TCS

Backed by our famous "GOOF-PROOF" Warranty

1004 FL4

Scale	Functions	Function Rating
All	4	200 mA

Dimensions .556"x.356"x.12" or 14.17mm x 9.06mm x 3.06mm

This Function only decoder is designed to add extra lighting functions for any scale where extra lighting functions are needed. These decoders are commonly used to add smoke coils, firebox flicker, or ditch and step lights.
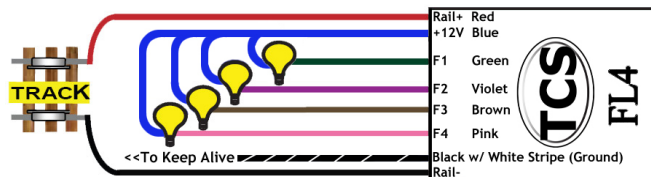
Light Function Wires

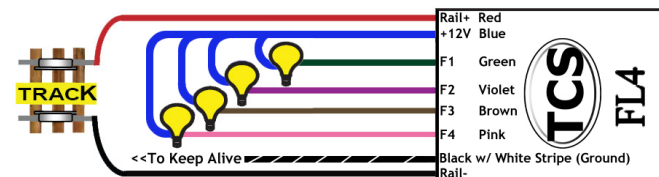| CV #	Def't	Wire Color	F#
CV 51	32	Green	F1
CV 52	32	Violet	F2
CV 53	32	Brown	F3
CV 54	32	Pink	F4

Rule 17 Dimming Control

Rule 17 Dimming is turned on and off by button 4 as the default, but this value can be remapped via CV 123. See the Function Remapping guide in the lighting section of docs.tcsdcc.com for more info.

Available Lighting Effects	fwd	rev	both
Constant Bright Light	0	16	**32**
Random Flicker (fire box) 1	1	17	33
Mars Light	2	18	34
Flashing Light	3	19	35
Single Pulse Strobe	4	20	36
Double Pulse Strobe	5	21	37
Rotary Beacon	6	22	38
Gyra Light	7	23	39
Rule 17 (dimmable light)	8	24	40
Ditch Light (Left or Right)	10	26	42
Ditch Light (Other side)	11	27	43
Constant Dim Light	12	28	44
Brake Light(s)	14	30	46
MORE ITEMS NOT SHOWN!			

WIRING DIAGRAM

TRACK
<<To Keep Alive

Rail+ Red
+12V Blue
F1 Green
F2 Violet
F3 Brown
F4 Pink
Black w/ White Stripe (Ground)
Rail-

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BASIC CONFIGURATION

CV 29 Configuration

A	0	1	Reverse the direction the engine runs.
B	4	4	Enable analog (DC) operation.
C	0	32	Make the decoder address 128 or higher.
CV 29	6		⟵ **Program the sum of the values you choose into CV 29**

2 Digit Address   Use if the address is 127 or less.

CV 1	3	⟵ Record your choice here.

4 Digit Address   **Make sure 4-digit Addressing is enabled in CV29**

CV 17	0	⟵ Record your four digit address here
CV 18	0	Your command station will assign the values of CV 17 and CV18

Consist Address   **Add 128 to reverse the loco when in consist.**

CV 19	0	Use a 2 digit address when in a consist (Multiple units).

Decoder Lock

CV 15	0	All unlocked = **0**	Decoder to unlock = **1 - 6**		All locked = **7**
CV 16	1	Mobile = **1**	Sound = **2**	Light Only = **3**	4	5	6

To unlock a decoder, make CV 15 = 0 or CV 15 = CV 16. To lock a decoder, make CV 15 not equal to CV 16. To lock all same address decoders, make CV 15 = 7.

Factory Reset

CV 8	153	Program a value of 2 or 8 to perform a Factory Reset.

For more information on decoder features or programming visit:
www.tcsdcc.com and check out the **Complete Programming Guide**.

NOTE: **When attempting to read back CV's on the programming track the FL4 must have a 50-100 ohm resistor in series between the blue wire and any of the light function wires.**

WARRANTY PROCEDURE: All decoders are covered by a one-year warranty. **This decoder must be returned in a small box.**
1. For registration, more details, and disclaimers, visit tcsdcc.com/warranty
2. Print out a copy of the Warranty Registration and include it in the box
3. Return decoder(s) directly to TCS using the address below.

Compatible with NMRA DCC standards   Designed & Built by TCS in the USA

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