

Ends shall be 1X6 birch or equivalent to provide C-clamping to adjacent modules. Ends are to be 24 inches wide. Roadbed to be 1/4 cork or equivalent on 1/2 inch plywood or equivalent, braced to prevent sag or flexing. The module (set) shall have at least four legs and stand alone. Nominal and Minimum height of railhead from the floor is 50 inches. Maximum height of rail is to be 62 inches. On modules with grades, the elevation of the high end shall be some multiple of 3/4 inch above low end. Legs shall have adjustment of pins or minus 1/2 inch. The bottoms of the legs shall have rubber tip or equivalent floor protection. Mainline maximum grade is 2.0 percent (1/4 inch per foot) with the track level for 6 inches from each end. Vertical curves shall be appropriate for mainline operation of contemporary long cars. Modules may be used with spectators on either side.

Track

Track shall be code-83 nickel-silver flex or handrail. Minimum radius is 42 inches with at least 12 inches of straight track between reverse curves. Mainline turnouts shall be at least #6. At the ends of the module, the track shall be centered on the 24 inch width, perpendicular to the end, also straight and level for 6 inches from each end of the module. Rail shall be cut off 1 inch away from module end; ties and ballast shall be continued to the module end for good appearance and matching with the adjacent module. Free-mo end plates are recommended for ends.

Wiring

Turnouts shall not rely on points to power frog. Wire shall be #18 or larger stranded. Feeder wire can be of 24 gauge or heavier. There shall be a 4 (or more) position barrier strip at each end under the module for wire hook-up.

Wiring consists of 4 separate bus wires and 6 conductor DCC Digirax Loconet bus. All ends have a pair of male and female 2 pin Jones plug (Part Number P-302-CCT and S-302-CCT) for the mainline, a single 2 pin trailer plug, Radio Shack (PN 270-026) for the accessory power, and a surface mount 6 conductor RJ12 box mounted to inside of module 1X6 end.

Mainline wiring is as follows for Jones plugs (must be facing module end for correct perspective):

Male pin 2 right rail, male pin 1 left rail. Female pin 2 left

rail, female pin 1 right rail. The same wiring situation would be found for the other end(s).

Accessory power is wired straight through. A bridge rectifier and filtering capacitor may be used to convert AC or DCC signal to DC. Applications that require AC or DCC signal may utilize power directly from the bus.

6" Straight and Level

Each module needs

1" Rail Setback

3/8" Subroadbed to top of rail

6" a RJ12 Loconet connection point, one on every end, mounted on the inside of the module, and one dual flush mount 6 conductor RJ12 facoplate mounted on each exposed side of module, for throats.

All of the Loconet connectors and associated cables need to be connected together straight through (i.e. pin 1 - pin 1, pin 2 - pin 2, pin 3 - pin 3, etc.) *Note* standard telephone cables are NOT wired straight through).

To connect the DCC bus between modules, a 2 foot RJ12 to RJ12 cable is utilized.

To connect a DCC booster to a module, a 4 foot RJ12 to RJ12 cable is utilized. A 4 foot cable with one female and one male 2 pin Jones plug on one end, plugged between interfacing modules, connected to the output of the booster.

Control
Digirax DCC and accessories are standard for interoperability among Free-mo clubs. For more information about Technical specifics consult Digirax website.

CINCH Jones Plugs & Sockets

No.	Description	A	B	C	D	E	Digit-Key Part No.	1	25	50	100	250	500	Cinch Part No.
2	Plug	17.55	24.21	9.53	9.12		CJ106S-ND	2.83	50.91	90.87	164.40	380.45	788.84	P-302-CCT
3	Plug	26.26	11.99	24.21	7.95	9.12	CJ106P-ND	2.88	54.80	89.68	160.15	427.86	796.67	P-303-CCT
4	Plug	19.96	18.39	24.21	9.53	11.91	CJ104P-ND	3.24	61.64	112.13	202.65	481.29	896.42	P-304-CCT
6	Plug	26.31	18.39	27.38	11.13	12.29	CJ106P-ND	3.51	66.90	121.51	219.60	521.55	973.56	P-306-CCT
2	Socket	17.55	24.21	9.53	9.12		CJ106S-ND	2.83	50.91	96.78	174.30	418.39	773.39	S-302-CCT
3	Socket	26.26	11.99	24.21	7.95	9.12	CJ106S-ND	3.25	61.67	112.55	203.40	483.08	901.74	S-303-CCT
4	Socket	19.96	18.39	24.21	9.53	11.91	CJ104S-ND	3.29	62.60	113.88	205.80	488.78	912.38	S-304-CCT
6	Socket	26.31	18.39	27.38	11.13	12.29	CJ106S-ND	3.75	71.31	129.73	234.45	556.82	1039.40	S-306-CCT

*The contact "Jaws" connector is round, all others are rectangular.

Features:

-Finger tip terminals with 2.0mm x 1.5mm wiring holes.

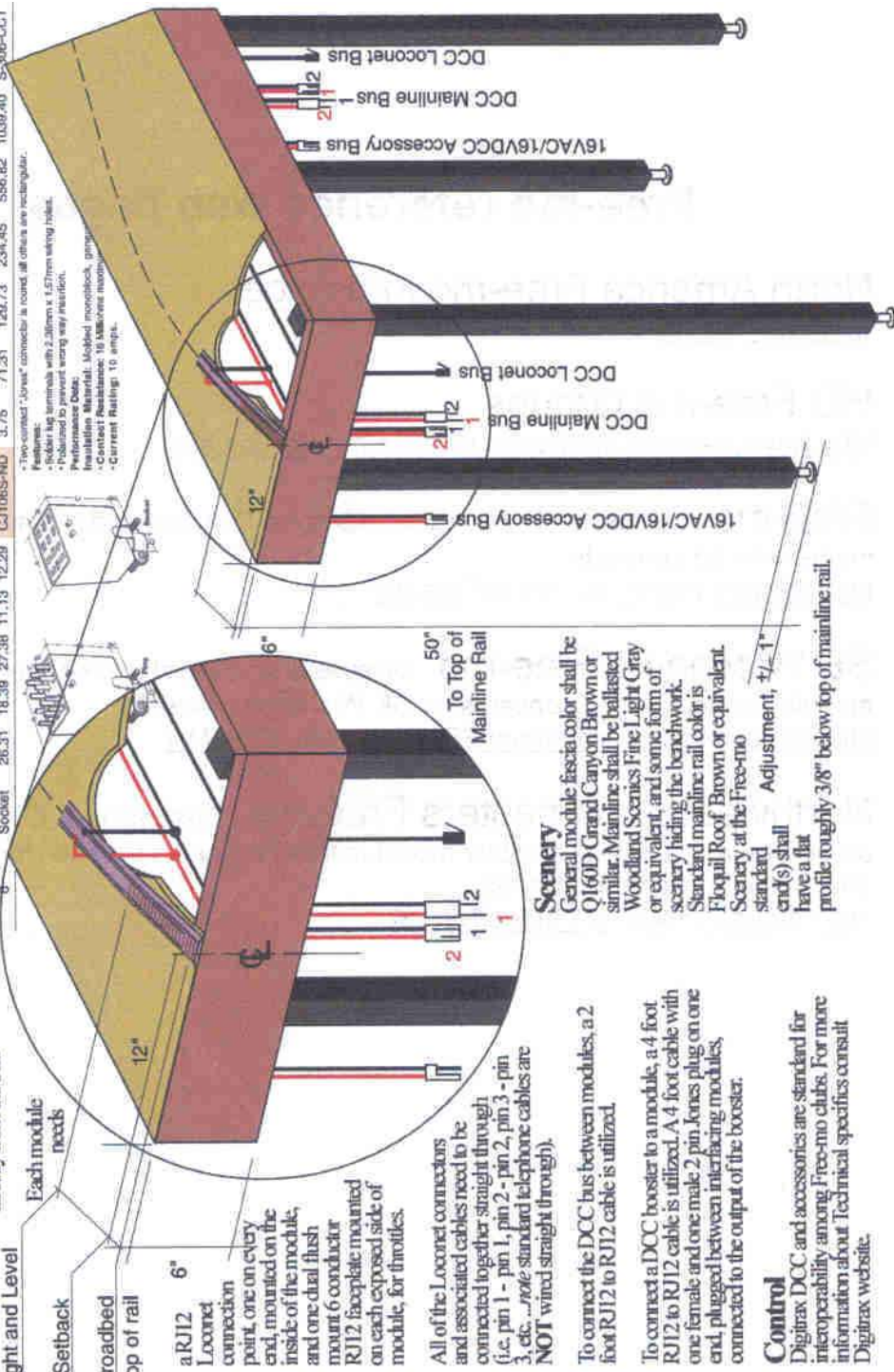
-Published to prevent wrong way insertion.

-Performance Data:

-Material: 100% Molded, non-toxic, flame retardant.

-Current Rating: 10 AMP/1000VAC.

-Current Rating: 10 AMP.



Scenery

General module fascia color shall be Q160D Grand Canyon Brown or similar. Mainline shall be ballasted Woodland Scenics Fine Light Gray or equivalent, and some form of scenery hiding the benchwork. Standard mainline rail color is Floagall Roof Brown or equivalent. Scenery at the Free-mo standard Adjustment, +/- 1" end(s) shall have a flat profile roughly 3/8" below top of mainline rail.

Free-mo reference web pages

North America Free-mo info page

www.free-mo.org

HO Free-mo Groups

<http://www.trainweb.org/freemoslo/Free-mo-Groups.htm>

Free-mo · Discussion in English of HO scale Free-mo and Fremo modular model railroad concepts.

<http://groups.yahoo.com/group/Free-mo>

SE Wisconsin Free-mo · Discussion in English of HO scale Free-mo modular model railroad concepts for SE Wisconsin Free-Mo

<http://groups.yahoo.com/group/SE-Wisconsin-Free-Mo/>

Northwest Trainmasters Free-mo · Discussion in English of HO scale Free-mo & NMRA modular model railroad concepts for The Northwest Trainmasters (Northern Illinois)