

GAUGE #1

**Indiana Large Scale Railroaders**

(Formerly INDIANA BIG TRAIN ENGINEERS)

INDIANAPOLIS, INDIANA

MODULAR DIVISION

MODULE  
CONSTRUCTION STANDARDS

# ILSR MODULE CONSTRUCTION SPECIFICATIONS

## INTRODUCTION

The Indiana Large Scale Railroaders (formerly the Indiana Big Train Engineers) Club started the Modular Division with a meeting on April 3, 2004. It was decided that we would follow basic standards for each module but let the details be determined by the individual constructing that module.

After several meetings, those basic standards came to include track location, module size, sky board size, and wiring. The height above the floor and the track set back became the most difficult part to maintain.

It is the purpose of the document to lay down the basic standards which ALL modules must meet and give some guide lines to help maintain consistent operation.

Indiana Large Scale Railroaders  
(formerly the Indiana Big Train Engineers)  
Modular Division  
Club Name Updated December 6, 2008

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### PART 1 TABLE DIMENSIONS

The height from the floor:

1. Table top to floor – 30 inches
2. Rail top to floor – 31.25 inches

Size of table is 34 inches deep and 59 inches wide.

Set back for front track (#1) is 4.25 inches front rail to front of module.

Set back for second track (#2) is 11.25 inches front rail to front of module.

Sky board is 24 inches high and the length of your module.

Front Plexiglas is 12 inches high and the length of your module.

Paint all four sides of table gray. Wal-Mart medium base # 5051, color code AXX3B40. It is an exterior gray and one quart should do it.

#### Note:

If your module is wider than our standard, it **MUST** be a multiple of our width. That is, 59 inches or 118 inches so that it will fit our layout. Please do not make it protrude to the front as this would interfere with visitors walking around the layout. If your sky board is higher than 24 inches, please taper it to 24 inches at each end of your module.

**YOU MUST MAKE SURE THAT THE TRACK IS SET BACK TO OUR STANDARDS AND THE TRACK HEIGHT IS TO OUR STANDARDS.**

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## PART 2 ELECTRICAL STANDARDS

Basic buss: 6 conductors, 12 gauge stranded THHN wire.

Color coding scheme:

Black and Red	Accessory Power
Orange and White	Track 1 Power
Green and Yellow	Track 2 Power

Female connector always on the left as you face the module.  
Male connector always on the right as you face the module.

Conductor Placement within connector shells (as you look at face of connector)

Female	Black	White	Green
	Red	Orange	Yellow
Male	Green	White	Black
	Yellow	Orange	Red

Basic parts

- Wire – six 10 ft. lengths of each color
- Connectors – 1 shell with retaining clips (use on female end)
- 1 shell without retaining clips (use on male end)
- 12 silver plated contacts
- 2 prebuilt connector housing assemblies

The front track is track #1 and the front rail is + or orange  
The second track is track #2 and the front rail is + or green

Each module is to equipped with a surge protector to provide 115 VAC to each module. The male plug is on the right as you face the module.  
Place the surge protector on the left as you face the module and within reach of the next modules male plug.

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## PART 3

### CLEARANCE STANDARDS AND TRACK

Place switches with trailing points in the direction of common travel. The front track is normally East bound or left to right as you face the module. The second track is West bound or right to left as you face the module. This does not mean the trains would never travel other directions but that this is the normal direction. Placing trailing points in the standard direction will minimize derailments.

Clearance standards ( minimum ):

1. Top of rail to over head structures – 9”
2. Center of track to side structures – 3.25”
3. Center of track to docks and platforms – 2.4”
4. Top of rail to top of docks and platforms – 1.25”

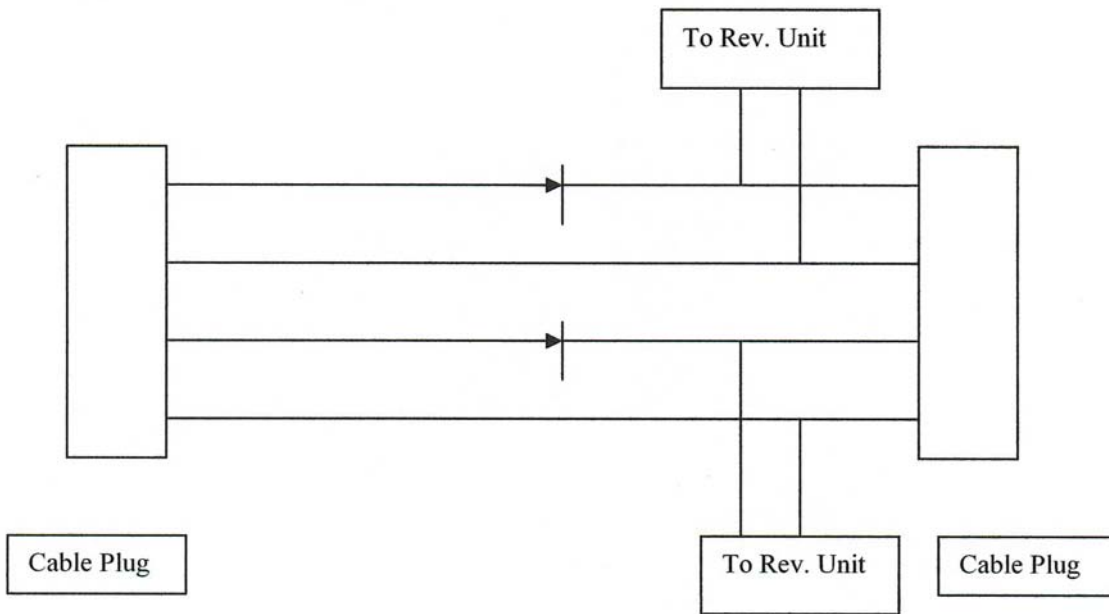
# ILSR MODULE CONSTRUCTION SPECIFICATIONS

## PART 4 Automatic Reversing System

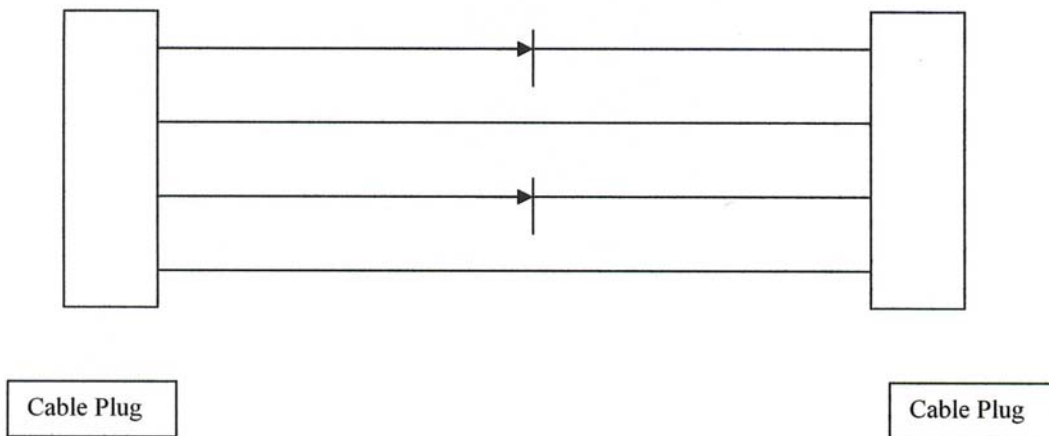
The system uses two LGB #10340 reversing units. Two sets of cables and jacks are used to insert the units into the electrical system.

### Diagram

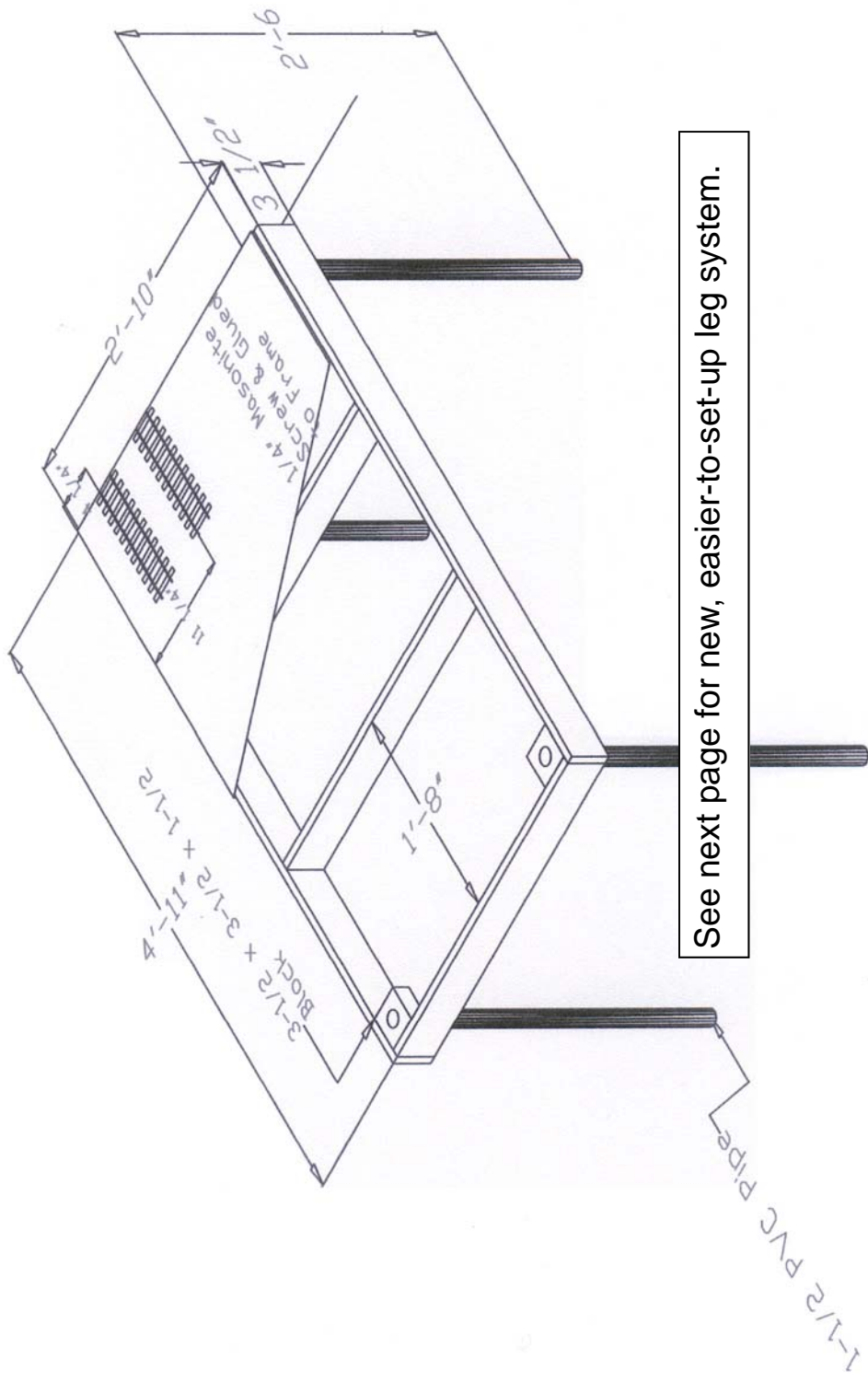
Near end of layout plugs



Far end of layout plugs



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See next page for new, easier-to-set-up leg system.

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### The Change to Fold Up Legs



The screw-in PVC legs originally specified for the modules were found to be very time consuming to install and to level, so “banquet style” fold up legs have been specified for all new modules being built. The legs can be purchased at Harbor Freight and other hardware stores. A pipe cutter may be needed to bring them to standard height.