Pretty Lights-W/ TVT V2.0

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Never ending, random light show.

There is probably a simpler way to do this, but I wrote this, and then kept adding to it. So now it is just kind of a mess! :)

Step	Label	Addr	Code	Mnem	Comments	
1	**Lights**	000	016		Load B	Pattern hold time counter
2		001	000			
3		002	105		Get Switches	Reads front panel switches (requires mods)
4	Left	003	046		Load E	Pattern shift left counter
5		004	040			
6	A	005	121		Send to Lamps	Lights!
7		006	041		Dec E	
8		007	150		Jump if zero	Go right for a while
9		010	030		go right	
10		011	001			
11		012	002		Rotate Left	Go left
12		013	106		Call Delay	
13		014	055			
14		015	001			
15		016	011		Dec B	
16		017	110		Jump not zero	
17		020	005		"A"	
18		021	001			
19		022	310		Copy A to B	Randomize pattern a little
20		023	105		Get switches	
21		024	211		Add A to B	
22		025	104		Jump	
23		026	005		"A"	
24		027	001			
25	Right	030	046		Load E	Pattern shift Right counter
26		031	070			
27	B	032	121		Send to Lamps	Lights!
28		033	041		Dec E	
29		034	150		Jump if zero	Go Left for a while
30		035	003			
31		036	001			
32		037	012		Rotate Right	
33		040	106		Call Delay	
34		041	055			
35		042	001			
36		043	011		Dec B	
37		044	110		Jump if zero	
38		045	032			
39		046	001			
40		047	310		Copy A to B	Randomize again
41		050	105		Get switches	
42		051	211		Add A to B	
43		052	104		Jump	
44		053	005			
45		054	001			
46	Delay	055	026		Load C	
47		056	006			
48	Loop 3	057	036		Load D	
49		060	000			**Screen dazzle** loads 256 bytes of data stored
50	Loop 2	061	031		Dec D	on page 002, and sends to the Digital Group
51		062	110		Jump not zero Loop 2	TVT. The output start address is randomized
52		063	061			somewhat, and provides a shifting video out
53		064	001			display. Keep the routines in even if you don't
54		065	021		Dec C	have a TVT, it makes for a better light show!
55		066	110		Jump not zero Loop 3	If you have a TVT, load page 002 with some
56		067	057			stars, a little text, or whatever, & go!
57		070	001			
58	**Screen dazzle**	071	074	CPI	Compare A with	
59		072	200			Frequency of screen updates, Lower=More
60		073	043	RTC	Return if carry set	

61		074	320	LCA	Load C with A	Save contents of A in C
62		075	056	LHI	Load H with screen page	Page location of screen data
63		076	002			
64		077	360	LLA	Set start location randomly	
65	GETCHAR	100	307	LAM	Load A with data	Get a character from data mem
66		101	123	OUTa	Send to screen	
67		102	250	XRA	Clear A	
68		103	123	OUTa	Send to screen	
69		104	060	INL	Increment next get addr	
70		105	302	LAC	Where did we start?	
71		106	276	CPL	Compare with where we are	
72		107	110	JFZ	Jump not done yet GETCHAR	
73		110	100			
74		111	001			
75		112	007	RET	Return	