dimmer 120 A, 20 V

- Features: 15 DMX channels with adjustable address
- High power - source: 3x 1-20 V / 40 A (total 120 A)
- Driver power - source: 1x 7 - 30 V / 90 mA
- Power connectors: up to 4 independent power supplies (can be merged)
- Maximum output per channel: 20 A max ~ 400 W (25 A with heatsink, 100 A pulse)
- Total continuous output: max 3x 40 A ~ 2400 W (120 A / 20 V)

DMX 15-LED Dimmer 120 A, 30 V

- Features: 15 DMX channels with adjustable address
- High power - source: 3x 1-20 V / 40 A (total 120 A)
- Driver power - source: 1x 7 - 30 V / 90 mA
- Power connectors: up to 4 independent power supplies (can be merged)
- Maximum output per channel: 70 A max (short-term load)
- Total continuous output: max 30 A / per channel

DMX 30-LED Dimmer 120 A, 30 V

- Features: 30 DMX channels with adjustable address
- High power - source: 3x 1-30 V / 40 A (total 120 A)
- Driver power - source: 1x 7 - 30 V / 90 mA
- Power connectors: up to 4 independent power supplies (can be merged)
- Maximum output per channel: 8 A max ~ 240 W (10 A with heatsink, 40 A pulse)
- Total continuous output: max 3x 40 A ~ 3600 W (120 A / 30 V)

DMX 30-LED Dimmer 120 A, 100 V

- Features: 30 DMX channels with adjustable address
- High power - source: 3x 1-100 V / 40 A (total 120 A)
- Driver power - source: 1x 7 - 30 V / 90 mA
- Power connectors: up to 4 independent power supplies (can be merged)
- Maximum output per channel: 8 A max ~ 800 W (12 A with heatsink, 50 A pulse)
- Total continuous output: max 3x 40 A ~ 12000 W (120 A / 100 V)

- Output control: PWM modulation
- Dimensions: 179 x 147 mm (including detachable clamps)
- Control protocol: DMX512-A (Loxone compatible)
- Special functions: gradual switching PWM for interference suppression
- Demo mode: 10 modes
- Is important to connect the mutual anode electrode (+) when using light sources with the mutual power-source (RGB LED stripes…)