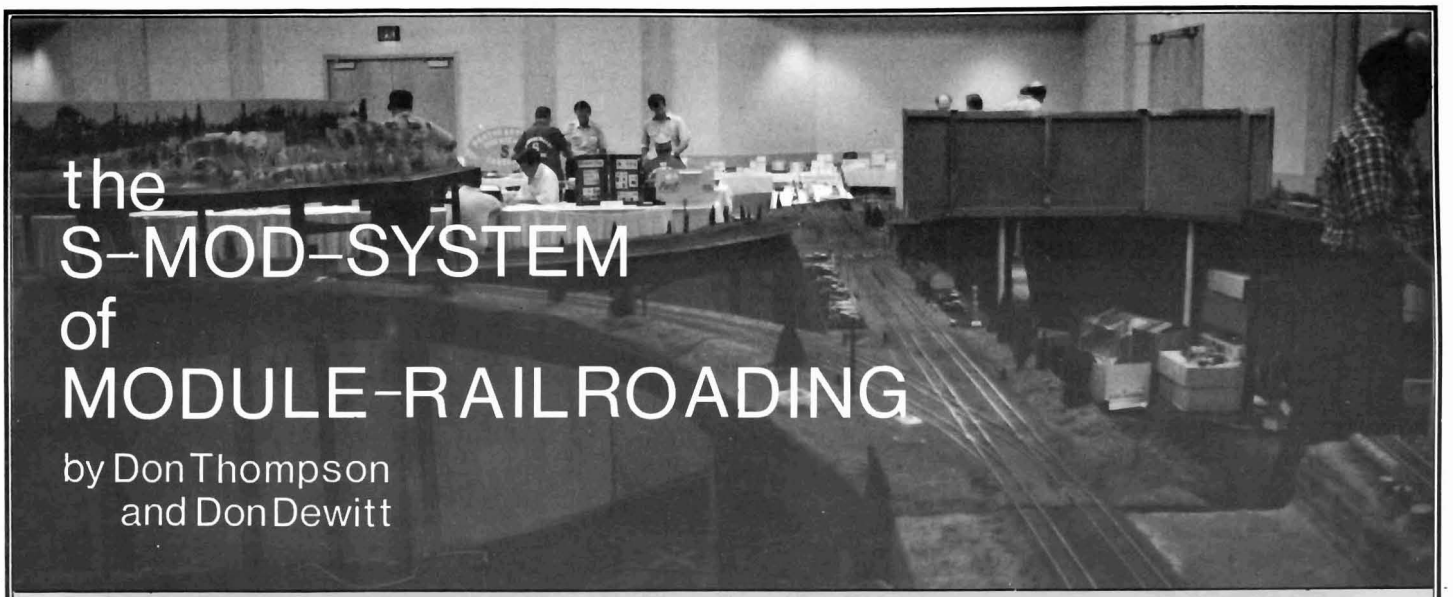


the S-MOD-SYSTEM of MODULE-RAILROADING

by Don Thompson and Don Dewitt

Modules are not a new concept to model railroading. Many of us learned about them over a decade ago when the Delaware Valley S Gaugers wrote an article on the subject for this magazine. Many new and exciting developments have occured since those first pioneering efforts. This series, in six installments, will provide the modeler with new guidelines to use in the design and fabrication of modules which will be compatible with all others built to THE S-MOD SYSTEM. Lets begin with Chapter I: Planning the Module.

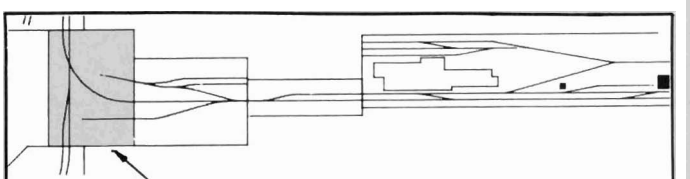
Modules are intended to be to be versatile. They can be used for promotional work, club layouts or a way of learning the techniques used in building model railroads a few feet at a time. The ideal use for a module is make it a part of your layout thereby making the fullest use of the model. Perhaps the first item on your list will be to decide what purpose the module will serve.

Next, consideration should be given to the size of the module to be planned. How it must be moved, limitations on passageways and the sheer physical strength needed to lift a large module have a direct bearing on the final design. Owning a station wagon and having two strapping sons to move a leviathan module from show to show may be an advantage over the plight of co-author Don Thompson, who's space is at a premium. Don's Nissan Sentra will hold two 8' and two 4' modules with the front seat laid all the way forward leaving no room for the strapping sons, (they are too young anyway). He has all he can do to lift the larger units and hopes that someone will be close at hand to help. When planning module size, the limitations that you may encounter must be considered.

Another factor that may influence the size, (especially length), of the module is the type oflayout it will fit into. Modular layouts are much the same as Dominos laid end to end. As modules, they can be made into closed systems, (loop only), or open, (loop to loop, point to loop or point to point). There are advantages as well as disadvantages in either system. The loop sysytem is the easiest to operate. Trains go around and around and require little supervision. It can become boring rather quickly, however, and at least four corner modules must be on hand to get the layout running. The open system is more desireable in that the only restriction on size is the dimension of the space available for set up.

The open system allows prototypical operation in almost every respect. Junctions, single track mainlines, branches and terminals may all be assembled in an endless variety of layout schemes to keep the operating crew on their toes. The disadvantage of this system at shows or promotion displays is the necessity of having a staff of people who are willing to operate the layout. A closed/open loop combination system may be the solution to this problem.

A consideration in the design of modules is the length in relationship to other units that your fellow club members may be building. If your module is to be included in a closed loop, then you may want to build in increments of 4', (eg. 4, 8, 12, etc.). However, any length can be made as long as there is a corresponding length on the other side. Liken the scheme to laying sectional track. An odd size or long section on one side must be balanced with an equal amount of footage on the other. Another consideration is interchangeability of track design. A single track module will not mate with a double tracked unit without a section with a switch reducing the line from 2 tracks to 1. While most modules can be designed as stand alone dioramas, an important fact to consider is the compatibility of your unit with those of your club members, or anyone who uses this system.

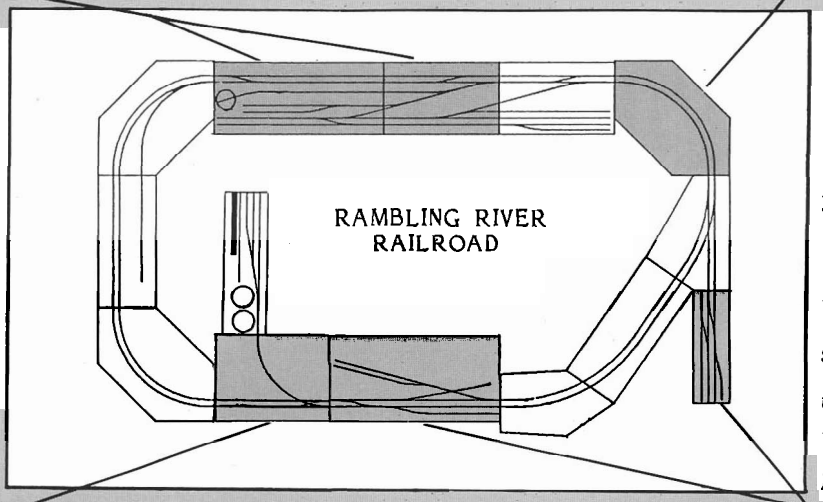


This detail from the plan used by the Central Jersey S Scalers on their latest Module-Fest setup held in November '86. The section indicated is a typical transition unit with branch and through trackage. It was built by Bill Myers.

Now that you have an idea of the limitations that can be imposed on a module design, lets take a look the types that can be built:

YARD MODULES can be large marshalling facilities with stub or through ladders. They may have engine terminals or a big city passenger complex with a postal annex and a Railway Express Agency transfer building.

The JUNCTION MODULE has turnouts for single or multi-track operation. They may contain terminal leads also. This type of unit is essential to open layouts and connects main line modules. They need not be 90° angle units. As the diagram shows, a module containing two main lines also has a yard lead. This module is also used to make connections with narrow gauge lines and may contain dual gauge trackage.

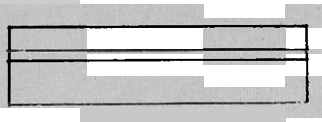


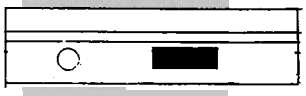
A MAINLINE MODULE is a section containing single, double or more main lines running from one end to another and are used to give the railroad length. Also, you may construct wyes as shown in the diagram below. Crossovers and sidings can be found on these modules, as well as through passenger stations. Scenery can be added to spice up a normally simple module. You might want to build a mainline fuel service area.

Passing sidings, industrial spurs, warehouses or dockside facilities, to name a few, can be found on SWITCHING MODULES. A roundhouse with a turntable is another possibility for this module.

As you can see, there are lots of factors that go into designing a module. Here are some examples:

If you have little interest in operation, then a main - line module is for you.

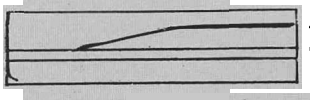




Now you may want to add a few items such as a water stop or perhaps a wayside station.

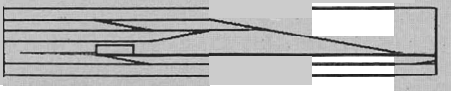
A little scenery will go a long way towards relieving boredom.



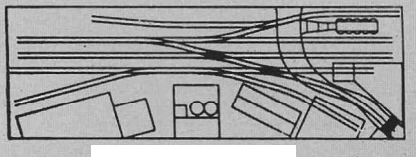


A switching module can start out simple. Begin with one turnout....

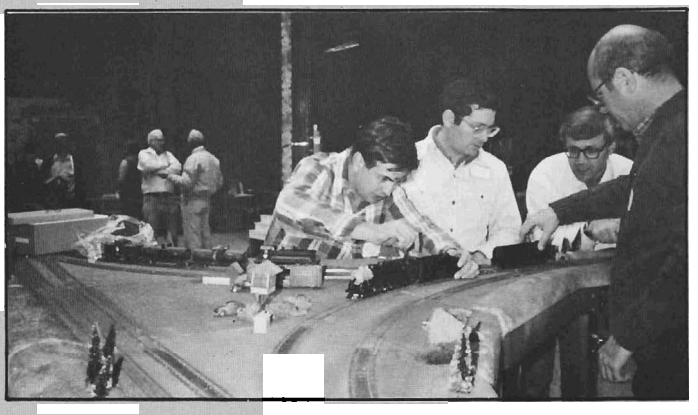
Then another....



Then you can work your way into a module such as the unit constructed by Stan Stockrocki. He packed the following items into a 3x6' space: A double track mainline flanked by a cement plant, a junk yard, a power plant and a factory amidst two slip switches, two double crossovers and a street railroad. He also found room for a grade crossing!

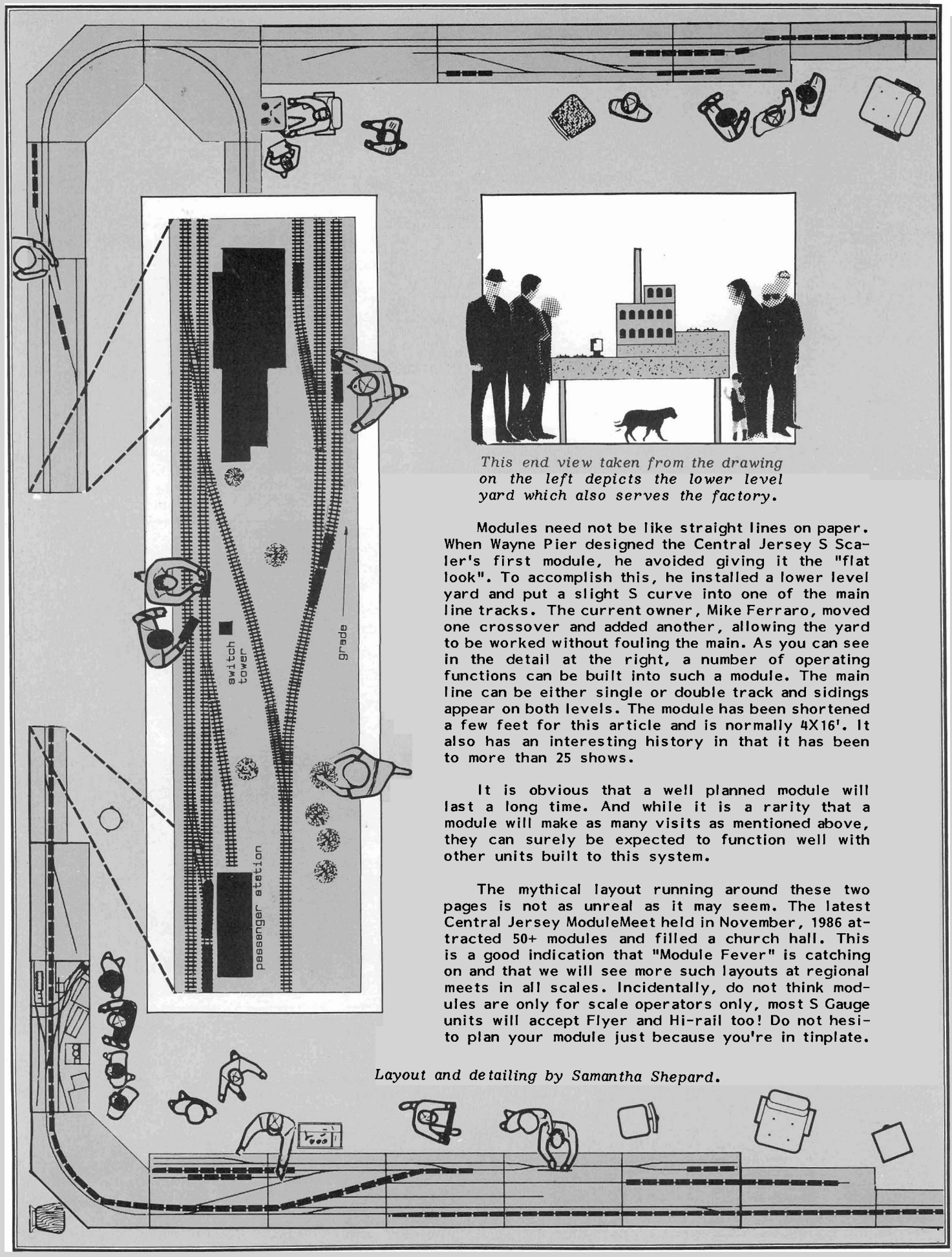


The most popular place on the layout seems to be the "Y" module. Used as a junction for three mainlines, this unit afford an excellent spot to train watch, just like the prototype. Don Dewitt built this module in 3/16" scale. It is 16' long and 8'deep.



It never ceases to amaze us that a model railroader will put a locomotive on the rails on a curve. Mike Ferraro is no exception as he adds his NYC J3 to the modular layout. Kent Singer, Ed Loizeau and an unknon kibitzer lend a hand. The scene is at Hoboken Terminal setup in 1986.

The variation in module types is endless. A modeler can build a number of different units with only slight changes in track plans, but with different industries or scenery. On the next two pages, a mythical setup shows what can be done with similar modules.



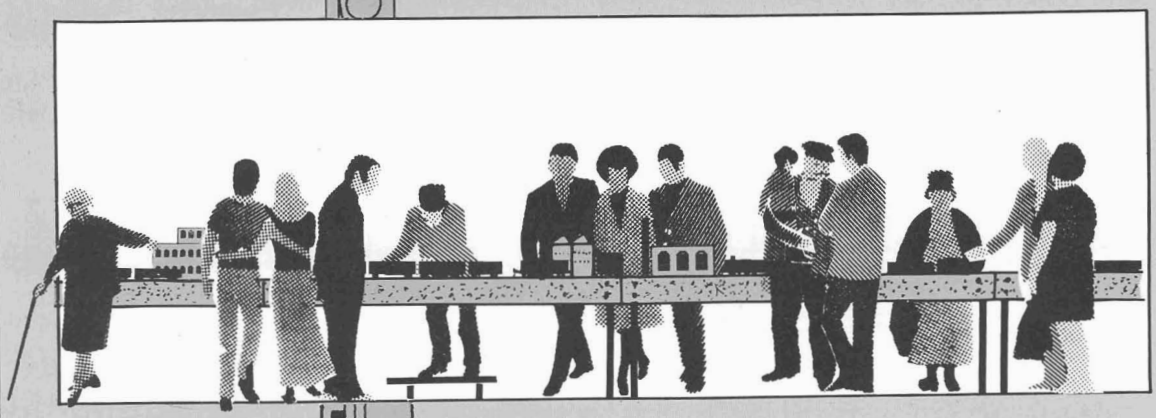
This end view taken from the drawing on the left depicts the lower level yard which also serves the factory.

Modules need not be like straight lines on paper. When Wayne Pier designed the Central Jersey S Scaler's first module, he avoided giving it the "flat look". To accomplish this, he installed a lower level yard and put a slight S curve into one of the main line tracks. The current owner, Mike Ferraro, moved one crossover and added another, allowing the yard to be worked without fouling the main. As you can see in the detail at the right, a number of operating functions can be built into such a module. The main line can be either single or double track and sidings appear on both levels. The module has been shortened a few feet for this article and is normally 4X16'. It also has an interesting history in that it has been to more than 25 shows.

It is obvious that a well planned module will last a long time. And while it is a rarity that a module will make as many visits as mentioned above, they can surely be expected to function well with other units built to this system.

The mythical layout running around these two pages is not as unreal as it may seem. The latest Central Jersey ModuleMeet held in November, 1986 attracted 50+ modules and filled a church hall. This is a good indication that "Module Fever" is catching on and that we will see more such layouts at regional meets in all scales. Incidentally, do not think modules are only for scale operators only, most S Gauge units will accept Flyer and Hi-rail too! Do not hesito plan your module just because you're in tinplate.

Layout and detailing by Samantha Shepard.

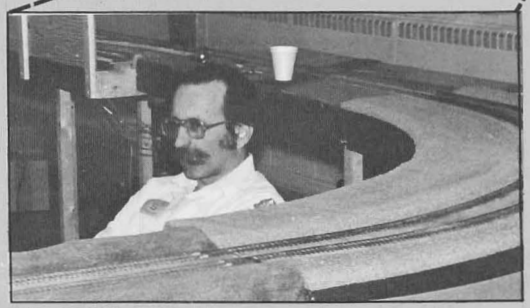


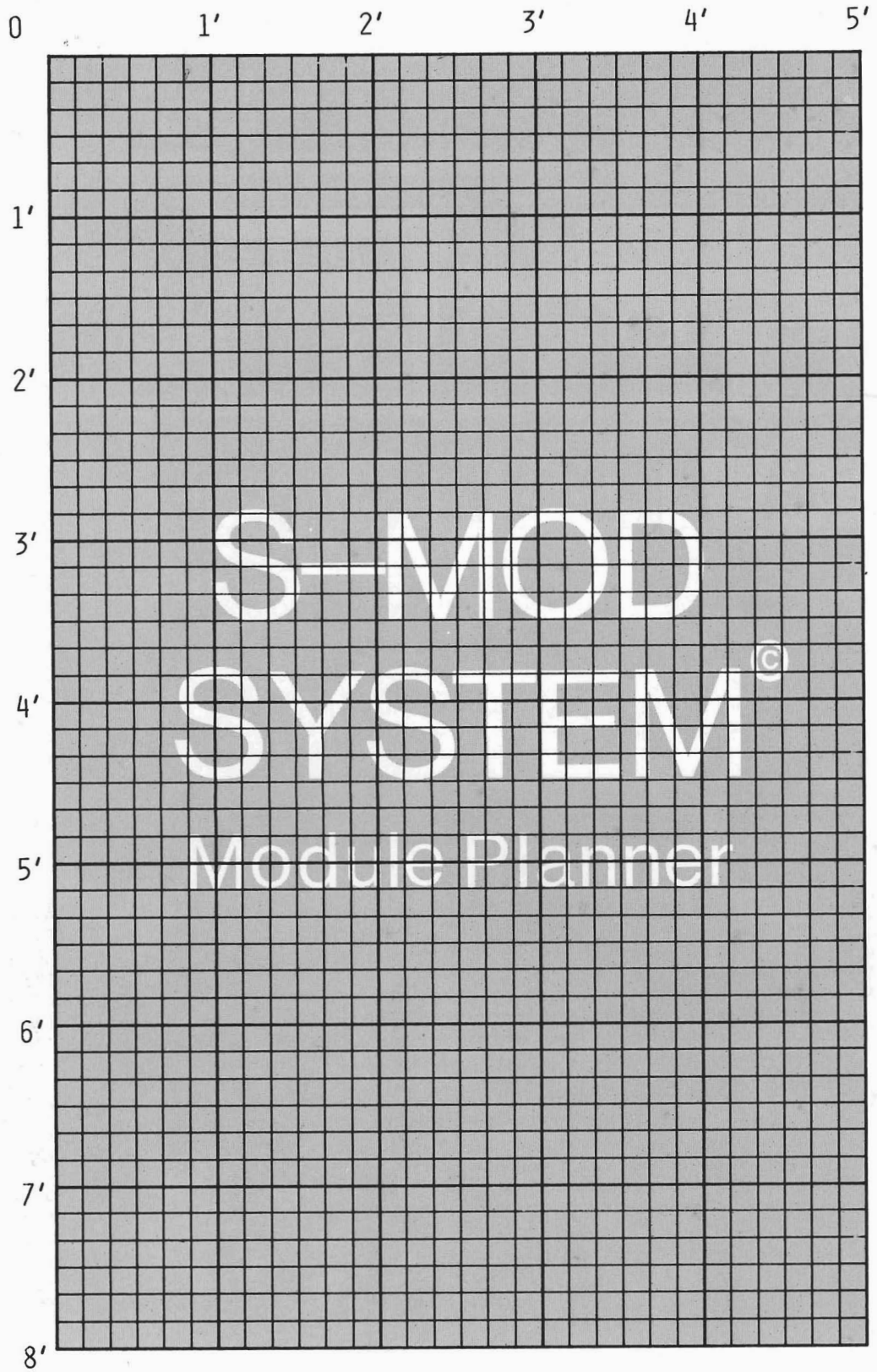
You can be sure to attract a crowd with your Module. Especially if you adopt the philosophy that if its interesting to you, it will be the same to others.

Whichever module you eventually design, bear in mind you will be investing a lot of time, money and effort in its building. Take the time, which costs nothing at this point, to make an effort to design a module that will give you the greatest return on your investment. We recommend that you read a book on the subject by Paul Ingraham entitled: "Modular Modeling Manual". It can be obtained direct from the author at 3304 Maybelle Way, #1, Oakland, Ca. 94619. Your local dealer may have it also.

The S-MOD planning kit follows this article. Next issue will feature chapter II in this series entitled: Benchwork, so now's the time to get started on you module layout plan.-ED.

Photo below: Yawn! It looks like Tom Hawley has had a long day. "Everything in Modulation", he says.





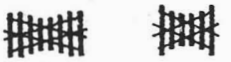


See note 1.

Crossings



19° 22.5°



30° 45°



60° 90°

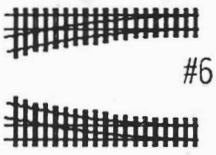
Switches



#4



#5

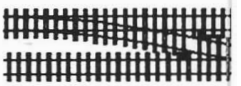


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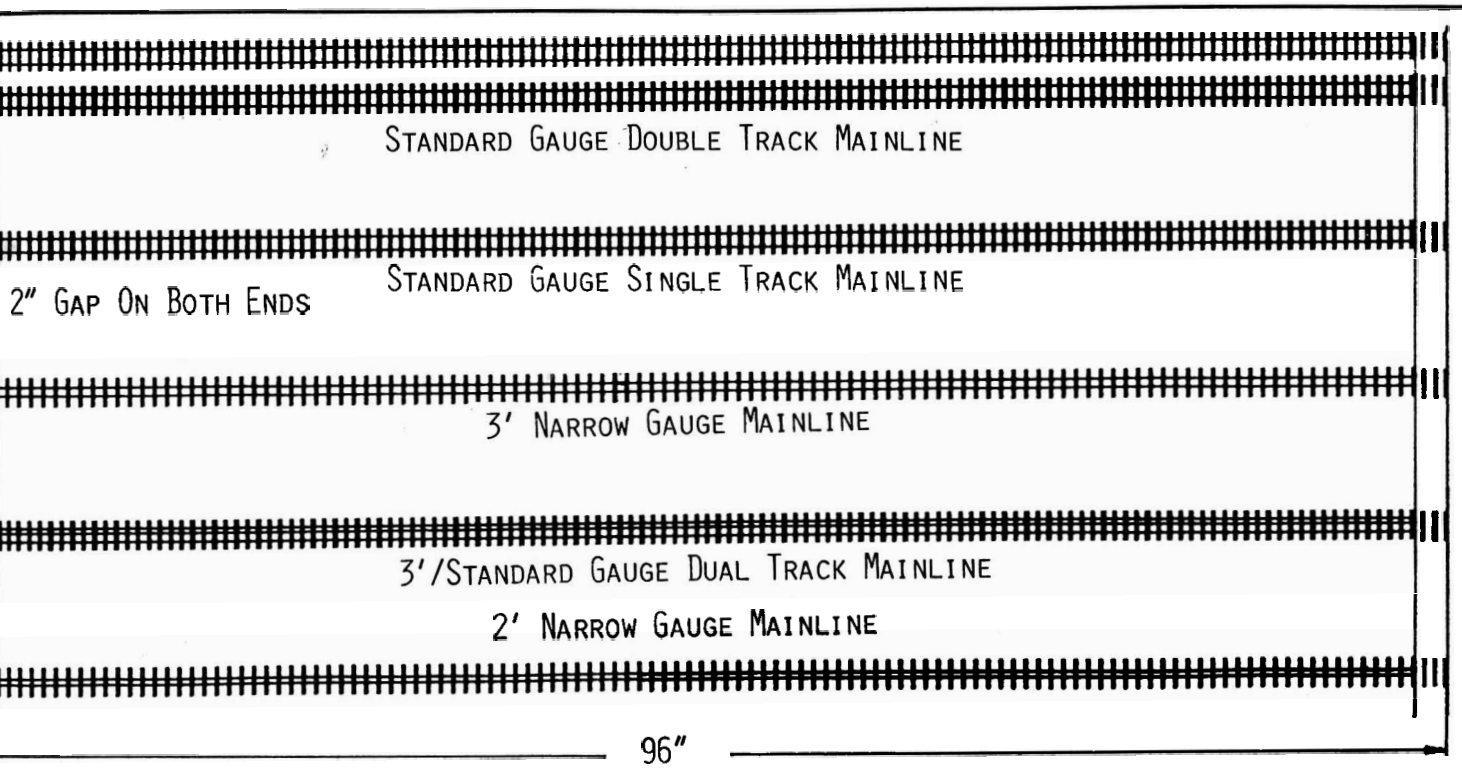
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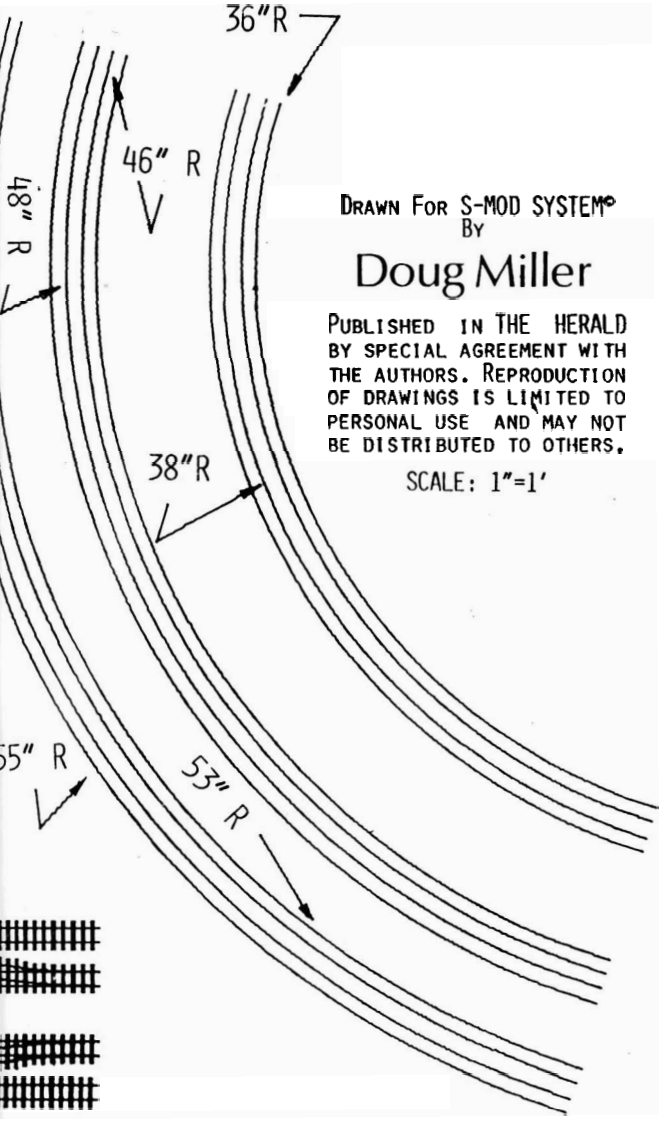
#6 Crossover



#8 Crossover







DRAWN FOR S-MOD SYSTEM©
BY
Doug Miller

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SCALE: 1"=1'

HERE IS YOUR S-MOD PLANNING KIT. IT CONSISTS OF A GRID, DIAGRAMS FOR TRACK AND SWITCHES AND A SET OF PLOTTED CURVES.

THE TOOLS NEEDED TO BEGIN ARE: A SHARP HOBBY KNIFE, A SHEET OF SHIRT CARDBOARD, OR EQUIVALANT, A BOTTLE OF PASTE OR RUBBER CEMENT AND A ROLL OF SCOTCH BRAND "MAGIC TAPE", (THIS CAN BE OBTAINED AT AN ARTIST'S SUPPLY STORE).

START BY MAKING PHOTOCOPIES OF THESE TWO PAGES. YOU MAY WANT TO MAKE SEVERAL COPIES OF THE TRACK AND SWITCH DIAGRAMS AS THEY MAY BE USED MORE THAN ONCE. THE NEXT STEP WILL BE TO GLUE THE COPIES TO THE CARD STOCK. ONCE THIS IS DONE YOU ARE READY TO CUT OUT THE DIAGRAMS. THIS IS WHERE THE SHARP HOBBY KNIFE COMES IN. ITS A GOOD IDEA TO LABEL A SMALL JAR OR ENVELOPE FOR EACH SWITCH OR CROSSOVER SIZE. THIS WILL AVOID DRIVING YOU NUTS LATER.

WITH THIS TASK COMPLETED, YOU ARE READY TO BEGIN PLANNING YOUR MODULE. HERE'S WHERE THE "MAGIC" TAPE IS USED. THIS TAPE HAS A LOW "TACK" POINT AND WILL LIFT OFF THE PAPER WITHOUT TEARING. IT CAN BE MOVED SEVERAL TIMES WITHOUT LOSING ITS GRIP. PLACE A SMALL STRIP OF TAPE OVER THE TRACK COMPONENT AND POSITION IT ON THE DIAGRAM TO FIT YOUR PLAN. USE THE DIAGRAMS ON THE PREVIOUS PAGES TO HELP YOU PLAN YOUR MODULE.

THE DIAGRAMS ON THESE TWO PAGES ARE FOR 3/16" SCALE MODULES. FOR USE IN OTHER SCALES, THE FOLLOWING PERCENT OF REDUCTION OR ENLARGEMENT FIGURES WILL HELP. BEAR IN MIND THAT ONLY THE TRACK DIAGRAMS CHANGE. THE GRID REMAINS AT 1"=1FT.

HO GAUGE: REDUCE TO 74%. O GAUGE: INCREASE TO 132%.

NOTE 1: THE DISTANCE BETWEEN MAINLINE TRACKS IS DETERMINED BY THE STANDARD YOU CHOSE TO FOLLOW, IE, NASG, NMRA, ETC. THE DISTANCE BETWEEN TRACKS IF USED AS IS PROPERLY PROPORTIONED TO NASG STANDARDS.