RR-CirKits

Specializing in Affordable Electronics for Model Railroads

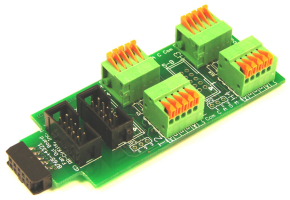
FOB-B

4 Head Signal Demultiplex Board

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 three connectors to facilitate these connection options and allow for pass through wiring.



FOB-B (4 Head Signal Demultiplex Board)

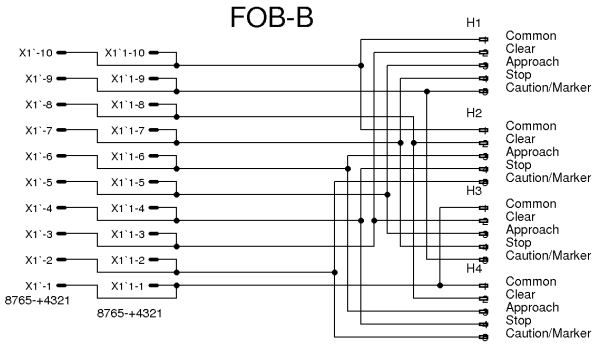
The FOB-B board contains 4 five output compression connectors. Each compression connector has outputs for: Com (Common), C (Clear), A (Approach), S (Stop), and M (Marker). The wiring on the board decodes the 10 wire multiplexed signal from a 4ASD-4 signal driver into 4 signal heads.

The output compression connectors used on this board allow connections to wire from #18 AWG to #40 AWG. For the smaller wire sizes, first press back on the orange lever to release, then poke home the wire. Release the lever, and gently pull on the wire to be sure it was captured properly. The FOB-B includes a pass-through ribbon cable connector for adding a second FOB-B for demultiplexing the full 24 lamp output of the Plant Controller board. This connector also allows use of a tandem FOB-B where signal heads on the same 4ASD-4 are not located close to each other.

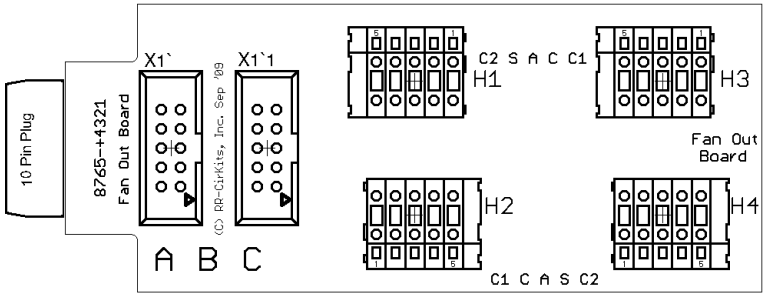
Connections

There are three inputs and four output connectors on the FOB-A board. The first three input connections are the multiplexed 10 pin cable connections output by the 4ASD-4 and Plant Controller boards. A female plug and two male header connections are provided, and may be used as required. The outputs are 5 position compression connectors for each signal head. Warning, if your signals are wired common to the mast, then you must be sure that they use the same common connections.

For use with the Plant Controller (24 output) use the C/M (Caution/Marker) 'C2' connections as the LED commons on the 2nd FOB-B. (See * Note:)



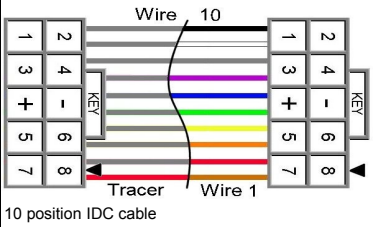
Connection Identification



Input Connector Pin Identification

The port connector wiring is as follows.

Pin number	*Connection*
1	C1 (B Common 3,4)
2	C2 (2,4) [D Common]
3	Clear (1,3)
4	Stop (2,4)
5	Approach (1,3)
6	Approach (2,4)
7	Stop (1,3)
8	Clear (2,4)
9	C2 (1,3) [C Common]
10	C1 (A Common 1,2)



10 position IDC cable

Output Headers Connection

The Output wiring is shown below.

Pin number	*Connections*
H1-1	Common A
H1-2	Clear
H1-3	Approach
H1-4	Stop
H1-5	C/M (C2) [Common C]
H2-1	Common A
H2-2	Clear
H2-3	Approach
H2-4	Stop
H2-5	C/M (C2) [Common D]*
H3-1	Common B
H3-2	Clear
H3-3	Approach
H3-4	Stop
H3-5	C/M (C2) [Common C]*
H4-1	Common B
H4-2	Clear
H4-3	Approach
H4-4	Stop
H4-5	C/M (C2) [Common D]

* Note: The commons for C and D (used only on a 2nd daisy chained board) do not line up on connectors 2 and 3. Use the common at H3-5 for H2 and use the common at H2-5 for H3 when connecting a second FOB-B board to a Plant Controller. This is due to the dual use of these lines as Marker/Caution on four head 4 aspect systems and as C2 (Common 2) on eight head 3 aspect systems such as the Plant Controller.

RR-CirKits Contact Information

RR-CirKits, Inc.
7918 Royal Ct.
Waxhaw, NC USA 28173

http://www.rr-cirkits.com
sales@rr-cirkits.com
service@rr-cirkits.com
1-704-843-3769
Fax: 1-704-243-4310

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