RR-CirKits
Specializing in Affordable Electronics for Model Railroads

FOB-C
Fan Out Board, Dual Direct

User's Guide

I/O Modules

All RR-CirKits Tower Controller I/O modules are designed to either be plugged directly into the TC-64, or else mounted in Tyco 3-1/4" Snap-Track® mounted to the bench work and connected with short ribbon cables. (Snap-Track® is a plastic channel designed to mount PC cards to a chassis, not something to run trains on.) This I/O module is equipped with two connectors to facilitate these connections.
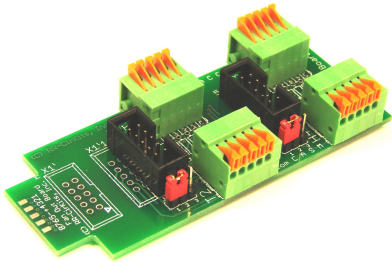
FOB-C (Fan Out Board, Dual Direct)

The FOB-C is designed as a simple way to connect two flat ribbon cables to individual wires. The FOB-C board contains two each 10 pin headers and four 5 line compression connectors. Each compression connector has outputs for C1 (Common) and 4 of the input lines. The wiring on the board includes two jumper positions to select either ground or plus voltage for the common connections.

The output compression connectors used on this board allow connections with wire from #18 AWG to #40 AWG. For the smaller wire sizes or for stranded wires, first press back on the orange lever to release, then carefully poke home the wire. Release the lever, and gently pull on the wire to be sure that it was captured properly.
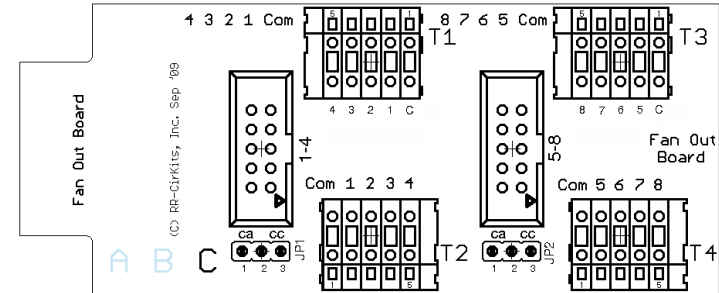
Connections

There are two ribbon and four wire connectors on the FOB-C board. The 10 pin headers are for the flat ribbon cable connections used by the TC-64, SMD-8, and Plant Controller boards. Two male header connections are provided, and may be used as required. The wire connectors include two 5 position compression connectors for each 10 pin header.
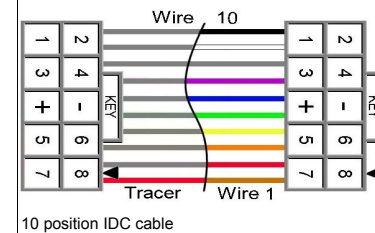
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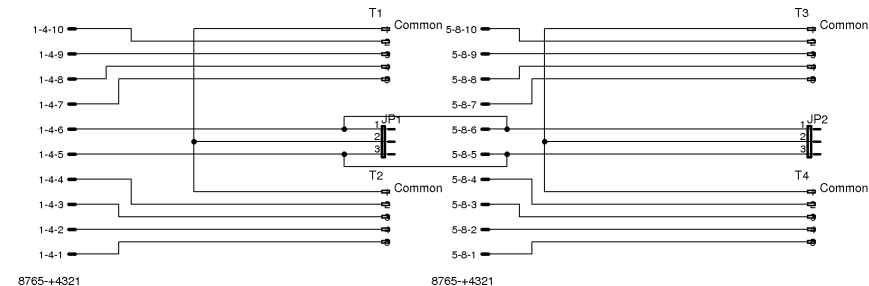
FOB-C Connector Identification

Input Connector Pin Descriptions

The port connector wiring is as follows.

Pin number	Connection 1-4	Connection 5-8
1	h (line 8)	h' (line 8)
2	g (line 7)	g' (line 7)
3	f (line 6)	f' (line 6)
4	e (line 5)	e' (line 5)
5	Ground (cc) JP1 & JP2	See Warning!
6	+VDC (ca) JP1 & JP2	See Warning!
7	d (line 4)	d' (line 4)
8	c (line 3)	c' (line 3)
9	b (line 2)	b' (line 2)
10	a (line 1)	a' (line 1)

10 position IDC cable

Output Header Descriptions

The Output wiring is shown below.

Pin number	Connections
T1-Com	Common 1-4
T1-1	a (line 1)
T1-2	b (line 2)
T1-3	c (line 3)
T1-4	d (line 4)
T2-Com	Common 1-4
T2-1	e (line 5)
T2-2	f (line 6)
T2-3	g (line 7)
T2-4	h (line 8)
T3-Com	Common 5-8
T3-5	a' (line 1)
T3-6	b' (line 2)
T3-7	c' (line 3)
T3-8	d' (line 4)
T4-Com	Common 5-8
T4-5	e' (line 5)
T4-6	f' (line 6)
T4-7	g' (line 7)
T4-8	h' (line 8)

Note: The commons for T1 and T2 are controlled by JP1. T3 and T4 are controlled by JP2. Add a jumper to 'cc' (2-3) for common ground, or 'ca' (1-2) for common plus voltage.

Warning! Do NOT connect two ribbon cables from different devices to the FOB-C at the same time! This will short their power connections and damage to one or both devices could occur! Two cables originating from the same device or I/O board are OK.

RR-CirKits Contact Information