SLOMRA.org

G-Scale Module Standard

1.0 Introduction

Large Scale Train Modules (LSTM) have become one of the most popular attractions at public events. Their size and variety are very eye catching and hold peoples interest for long periods of time. With a LSTM standard, anyone can build one of these modules at home and take it to a show or club and join in the fun. If you move to a different part of the country you will not have to rebuild.
The basic concept of these LSTM standards is simplicity. Easy to build and maintain. Each LSTM can be detailed as an expression of the builder's talents and interests. By building several LSTMs, an individual can create a large scene over multiple connecting LSTMs.

This is a standard used by several clubs; Central Connecticut 'G' Gaugers, Del Oro Pacific Large Scale Modular Railroad, Friends and Family Lines in Florida, Hostler Model Railroad Club of Northern Utah, Karl Abbott, Abbott Railroad, Rick Henderson, Mystic Springs Railway, New Hampshire Garden Railway Society, Lancaster & Northwestern Railroad, Midwest RAILS, Chicago area, Grand Rapids Modular Railroad Group, and the Tulsa Garden Railroad Club Modular.

2.0 Large Scale Trains Modules (LSTM) Construction

The Large Scale Trains Modules (LSTM) standard was the original module designs by Gerry Reynolds of California who passed away in 1998. These descriptions and drawings were created by Rick Henderson, Mystic Springs Railway

These standards are for two tracks, creating two operating loops. The three most critical measurements are LSTM width of 47 3/16", table top height of 40" from floor to top of plywood, and center line of the tracks being located 4" from the front and 11 3/8" from the front for the inner track. Once these three are correct, your LSTM will mate up with any other LSTM built to these standards. The standards are based on the use of the popular 4' large scale code 332 brass sectional track [brand is not important]. The 4' length actually measures out to only 47 3/16". The important object is to have the ends of the track meet exactly at the edge of the LSTM for connection with the next LSTM.

The standard depth of a LSTM [front to back] is 30" (Figure 1). Some build deeper LSTMs to allow additional space for structures and scenery. As long as the front LSTM edge and tracks line up correctly, the depth is not a problem. You could even have a section drop down for a bridge or trestle as long as the sides remain at the correct height for the next LSTM.

The table frame is made of 1x4 board and covered with 3/8" plywood. Legs are hinged and attached to a support board under the table to allow them to fold up into the frame work (Figure 2, 3 and 4). The legs have adjustable screw type feet to correct for uneven floors. These feet are normally added by drilling a hole in the end of the leg and adding a "T-nut" which the foot screws into. If you can find commercially made adjustable legs that give you 40" in height then you do not need to make your own legs. Additionally you should have a C-clamp on each end to help attach and hold to the next LSTM.

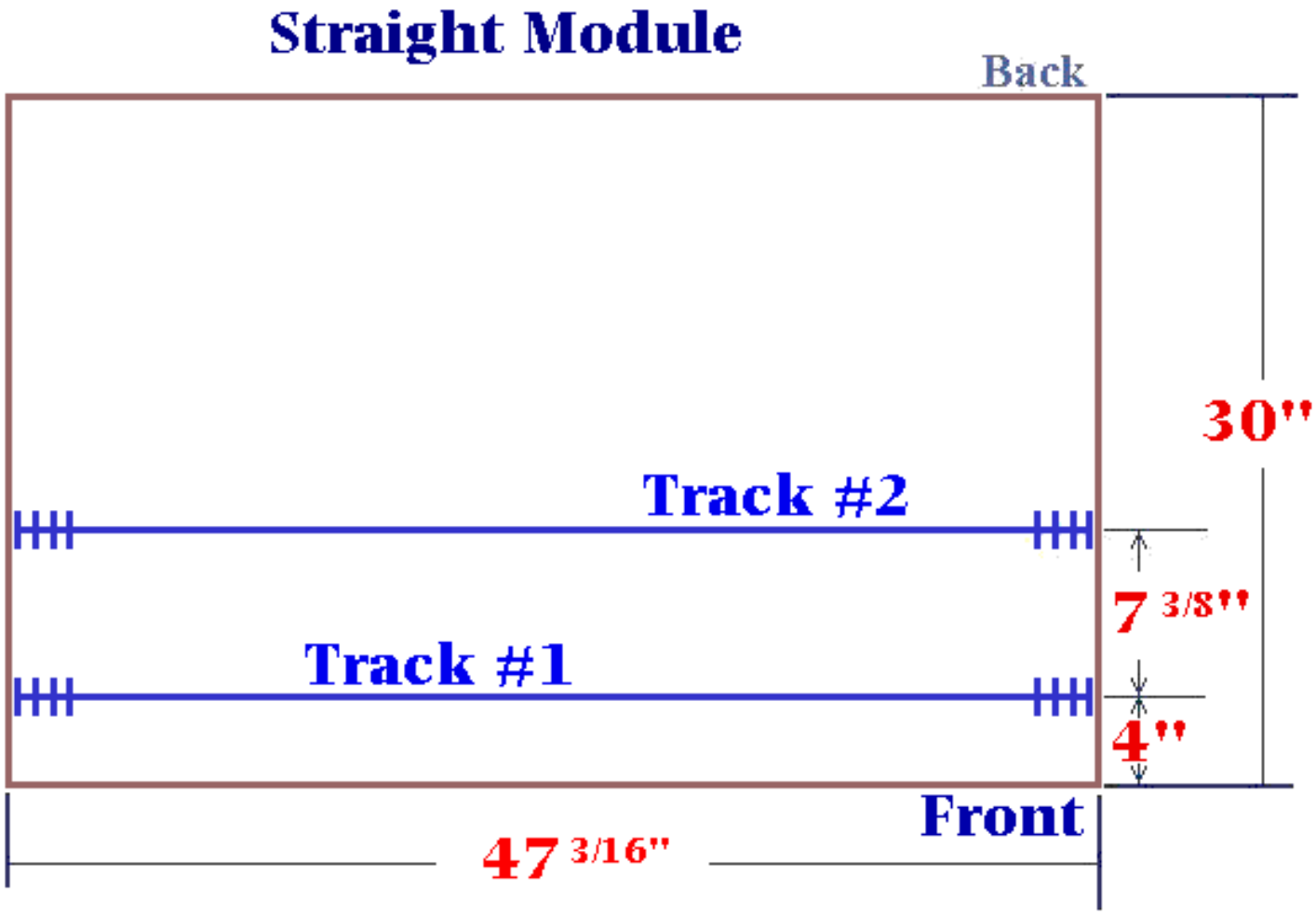

Figure 1, Straight Section

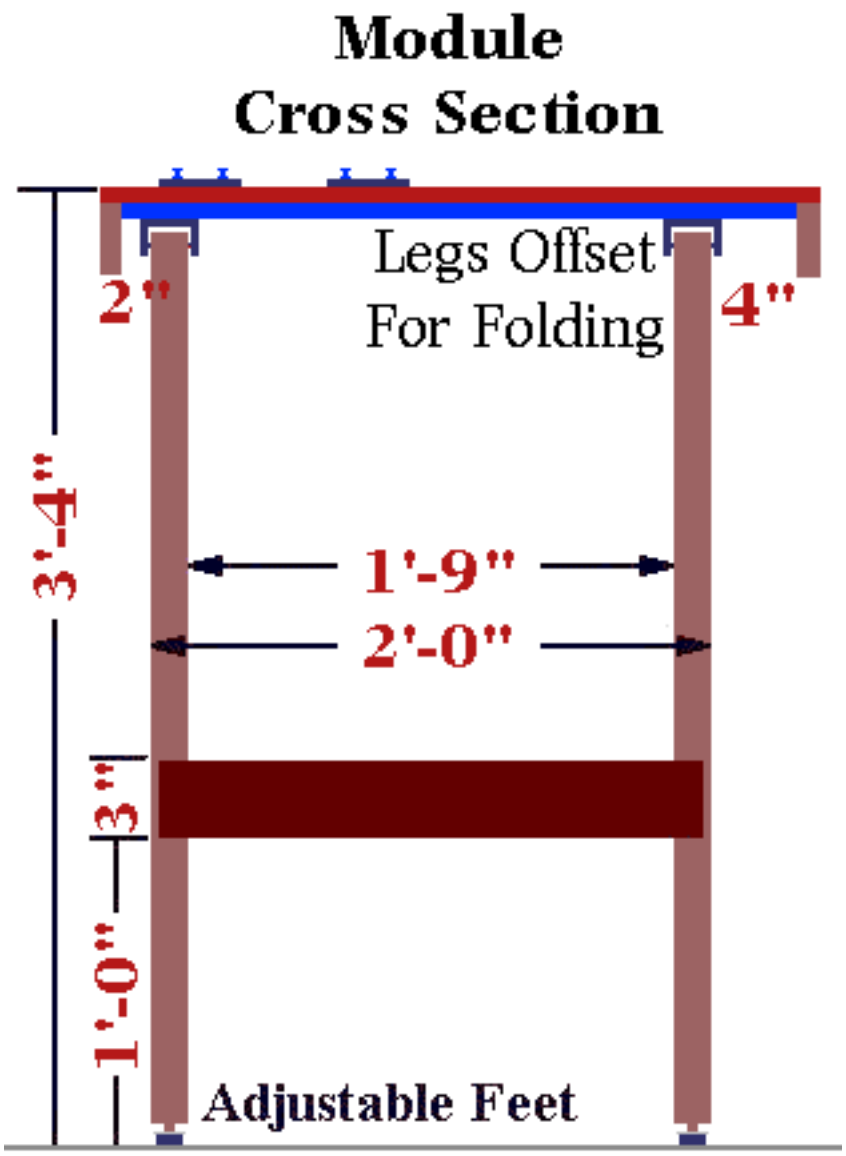

Figure 2, Cross Section

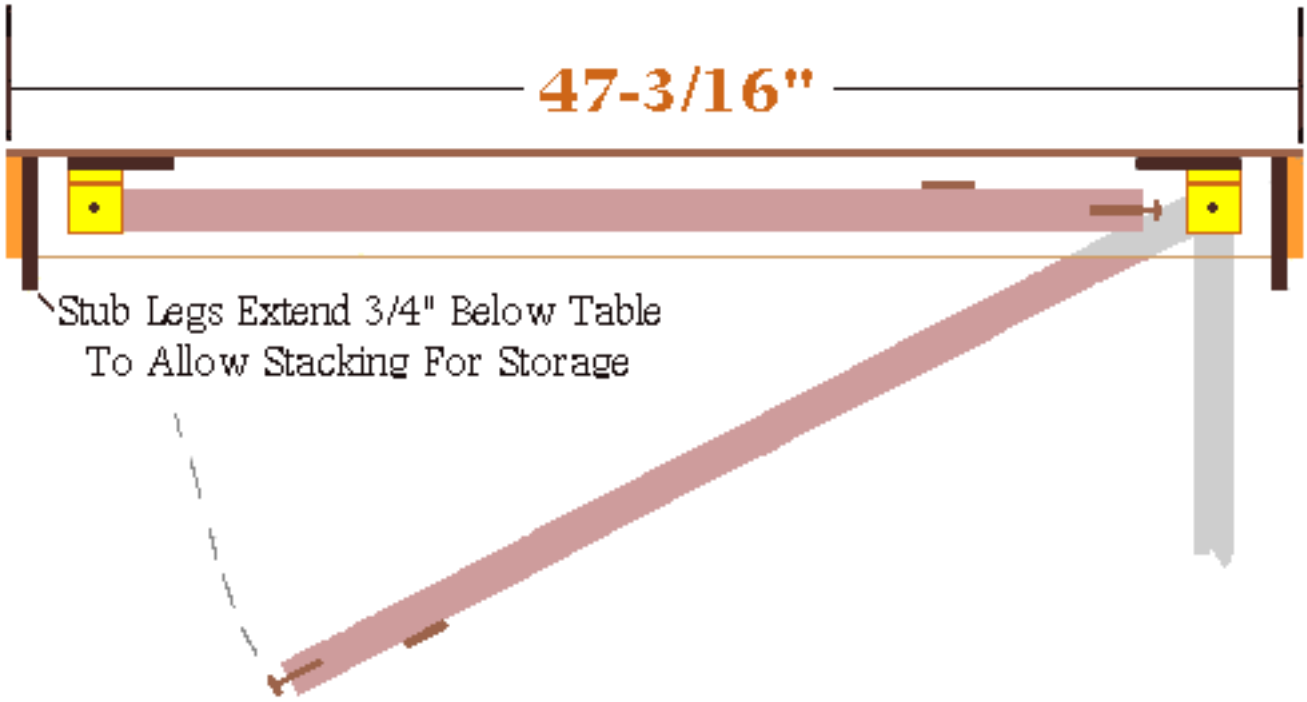

Figure 3, Side View

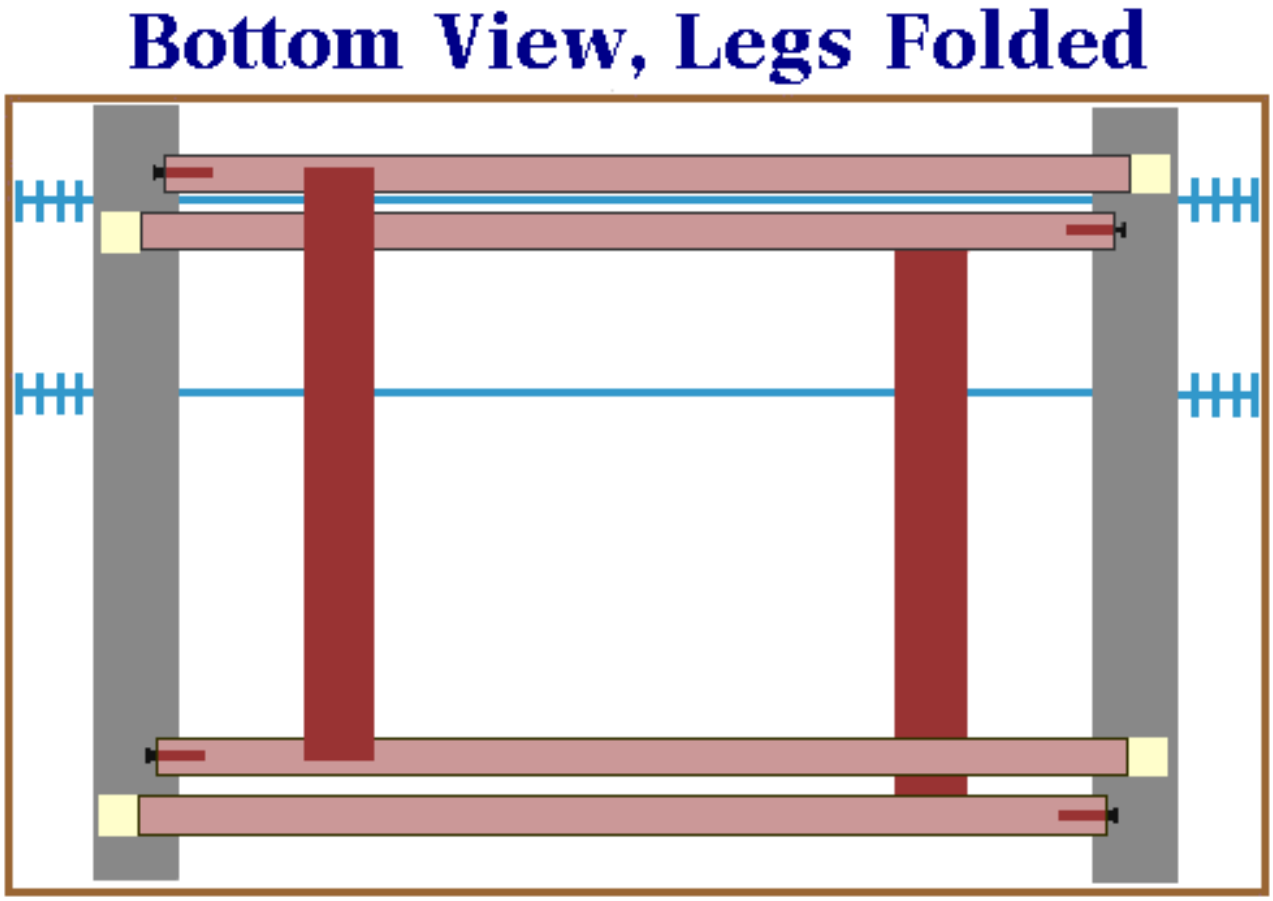

Figure 4, Bottom View

Corner LSTMs (Figure 5) are typically constructed by clubs. Some individuals construct their own so they may have a complete operational layout at home. Using two corners together will give you a 180 degree turn. Two corners will also give you a center opening of 5' 6" inside the LSTM display if all the straight sections are 30" deep. This center open section space is important for the owners who can easily get to any LSTM from inside in case of a problem during a show.

Painted back drops are not required but again they represent the modelers work. Keep in mind that if your LSTM is deeper than 30", the back drop will not line up with the connecting LSTM exactly.

Turnouts, sidings and even yards can be used, however they will often require that you span several LSTMs that you build as a group and always set up together.

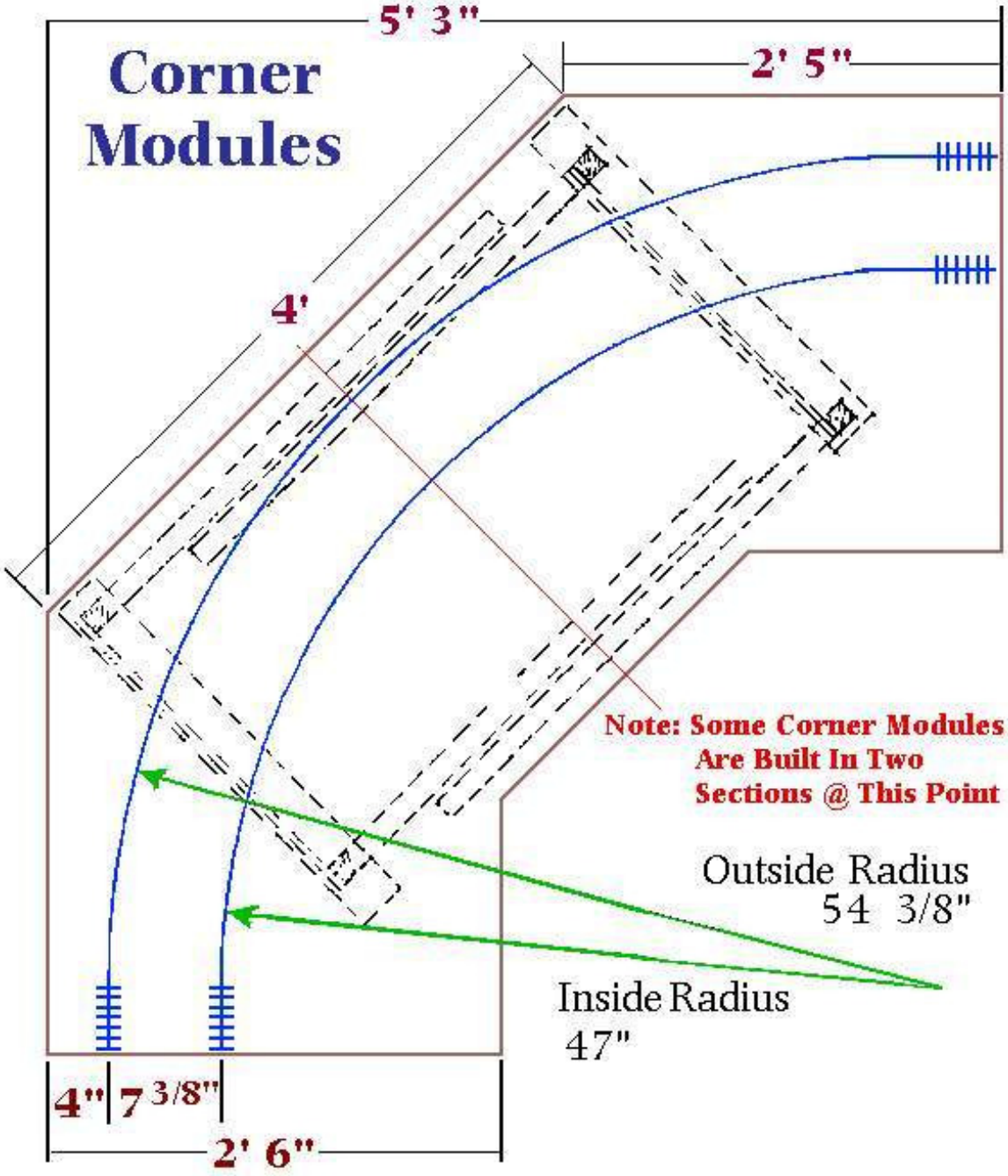

Figure 5, Corner Section

3.0 Wiring

The wiring connectors between LSTMs are all 4 wire [green, yellow, brown & white usually] flat pig tails used in wiring trailers (Figure 6). These are found in automotive sections of stores all across the country. These connectors are mounted on the rear edge of the LSTMs and should extend 6" beyond the sides of the LSTM. A second set of wires is often used to carry auxiliary power for accessories. Note which plug goes on which end in the drawings.

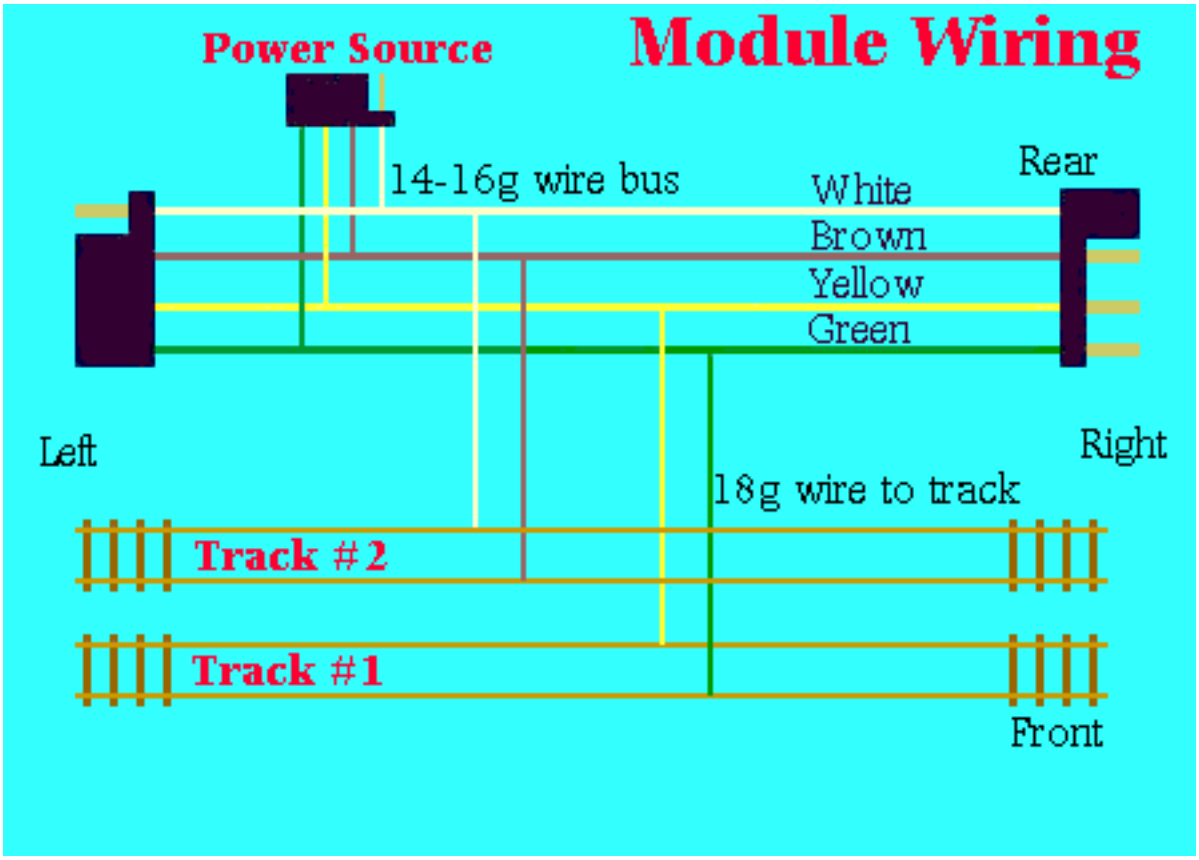

Figure 6, Wiring Plan

4.0 Scenery

A flat scenic profile should be used at the module standard end(s). A module should not only have universal ends in a physical and electrical sense, but also in a scenic sense as well. Having a scenic element that abruptly ends at one module end, like a mountain, river, or road, detract from the overall layout scene. Remember, this applies to the universal module end. On an internal interface between two sections of one module pair, these requirements do not apply. The flat scenery profile should continue for 4 inches into the module.

4.1 Scenery Recommended Practices

The front and back module fascia color should be chocolate brown. A semi gloss latex over a primer/sealer is recommended. Module legs may be painted to match.

The basic sky color should be a light sky blue flat latex paint and transition to a darker blue at the top of the backdrop.

All turnouts should be accessible from both sides of each module and hand throws are recommended.

Standard ballast techniques are encouraged. Ground foam grass and soil in the ballast is recommended as an occasional scenic event - especially on less used track. Rails should be painted rail brown with occasional rust streaks.

5.0 Definitions

These definitions are provided to establish a common basis of understanding of the standards.

Accessory Power Bus: The continuous two wire bus powering electrical accessories such as turnout motors, structure lighting, animation, etc.

DC Cab: Direct Current cab or throttle of 0 to 12 volts supplied by a convention throttle/power pack.

DCC: Digital Command Control

East: The direction to the right when facing any module. Trains traveling left to right are eastbound.

Endplate: The specified end surface of a module that joins with an adjacent module.

LocoNet Bus: The continuous six-wire bus carrying DCC information among the DigiTrax brand DCC system components such as throttles, boosters, radio receivers, etc.

Module: A section of a portable layout that has a common endplate, track connections and electrical connections to mate to other units and features a single track mainline. Portable layout is constructed to provide a point-to-point, point to loop or loop-to-loop meandering main line. A module may consist of multiple subsections.

Module (Basic): Unit of a portable layout that is level and of a fixed dimension

Module (Advanced): Unit of a portable layout that may feature grades. Dimensions are not fixed and allow for a unit of any interior width, length or geometric shape.

North: The direction the viewer/operator is looking when facing the module.

Pigtail: Connector/wire assemblies used to connect any of the electrical busses together between modules.

Passing Siding: Parallel track that allows one train to overtake and pass a second train. Length is sufficient to hold entire train. Located along single-track main lines to facilitate passing.

Run-around Siding: Parallel track that allows motive power to run-around a cut of cars to switch a facing point spur. Length is not sufficient to hold an entire train. Located in industrial areas to facilitate switching operations.

Section: A part of a larger Module. Used in conjunction with other sections and assembled in the same configuration to create that module. Conforms to end profile, track and electrical connections only on the ends that mate with other independent modules. Typical examples include a long yard, passing siding or turn back loop constructed of multiple sections that only mate together in one configuration.

Standard end: A location where a module will connect to other modules; also contains an external interface that must meet all mandatory standards.

South: Is always behind the viewer/operator.

Track (Power) Bus: two wire bus for feeding power to the track.

West: The direction to the left when facing any module.