

DCC TURNOUT DECODER MASTER - DIY

IC1	PIC16F628A	1
IC2	6N137	1
IC3	7805	1
IC socket	SOKL08	1
IC socket	SOKL18	1
D1-D9	1N4007	9
D10	1N4148	1
CR1	8MHz	1
C1	100uF/35V	1
C2	100uF/16V	1
T1-T8	TIP121/122	8
R1-R9	1k	9
R10	1k5	1
X1-X4	TB-3.5-P-3P	4
X5, X6	DG306-5.0-2P11	2
X7	DG306-5.0-3P11	1
X8	2 pinhead + cap	1
U1	KBU1010	1
X5	Power supply (12-16V AC/DC)	
X6	DCC	
X7	Output to Slave module	

JUMPER (X8):

Disconnect in case if the slave module is connected and want to change values in CV.

PROGRAMMING:

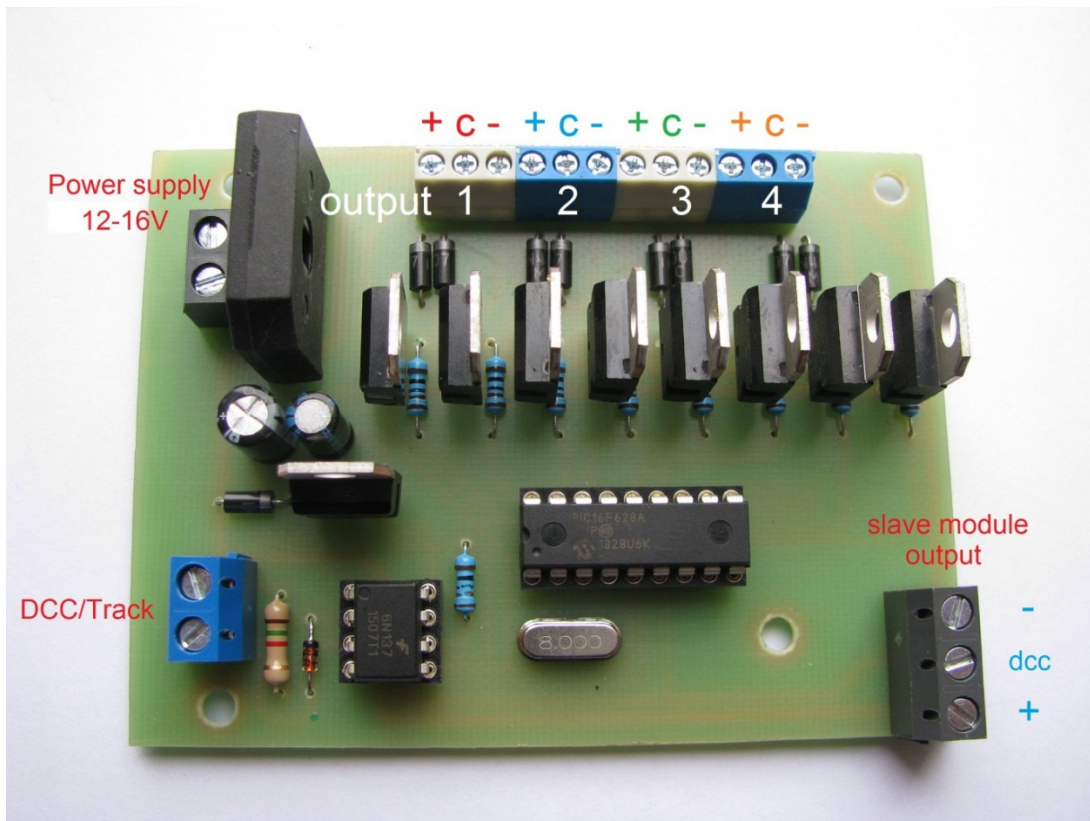
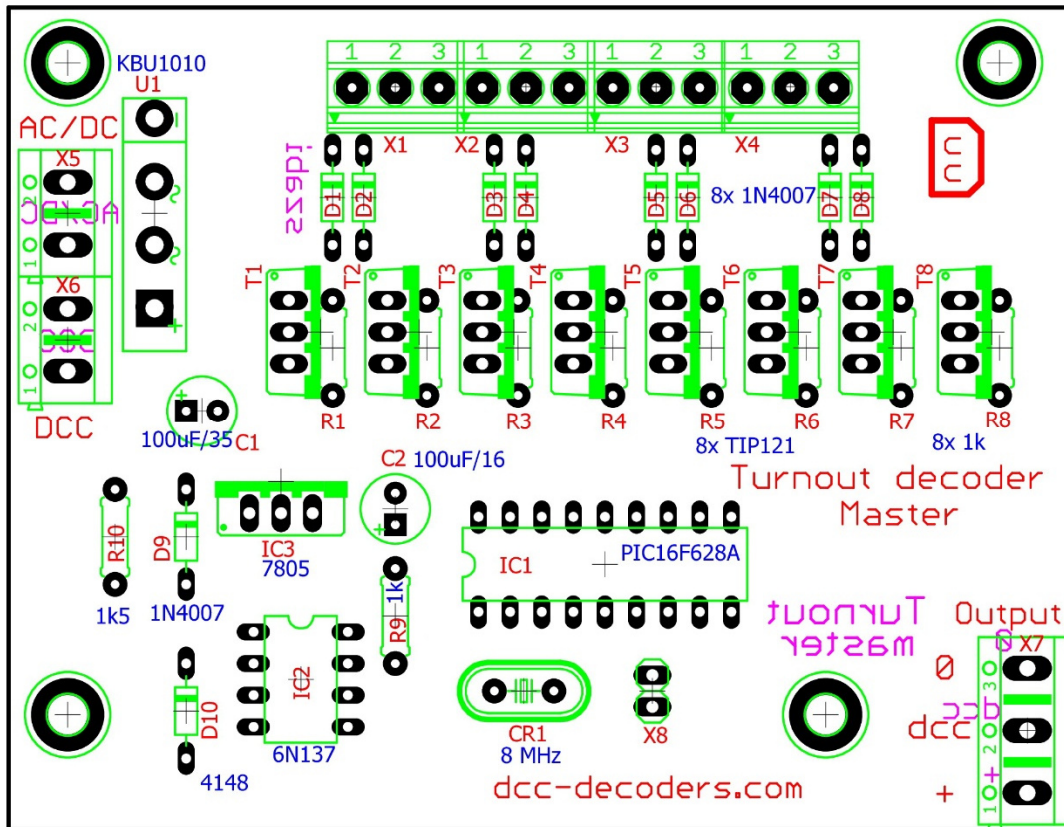
Connect master to Programming track (DCC terminal), remove all Jumpers except module you want to program. Enter value to CV1/CV513 depends on your system (see above). Value 1 means addresses between 1-4, value 2: 5-8, value 3: 9-12, etc (see Table 2).

If the Jumper is disconnected, you can't modify CVs or command device!

CV1	CV2	Values	Default	Description
513	1	1 ... 63	1	Decoder address (low address) – see Table!
515	3	0 ... 255	1	Output time: Out 1 (0-permanent, 1=10ms, 2=20ms, ..255=2,5s)
516	4	0 ... 255	1	Output time: Out 2 (0-permanent, 1=10ms, 2=20ms, ..255=2,5s)
517	5	0 ... 255	1	Output time: Out 3 (0-permanent, 1=10ms, 2=20ms, ..255=2,5s)
518	6	0 ... 255	1	Output time: Out 4 (0-permanent, 1=10ms, 2=20ms, ..255=2,5s)
521	9	0 ... 7	0	Decoder address (high address)

CV1 - „Lenz system” - accessory address over 513

CV2 - „Roco system” - accessory address under 255



CV 513 / CV 1	Outputs no.	CV 513 / CV 1	Outputs no.
1	1,2,3,4	33	129,130,131,132
2	5,6,7,8	34	133,134,135,136
3	9,10,11,12	35	137,138,139,140
4	13,14,15,16	36	141,142,143,144
5	17,18,19,20	37	145,146,147,148
6	21,22,23,24	38	149,150,151,152
7	25,26,27,28	39	153,154,155,156
8	29,30,31,32	40	157,158,159,160
9	33,34,35,36	41	161,162,163,164
10	37,38,39,40	42	165,166,167,168
11	41,42,43,44	43	169,170,171,172
12	45,46,47,48	44	173,174,175,176
13	49,50,51,52	45	177,178,179,180
14	53,54,55,56	46	181,182,183,184
15	57,58,59,60	47	185,186,187,188
16	61,62,63,64	48	189,190,191,192
17	65,66,67,68	49	193,194,195,196
18	69,70,71,72	50	197,198,199,200
19	73,74,75,76	51	201,202,203,204
20	77,78,79,80	52	205,206,207,208
21	81,82,83,84	53	209,210,211,212
22	85,86,87,88	54	213,214,215,216
23	89,90,91,92	55	217,218,219,220
24	93,94,95,96	56	221,222,223,224
25	97,98,99,100	57	225,226,227,228
26	101,102,103,104	58	229,230,231,232
27	105,106,107,108	59	233,234,235,236
28	109,110,111,112	60	237,238,239,240
29	113,114,115,116	61	241,242,243,244
30	117,118,119,120	62	245,246,247,248
31	121,122,123,124	63	249,250,251,252
32	125,126,127,128	...	