

**A
CLEAR
TRACK
TO**

N Gauge Fun



A CLEAR TRACK.....

.....to N Gauge Fun

This booklet has been prepared with a special group of people in mind; namely, the newcomers to the hobby of model railroading. N Gauge (or N Scale as the purists prefer), a fast rising youngster in the growing family of popular scales or gauges was only recently imported from Europe to this country and from all appearances is here to stay. Because of its minuscule size it is attracting into the hobby a large number of one time armchair railroaders who were frustrated by a lack of space.

Built to a scale of .075 inches to the foot, or one 160th actual size, N Scale occupies a space of only slightly over one-half that required for a comparable HO Gauge railroad. A simple loop of track can in fact be installed in the center drawer of an ordinary junior executives desk ... ordinary referring to the desk not the executive.

If you've had previous experience in HO with prefabricated sectional trackwork, particularly Atlas track, much of what follows will appear quite familiar. Even so we caution you old-timers that, because of a difference in the geometry between Atlas N Gauge track and Atlas "Snap" and "Customline" track, you won't be able to duplicate—piece for piece—the layouts appearing in the various Atlas booklets. Just about all of them would require some rearranging of track components. Quite frankly, if you happen to spot a family resemblance, that's exactly what we've done.

Some of the simpler layouts in this booklet can be assembled and operated on the living room rug and although we can understand the temptation to do so we most highly recommend against it. Your Atlas locomotives are amazingly rugged, considering their size, but their perma motors will tend to attract lint from a rug

which, if it doesn't actually injure the mechanism, will most certainly cause discouragingly poor operation in fairly short order. If the spirit is weak and you just have to try it out before starting your permanent layout we suggest the dining room table after which you might study pages 4 & 5 for two styles of very easily constructed layout tables.



TRAIN SET OVAL...

The simple oval of track which is packaged with all Atlas Train Sets will be the introduction for many of you to the pleasures of the marvelous new hobby of N Gauge Model Railroading. This booklet shows some of the countless many layouts into which you can expand your basic loop using the large variety of track, accessories and electrical components now available from ATLAS... a name long synonymous with dependability in the world of model railroading.

MINIMUM SIZE LOOP

21" x 21"
21" x 26"

Although your trackwork can be fastened directly to the tabletop we think you will appreciate the heightened realism and quieter operation which will result from the use of Atlas cork roadbed. Check page 6 for some "tips" on installing it.

The wiring for all the layouts here-in is basically similar, as shown on pages 8 through 10, but we've further simplified matters by providing a complete wiring diagram for each layout and for those of you who select one of the larger layouts a discussion of control panels with track diagrams appears on page 27.

Atlas also makes manually operated track switches and you might wish to use these at the easily reached locations thus reducing the amount of wiring required.

While on the subject of track switches you'll want to scan the short section dealing with "crowded turnout arrangements" on page 7 which shows how your versatile ATLAS switches can be assembled into complex arrangements in a minimum of space.

Pick a layout that makes a happy compromise with your tastes in railroading and your pocketbook then take enough time to start properly by reading the remainder of this booklet.


Last of all, welcome to a wonderful hobby . . . we've enjoyed it for a long time and sincerely hope that you will too!

KEY TO TRACK PLAN SYMBOLS

2 INCHES = 1 FOOT


 0" Straight Section

 2 1/2" Straight Section

 1/4" Straight Section

 5/8" Straight Section

 Straight Track Assortment

 Rerailer


 Bumper

 9 1/4" Radius Curve Section

 9 1/4" Radius Half Section

 Carved Terminal—9 1/4" Radius


 11" Radius Curve Section

 11" Radius Half Section


 19" Radius Section*


Standard Switches
Switch Control Box Mes.
 Right Hand Left Hand

 15 Degree Crossing

P1 through P32
 Piers—9/64" through 1 1/16" by 9/64" increments

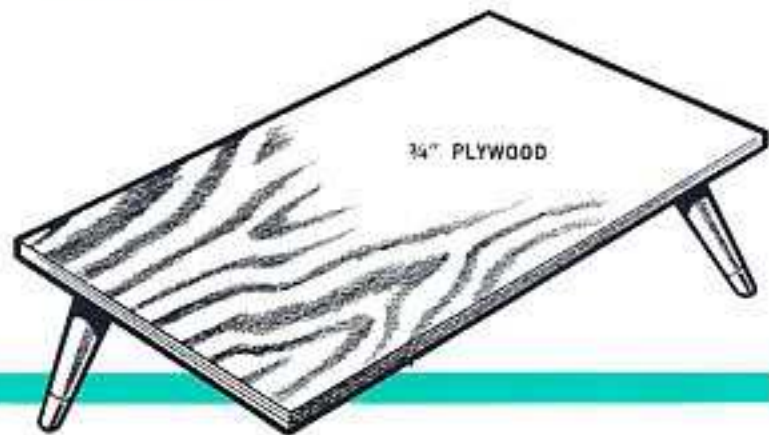
 Pier Girder

Insulated Rail Joiners
 One Rail Both Rails

Terminal/Joiner
 One Rail Both Rails

*NOTE: A 19" radius section is supplied with each Manual or Remote Control Standard Switch

TIPS ON TABLES & BENCHWORK



SIMPLE PLYWOOD TABLE



FURNITURE LEGS 6"-24" LONG

ND. 10 x 3/4"
ROUND HEAD WOODSCREWS

The amount of pleasure to be derived from a model railroad depends, to a large extent, upon its foundation. The small amount of time and effort required to erect either of the two tables shown here will be amply rewarded in numerous ways but most importantly by continuing good operation on well laid track that will maintain its alignment.

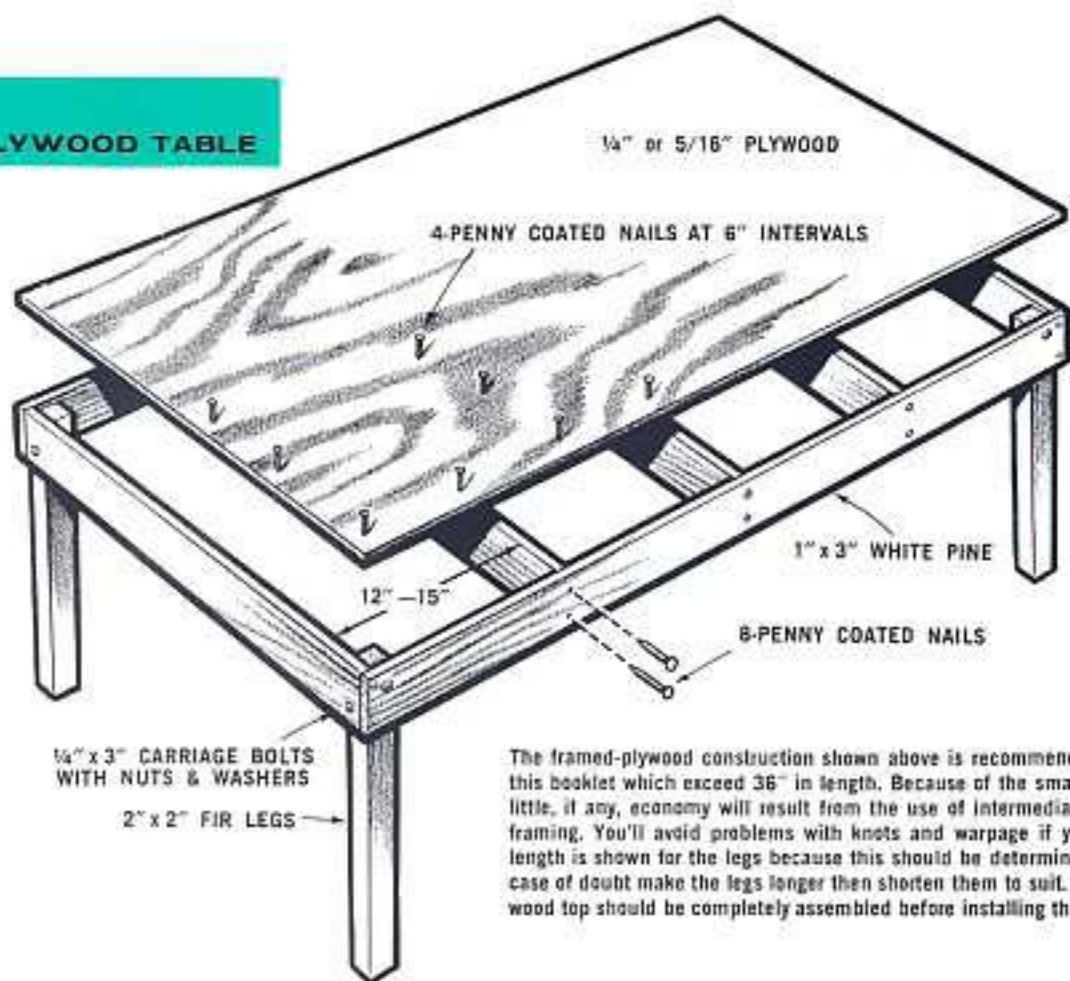
Both tables require a plywood top and here we will depart from our usual recommendations to HO builders by suggesting that you avoid using the cheaper sheathing grades of plywood known as "Plyscord" or "C-D." Their surfaces are too rough to conceal easily and quite frequently a portion of their outer veneers will be missing, particularly at knots. After all, what appears like a little rut to an HO engine starts looking like a creek bed in N Gauge.

The little fellow at the left, which can be built in less than an hour, is an ideal choice for the smaller railroads in this book because its low height allows it to be easily stored under a bed. The commercial furniture legs are readily available locally or can be had from the mail order houses, at very reasonable cost, ranging in height from 4" to 28" in a variety of styles. When attaching the legs be sure they are installed far enough in from the corners so that their feet do not stick out beyond the table edge.

The framed construction on page 5 is pretty much self explanatory. You may wonder a bit at the note specifying "coated nails" rather than screws. The work will progress more rapidly and anyway a hammer's a lot more fun than a screwdriver. If you have some doubt about their ability to hold just drive one nearly all the way then see how much "back" you have to apply in removing it. You'll probably tear the head off first.

A final recommendation is to paint the entire top flat gray or brown which will simplify scenicking your railroad later on.

FRAMED PLYWOOD TABLE



The framed-plywood construction shown above is recommended for all layouts in this booklet which exceed 36" in length. Because of the small quantities involved little, if any, economy will result from the use of intermediate grades of pine for framing. You'll avoid problems with knots and warpage if you buy the best. No length is shown for the legs because this should be determined by your height. In case of doubt make the legs longer then shorten them to suit. The framing and plywood top should be completely assembled before installing the legs.

TIPS ON CORK ROADBED & TRACKLAYING

As mentioned in the benchwork section, first paint your tabletop with a quick drying flat gray or brown. Next step is to assemble the Atlas track as per plan. For the present don't bother with the plastic rail joiners or with any "up & over" piers called for. It is important to check several matters of track alignment at this point:

(1) *Curves must be free from kinks and of correct radius.*

A curve of 180° or more can easily be checked by measuring across it,



centerline-to-centerline. A 9¼" radius curve, for example, should measure 19½" across.

(2) *Parallel tracks must be properly spaced and straight.*

In most cases proper centerline spacing of parallel tracks will be approximately 3.5/16". Use a yardstick to align your straight track.

At this point your track may seem somewhat uncooperative. If it doesn't fit as it should your most likely source of trouble is a curved section of incorrect radius or a straight of improper length. Atlas curved track is identified on the bottom side either by radius or catalog

number. Also check to see if the switch machine corners are interfering and correct as shown on page 7. When satisfied with the alignment, temporarily secure the track with an occasional #20 x ½" nail or escutcheon pin, driving it in only far enough to hold the track in place. Keep rechecking the alignment as you progress. After a final check assures you all is as it should be, mark the location of all the track on the table, using a soft pencil drawn along the ends of the ties (Fig. 1). If your railroad uses "up & over" piers now's the time to mark their location, tracing around one of the pier bases as a template.

Now, remove the temporary nails and lift away the track, keeping it in chunks as large as can be handled without damage. Sketch in centerline,



between end-of-tie lines, using your yardstick on the straight sections. Don't bother with centerlines for trackage which will be supported by piers since you won't be installing roadbed at these locations. When all the centerlines have been marked in proceed with the installation of the cork roadbed: a pleasantly simple task that will improve the appearance and operation of your railroad. Separate the 36" lengths of





roadbed into half-strips and start laying them against the centerlines just drawn. Use #20 nails, as shown in Fig. 2, at 2" or 3" intervals. Fasten the second strip snugly against the first, placing the nails directly opposite those in the first strip so as to avoid forcing the cork into a wiggly pattern. Don't hammer the nails in so deep as to form dimples. Virtually invisible joints between cork sections can be made by overlapping the cork and cutting through both pieces at once as shown in Fig. 3. Poke out the bottom scrap and press the upper strip down.

Switch junctions are easily made as shown in Fig. 4. As with the end-to-end joints, cutting through overlapping strips will insure neatly fitted joints.

The little block of cork along the straight leg dresses up the switch machine. Insert a similar piece under the projection on the curved terminal sections. Now we're ready to re-assemble the track atop the roadbed, installing the plastic rail joiners and the terminal/joiners where shown in the plan. Next, fasten the track down, using one nail per section and checking the alignment as you go. Tap the nails down just far enough to touch the crosstie.

Sections of track are isolated electrically by substituting Atlas plastic rail joiners for the metal joiners. To remove the locked on joiner grasp firmly with needle-nosed pliers and pull it straight off. Slip on plastic joiner half way, being careful not to damage the small central tab.



CROWDED TURNOUT ARRANGEMENTS



CLIP AWAY TWO TIES

A
CLIP AWAY TWO TIES

OR:

B
Add 5/8 section here to eliminate switch machine interference, and...



... add an 5/8 section at each of the other two gaps to maintain relative positions of track ends to remainder of layout. Equivalent lengths must be inserted in trackage on opposite side of layout.

TIPS ... ON WIRING

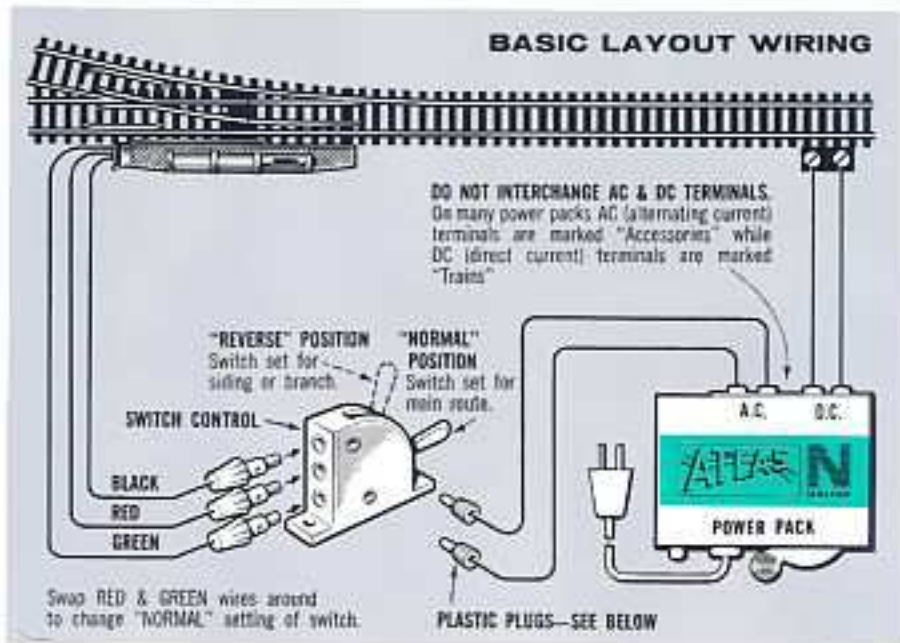
The well known Atlas line of control components has so simplified the task of wiring a model railroad that we need but these three small pages to acquaint you with their use.

The basic wiring scheme, at the right, could be used to run any of the layouts in this booklet just by substituting metal rail joiners for the plastic joiners which divide the railroad into separately powered blocks. You would, of course, be limited to single train operation and you'd have to control all track switches, save one, manually. To control the other switches you just snap on an additional control box for each switch, plug in the coded wires and you're all set.

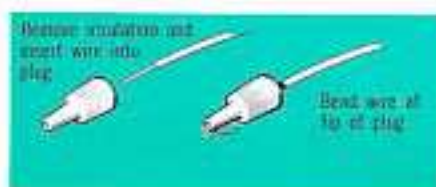
Restoring the plastic rail joiners and adding another power pack will enable you to operate and control a second train but now you'll need a device with which to assign power from each pack to the electrically separated blocks. This device will be an Atlas Selector. Layout N52 on pages 12 and 13 shows how to make the simple power packs to Selector-to-tracks connections.

Two of the simpler railroads, N51 and N58, are one-train-moves-at-a-time layouts with just one power pack and don't need the Selector. In both layouts an Atlas Connector is used to allow you to shut off power under an engine parked on one track while another loco goes about its business elsewhere. Layout N51 shows all the wiring needed.

All the layouts show the required control



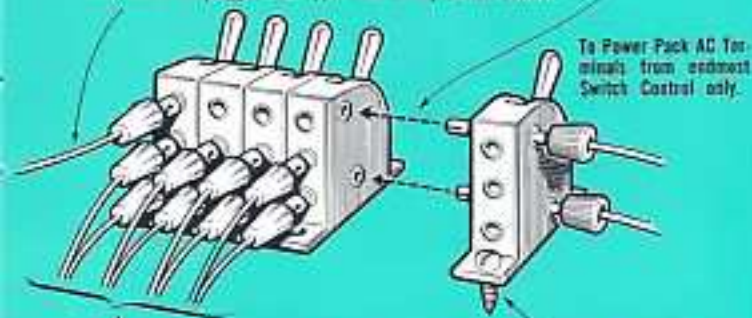
The small plastic plugs packaged with each Atlas Remote Control Switch provide a simple and effective method of connecting the AC terminals of your power pack to the Switch Controls. Just strip about 3/16" insulation from the wire, insert into plug then bend over projecting wire as shown at the right.



GANGING SWITCH CONTROLS

Any number of SWITCH CONTROLS may be interconnected without additional wiring merely by inserting the plugs of one into the receptacles of its neighbor.

BLACK WIRES from all Switch Machines may be connected together at convenient place under layout and then only one of them needs be plugged into upper hole of any Switch Control.



RED & GREEN wires from each Switch Machine to its respective Switch Control

No. 4x 3/4" wood screw into Control Panel every 3rd or 4th Switch Control

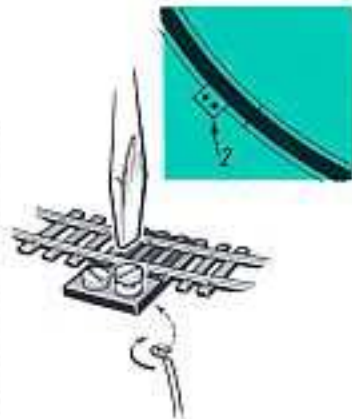
panel components. Wiring them is just a matter of running connections from the components to their corresponding numbers on the track plan. Connect switch controls to switch machines and Selector to tracks. Track connections are made as shown in the two sketches at the right of page 9. Drill small holes through the tabletop at all switch machines and track terminals for the wiring, all of which should be kept under the table. Most switches will be far enough from your control panel to require splicing in of additional lengths of no. 22 wire whose color should match the original wire thus avoiding confusion at the control panel. Splices should be soldered for dependability and taped to avoid short circuits.

See the next page for a few easy ways to properly connect track switch crossovers.

CONNECTIONS TO TRACKS

CURVED TERMINALS

Wiring of Curved Terminal Sections on the layouts throughout this booklet is shown, as in the inset, by a numbered arrow to a corner of the terminal to indicate which screw to use. When securing wire to screw bend a loop in the clockwise direction shown so that tightening of screw will pull wire into place. To avoid loose ends stranded wire should be twisted tightly before forming loop.



TERMINAL/JOINERS

Wiring directly to the rails with Atlas Terminal/Joiners is shown throughout the layouts as in the inset at the right. The numbered arrow indicates which rail receives the joiner. Merely remove standard joiner as shown on page 7 and replace with wired terminal/joiner.



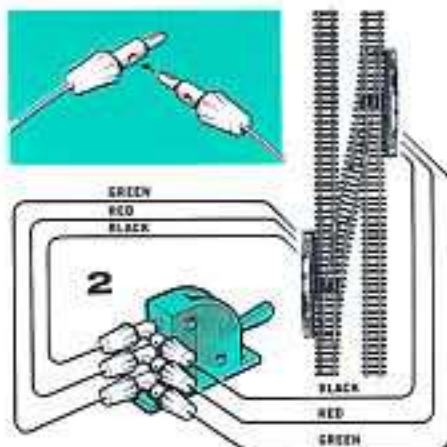
ACTUATING BOTH SWITCHES OF "CROSSOVER" through single CONTROL

Several layouts in this booklet feature "crossovers" or two switches connecting adjacent parallel tracks. In all cases both switches should be thrown at the same time which can be done with a single switch control. We show three methods of so doing on this page. Those of you who prefer to use up all your switch controls can resort to the unprofessional technique shown in Fig. 1.

CLOSE TO CONTROL PANEL ARRANGEMENT

Plugs from one switch machine may be connected to same color plugs of second switch machine as shown at the right. Be sure to read caption below Fig. 2.

If you prefer to use a separate switch control for each switch of a crossover it's a good idea to keep both controls side by side within a group of switch controls and to secure the handles together as shown below.



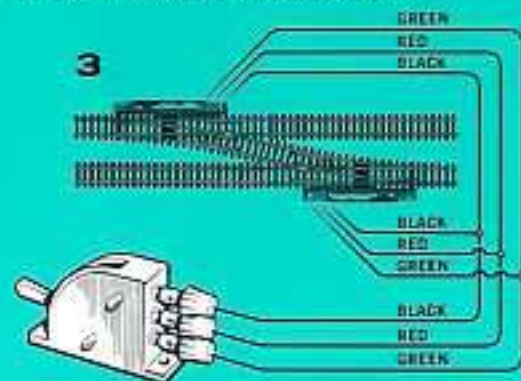
NOTE: If several Switch Controls are grouped together this Control must be located at either end of the group. If Control is located in middle of group use method shown in FIG. 3

Handles taped
or wired
together

1

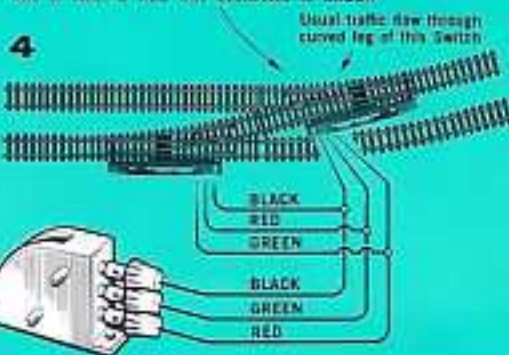


FAR FROM CONTROL PANEL ARRANGEMENT



MAIN ROUTE THROUGH CURVED LEG OF ONE TURNOUT

GREEN wire from this Switch connected to RED wire of other & RED wire connected to GREEN



MINIMUM SIZE LOOP WITH PASSING TRACK

This little jewel introduces the basic operation of all single-track railroading—the meeting of two trains at a “double-ended” passing siding—in the bare minimum of space. Widthwise, it will fit on the readily-available two by four foot piece of plywood and leave space at each end for a natural arrangement of Atlas buildings and other scenic items. Perhaps you have in mind a coffee-table pike for which even this length is too much; you can come down comfortably to less than thirty inches and still fit a seven or eight-car freight into the siding while the limited roars by on the main line.

As you'll discover, however, in any layout with a single passing track you can have only one train going anywhere at a time, so the single-pack electrical system we show here is all you need for the job. While you're waiting to acquire your second engine, of course, your first locomotive can be kept busy switching cars in infinite combinations.

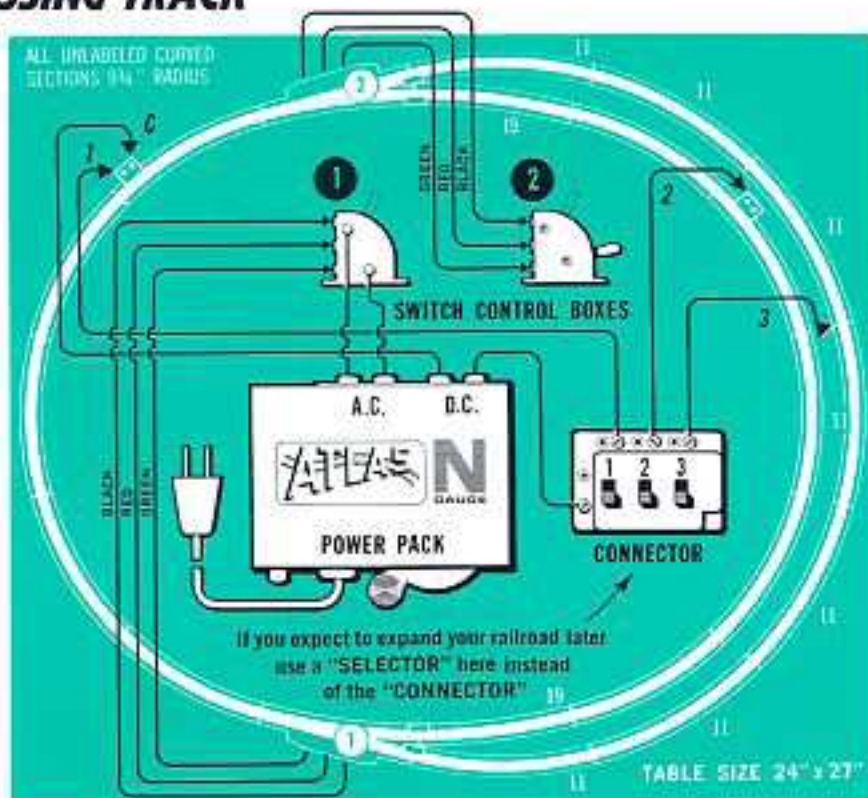
ATLAS PRODUCTS REQUIRED**TRACK**

- 9 1/4" curved section #2510
- Curved terminal
- 12" curved section #2500
- 15" curved section #2520 (purchase none)
- R-4 Standard Switch
- L-4 Standard Switch
- Terminal/Jumper
- Plastic 1/4" pin
- Con roadbed

ELECTRICAL

- Power pack
- Connector
- Switch Control (purchase none)

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LAYOUT N52

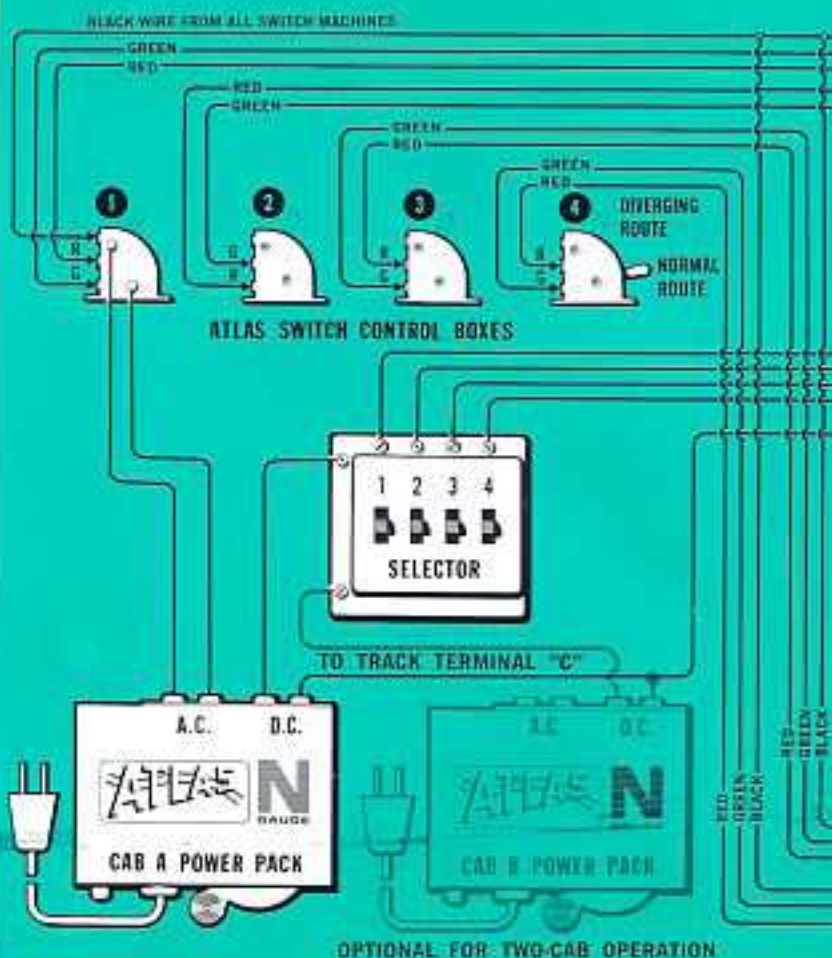
LOOP..... WITH PASSING TRACK AND SIDINGS

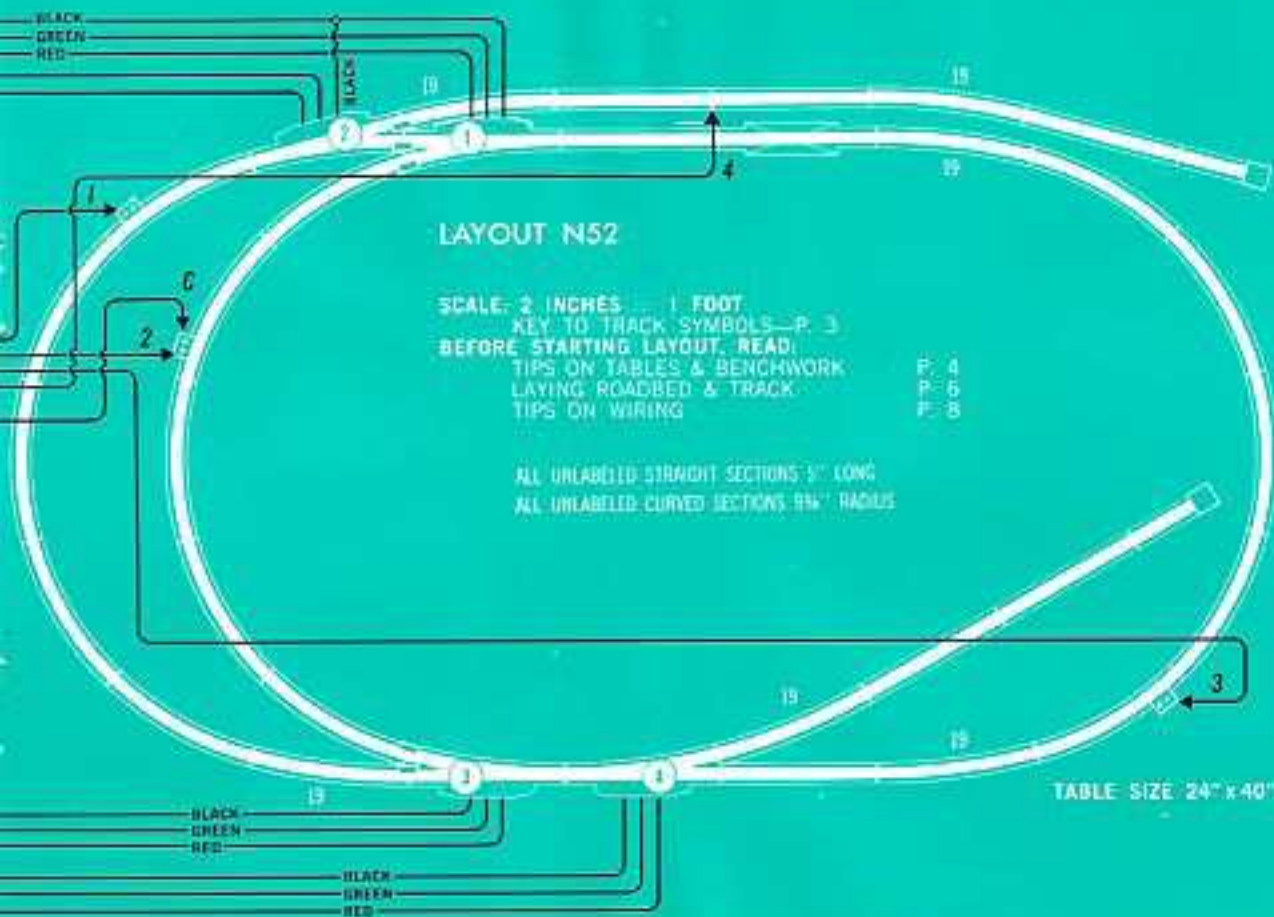
This railroad will also fit easily on a two by four foot base, without leaving the end curves frighteningly close to the precipice; if you're in an expansive mood, adding straight sections in the basic oval can make a layout as long as you wish. The added straightaways will not only provide room for longer station platforms and other scenic items which may not match well with curved track but also let you occasionally see your whole train stretched out realistically.

This also is a one-passing-track system, so continuous running by two trains just isn't possible and the basic one-power-pack wiring shown is adequate. However, adding a second pack and just two connections, as shown in the shaded part of the diagram, still opens up interesting possibilities for two engineers to keep busy independently. While one "train crew" is switching cars in and out of the spur track at the top of the plan, a second team can be working the siding at the lower right.

The passing track at the left end also allows another, more subtle maneuver when a single "local freight" is running on the line with cars to be delivered to both spur tracks. The locomotive can use the passing track to run around its train and thus get in position to shove cars into the spur which faces the "wrong way" for whichever direction it is traveling. Of course, you could accomplish the same purpose by backing all the way around the oval, but that would be impossible in the prototype and a most un-railroad-like procedure on any self-respecting model railroad.

In assembling this layout, you'll have an apparent problem at Switch # 1's location; the solution is discussed on page 7.



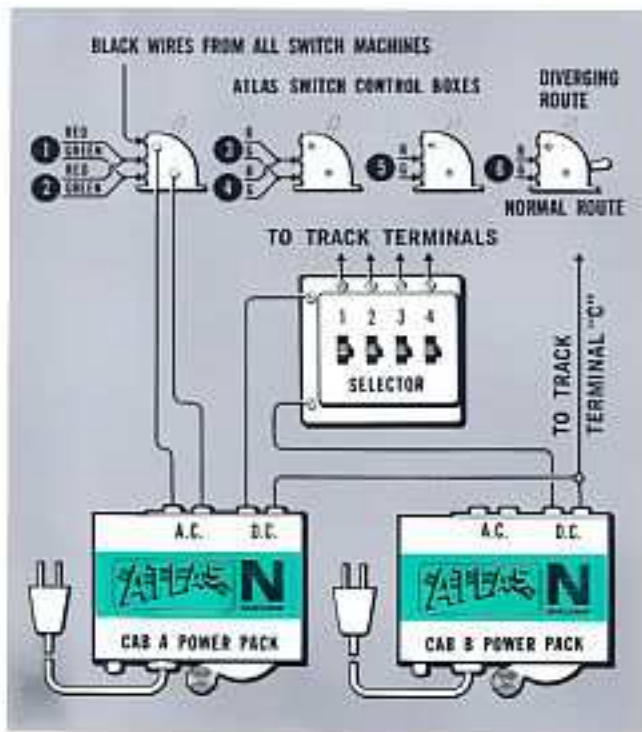


ATLAS PRODUCTS REQUIRED

TRACK	
5" straight section	2
Encoder	1
Bumper	2
9/16" curved section #2510	13
Curved terminal	2
1 1/2" curved sect. #2526 (lay 2)	6
R.H. Standard Switch	2
L.H. Standard Switch	2
Terminal/liner	1
Plastic rail power	1 dec.
Clrk roadbed	6 pcs.
ELECTRICAL	
Power pack	2
Selector	1
Switch Control (3 or three mod.)	4

DOUBLE TRACK LOOPS

Here we present two layouts featuring double-track mainlines which will allow you to operate two long trains continuously. The plan below shows the minimum length into which you can squeeze a double-track loop with two crossovers. The four inches in length saved will cost you somewhat dearly in that you'll gain an inch in width taking you out of the 2' x 4' plywood standard size and, worse still, you will lose the operational possibilities of the switchback sidings. The wiring diagram is correct for both layouts but pay heed to the note at the bottom about interchanging the red & green wires from switch machines 2 and 3.





LAYOUT N54

SCALE: 2 INCHES = 1 FOOT

KEY TO TRACK SYMBOLS—P. 3

BEFORE STARTING LAYOUT, READ:

TIPS ON TABLES & BENCHWORK P. 4

LAYING ROADBED & TRACK P. 6

TIPS ON WIRING P. 8

ALL UNLABELED STRAIGHT SECTIONS, 5" LONG

ALL UNLABELED CURVED SECTIONS 94" RADIUS

SEE "CROWDED TURNOUTS," P. 7

TABLE SIZE 24" x 38"

ATLAS PRODUCTS REQUIRED

TRACK

1" 19 Ax 11 Insided	1
1 1/2" 19 x 9 1/2 Insided (switching wood)	2
7/8" Straight sections Switching wood	4
Straight Track Roadbed	1
Atlatra	1
Stations	4
1/4" Curved sections #2518	3
Curved Roadbed	2
11" Curved sections #1520	18
10" 16 1/2 sections #2521	10
15" Forest Sections & Turnouts #1514	13
R.W. Standard Switch	7
R.W. Standard Switch	3
Control Boxes	2
Electrical Insulator	400
Dark Roadbed	8 pcs.

ELECTRICAL

Power pack	1
Switch	1
Switch Control (switching wood)	4



EXPANDED DOUBLE TRACK LOOP

Here we get some idea of the tremendous increase in operational possibilities available by way of a modest increase of one foot in length and three inches in width over the table size required for Railroad N54 on the preceding page. The main-line runs are extended substantially; two single ended spurs have been added and the switchback siding has acquired a third tail to allow an infinite variety of switching moves.

Two long trains can be continuously operated in opposite directions when you're in a lazy train-watching mood or, if driven to it by the speed minded youngsters in the family, raced in the same direction handicapping the faster train by assigning it to the longer outer loop.

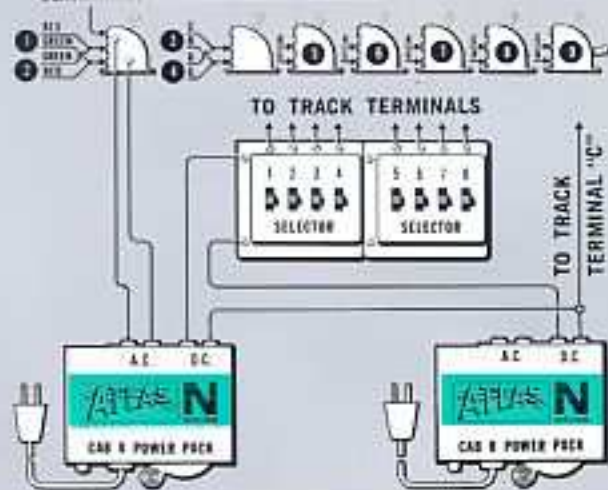
This last activity is discouraged when in the company of the more serious members of the model railroading fraternity.

When the local peddler is switching the sidings off the outer loop you can avoid stabbing your express passenger train, or through freight, by routing it over the inner loop. When serving the various industries along the switchback sidings you'll route your through train to the outer loop to run past the peddler allowing it to use the left side of the inner loop as a switching lead.

You will notice from the wiring diagram, at the right, that only seven switch controls are shown although the layout has a total of nine. Switches 1-2 and 3-4 comprise crossovers both switches of which are always "thrown" in pairs as explained on page 10. Both crossovers use the curved leg of one turnout in the main-line which is why the wires from each pair of switch machines are crossed, red to green and vice versa, on the two left-most switch controls of the wiring diagram. Fig. 4 on page 10 will show you how to do this properly and will clarify the reason for its necessity.

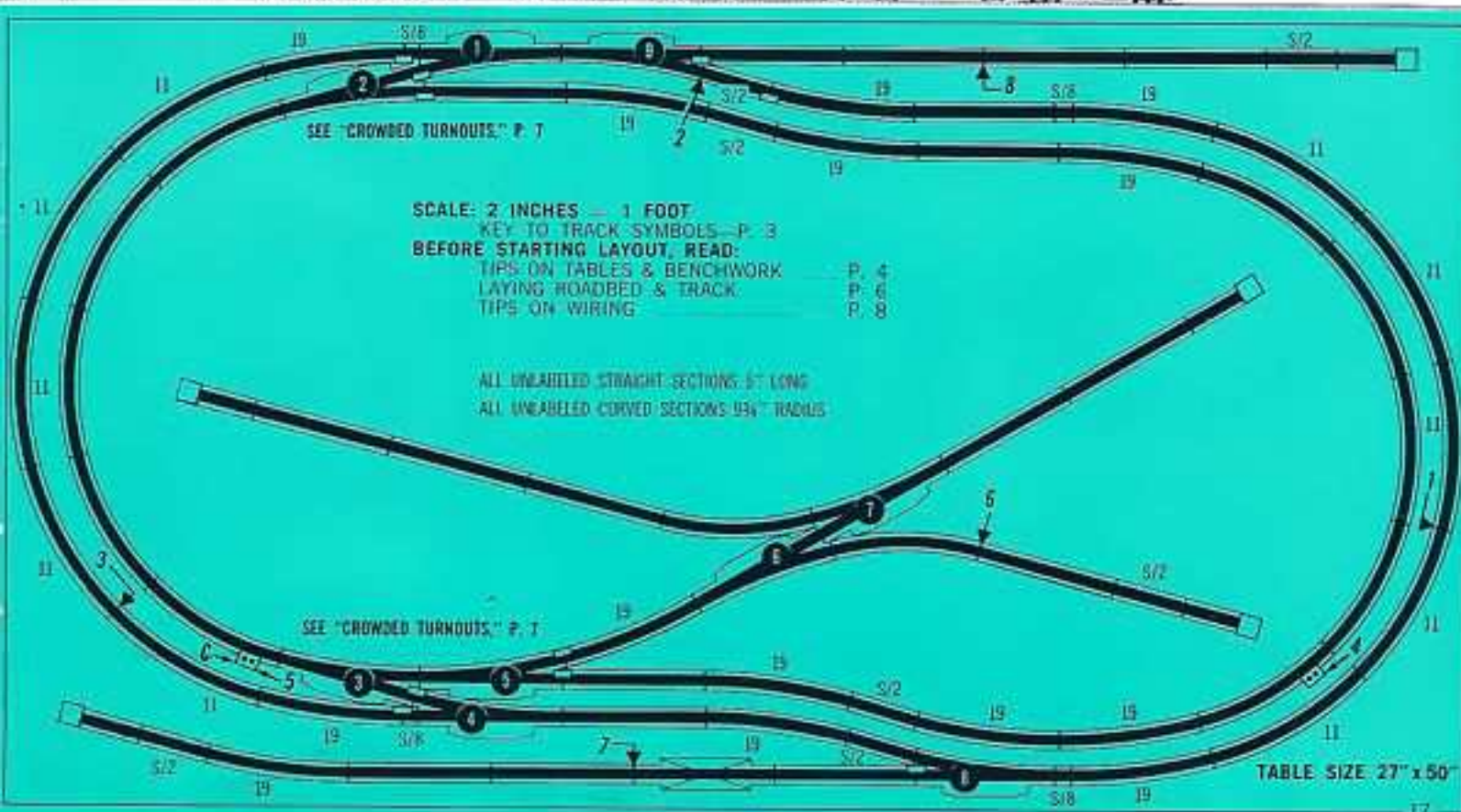
WIRING DIAGRAM

BLACK WIRES FROM ALL SWITCH MACHINES



ATLAS PRODUCTS REQUIRED

TRACK		ELECTRICAL	
3' straight section	18	10" curved section #2525 (purchase 5)	14
7 1/2" straight section (purchase 5)	7	RH Standard Switch	6
4" straight section (purchase none)	4	LH Standard Switch	7
Straight Track Assembly	1	Terminal Jumper	2 pt.
Retainer	1	Plug-in set jacks	1 doz.
Bumper	5	Cork matted	11 pcs.
3 1/4" curved section #2510	10	Power pack	
Curved terminal	2	Selector	
1 1/2" curved section #2520	10	Switch Control (purchase none)	



LAYOUT N56

TWICE AROUND..... VIA "UP & OVER"

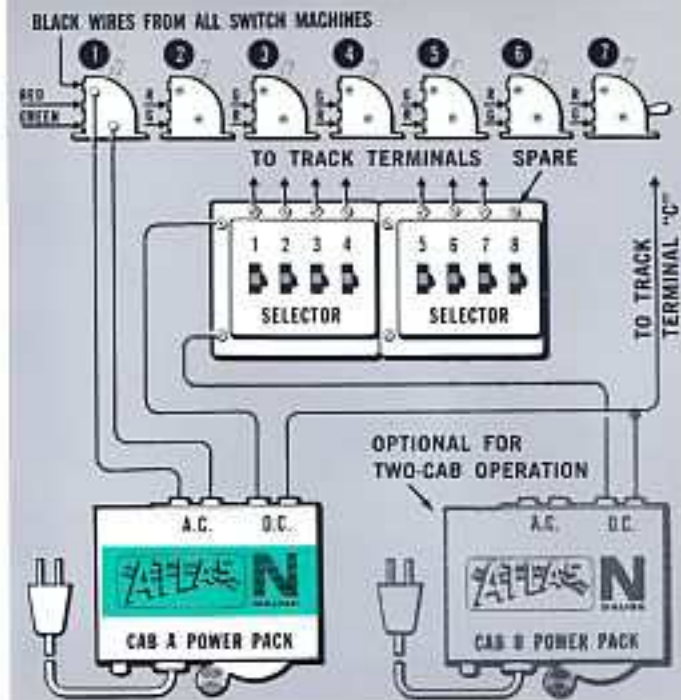
If your layout space is limited and your primary need is a model railroad with as long a main-line run as possible, a twice-around track plan is an excellent choice because it just about doubles the amount of main-line possible in a given space.

This layout achieves that aim through the use of Atlas up-and-over piers and will appeal mostly to the fan who enjoys watching a long train work its way up and down the grades of a long winding main-line.

Three generous yard tracks are available for breaking up and storing those long trains and a passing track with two industry spurs is available to provide additional operating diversions.

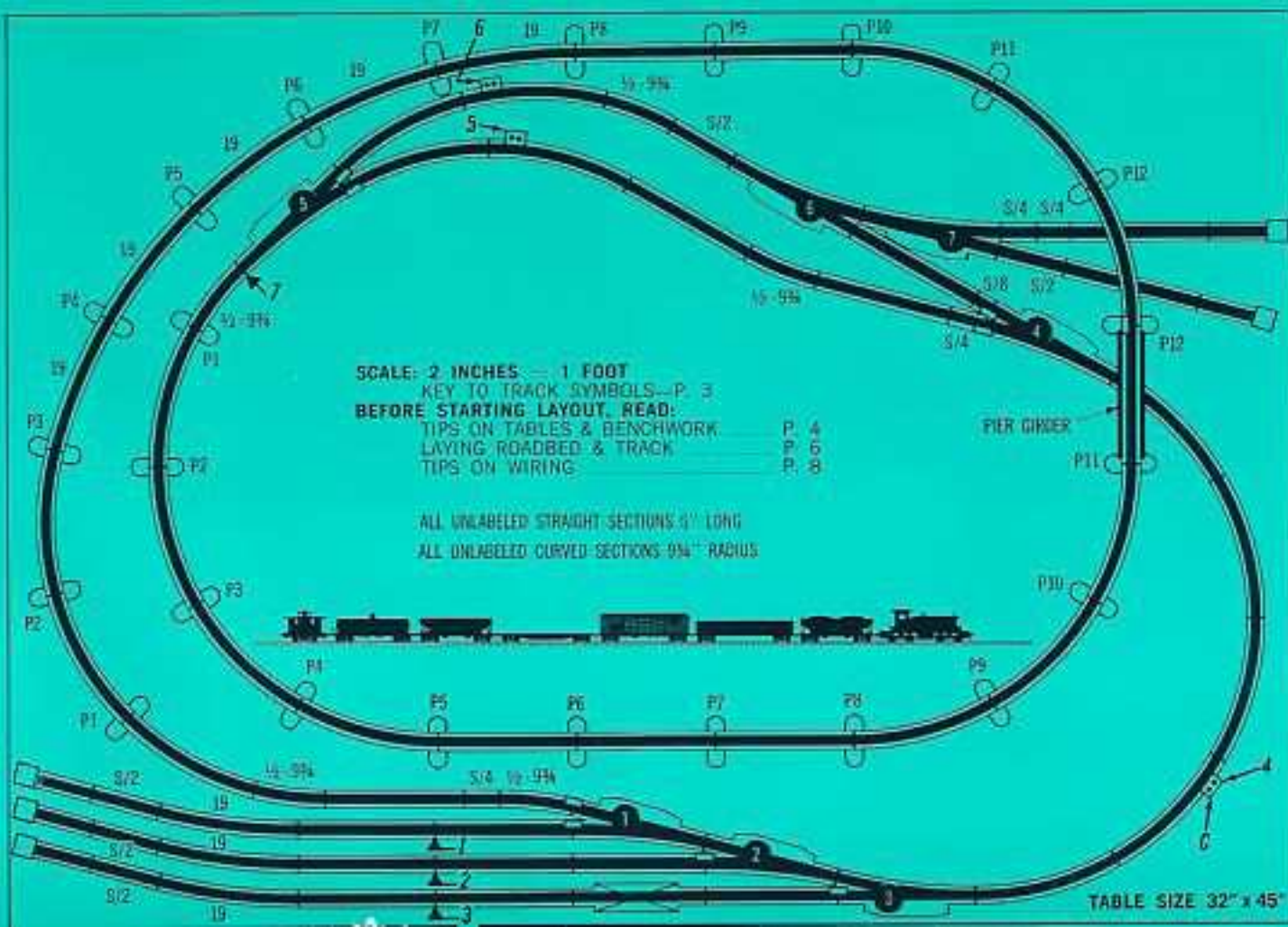
The location for each of the graduated piers is marked on the track plan with the number you'll find molded into the plastic of each pier on the inside. You'll want to be careful not to confuse the no. 6 and no. 9 piers. Be sure to read the section on laying track and roadbed on page 9 before laying any of the track. After the track has been installed fasten the piers down with short #19 flat-head nails. It's a good idea to leave all the nails sticking up about an 1/8" or so above the bases until you're completely satisfied with the track alignment. Should there be a need for adjustments you'll then be able to easily withdraw any nails.

This is basically a one train layout requiring only one power pack, however an optional second pack is shown in the wiring diagram which will allow you to switch the industry spurs while a train traverses the mainline. Build the layout at first using just the single pack. If, at a later date, you should decide to add the second pack you'll be able to do so in only a matter of minutes by making just two wire connections without need for making any changes whatsoever in the original wiring.



ATLAS PRODUCTS REQUIRED

TRACK		
5' straight section	20	
1 1/2' straight section (purchase 2)	4	
1 1/2' straight section (purchase none)	4	
1 1/2' straight section (purchase none)	4	
Straight Track Assembly	1	
Encoder	1	
Decoder	1	
9 1/2" curved section #2510	1/2	
9 1/2" half section #2511	1/2	
Curved terminal	1	
15" curved section #2515 (purchase 1)	8	
E.A.C. Standard Switch	2	
I.H. Standard Switch	0	
Terminal/Isoler	7	1/4"
Plastic rail power	1	1/4"
Rail Set	1	
Cork roadbed	9	1/4"
ELECTRICAL		
Power pack (See wiring Diagram)	2	
Selector	2	
Switch Control (purchase none)	1	



TWICE AROUND VIA CROSSING

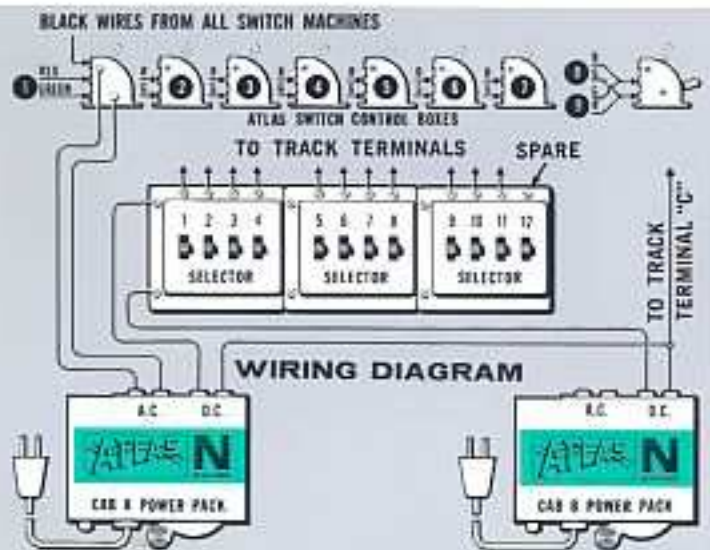
If the idea of a long main-line run, arrived at via the device of a twice-around arrangement, appeals to you but you find the plan on the preceding page a bit shy of operational possibilities then take a good look at this plan.

In addition to that long main-line you'll find two generous double ended passing sidings where your passenger train can overtake and pass a slow freight or, more

fun still, where opposing trains can meet. With a little practice you'll be able to make meets without stopping either train.

The little yard will allow the engine of an incoming train to drop its cars and then escape on the adjacent track by using the two switches down at the left end.

There's a "spare" position remaining in the bank of Selectors on the control panel. You'll be able to use it to feed power to another siding you might want to add later on or, by adding a couple of inches to the table width you can install and control a third track in the yard. A track diagram on the control panel would be helpful on a layout of this size. See page 27 for some hints.



ATLAS PRODUCTS REQUIRED

TRACK

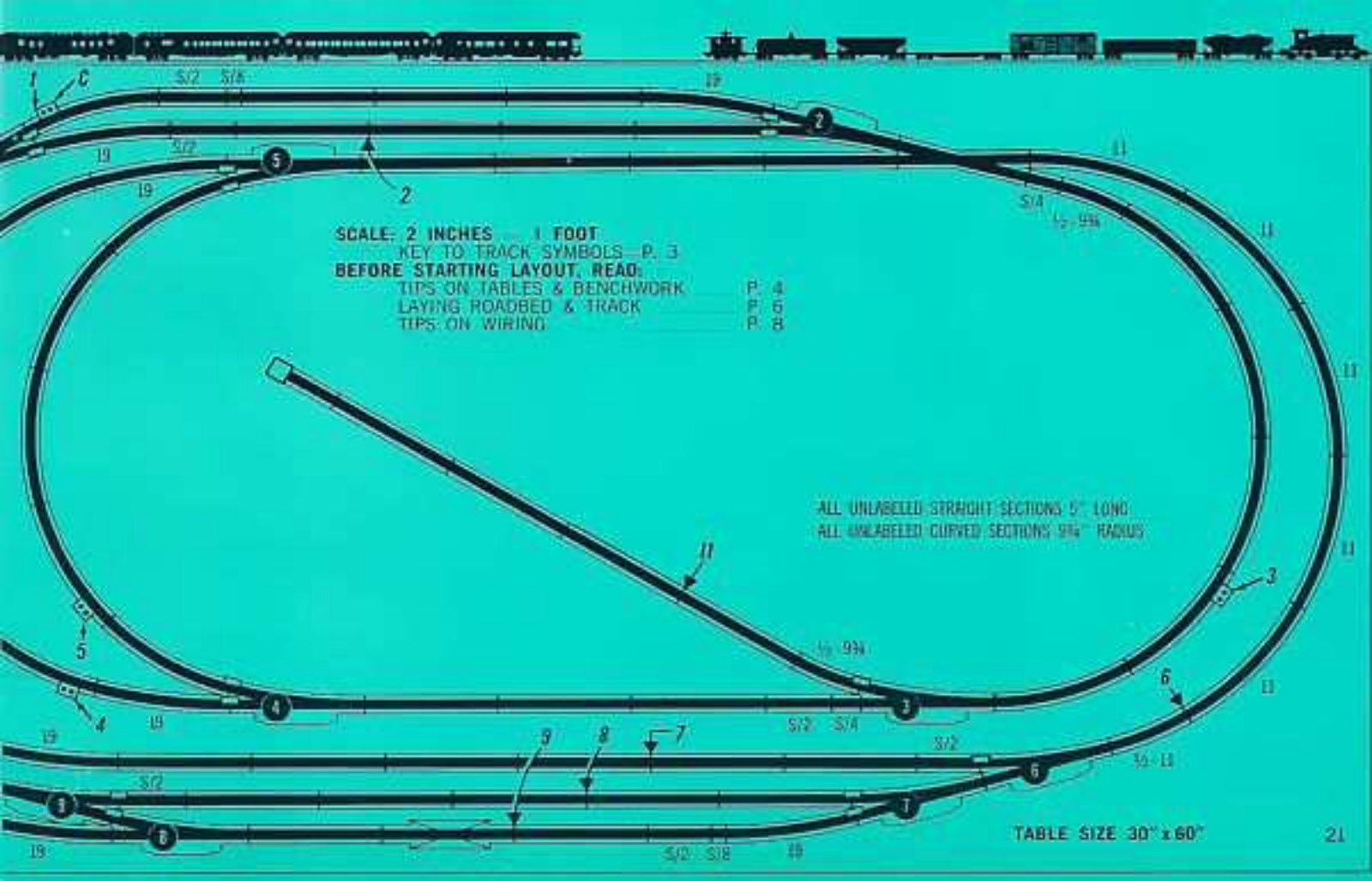
- 1" straight section
- 2 1/4" straight section (purchase 5)
- 3 1/4" straight section (purchase none)
- 1/2" straight section (purchase none)
- Straight Track Alignment
- Spacer
- Support
- 8 1/2" curved section #2310
- 8 1/2" curved section #2311
- Curved terminal
- 17" curved section #2320
- 17" flat section #2321
- 15" curved section #2126 (purchase none)
- 8 1/4" Standard Switch
- 1 1/4" Standard Switch
- 1/2" Angle Crossing
- Terminal Jumper
- Plastic rail joiner
- Dark roadbed

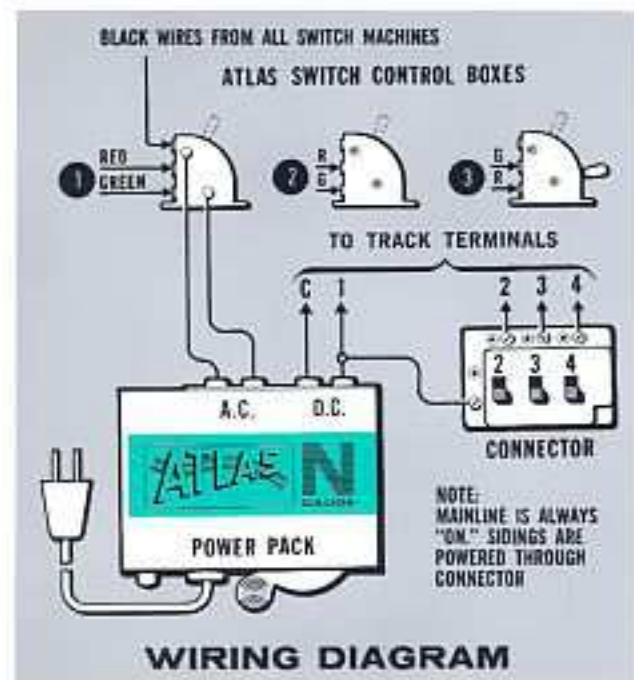
ELECTRICAL

- Power pack
- Selector
- Switch Control (purchase none)

3)
12)
13)
14)
15)
16) gal.
17)
18)
19)





"UP & OVER" FIGURE 8

Take an ordinary oval of track, twist one end and you have a "figure 8" plan. The tracks can cross at grade or, as shown here, bridge one over the other using an Atlas Pier Set to achieve the required elevation.

There are advantages and disadvantages to both arrangements when the layout is confined to a minimum size such as we have here. In an at-grade plan any sidings installed inside the end loops must of necessity be rather shorter than desirable, whereas in the up-and-over method these sidings can be several track sections longer because their switches and the first few lengths of track can be located in the space normally occupied by the intersecting line of track.

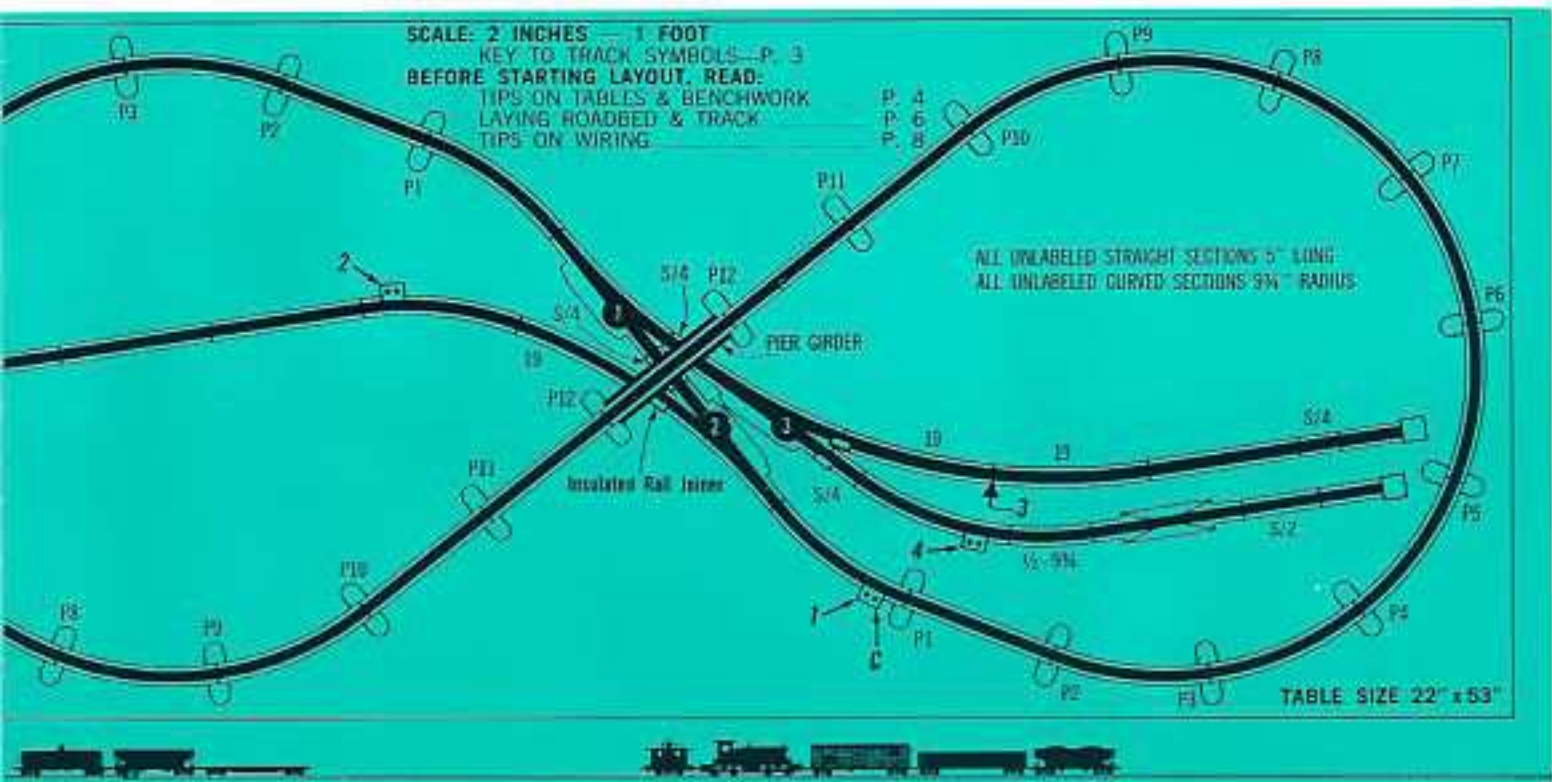
If, on the other hand, sidings are to be installed outside the end loops, the flat plan has the advantage. As you can see, any switches to sidings off the end loops of this plan would have to be elevated to the height of the main-line.

This plan will find its greatest acceptance among the youngsters. If you happen to be a Dad who has to put something together in a hurry on Christmas Eve this plan will take only a little while longer than a simple loop of track and it will keep the little guy interested a lot longer. As with any Atlas layout, all track components can be pulled up and rearranged into bigger and better layouts.

ATLAS PRODUCTS REQUIRED

TRACK			
0" straight section	10	L.H. Standard Switch	3
2 1/2" straight section	1	Terminal Block	1
1 1/2" straight section	4	Plastic vial (power)	1 doz.
Encoder	1	Pier Set	1
Bumper	3	Cork Isolated	3 doz.
5 1/2" curved section @200	17	ELECTRICAL	
3 1/2" half section @211	1	Power pack	1
Curved terminal	1	Connector	1
1 1/2" curved section @226 (purchase same)	3	Switch Control (purchase same)	3





MULTIPLE TRACK ARRANGEMENT

The word "railroading", in the minds of fans bred in the heavily populated areas of the country, conjures up mental pictures of multiple track main lines kept to a high polish by the almost continuous passage of trains. Here we try to emulate such a railroad for those fans whose desires, previously thwarted by a lack of space, lean toward that kind of an operation. If the plan whets your appetite but the 60" length is still a bit long, despair not. The layout can be shortened 5", with little harm, by dropping a straight section out of the main-line and yard tracks. The curved siding also will need to be shortened by a track section. Actually, it's possible to shorten the layout by two sections but we don't recommend it—the railroad will start looking too much like a bowl of spaghetti.

The four-track yard, which is representative of a minor subdivision point, can store about thirty-two cars; some dropped off by through freights and others brought in by the local freight from the lineside industries served by the two generous sidings. One of these sidings is nearly long enough to qualify as a branch line; the appearance being enhanced by its serpentine route. The real reason for its curvature though, lies in economy because we wanted to use up all the 19" radius curved sections which are packaged free with all Atlas standard switches. Your yard engine will stay busy at the task of arranging cars for distribution locally or into blocks to be picked up by east or west-bound freights; all the while remaining in the clear by using, as a switching lead, the innermost main track at the right. Incidentally, those 19" radius curved sections

are of the same radius as the curved leg of the switches. So, if we haven't put in enough yard tracks or sidings, to satisfy your needs, you can easily add a few more by replacing, with a switch, either a 5" straight section or a 19" radius curve. Doing so will, of course, require the addition of another Selector to the control panel.

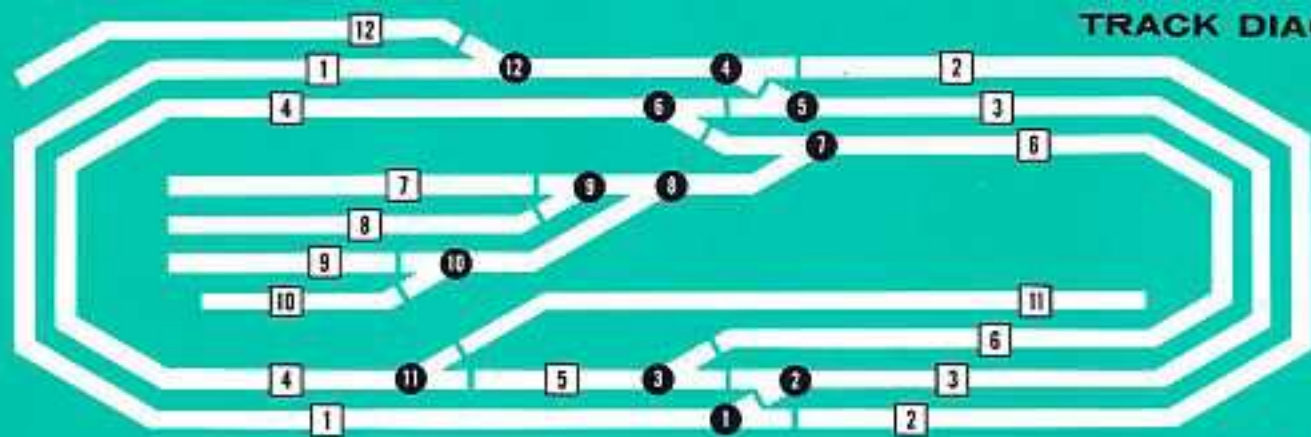
Wiring for this layout is as simple as for any in the book—there's just a bit more of it. A diagram showing all control panel components appears on page 26 with all track and switch machine connection numbers corresponding to those shown on the layout plan. No matter how simple and straightforward a wiring system, if there's a lot of it you're almost certain to make a couple of errors. So here again, as in all Atlas publications, we stress the importance of trying out each track or switch circuit as you complete it. This way, when you do make your first boo-boo you'll know, immediately, exactly where it lies. A look at the switch controls will show that crossovers 1-2 and 5-6 have their red and green wires oppositely arranged. That's because the normal flow of through traffic will be via the straight legs of crossover 1-2 but through the curved

ATLAS PRODUCTS REQUIRED

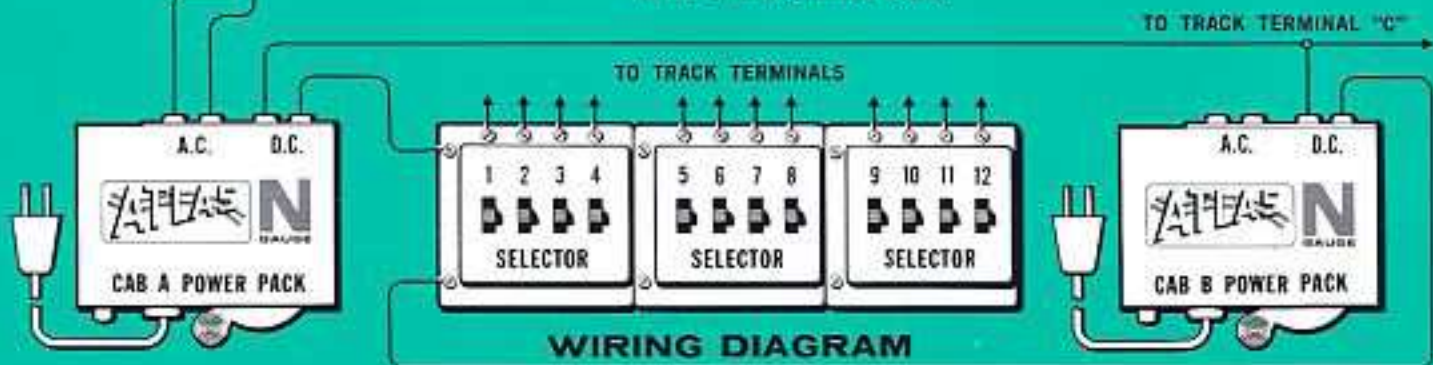
TRACK		ELECTRICAL	
5" straight section	28	11" ball section #2521	2
7 1/2" straight section (purchase 2)	2	19" curved sect. #2526 (with nose)	32
11 1/2" straight section (purchase none)	0	R.H. Standard Switch	1
14" straight section (purchase none)	0	L.H. Standard Switch	1
19" straight section (purchase none)	0	Terminal cover	16 or
20 1/2" track alignment	1	Plastic tie pieces	16 doz.
Bumper	1	Dark roadbed	16 doz.
9 1/2" curved section #2510	1		
9 1/2" ball section #2511	1		
6" yard terminal	1		
11" curved section #2520	1		
		Power pack	1 doz.
		Selector	1
		Switch Control (purchase none)	10



TRACK DIAGRAM



ATLAS SWITCH CONTROL BOXES



WIRING DIAGRAM

legs of crossover 5-6. See page 10 for a fuller explanation. While on the subject of track switches, take a look at the short section, on page 7, concerning crowded turnout arrangements. As noted on the track plan, the two groups of switches comprising the crossovers will require the minor adjustments covered by the above named section.

The control panel for a railroad of this scope should, most properly, be equipped with a track diagram to help keep things going in an orderly fashion.

We've worked one up for you and it appears above the control components on page 26. You can just clip it out and paste it down on your panel if you're the lazy type or, preferably, read the following few paragraphs for some hints on how to make a professional looking one yourself.

CONTROL PANELS

Most of the layouts in this booklet are too simple to require anything more than a neat arrangement of the Atlas control components on a separate piece of plywood. For that matter, if you've used a table a little larger than required you can just mount the components down in either corner. If your layout is built on a simple table like that on page 4 and you plan to store it under a bed when not in use, you might consider mounting the controls in a simple drawer which can be pulled out for operating sessions then shoved back, vastly simplifying the storage operation. Just be sure to allow enough slack in the wires between the drawer and table. Cabling them with tape or bits of wire will keep things neat and prevent broken connections.

Layouts N55, N57 and N59 use a sufficient number of controls to make them worthy candidates for control panels complete with track diagrams. An easily made track diagram adds a note of prototypical realism to operation and shows at glance which selector feeds a given block and the number and location of any track switch.

More than likely, you'll have a piece of 1/4" plywood left over from the table and this will serve just fine for the panel. First step is to

temporarily arrange all the control components as shown in your railroad's wiring diagram to determine the panel's size. Note here that the switch controls won't occupy anywhere near the width shown because they'll all be ganged as shown on page 9. Actually, ten of them will occupy about the same width as a single Selector.

Next, sketch out your track diagram, on a piece of scratch paper, generally following the style shown in the diagram on page 26. One point of importance: *The straight legs of switches on the track diagram should be arranged to show the normal flow of traffic regardless of how the switches appear on the layout itself.* A comparison of the diagram on page 26 with the plan on page 23 will explain. Your diagram can be duplicated on the panel in either of two ways: Either use 1/8" wide light colored pressure sensitive tape on a dark background or apply 1/8" strips of masking tape over a light colored background then spray the panel with a dark color and remove the tape.

The track switches and electrical blocks on the panel can be identified using either decals, rub-down transfers or numbers clipped from a small calendar. It's a good idea to use different styles of numerals for the track switches and the electrical blocks. Apply a protective coat of varnish to the panel when completed.



THAO STEPER

TECHNICAL GRAPHICS

ATLAS

The word "ATLAS" is written in a bold, white, sans-serif font with a black outline. It is set against a teal background that features a pattern of rebar (steel reinforcement bars) in a grid. The entire logo is enclosed in a rounded rectangular border.

N
GAUGE

The letter "N" is formed by a series of horizontal black lines of varying lengths, creating a stylized, blocky appearance. Below the "N", the word "GAUGE" is written in a bold, black, sans-serif font.