Recd 4/12/49

MIDGAGE MODELS, INC

3/16" SCALE

"S" Gauge

MODEL RAILROAD EQUIPMENT

PRICE 35 CENTS

P. O. BOX 1044 MIDGAGE MODELS, Inc. PORTSMOUTH, R. I.

There's nothing like "Railroad Atmosphere" to keep us in the mood to produce more and better "S" Gauge products for our present and future customers!

Some time ago we purchased two obsolete 36' wood sheathed box cars from the New Haven Railroad for use as storage facilities at our old shop. One of these cars has been revamped to resemble a New Haven work car and has been moved adjacent to our new factory building at 2793 East Main Road, Portsmouth, R. I. Inside, the Portsmouth Model Railroad club has built and is operating the "Mt. Hope Bay Lines", one of the most complete "S" Gauge layouts in in this area. Visitors are welcome at any time. Just drop us a postcard if you wish to see the layout in operation outside of normal working hours.

Midgage Models, Inc.

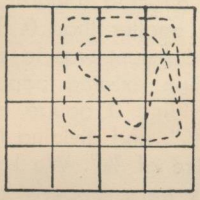
Willis G. Stewart, Pres.

ASSOCIATED S GAUGE MANUFACTURERS

An Introduction to "S" Gauge

"S" Gauge is the designation adopted by the National Model Railroad Association to identify 3/16" scale, 7/8" gauge Scale Model Railroad Equipment. Each gauge has been given a convenient, easy to use designation which as nearly as possible, conveys some idea of what that gauge is. Thus "S" is not only the initial for seven-eighths inch gauge, but also for sixteenths and sixty-fourths, all of which are prominent measurements in the gauge.

If you are a newcomer to Model Railroading, you will find that "S" gauge offers all you can ever desire in the pursuit of this hobby. It is large enough to provide detail to satisfy the most discerning of modelers, and you won't have to resort to magnifying glasses and tweezers to obtain such detail. Yet the fact that it will operate on 30 inch radius curves gives you an opportunity to build a really complete layout in a fairly restricted space.



This chart shows how your 3-16 Scale 7-8 Gauge layout will occupy only 9-16 of the area required in O gauge. A 9 square yard area provides the S gauge equivalent of a 16 square yard O gauge pike.

With a wide selection of trackwork materials, car kits, hardware, accessories and motive power available now, and more being added continually, you will find, as we explain in detail later on, that it's really easy to get started in "S" Gauge!

If you are an old hand at Scale Model Railroading, you will appreciate knowing that "S" gauge is the only practical size for easy measurements in inches. There is no compromise between scale and gauge, no mental gymnastics involved in converting inches to millimeters, or to odd fractions. You will find real pleasure in working in "S" gauge (3/16" scale—7/8" track gauge). Reduced to 1/64th full size, one prototype inch is equal to 1/64" in scale. Any Mechanics Rule reading in 64ths is an "S" gauge conversion scale. Study the NMRA Standards and "S" gauge comparison charts on the inside back cover and then take a look at the full size illustrations of trucks, car sides and other items in this catalogue, and you will begin to get a clear picture of the reason why this new, practical gauge for trouble-free operation has increased in popularity over eight times in the past few years. (Model Railroader 1948 Prototype Poll).

This is an actual size end view of our scale 152# rail laid in "S" Gauge on scale wood ties.

MIDGAGE MODELS, Inc.

P. O. Box 1044 PORTSMOUTH, R. I

DEVELOPMENT OF 7/8" GAUGE

By Louis H. Hertz *

Those familiar with the accepted gauge measurements of today are perhaps likely to give little thought to the fact that it was the initial establishment of standardized gauges for miniature trains that gave the hobby of model railroading its first impetus. There were great quantities of toy and model locomotives and rolling stock of various degrees of realism and quality turned out in both this country and abroad in the half century starting around 1850. It was not even considered questionable taste in this era to light up a little live steamer and let it wend its merry way across the parlor floor without benefit of track to guide the "fiery little monster." Some other manufacturers set the wheels of their productions in a permanent curve so that they would only run on a circle of fixed radius, while those who provided their motive power with normal wheel bases, were often so remiss as to neglect to include switches in their lines. In either case, a model railroad system in the sense we use the term was an impossibility.

All this was changed in the 1890's, when European manufacturers of tinplate clockwork, live steam, and electric models developed the standard numerical system of gauge numbers and sizes, the basis from which virtually all subsequent gauges have been developed. Although there was for a number of years a certain variation in the way the sizes were given, depending on whether or not the gauge was measured from the rail centers or, correctly from the inside running edges, the following list gives the width correctly for each gauge:

No. 0 Gauge	1 ¼"
No. 1 Gauge	1 ¾"
No. 2 Gauge	2"
No. 3 Gauge	2 ½"

These sizes were immediately accepted and put into use by model railroaders, tinplate manufacturers, and such pioneer scale manufacturers as were in business at that time, or appeared on the scene in the years following. The No. 3 gauge was soon regarded as primarily suitable for outdoor installations, but the 0 (from whose designation the "No." was soon dropped), No. 1, and No. 2 gauges, as well as an American introduction, the 2 ⅛" "Standard gauge," enjoyed considerable popularity.

As time went on, the most popular gauges in Europe were the 0 and No. 1, and in the United States, 0 and Standard, although some early scale model builders in the country preferred to work with the No. 1 gauge because of its easy, correct scale of ⅜" to the foot. As early as 1906, thought was given to gauges smaller than 0 by such British model authorities as W. J. Bassett-Lowke, E. W. Twining, and Henry Greenly, in an effort to create what was to be designated a "table railway".

Models were designed for scales as small as ⅛" to the foot, but small motors were not then available for their commercial production. After the First World War, efforts were again directed toward the creation of gauges smaller than 0. The logical line of development was to split the sizes of the then existing popular gauges in half. Dividing 0 gauge provided a gauge of ⅝". and dividing No. 1 gauge gave a size of ⅞". We know now that both sizes were seriously considered for commercial production in England in the early 1920's.

In 1921, however, the famous German tinplate firm of Bing, in collaboration with Bassett-Lowke brought out a "table railway" in clock-work, in a size supposedly half that of 0 gauge, but actually refined to precisely 16.5mm. Gauge. An approximately correct scale of 4mm. was used with this gauge, which was called C0. In 1924 Bing brought out electric models for this gauge.

The appearance of the Bing trains would seem to be the deciding factor in delaying the wide-spread introduction of ⅞"

gauge at the time. Stewart-Reidpath, another English manufacturer, had intended to place upon the market a line of 7/8" gauge equipment. Instead, he decided to employ the 16.5mm. gauge and create a more accurate scale for it. Accordingly, the 3.5mm. scale was established. Mr. Reidpath rejected the term 00, already in use to refer to the 4mm. scale, and adopted the name HO (Half 0) for his 16.5mm. gauge, 3.5mm. scale. Some 7/8" gauge, 3/16" scale models had been built in England by individual model makers before the First World War, and other layouts were occasionally constructed in this gauge in the 1920's and early 1930's, but the lack of commercial parts naturally retarded the development of this size. Only those with sufficient skill to make everything themselves were able to make use of 7/8" gauge, which was known as "Theta" or H1 (Half 1) gauge.

The potentialities of a gauge midway between H0 and 0 gauge did not escape notice in the United States. In 1936, and possibly in 1935, Donald M. Tiffany, of Bayside, N. Y., endeavored to introduce 3/16" scale models in the United States. Mr. Tiffany was a manufacturer of cast ship model fittings, and for his entry into railroad models he chose to produce a 3/16" scale hopper car kit, made up of white metal castings. Scale model railroading was then in its infancy in the United States, and the availability of only one car kit in 7/8" gauge was hardly sufficient to tempt many into this gauge. In 1936 the Cleveland Model & Supply Co., of Cleveland, Ohio, established manufacturers of model airplane kits, published a magazine entitled "Cleveland Modelmaking News". In the seventh issue, plans were included for building a 3/16" scale model of the Union Pacific streamline train.

The following year, Cleveland announced an extensive line of non-operating 3/16" scale trains, followed later by operating parts and kits. An extensive advertising campaign accompanied the introduction of these models, which were termed "CD gauge", "CD" being already established as a widely used trademark of the company's airplane kits. Still the public did not seem quite ready for 7/8" gauge. Considerable further impetus was given to 3/16" scale in 1939, when American Flyer started adding models built to this scale but running on 0 gauge track to their line. Not long thereafter, a second tinplate train manufacturer, Louis Marx & Co., brought out a series of lithographed 3/16" scale freight cars to run on 0 gauge. Model railroaders who had already gone into 7/8" gauge found these lines ideal sources of locomotives

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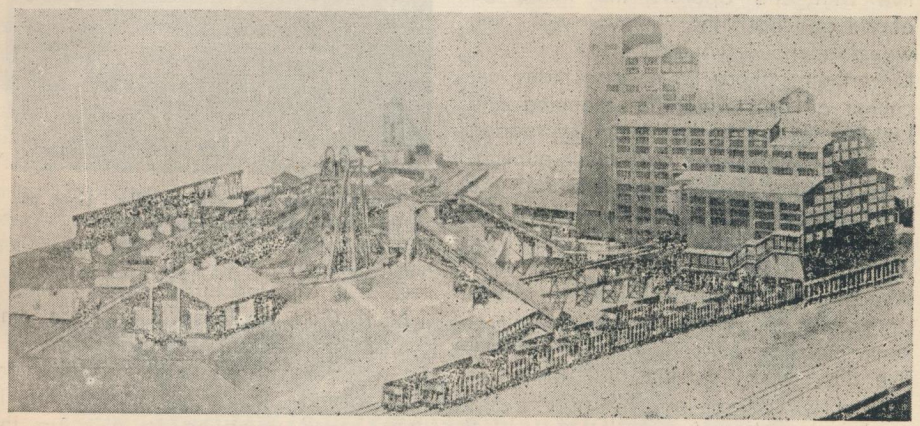


Model of Pennsylvania Hard-Coal Mine, Scale 3-16 inches - 1 ft.
Built by Donald M. Tiffany, Bayside, N. Y.

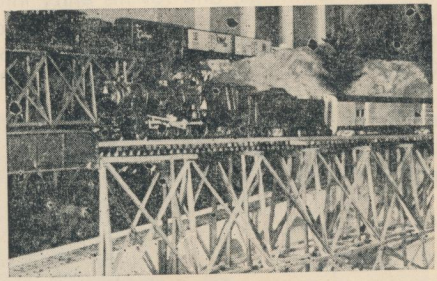
Starting An "S" Gauge Layout

We can confidently say that at the present time it's easier to start an "S" gauge layout, than one in any other gauge. There are several possibilities open to the newcomer in "S" gauge, and after we have outlined them, you will see why this statement is true.

The first, and most generally accepted method, regardless of gauge, is to buy one or two reefer or box car kits, and assemble them, and after they are finished, buy some rail and ties or tie strip, rail connectors, spikes and a track gauge, or one of the track kits described later on in this catalogue, and proceed to lay yourself some track on whatever foundation or table you have planned and built as best suited to your needs. We do not intend to get into any controversial discussion as to the relative merits of an open framework type of layout as against one built on a flat table top, or whether you should plan a strictly point-to-point layout, avoiding any semblance of a simple loop or merry-go-round circuit as if it were the plague. We feel that a combination of both types of construction and both types of layout are desirable in most cases, and since you have to build and live with and operate the thing, go ahead and do it the way you wish. You would anyhow, wouldn't you?

Nevertheless there have been many excellent articles written on planning and building layouts in the Model Railroader, the Model Craftsman and other publications devoted to this hobby, and if you have any questions on the subject, we would suggest you refer to them for guidance.

About this time you will want to obtain or build a locomotive or power unit of some sort, for unless you are totally unlike the rest of us, the thrill of giving your first car a "poosh" around the track to see how far she'll coast, or if she'll tear through that new turnout at a neat 110 scale mph, will soon wear off, and you'll be looking for something besides gravity or trained white mice to horse around your rolling stock. There are several good "S" gauge locomotive kits available at the present time (you'll find a Pennsylvania K5 Pacific Locomotive described elsewhere in the catalogue) and whether you choose a super-detailed road engine, or a simple yard switcher, our advice is to get the thing running with the bare amount of details and extras required and then add such trimmings and details as you desire at your leisure. First, and most important, you are not nearly so likely to mess up a fine loco kit at the last minute, due to your anxiety and hurry to get it 100% complete and in operation, and secondly, you'll have motive power on your layout so that you can take time out from construction and enjoy a bit of operation from time to time. And you won't be faced with the embarrassment of overhearing young Casey Jones carrying on a conversation with the new neighbor



Scene on the "St. Vrain Valley" Lines of E. L. Gunther, Longmont, Colorado.

kid in this vein:

C. J. Jr. My Dad builds model trains!

N. K. Gee, He Does? Can I see 'em?

C. J. Jr. Heck no. They don't run!

At which point you will probably retreat to your inner sanctum, mumbling in your beard, swearing to give up the ding-dong hobby and take up something

simple like collecting match book covers or beer bottle labels.

But don't be discouraged by all this. There's an easier way out after all. Many another potential "S" gauger has faced the same problems and have found an amazingly simple solution. How? It's easy! The new American Flyer trains manufactured by the A. C. Gilbert Company are scaled to 3/16" per foot and designed to operate on two rail 7/8" gauge tinplate track. Now don't get excited, we're not advocating that you forsake true scale for Tinplate. Just bear with us a minute, and we'll explain what we have in mind! Six different locomotive types are available, four of which operate with series wound AC-DC motors using a sequence reverse, and two of which have permanent magnet type straight DC motors, and all may be obtained with or without smoke effects, and with a wide assortment of freight and passenger cars. Considering the quality and fidelity of detail, they are remarkably low in cost, and the purchase of any one of the available sets puts you in "operation" immediately.

Now you con start a program of conversion and building which will eventually give you a full scale set-up, and you will have had the advantage of having something to operate and enjoy from the start. The AF die cast or plastic cars can be converted to scale operation by the replacement of trucks and couplers and the addition of a few extra details and hardware items to dress them up (we make complete conversion kits especially for this purpose), and very little work is required on the locomotives to adapt them for operation on scale track. (Another section of this catalogue is devoted to Locomotive conversion methods, and there are kits on the market for this job also.) These converted units will still operate on your tinplate track while you are building up your scale trackwork and getting ready for the final changeover. By this time you will be wanting to add to your rolling stock by building up several of the box car, reefer and passenger car kits described later on, and of course this extra equipment means you will need another road engine, such as our Pacific.

We feel sure that the "Midgage Line" of 3/16" scale Model Railroad equipment, described in detail in this catalogue, will come up to your every expectation in this new gauge. Our products have been

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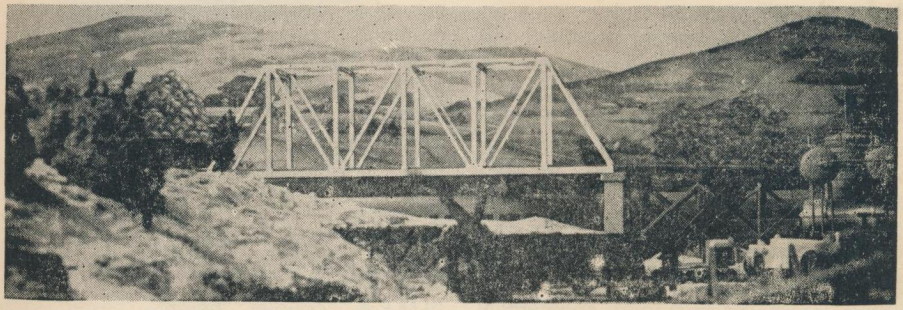

Scene on the Portsmouth Model Railroad Club's "S" Gauge 'Mt. Hope Bay" line

TINPLATE CONVERSION DATA

Because of the many questions we have been asked concerning the interchangeability of 3/16" scale or "S" gauge Model Railroad Equipment with American Flyer "A. C. Gilbert 3/16" semi-scale or tinplate train equipment, we feel that we should devote this section of our catalogue to a discussion of the many factors involved.

First, scale 3/16" cars, equipped with scale trucks will operate satisfactorily on AF two rail tinplate track, provided the track is in good condition and in proper gauge. It is necessary, of course to provide some means of coupling between tinplate cars equipped with automatic couplers, and the scale dummy couplers used in most scale car kits. One possibility is to replace the scale trucks and couplers with AF combination trucks and coupler. Our kits are all specially listed without trucks, bolsters and couplers, if you wish to use them in this manner.

Second, AF 3/16" cars and locomotives cannot be operated on scale track without some minor alterations. There is interference with spikes and ties due to oversize wheel flanges, and because of the fact that the "back to back" spacing of the wheels is about 1/16" too narrow, difficulty will be encountered with wing and guard rails in scale turnouts and crossovers.

If your layout space permits the use of the slightly larger radius curves needed for full scale operation over that required for tinplate track, we are sure that you will find greater satisfaction and better performance in building up your trackwork in scale and gradually converting your tinplate locomotives and rolling stock to operate on it. Tinplate car wheels, locomotive pilot and trailing truck wheels and tender truck wheels may be replaced with scale wheels, or they can be remachined to increase the back to back distance to 25/32" and also to reduce the flange depth to about .039" (1/32 plus). Or it is an easy matter to convert any AF car to scale operation by using our conversion kits, which include scale trucks, dummy couplers, a pair of truck bolsters and coupler pockets designed to fit AF cars and automatically insuring correct N.M.R.A. coupler height, along with transfers, miscellaneous hardware and instructions.

In the case of the locomotives, since the drive wheel flanges are only slightly oversize, it is possible to file these down by running the engine under its own power after fastening it securely in an inverted position. The inside edges of the wheels should be filed or ground to increase the back to back spacing at the flanges to 25/32" while the flange depth

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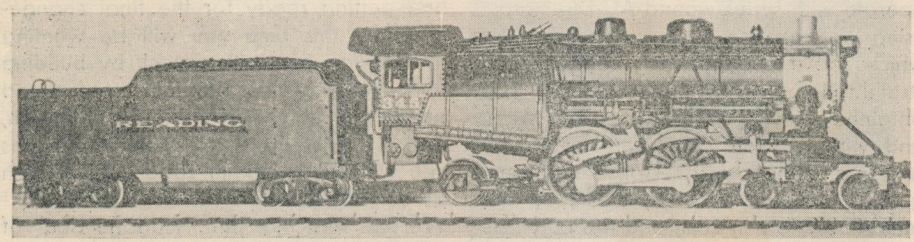
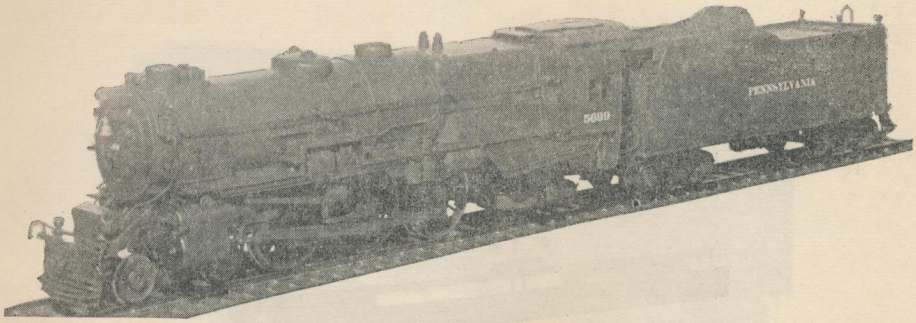


AF Atlantic Locomotive converted for scale operation by M. E. Chadborn, Kansas City, Kansas.

PACIFIC LOCOMOTIVE KIT



This is one of the finest Locomotive Kits available in any gauge. The Prototype, Pennsylvania Railroad's well known K-5, is equally at home heading a fast freight or heavy passenger train. It is faithfully reproduced in 3/16" scale, the finished model being 16⅝" long from coupler to coupler! Consider these outstanding design features:

*Boiler and Cab, Tender Body, Smoke Box Front, Cylinders, Pilot and Trailing Truck Side Frames are strong durable die castings, clean and accurately detailed.

*Engine Main Frame, Tender, Pilot Truck, and Tender Truck Side Frames are cast bronze, well detailed and accurately machined.

*180" Scale Main Drive Wheels have pressure die-cast cores with turned steel tires, assembled and insulated. Positive quartering. All wheels flanged.

*Side and Main Rods are heavy brass stampings with milled flutes.

*Working scale Valve Gear Parts are etched in brass with all pivot holes drilled.

*20 to 1 ratio steel worm and bronze worm gear.

*Powerful Pittman Model DC-91 7 pole permag drive motor.

*Detailed Boiler Back, Working Headlight Parts, Boiler Weight and Gold Lettering transfers included in kit.

All major parts are machined, ready for assembly. Complete, well illustrated step-by-step assembly instructions help make this an extremely easy kit to build. Holes in coupler shanks and one hole in boiler weight for self tapping screw have to be drilled at assembly. Soldering at a few points is desirable, but not absolutely necessary. Filing and rivetting will be the only other hand operations required.

It's tops in performance, and the accurately scaled, well detailed, die cast boiler, cab, tender and drive wheels, together with scale valve gear, fluted side and main rods, and heavy bronze main frame and tender frame are easily assembled into a masterpiece of motive power for your "S" Gauge Pike!

The husky 7 pole Pittman DC-91 Motor—20 to 1 ratio steel worm and bronze worm gear—weighted boiler—accurately stamped side rods—precision machined main frame—positive wheel quartering—all combine to give you s-m-o-o-t-h, quiet POWER—power to start your heaviest trains at a snails pace—power to pull long strings of Pullmans up steep grades, and around sharp curves at high speeds!

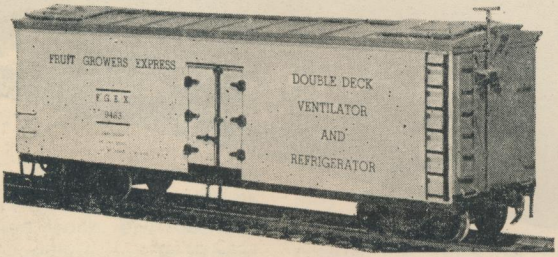
The heavy bronze pilot truck—weighted trailing truck — equalized tender trucks — location of boiler weight and motor—all combine to give dependable, trouble free operation!

A full length article on the assembly of this Locomotive kit appears in the November 1948 issue of the Model Railroader!

Cat. No. 1-100 3/16" SCALE PACIFIC (Penna K-5) LOCOMOTIVE KIT COMPLETE $47.50

(See Page 14 For Listing of Locomotive Parts)

FREIGHT REFRIGERATOR CAR KITS



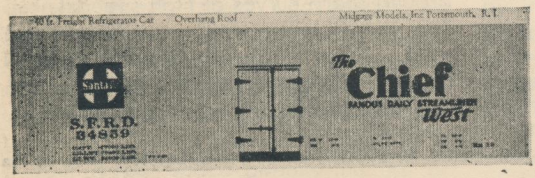
No model pike is complete without a string of colorful freight refrigerator cars, commonly known as "Reefers". The type illustrated is one of our standard kits which are built up with printed and scored sides to represent wood sheathing. The body of this kit is built up with an accurately milled, seasoned and dried Basswood roof, floor and sides, with interlocking ends. A milled "U" type underbeam is provided, together with ample stock for frame ribs, roof ribs and eave moldings.

Hardware includes ice hatches and platforms, combination truck bolster and coupler pockets to insure N.M.R.A. standard coupler height, couplers, air reservoir, air cylinder, air valve, brake wheel, destination boards, door hinges and latch bars, stamped ladders, end and center sill steps, brake platform and roof walk end braces. All necessary pins, screws and wire are included to make this a real super detail job if you wish. Kit includes trucks, painting instructions, and complete, easy to follow assembly instructions showing full size side, bottom & end views, together with exploded perspective views on an 11" x 17" sheet. Your choice of 12 different car sides: CMSTP & P, Fruit Growers Express, G.A.R.X., Illinois Central Dispatch, Merchants Despatch, New York Central (MDT), Pluto Water, Santa Fe, Soo Line, Swifts, Wilson Car Lines and Western Pacific Available with Andrews or Bettendorf Trucks.

Cat. No. 1-175
Complete Freight Refrigerator Car Kit $4.25

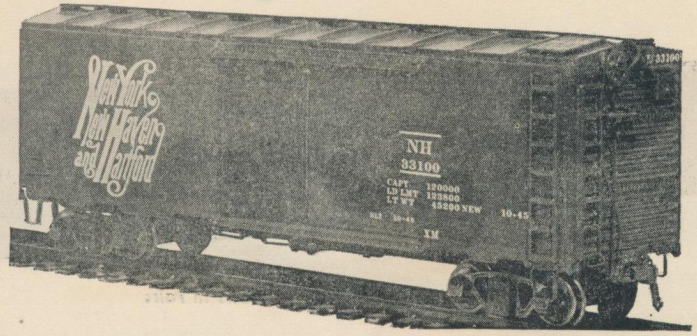
Cat. No. 1-176
Freight Reefer Kit Minus Trucks ... 3.50

Cat. No. 1-177
Freight Reefer Kit, Minus Trucks, Bolsters and couplers (For Tinplate) 3.25



Illustrated at left is one of the many car sides available with these kits. Note deep, accurate scoring. See page 21 for additional car side listings.

40'-50 TON BOX CAR KITS



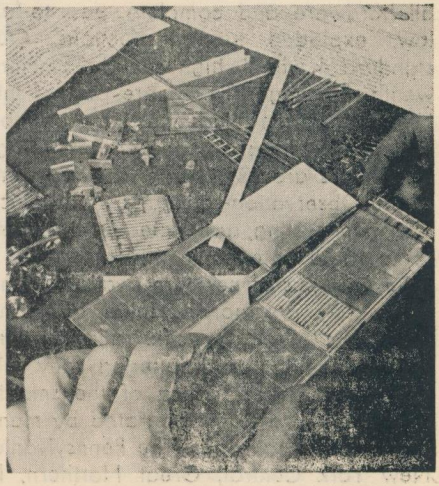
The Kit is modeled after a standard 40'-50 ton all steel AAR Box Car, and with a few minor changes in hardware installation can be adapted to almost any road of your choice. Rivet detail is deeply and accurately embossed on the aluminum sides. Wood body which is basis of this kit is accurately milled from seasoned basswood and is easily assembled. Top edge of metal side is flanged to fit under roof eaves, and cast metal ends fit around edges of the sides to hold them securely against the body, with no exposed edges. Ends and doors are well detailed castings. Hardware includes metal roof ribs, embossed "Z" type top door slides and channel type bottom door slides, stamped ladders, roof walk end braces, sill steps, and brake platform, with cast AB brake sets, brake wheel, and housing, destination boards, couplers and combination bolster and coupler pockets to insure correct N.M.R.A. coupler height.

Kit is complete with either Andrews or Bettendorf trucks (your choice) and any one of the 16 road name transfers listed elsewhere in this catalogue, along with complete, easy-to-follow exploded assembly instructions.

Cat. No. 1-150
40'-50 ton Box Car Kit, Complete. $4.50

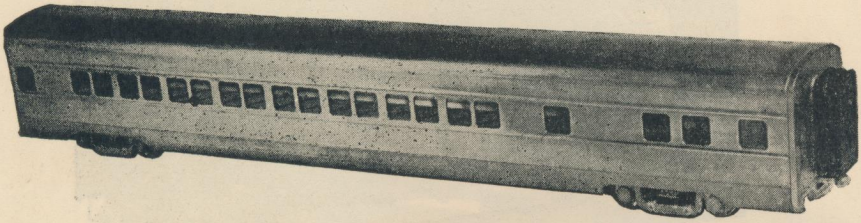
Cat. No. 1-151
40'-50 ton box Car Kit, Minus Trucks 3.75

Cat. No. 1-152
40'-50 ton Box Car Kit, Minus Trucks. Bolsters and couplers (For Tinplate) 3.50



Shown at right are some of the many well detailed parts which are part of these kits.

"S" Gauge Streamlin Pa



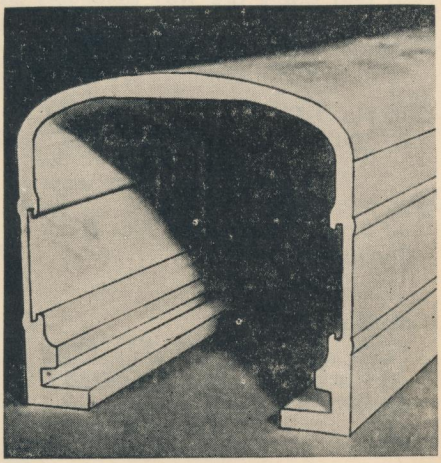
Streamline Coach With Windows In Pairs

We feel that these "S" Gauge Streamline Passenger Car Kits are the finest available at the present time. The body of these cars is a one piece Aluminum Alloy extrusion with integral window strip and floor support grooves. We are the originators of extruded metal coach bodies for streamline cars and have several patents pending on this type construction.

These kits include extruded magnesium streamline fairing strips with truck clearances punched out, high quality pressure cast ends, full working molded rubber diaphragms, (another Midgage original), wood floor, acetate window strips, all hardware and complete, easy-to-follow, exploded type instructions. Our standard 4 wheel, high speed Commonwealth Passenger Trucks are part of this kit. Cars are modeled after 80' prototype and are 15" long over the ends. 67' Baggage Cars are 12½" long. The rear end of the Observation-Lounge is a one piece aluminum casting, and material is included for a radio antenna in this kit.

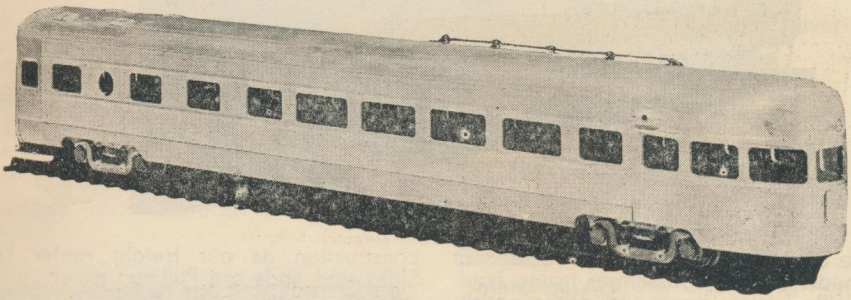
Seven types of cars are available, and while they are not modeled after the equipment of any specific railroad, with proper painting and lettering they will serve as a close replica of the smooth type streamline trains operated by many of the larger railroads. The Pennsylvania, New York Central, Great Northern, Illinois Central, Chicago and Northwestern and Union Pacific are some of the roads operating this type equipment.

For those who prefer to operate 3/16" scale equipment on Tinplate Track, we offer a line of four special short streamline cars equipped with tinplate trucks and couplers. They are all scale 67' (12½") long and will negotiate the shorter radius tinplate curves with ease. With the exception of trucks and bolsters, and a lesser number of windows, these "shorties" are identical in design with our full scale streamliners.

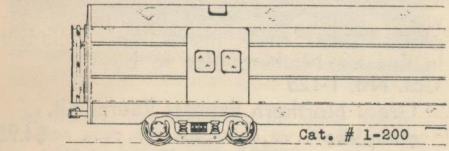


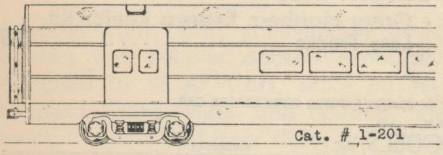
End view of extruded aluminum alloy coach body section showing window strip and floor support grooves. Patents pending.

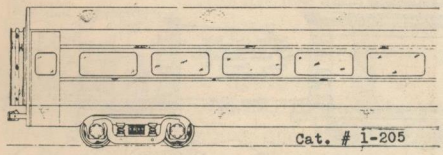
nlinPassenger Coach Kits

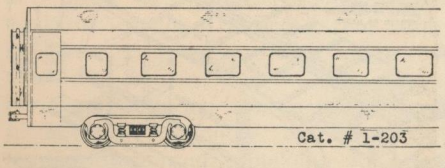


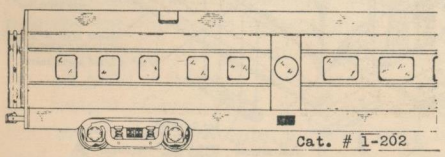
Streamline Observation-Lounge











Cat. No. 1-200
67' Baggage Car Kit $6.50

Cat. No. 1-201
Baggage-Tavern-Lounge (Combine) 6.50

Cat. No. 1-202
Diner 6.50

Cat. No. 1-203
18 Section Roomette 6.50

Cat. No. 1-204
Coach with Windows in Pairs 6.50

Cat. No. 1-205
Double Window Coach 6.50

Cat. No. 1-206
Observation-Lounge 7.50

Cat. No. 1-207
Tinplate Baggage Car Kit 5.50

Cat. No. 1-208
Tinplate Coach-Double Windows. 5.50

Cat. No. 1-209
Tinplate Coach-Windows in Pairs . 5.50

Cat. No. 1-210
Tinplate Observation-Lounge ... 6.50

(Prices of above kits include trucks)

GN EXPRESS REFRIGERATOR CAR KITS

These 50' express reefers can be seen at the head of many passenger trains, hauling milk, butter, eggs and other perishables at high speeds throughout the country. This 3/16" scale kit is modeled after the Great Northern prototype, and is complete with fully sprung passenger type, high speed 4 wheel trucks, die cast hardware, including door hinges and latch bars, ice hatches, end sills and couplers, as well as stamped ladders, sill steps, roof walk end braces, and corner braces.

Body parts are dried and seasoned basswood, using the same interlocking end construction as our freight reefer kits. Sides and ends are Pullman green, printed on heavy card stock, accurately scored and lettered in Gold with two color Herald, and varnished for protection against soil and dirt. All small hardware, paint and easy to follow "exploded" assembly instructions included in this kit. Nothing else to buy!

Cat. No. 1-125
Great Northern Express Reefer Kit, complete $4.95

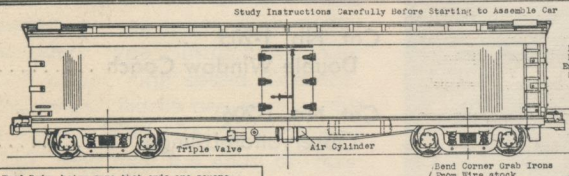
Cat. No. 1-126
Great Northern Express Reefer Kit, Less Trucks 3.50

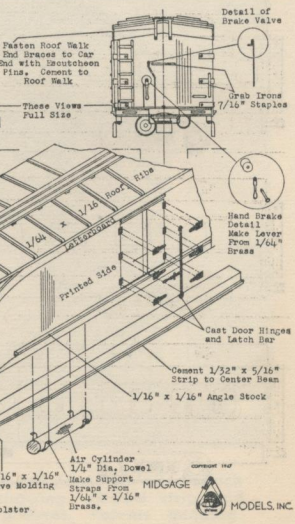
ASSEMBLY INSTRUCTIONS FOR "S" GAGE GREAT NORTHERN EXPRESS REFRIGERATOR CAR

MANUFACTURED BY

P. O. BOX 1044 — MIDGAGE MODELS, INC. — PORTSMOUTH, R. I.

Study Instructions Carefully Before Starting to Assemble Car





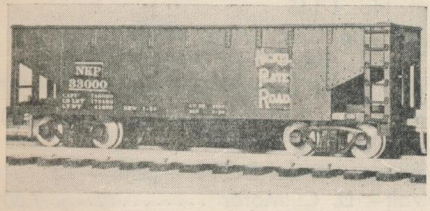
1. Assemble Wood Body, being sure that ends are square with sides.
2. Cement Roof Eaves, Roof Ribs, Roof Walk End Braces, Roof Walk, and Center Beam in place.
3. Attach Icing Platform, Roof Grab Irons, Air Cylinder, Triple Valve, Air Reservoir, Body Bolster, Couplers, End Sill Castings, and Sill Steps, and make and attach Buffer Plates.
4. Paint Roof Pullman Green and Underbody Black before mounting printed sides.
5. Trim Printed Sides and Ends to fit body as shown. Sides overlap ends. Small dash marks on Sides and Ends are locating points for trimming. Wood side extends below printed side about 1/8".
6. If necessary sand wood sides lightly so that Side and Letterboard are flush with Roof Eaves, when mounted in place. Cover Ends and Sides with even layer of good model cement and press in place using flat weights to insure smooth bonding and eliminate bulges and wrinkles. Wax paper will protect sides and prevent weights from sticking to them.
7. Trim and mount Letterboards and End Moldings, which are made from surplus card stock, pressing until dry to prevent wrinkles. Paint edges of Letterboards and End Moldings before mounting.
8. Attach Door Hardware, Corner Braces, Grab Irons, Hand Brake Assembly, Roof Walk End Braces, Ladders, and 1/16" Angle at lower edge of printed side. These parts can all be painted Pullman Green before cementing in place.
9. Cut off extensions on ends of truck inner side frames and assemble as per supplemental instructions. Paint and install with #4 x 3/4 R. H. Wood Screws.

This instruction sheet is typical of those included in all MIDGAGE kits

"S" Gauge Tinplate Conversion Kits

As was mentioned in the section of this catalog devoted to Tinplate Conversion Data, we have a series of freight car conversion kits available, and also stock the "Nimco" Locomotive Conversion Kits for those of you who plan to change your American Flyer 3/16" Tinplate equipment over to full scale operation.

The freight car conversion kits, available for box, cattle, hopper, gondola, tank and caboose cars are complete with Andrews or Bettendorf Trucks (Except



AF Hopper Car converted for scale operation with midgage parts by M. E. Chadborn of Kansas City, Kansas.

caboose conv. kits), combination body bolsters and coupler pockets especially designed to fit AF Cars, scale dummy couplers, brake wheel and housing, lettering transfers and door slides and other special parts and hardware as required for each type car, along with complete, step-by-step instructions for converting these cars for scale operation.

Locomotive Conversion Kits include scale drive wheels, crankpins, pilot truck wheels and axles, trailing truck wheels, tender trucks or wheels as required, rear coupler insulating parts, reversing bridge rectifier and bracket for AC-DC motors, hardware, lettering transfers and complete, easy to follow, instructions for tearing down and rebuilding AF Locomotives for full scale operation.

You will find that the actual job of converting your American Flyer Locomotives or Freight Cars with these complete conversion kits is quite simple, and is well worth the effort in the resulting improvement in appearance and operation.

Cat. No. 1-250
Midgage AF Box Car Conversion Kit $2.35

Cat. No. 1-251
Midgage AF Cattle Car Conversion Kit 2.35

Cat. No. 1-252
Midgage AF Hopper Conversion Kit 2.15

Cat. No. 1-253
Midgage AF Gondola Conversion Kit 2.15

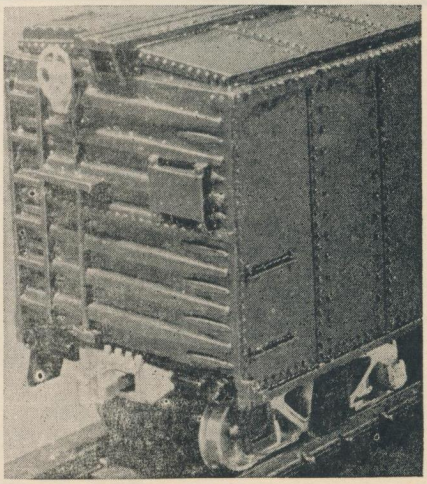
Cat. No. 1-254
Midgage AF Tank Car Conversion Kit 2.15

Cat. No. 1-256
Midgage AF Caboose Convesion Kit 2.50

Cat. No. 1-275
Nimco AF Atlantic Loco Conversion Kit $10.90

Cat. No. 1-276
Nimco AF Pacific Loco Conversion Kit 12.90

Additional Locomotive Conversion Kits and parts are listed on next page.



Converted AF Box Car showing scale trucks, coupler and coupler pocket, brake wheel and housing.

PACIFIC LOCOMOTIVE PARTS

Cat. No. 4-105
Pilot Truck Casting — Bronze — Unmachined ..... $ .45

Cat. No. 4-106
Pilot Truck Casting — Bronze—Machined 1.65

Cat. No. 1-375
Pilot Truck Wheel and Axle set... .45

Cat. No. 4-101
Engine Main Frame Casting — Bronze — Unmachined 2.00

Cat. No. 4-102
Engine Main Frame Casting — Bronze — Machined 5.15

Cat. No. 4-103
Tender Frame Casting — Bronze — Unmachined 1.30

Cat. No. 4-104
Tender Frame Casting — Bronze — Machined 2.10

Cat. No. 1-231
Trailing Truck Kit—Complete—Consisting of Die Cast Side Frames, Cross Brace, 50" Wheel and Axle Assembly and Weight 1.50

Cat. No. 1-230
Tender Truck Kit—Complete—pair 2.00

Cat. No. 1-325
Side and Main Rods—one each left and right—Fluted and Drilled—set.. 2.00

Cat. No. 1-326
Crossheads, Left and Right, two Crosshead Guides, two Crosshead Screws, Crosshead guide Brace—set 2.00

Cat. No. 1-327
Walschaerts Etched Valve Gear Details with support Bracket, Reverse lever shaft, valve rods and rivets — set 2.00

Cat. No. 1-145
80" Die Cast Drive Wheels with Turned Steel Tires, Positive Quartering, two wheels and one axle—set 1.80

Cat. No. 8-107
Pittman Model DC-91 — pole — 12 volt— D. C. Motor 7.50

Cat. No. 8-108
Steel Worm and Bronze Worm Gear—20 to 1 ratio, 5/32" Hole in Worm—3/16" hole in worm gear—set 2.00

"S" GAUGE TINPLATE CONVERSION KITS

Cat. No. 1-277
Nimco AF Hudson Loco Conversion Kit 12.90

Cat. No. 1-278
Nimco AF Union Pacific Loco Conversion Kit 11.90

Cat. No. 1-279
Nimco AF N.K.P. Switcher Conversion Kit 10.90

Cat. No. 1-280
Nimco AF Royal Blue Loco Conv. Kit 11.90

Cat. No. 1-300
Nimco Bridge Rectifier Kit $2.80

Cat. No. 1-350
Nimco Locomotive Driving wheels, per pair, with axle, one wheel rim insulated, steel tires, oxodized black 1.80
(Available in 51", 61½", 72" & 80" diameters, blind or flanged, with large or small counterweight)

Cat .No. 1-375
Locomotive Pilot Truck Wheel and Axle Sets ..... .45

Cat .No. 1-376
36" Tender Wheels, pair ..... .25

Cat. No. 1-377
40" Trailing wheels, pair ..... .25

Cat. No. 1-378
50" Trailing wheels, pair ..... .70
(Above wheels have 3/32" bore to press on AF Axles)

"S" GAUGE TRACKWORK

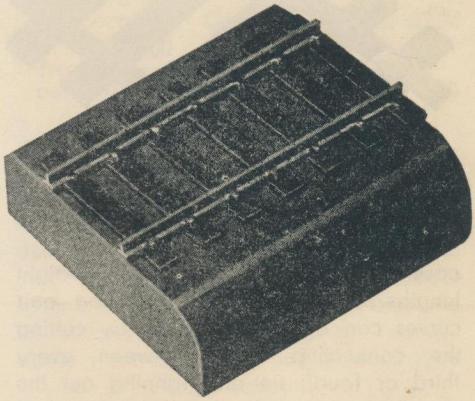
We feel that good trackwork is the most important feature of any Model Railroad. No matter how fancy your layout, and however impressive the scenery and rolling stock, if the track is not properly and accurately built, you are bound to encounter trouble and disappointment in your operation. An investment now in quality materials and careful workmanship will pay you dividends later in the form of smooth trouble-free operation. Don't be too ambitious and try to build a super-deluxe giant size triple deck layout, complete with double slip switches, crossovers, wyes, turntables, tunnels, bridges, trestles, valleys, hills and headaches, with a track network that resembles nothing more than the maudlin wanderings of a frustrated snail. Do plan your pike carefully so that there is a good logical reason for every switch and curve and grade on it, and get one section in operation, even if it is a temporary simple loop, so you can sit back occasionally and enjoy a bit of actual railroading as construction progresses. Here's everything you need to build your "S" gauge layout, whether you prefer wood ties or tie strip, hand spiking or a tracklayer that gauges and spikes in one operation.

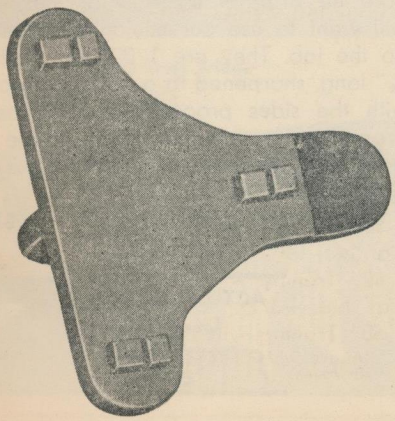
RAIL

Our "S" Gauge Rail is rolled to close limits on our own rolling dies, and is an exact reproduction of 152 lb. prototype rail, faithfully reduced to 3/16" scale. This rail is NMRA "G" Section and is .125" high. It is rolled from High brass to provide good electrical conductivity. You will find no other rail can give your pike that extra realism you desire in "S" Gauge.

Cat. No. 8-100

152lb. "S" Gauge Oxidized Brass Rail .125" High-36" lengths-per 99'. . . .$5.25





TRACK GAUGE

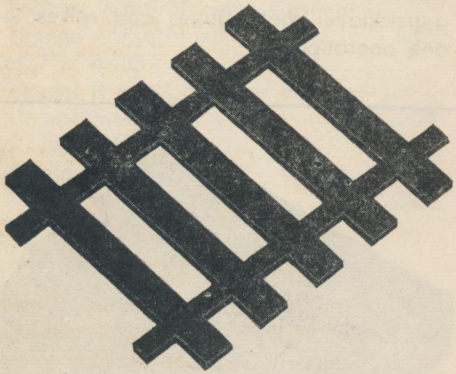
A good Track Gauge is your best insurance against faulty trackwork and poor operation. Our track gauges are made of cast brass, accurately machined to NMRA Standards, with provision for locating outside third rail if you desire. A three point type gauge, automatic track widening is obtained when used in laying curves.

Cat. No. 4-100

Machined Brass Track Gauges, each .50

Fibre Tie Strip

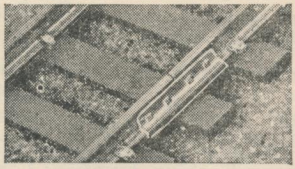
Our Fibre Tie Strip provides the most practical and easy basis for trackwork, and is still realistic enough to satisfy the most discerning of Modelers. Made from heavy black fibre board almost 1/16" thick, it is punched clean and sharp with the tie width and space between ties being equal. Ties are scale 8" wide and 8' long and have 4 spike holes pierced adjacent to the rail flange position for



ease in spiking. It comes in straight lengths 36" long for easy handling, and curves can be made readily by cutting the connecting strips between every third or fourth tie and fanning out the tie strip to provide the desired radius. We have also a special tie strip section for turnouts, in 3" widths, with the connecting strips offset to one side of the tie strip to provide plenty of length for any turnout. Four holes are pierced in each tie for ease in spiking down the straight rails fo your turnout. This special tie strip comes in 12 and 18 inch lengths only.

Cat. No. 3-100
Heavy Black Fibre Tie Strip, per 99' $4.50
Cat. No. 3-101
Turnout Tie Strip-12" length..... .20
Cat. No. 3-126
Turnout Tie Strip-18" length.. .. .30

Rail Connectors



Perhaps the most common method of providing an electrical connection or "bond" between rail sections is by the use of Rail Connectors or "Fishplates," small metal clips that slip over the bottom flanges of the rail and fit snugly against the center web. Our rail connectors are stamped from Rich Low Brass to provide good electrical conductivity and have four square bolt heads embossed on each side to duplicate the appearance of real "fishplates." They will fit either of our two rail sections ".125" or .115" high) and will give that last finishing touch you will want on your "S" Gauge Layout.

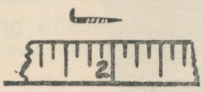
Cat. No. 3-102
Embossed Rail Connectors-per dozen .25
Cat. No. 3-102
Embossed Rail Connectors-per hundred 1.50

Miniature Spikes

No matter whether you spike our rail to fibre tie strip, or scale wood ties, you will want to use our miniature spikes to do the job. They are 1/32" square and ¼" long, sharpened to a flat chisel point, with the sides prooved, and the head properly shaped and offset, Made of steel, they are a true minature spike.

Cat. No. 6-200
Squar Steel Spikes, ¼ pound....$1.00

ACTUAL SIZE

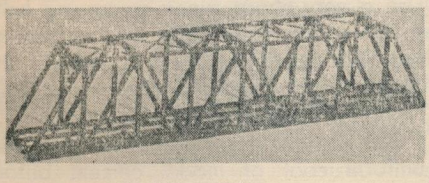


TURNOUTS—SWITCH KITS

If you are really ambitious, you will want to built up your own turnouts from our switch kits. However, if you want to take a few short cuts in getting your pike into operation, our built up turnouts are the answer. Accurately machined and jig assembled from our 152 ℔. (.125" high) Brass Rail, they are top strapped and ready to spike into place on your layout. The alignment straps are easily removed after spiking and the turnout is ready for operation. Built to NMRA Standard.

Our switch kits provide all of the necessery components for you to build up your own No.6 left or right hand turnouts. They are complete with full scale templates, 12" length of turnout tie strip, rail connectors, assembled and soldered frog and points, formed guard rails, and milled stock rails, with step by step instructions. Made from our 152 ℔. (125" high) Brass Rail.

Cat. No. 8-102
Built up Left Hand No. 6 Turnout $2.85
Cat. No. 8-103
Built up Right Hand No. 6 Turnout 2.85
Cat. No. 8-104
Switch Kit, Complete 2.25



Steel Truss Bridge

WOOD TIES

For those who want the utmost in realism, we offer stained wood ties made of soft pine, 1/8" thick x 3/16" wide x 1 1/2" long.

Cat. No. 5-150
Scale Wood Ties, Stained, per 1M $2.00
Cat. No. 5-151
Scale Wood Ties for Turnouts, stained, 1 1/2 length, per 100..... .35
Cat. No. 5-152
Scale Wood Ties for Turnouts, stained, double length, per 100..... .45

TRACKLAYER

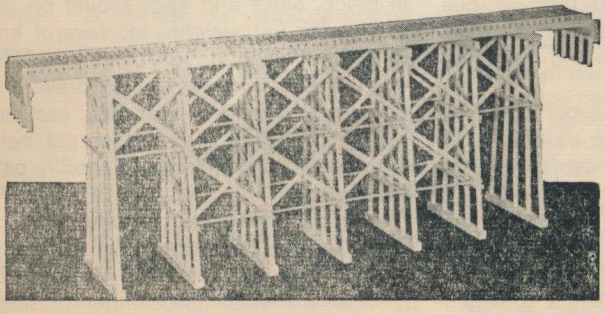
Through special arrangement with the Famous Model Company, we offer their new "Famoco" Tracklayer for "S" Gauge. This tracklayer gauges and spikes in one operation, gauging the track at two points, and has an extra attachment for regular or parabolic curves.

Cat. No. 8-106
"Famoco" "S" Gauge Tracklayer $2.75
Cat. No. 6-100
Tracklayer Spikes, (about 1500), per package ..... .60

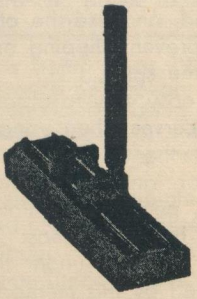
BRIDGE KITS

These Truss Bridge and Timber Trestle Kits are manufactured for us exclusively in "S" Gauge by Star-Line Models, whose quality products in other gauges need no introduction. They are pre-cut and easily assembled with the full size templates and instructions included in each kit. You will surely want to include one of each type in your "S" Gauge Layout.

Cat. No. 5-153
Timber Trestle Kit $3.25
Cat. No. 5-154
Truss Bridge Kit 3.50



Timber Trestle



"S" Gauge Tracklayer

TRACK KITS

Those who are just starting to build an "S" Gauge Layout will find that one of these Track Kits offers the advantage of convenience and economy over the purchase of individual components.

Kit No. 1 includes sufficient material to build 50' of track with one turnout, and includes 99' "S" Gauge Rail, 50' Fibre tie Strip, ¼ lb. Square Steel Spikes, 3 Dozen Rail Connectors, 1 Switch Kit and a Track Gauge. Bought separately the tota lcost would be over $12.00!

Kit No. 2 will build 100' of track with 2 turnouts and includes 198' "S" Gauge Rail, 100' Fibre Tie Strip, ½ lb. Square Steel Spikes, 6 Dozen Rail Connectors, 2 Switch Kits and a Track Gauge. Bought separately the total cost would be over $23.00!

Cat. No. 8-110
Track Kit No.1 (Builds 50' of Track)
$11.00

Cat. No. 8-111
Track Kit No. 2 (Builds 100' of Track)
$21.50

TRACKWORK TIPS

Garnet Paper, cemented or tacked to your roadbed, and given a thin coat of grey paint, will make a very realistic appearing ballast for your pike, and it is easy to apply. Trim matching edges with scissors, to get a close fitting joint, and use small head brads to tack in place along the bevel of the roadbed. We use Behr-Manning grade 2-36D on our layout.

A pair of linesmans pliers will grip the head of your miniature spikes firmly and permit easier driving through fibre tie strip and ballast. Grip the pliers firmly in one hand, and use the other to steady them to prevent slipping or bending the point of the spike.

An easy way to obtain a super-elevation on curves when using fibre tie strip is to split the tie strip to the center with a razor, and cutting halfway through the ties, peal this portion of the fibre from the bottom. Almost 1/32" difference in the thickness under the rail can be obtained by this method, which is sufficient to give a very realistic banking effect where desired.

MILLED ROADBED

Our roadbed is milled from seasoned and dried clear soft wood, and will provide an excellent foundation for whatever trackwork you plan. It is available in straight sections in two lengths, and curved sections in a variety of radii, along with easement curves for starting your curves on a true tangent, as well as switch blocks for No. 6 turnouts. Curved sections of different radii may be fitted together to make gradually changing curves.

Cat. No. 5-100
3' Straight Milled Roadbed.....$.55
Cat. No. 5-101
18" Straight Milled Roadbed..... .30
Cat. No. 5-106
1' Curved Roadbed-30" radius..... .30
Cat. No. 5-107
1' Curved Roadbed-36" radius..... .30
Cat. No. 5-108
1' Curved Roadbed-42" radius..... .30
Cat. No. 5-109
1' Curved Roadbed-48" radius... .30
Cat. No. 5-102
1' Left Hand Easement Curves .... .30
Cat. No. 5-103
1' Right Hand Easement Curves .... .30
Cat. No. 5-104
Left Hand Switch Blocks..... .40
Cat. No. 5-105
Right Hand Switch Blocks..... .40

KINKS ON KIT CONSTRUCTION

Use a very sharp razor or carving knife to trim printed car sides to size, scoring the side lightly at first, to prevent the glossy coating on the card stock from lifting or tearing along the cut.

Cover the car body or sides with a thin, **uniform** coat of model cement before pressing the printed side or scored end in place. Sides and ends should be pressed under flat weights for several hours to allow cement to dry and bond thoroughly. This is necessary to prevent the side from bulging or wrinkling, especially on smooth wood which does not permit the cement to penetrate as readily as on a balsa side.

Attach all hardware on roof, ends and underbody of cars, and paint this portion before fastening car sides in place. This method yill lessen the danger of smearing up a car side and spoiling the whole paint jobs.

STARTING AN "S" GAUGE LAYOUT

(Continued from Page 5)

designed with quality and faithfulness to prototype, a prime consideration. At the same time we have made a sincere effort to keep the retail price as reasonable as possible under present labor and material costs. In spite of the fact that many materials have risen in cost since we first established our kit prices (brass wire for rail, for instance has increased over 30% in cost this last year) we have managed to absorb such increases through improved production methods, and increased production, and actually have **reduced** prices on a great many of our products. As better grades of wood became available, they were used in our wood body kits and roadbed. New and stronger, (and costlier) alloys have been used in our truck side frame castings, which along with some redesign, have resulted in as much as 300% increase in strength. Additional lettering and heralds have been added to some of our lettering transfer sets. Dies for punching tie strip were rebuilt to permit piercing holes in each tie for spikes, thus making track laying easier and faster. Car sides have been reprinted with new and better cuts, giving greater accuracy and better detail. Tooling for all car wheels has been revised to incorporate an additional 1/64" tread width as recommended by the NMRA in their 1947 Standards.

Letters of praise and commendation from our many customers are adequate proof that our efforts to maintain and increase the quality of "S" gauge Model Railroad Equipment are appreciated. Start building in 3/16" scale now and remember that you will get the BEST in "S" gauge from MIDGAGE!

TINPLATE CONVERSION DATA

(Continued from Page 6)

should be just under 3/64" for best operation. If this method of reducing driver flanges is used, protect the motor with cardboard or paper during the job, and clean the locomotive thoroughly afterwords, to remove all filings and dust.

An alternative to this method is to widen the gauge of the drive wheels by tapping the ends of the axle with a nail set and hammer, driving the wheels off each end of the axle about 1/32". If this method is employed, check side rod and valve gear clearance carefully before operating the locomotive to see that no interferences result from the increased wheel spacing. Later on in this catalogue you will find listed complete AF Locomotive Conversion Kits, as well as separate conversion parts which will make it easy for you to change your equipment over to scale operation.

By all means plan to operate your model railroad on 12 volts direct current since this is recommended N.M.R.A. standard, and will operate American Flyer equipment as well as the other scale models being offered. Much more satisfactory and positive reversing will be obtainable and general performance will be smoother and quieter. A simple "bridge rectifier" can be substituted for the sequence reverse unit on AF Locomotives having series wound motors, so that they will reverse on DC just as a permanent magnet type motor does.

If you have an AC Transformer with your tinplate outfit it can be easily hooked up to a Selenium Oxide Rectifier unit to provide a direct current supply, or you can use a complete DC power pack to provide the necessary direct current.

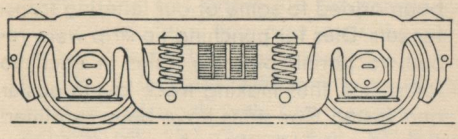
The Development of 7/8" Gauge

(Continued from Page 3)

and cars for conversion to the correct gauge for the scale, and in 1946, of course, American Flyer themselves altered their line to 7/8" gauge, while in 1947, a newcomer to the tinplate field, Mechanicraft, Inc. introduced a 7/8" gauge windup streamliner.

The writer of these lines can speak only as a historian, but it is significant to note that there has been, since 1941, a substantial trend toward 7/8" gauge, particularly with the steadily increasing number of manufacturers who have entered this field since the end of the second World War.

*Louis H. Hertz, well known tinplate collector, authority and historian, is Research Editor of The Model Craftsman, and author of "Riding the Tinplate Rails" and "The Handbook of Old American Toys."



Cat. No. 1-228

Commonwealth 4 Wheel Pass. Truck Kit $1.90

COMMONWEALTH 4 WHEEL PASSENGER TRUCKS

Here's a 4 wheel passenger truck kit suitable for your modern type coaches and express reefers. It is a Commonwealth Type, fully sprung, and is built up with pressure cast inner and outer side frame members and an injection molded plastic bolster. These are well detailed and free rolling trucks, easily assembled without soldering, and fully insulated for use on all metal cars. You will be proud to operate them on your "S" Gauge Pike!

NEEDLE BEARING, FULLY SPRUNG FREIGHT TRUCKS

These Andrews and Bettendorf Sprung Freight Truck Kits are built up with strong pressure cast, well detailed side frames and injection molded plastic bolsters for complete two rail insulation with all metal cars. Four small working coil springs in each truck actually support the car load and the needle point axle bearings combine to give a smooth operating, free rolling truck that will permit you to haul much longer trains with your available motive power!

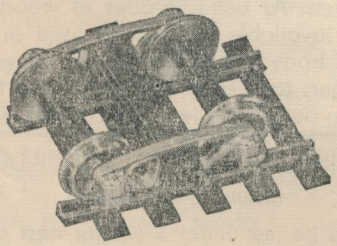
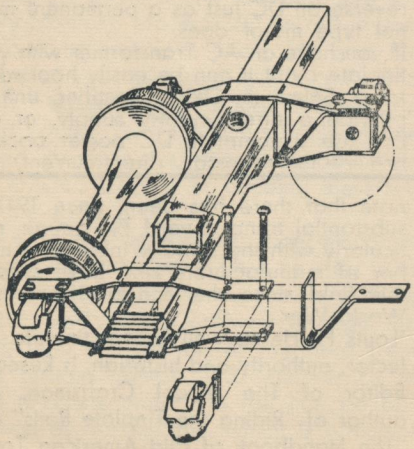


Illustration of Sprung Trucks not available at time of printing.

Cat. No. 1-225
Andrews Freight Truck Kit $1.10

Cat. No. 1-226
Bettendorf Freight Truck Kit 1.10



ARCH BAR CABOOSE TRUCKS

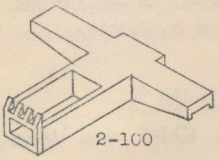
We know of no better detailed truck than our Arch Bar Caboose Truck. The side frames are built up to scale with accurate brass stampings and pressure cast journal boxes, rivetted together and assembled into a complete truck unit with a pair of injection molded plastic upper and lower bolsters of our original interlocking design. No soldering is required, and you will be more than pleased with the result of your efforts in assembling this truck.

Cat. No. 1-232
Arch Bar Caboose Truck Kit $1.50

CAR HARDWARE

The Car Hardware listed below, together with the wood body kits, printed car sides and lettering transfers listed on the following pages, will enable you to build an almost endless variety of rolling stock for your "S" Gauge Railroad Empire!

PRESSURE CAST HARDWARE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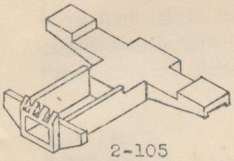
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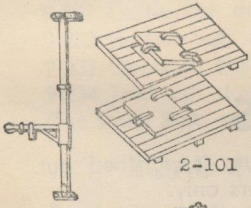
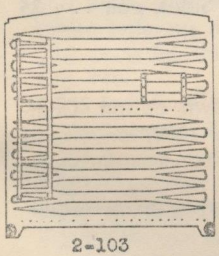
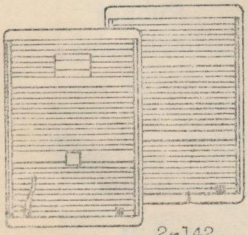

2-101

7-112 7-111

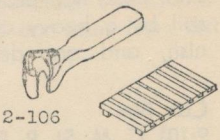

2-103

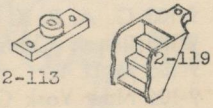

2-104 2-142

Cat. No.		
2-100	Combination truck bolster and coupler pocket, pair	.20
2-105	Combination truck bolster and coupler pocket (To fit AF cars), pair	.20
2-101	Working Ice Hatches, set of 4	.35
*2-102	Dummy Ice Hatches, set of 4	.25
2-103	Box Car Ends, Dreadnaught type, pair	.25
2-145	Box Car Ends, Youngstown type, pair	.25
2-104	Box Car Doors, pair	.15
2-142	Auto Car Doors, set of 4	.30
2-106	Scale Dummy Couplers, pair	.10
2-107	Brake Wheel, each	.05
2-108	Ajax Brake Housing, each	.05
2-109	Air Reservoir, each	.05
2-110	Air Cylinder, each	.05
2-111	Air Valve, each	.05
2-112	Destination Board, each	.05
2-113	Passenger Type Body Bolster, pair	.15
2-119	Coach Steps, set of 4	.20
*2-120	Coach Seats, 6 L. & 6 R.	.75
*2-123	Express Reefer Air Cylinder,	.10
*2-124	Express Reefer Air Valve, each	.10
*2-125	Express Reefer End Still Casting, pair	.20
*2-136	Pacific Loco Boiler Back, each	.20
*2-137	Air Cylinder—Tender, each	.05

STAMPED CAR HARDWARE

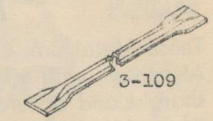
3-103	Ladders, set of 4	.25
3-104	End Sill Steps, set of 4	.20
3-105	Center Sill Steps, pair	.10
3-106	Roof Walk End Braces, pair	.15
3-107	Brake Platforms, each	.15
3-108	"Z" Door Slides, set of 4	.15
3-109	Rolled Roof Ribs, (12)	.30
3-117	"U" Door Slides, pair	.10
*3-112	Turned Pass. Steam Traps,	.10
3-113	Baggage Car Doors, pair	.20

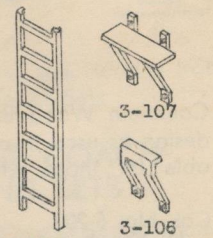

2-106 7-108


2-113 2-119

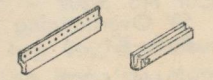

2-112 2-108 2-107


2-109 2-111 2-110


3-109


3-107 3-106 3-103


3-104 3-105


3-108 3-117

*Not Illustrated

PLASTIC CAR HARDWARE

7-108 Box Car Roof Platforms, pair .10

7-111 Reefer Door Hinges, (12) .... .10 7-112 Reefer Latch Bars, pair .. .. .15

PRINTED REFRIGERATOR CAR SIDES

Our Refrigerator Car Sides are printed on heavy card stock, with authentic lettering and coloring, protected from dirt and soil by a heavy coat of clear flat varnish, and are deeply and accurately scored to simulate wood sheathing. Scored material is included for ends and the sides will fit either 40' or 42' bodies. The following types are available:

Cat. No.
9-101 C. M. St. P. & P.
9-102 Fruit Growers Express
9-103 G. A. R. X.
9-104 Illinois Central Dispatch
9-105 M. D. T.
9-106 New York Central (MDT)
9-107 Pluto Water
9-108 Santa Fe (with Chief and Map Herald)
9-109 Soo Line
9-110 Swifts
9-111 Western Pacific
9-112 Wilsons

Freight Refrigerator Car Sides, pair .35
See illustration on Page 8
Cat. No. 9-100
Great Northern Exp. Reefer Sides (50') pair 45

METAL BOX CAR SIDES

These Metal Box Car Sides are made of Aluminum, with all rivet detail embossed sharply and accurately. The top edge is flanged inward to fit under the roof eaves and the door opening is punched out. Unpainted, for 40' cars only.

Cat. No. 3-114
Embossed Metal Car Sides, pair .. .35

WOOD BODY KITS

Complete Wood Body Kits of the same design as used in our Car Kits are available for those who wish to build up special cars of their own design. Complete with interlocking roof, ends and floor, sides, roof walk and underbeam.

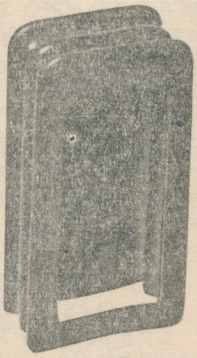
Cat. No. 5-200
40' Overhanging Roof Wood Body Kit ..... .90

Cat. No. 5-201
42' Overhanging Roof Wood Body Kit .. .. .90

Cat. No. 5-202
50' Overhanging Roof Wood Body Kit ..... .95

Cat. No. 5-203
40' Receding Roof Wood Body Kit .. .. .90

Cat. No. 5-204
50' Express Reefer Body Kit ..... .95



Molded Rubber Diaphragms

We are the originators of this type of Molded Rubber Diaphragm. They are flexible and realistic and are easily cemented in place.

Cat. No. 7-115
pair ..... .50

"S" GAUGE CAR LETTERING TRANSFERS

Serious Model Railroaders are aware of the fact that only by the use of car lettering transfers or decals is it possible to obtain complete freedom of choice of car numbering and dimensional data and variety of road names to duplicate actual car lettering. Application is easy and instructions accompany each set. We recommend giving the car a coat of dull varnish after lettering, to hide the connecting film on the transfers and to protect the lettering and car sides from dirt and soil.

CAR DATA SETS

Car Data sets consist of all necessary small markings such as capacity, weight, load limit, date built, car sizes, etc., and contain sufficient material to letter two or three cars of different sizes. White lettering only.

Cat. No.
9-200 Box & Auto car data set
9-201 Cattle car data set
9-202 Hopper car data set
9-203 Gondola car data set
9-204 Tank car data set
Car Data Sets, each ..... .15

ROAD NAME SETS

Road name sets consist of road name, initials, heralds and car numbers for sides and ends, and slogans, where required. White lettering only with white or black and white heralds.

Cat. No.
9-205 Baltimore and Ohio
9-206 Bessemer & Lake Erie
9-207 Boston and Maine
9-208 Canadian National
9-209 Chesapeake & Ohio
9-210 Chicago & North Western
9-211 C. B. & Q.
9-212 Erie
9-213 Missouri Pacific
9-214 New Haven RR
9-215 New York Central
9-216 Nickle Plate Road
9-217 Pennsylvania RR
9-219 Soo Lines
9-218 Santa Fe System
9-220 Western Pacific
9-221 Cities Serv. Oil
9-222 Phillips Petroleum
9-223 Sinclair Oil Co.
Road Name Sets, each ..... .20

ROUTE OF
The Challengers

Burlington Route
NEW YORK CENTRAL SYSTEM
ERIE
CITIES SERVICE
BESSEMER
BOSTON AND MAINE RAILROAD "MINUTE MAN SERVICE"
C AND O

Illustrated are some of the Heralds from our Road Name Transfer Sets.

STREAMLINE COACH LETTERING SETS

Black lettering only. Consist of road name and car numbers, and car names.

Cat. No.
9-224 Pullman, Pennsylvania and New York Central
9-225 Illinois Central, C. & N. W., Union Pacific
9-226 Imperial Arch, Imp. Bay, Imp. Court, Imp. Terrace, Imp. Falls, Imp. Mountain.
9-227 City of Buffalo, City of Cleveland, City of Philadelphia, City of Albany, City of Pittsburgh, City of San Francisco.
Coach Lettering Sets, each ..... .20

We mentioned elsewhere in this catalogue that quality and accuracy and faithfulness to prototype were given first consideration in designing our "S" gauge products. Shown below are but a few of the many letters we have received from dealers and individuals alike, unsolicited testimonials to the fact that the name "Midgage" on any 3/16" scale product is a guarantee of the Best in "S" gauge!

nd me the new
roducts made in "S" gau
n as requested for the Catalog
me and address given below.
have been constructing trucks made in your
ge kits, and I can safely say that never before
e I seen such a detailed piece of equipment go
ogether so easily and run so smoothly.

Mr. David J. Shumaker
211 Vidkroy Ave.
-town, Penna.

Gentlemen:
One of the finest locomotive kits
ve ever seen, your Pacific is tops!
I recently changed from HO to S and
m more than pleased with the extra
size, details, etc.

John G. Peldes
8238 S. Turner Ave.
Evergreen Park 42, Ill.

43 Beechwood Terra
Yonkers 5, N. Y.
August 2, 1948

Model
104
, R

BEHORE MOD
366 Boston Place
TOLEDO 10, OHIO

These Coaches are mine —
Send me when you can spa
them.

Russ.

ty check in the amount

ORDER

Last month I completed assembly and painted the K5 locomotive. She works smoothly and with unexpected tractive power. I am very proud of that engine.

Yours very truly,

D. N. Chamberlain
D. N. Chamberlain

GAGE MOD

Ge Models Inc.
Box 1044
rtsmouth, R.I.

Gentlemen:

I have just finished four
will make and keep "S Gauge" the
existence. It was a real pleasure
this fine kit.

Thank you for making such a fine lo
available to the "S Gauge".

Yours truly,
R.H. Gaither

DWIN HOBBY AND TOY SHO
75 SOUTH GRAND AVENUE
BALDWIN, NEW YORK

ge Models Inc.
Box 1044
tsmouth, R.I.

December 29, 1945

er Sirs,

In reference to your advertisement in the "Model Railroader", I am enclosing a dime for the copy of your catalog.

I believe that you are doing model railroaders a great fatorby initiating the 3/16" scale line, and I for one am greatly interested in it. I had been an advocate of HO, but this scale is a lot better to work with, and details are permitted comparable to O gage without sacrificing space.

Very truly yours,

Forrest D. Shoup
T/Sgt. Forrest Shoup
9th Bomb Squadron
rt. Worth AAFld.,
Fort Worth, Texas

I went down to see Eric Fuchs here in Boston and he immed
referred me to your products. As a sample, I bought one of you
cars and the result is that our entire stock will be purchased
you through Eric. I would like to find someone who could show m
kit that could equal yours, much less surpass it - I don't belie
would be successful in his quest.

If you have any printed matter on your products covering vari
cars, locomotives, scenery, track and equipment I would certainly b
glad to have you send it to me. Again, congratulations on a fine li
of products.

C.S
5/20/48

Yours very truly,
Glenn E. Owens, Jr.
Glenn E. Owens, Jr.

The streamlined cars do you credit,
one of the best kits I have seen on the market.
kits like the S Gauge should go far.

Yours truly
Robert McCormack

Your streamline cars are really swell!
Keep u
good work.

COLONEL BOB'S
1ST PICO BOULEVARD
ELES 6, CALIFORNIA
REPUBLIC 3717

PURCHASING

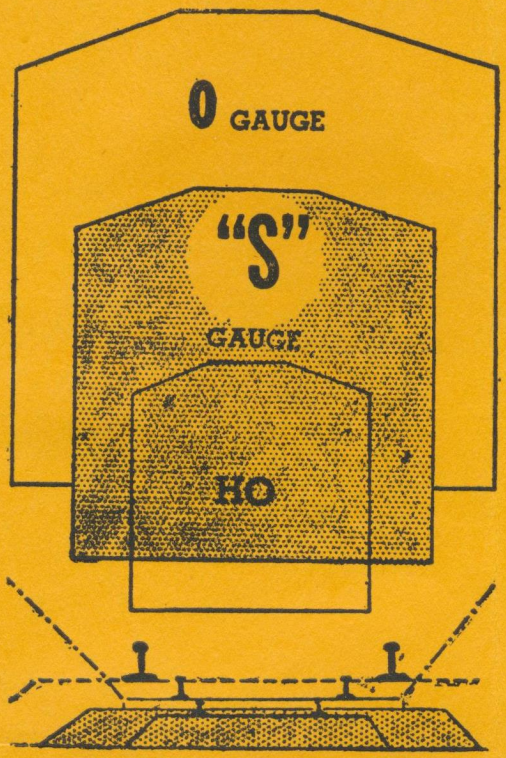
Your Double Window Coach is beautiful.

Sincerely yours,
Col Bob

S Gauge is the Practical Size
FOR EASY MEASUREMENTS IN INCHES

N. M. R. A. STANDARDS

Preferred Practice 2-Rail



Track Gage	7-8"
Scale	3-16"
Flange Thickness	1-32"
Flange Depth (.039)	1-32" plus
Back to Back - Flanges	25-32"
Tread Width - Minimum	3-32"
Flangeways - Frog & Guard	1-16"

(These dimensions should be as accurate as possible.)

Minimum Switch **No. 6**

This applies to a turnout from straight track. Special work radii shall not be less than with a No. 6 turnout.

Minimum Radius Curve **30"**

Applies to all main line track where interchange with any standard equipment is desirable. Yard, industrial trackage and trolley lines may of course be built to suit home equipment.

Minimum Double Track Center—	2 7-16"
Minimum Recommended for easy Handling	2 3-4"
Minimum Double Track Center— 30" Radius Curve	3 1-4"
Coupler Height— (Center to top of Rail)	17-32"
Bolster Height (Freight)	13-32"
Bolster Height (Passenger)	1-2"
King Pin Bearing Inside Diameter	.112"

Traction Voltage **12 V. - D. C.**

It is recommended that motors be designed for best operation at 11 V. - D. C. to allow for voltage drop in wiring, track, etc. When using polarized control on two rail, positive on the right hand rail shall produce forward motion. Rear coupler insulated shall be standard for two rail locomotives for double heading.

APPROXIMATE CAR - TRAIN LENGTHS

30 ft. caboose	5 5-8"
40 ft. Box car	7 1-2"
50 ft. auto or gondola	9 3-8"
60 ft. coach	11 1-4"
70 ft. coach	13 1-8"
80 ft. pullman	15"
Locomotive with tender	12" - 18"
6 car Passenger train with Locomotive	9 ft.
12 car Freight train with Locomotive	9 ft.

S Gauge is the Practical Size
FOR EXACT SCALE RELATIONSHIPS

Catalog by

THE NARRAGANSETT PRESS - Fall River, Mass.

Printers for Model Railroaders