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MÄRKLIN CLUB—North America

HOTTRAKS

Summer, 1989

Volume 5 Number 2

HOTTRAKS is the official quarterly newsletter of the Märklin Club, P.O. Box 795, Elm Grove, WI 53122

The Making Of The Z-Gauge Orient Express

Factory Feature

Few trains are linked with as much mystery, intrigue, and romance as the legendary Orient Express. In 1988, this magnificent train, long a symbol of luxury and decadence, celebrated the centennial anniversary of its inaugural journey from Paris to Istanbul.

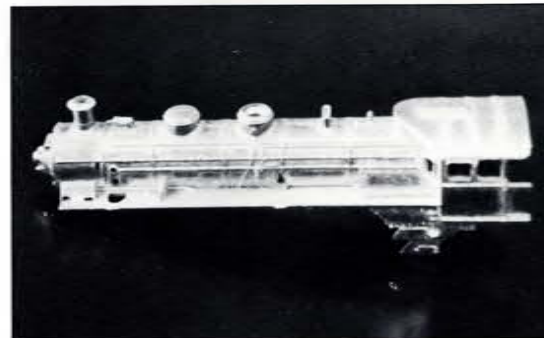
To commemorate this historic occasion, Märklin introduced an Orient Express train in Z-gauge. Creating a model as perfect and luxurious as the prototype required long hours of work by dozens of dedicated master craftsmen.

Aided by advanced technology, Märklin craftsmen were able to improve on the already high level of quality evident in their Z-gauge cars. For example, by using a new material for the casting molds, instead of the traditional hardened steel, it was possible to achieve an even greater level of detailing in the legendary coaches.

Casting The Locomotive Body

The body for the locomotive, consisting of cab and boiler, is a pressure casting made from a metal alloy high in zinc content. To create the locomotive body, liquid metal is injected into the mold under pressure and is ejected automatically after a brief cooling period. At this point, technology has reached its limit. To satisfy Märklin's rigid standards

The body of the Orient Express locomotive, consisting of boiler and cab, as shown here, is fashioned from a pressure casting made from an alloy high in zinc content. Märklin has found this alloy not only extends the life of the model, but also enhances its operation.



Another Märklin craftsman follows the painstaking process of assembling an Orient Express locomotive.

(Continued on Page 2)

Special Export Models Now Available Worldwide In First Year Of Production

A change in the distribution policy for the Special Export Program now gives you and all Märklin enthusiasts worldwide an opportunity to collect these non-catalogued models during their first year of production. Previously, first-year distribution was restricted to the country for which a particular model was produced. There is usually only one production run for these special models and, typically, availability is limited. The 1989 Special Export Program brochure will be available in July. The brochure also features Special Export Models from previous years. You will receive this brochure, free of charge, with your next issue of HotTraks. However, if you want it sooner, call the Märklin Club toll free at 1-800-772-2490 (from Wisconsin, 1-414-782-6381) and it will be shipped to you as soon as they become available. Brochures will also be available from authorized Märklin dealers across North America.

Have Your Layout Featured In HotTraks! Details On Page 8.

(Continued from Page 1)

Orient Express

for quality, the finishing work on each locomotive must be done entirely by hand. Only by doing it this way is Märklin able to create a locomotive that is worthy of pulling the Orient Express.

The Imprinting Process

To imprint the lettering on each car, Märklin uses the "tampo" process, in which colors and letters are printed in steps. Imprinting the complete train requires 45 steps. Most of these letters are finer than anything the human eye is able to bring into focus. To appreciate fully the clarity and detail of each letter, you must use a magnifying glass.

An Authentic Model For Most Any Era

Within the past several years, the Orient Express has made special excursion trips along the historic Paris-to-Istanbul route. For this reason, the Orient Express model can be used realistically on a layout representing almost any era in European railroading. Moreover, it's acceptable to run the Orient Express with modern as well as historic trains.

See your authorized North American Märklin dealer—in the United States and Canada—for complete information on the Z-Gauge Orient Express train.

The finished product. The legendary Orient Express as re-created by Märklin, operating on a contemporary Z-gauge layout. Special Orient Express excursions in recent years means the train can be operated realistically on a layout representing virtually any era in railroading.



The lettering on the Z-gauge Orient Express cars is finer than anything the human eye can bring into focus. The process used to imprint each car consists of 45 steps. To give you an idea of the quality and clarity of each imprint, we've photographed the lettering on a Pullman Car as it appears under a powerful magnifying glass.



One of the skilled Märklin craftsmen applies striping to what will soon be a magnificent Orient Express locomotive. To meet Märklin's quality standards, finishing work on the Orient Express locomotives is done entirely by hand.

Canada Added To International Series Of Imprinted Cars

Märklin, Inc., has announced the 3rd edition of its popular International Series of imprinted freight cars will feature a tribute to Canada in both HO and Z-gauge.

Four additional nations, all of which have been previously represented, will be featured in a different gauge. These "crossover" countries include Great Britain and Austria in HO, with Switzerland and the Netherlands in Z-gauge.

Delivery is expected by late summer.

Imprints were fashioned from original artwork commissioned exclusively for this project by Märklin, Inc. The imprints honor the people and culture of a nation. The new Canadian car, for example, features the nation's flag and some of the more historic landmarks.

The cars will be the same as in past years: a container car in Z-gauge and a Württemberg boxcar in HO. Along with the national imprint, each car will include the Märklin registered trademark and the official International Series Mark. These markings identify the year and series the cars were produced.

Limited Production

As in the previous two editions of the Series, production quantities are limited. Regardless of demand, additional production runs will not be authorized. The suggested retail price is \$39.95 for the HO cars, \$24.50 for the Z-gauge cars.

We encourage you to reserve your cars today. Your authorized North American Märklin dealer has complete details. For the name and address of the authorized

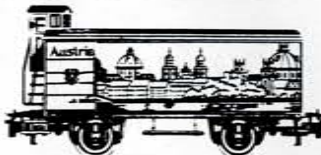
dealer nearest you, call the Märklin Club toll free 1-800-772-2490 (from Wisconsin call 1-414-782-6381).

As previously announced, the International Series will extend two more years, making it a five-year series. Fifteen nations will eventually be represented. Three cars will be produced each year, with imprints alternating between gauges until all nations have been offered in HO and Z-gauge.

Imprinted Cars



HO #2551A Great Britain \$39.95



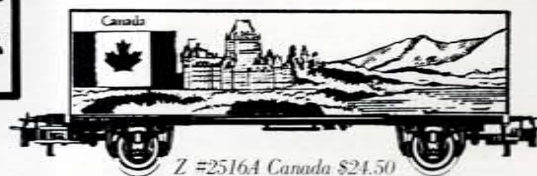
HO #2553A Austria \$39.95



Z #2510A Switzerland \$24.50



Z #2514A Netherlands \$24.50



Z #2516A Canada \$24.50



HO #2556A Canada \$39.95

Avoiding Trouble With K Track Contact Sections

By **TIMOTHY ECKERT**
Club Member #6478

Here are some tips for my fellow K Track layout builders with regard to the installation of contact track sections #2229, #2239, and #2299. These short pieces of track have a small plastic lever which gets pushed by the pickup shoe of a locomotive. This "push" closes a contact which energizes a solenoid elsewhere on the layout (either a signal or a turnout). Actually, each contact track section has two independent sets of contacts, one set each for direction. Used widely in automatically controlled layouts, these special track sections allow a train to activate events tied to signals and turnouts, which can control the movement of your train.

I have built two K Track layouts with the track permanently installed with screws and ballast. The following tips were developed as solutions to problems I encountered with some used contact sections that were not performing well after several hours of operation.

1. If possible, always use new contact sections. Each contact track section, whether it's new or used, should be tested prior to installation. A testing procedure is described later.
2. If problems are encountered during the testing, either adjust the bad contact arm or replace it with Märklin part #35749. I have encountered some arms which have no "spring" left, and replacement is necessary. Removal and replacement procedures are described later.
3. The Homesote, the plywood base on which the track is mounted, should have a rectangular hole made which coincides with the rectangular housing of the contact section. With this feature, the contact arms can be accessed for replacement or adjustment from under the train board.
4. Locating a contact section inside a tunnel or mountain should be avoided unless an access hatch is provided.
5. Finally, instead of using the contact track sections for "triggering" solenoids, serious consideration should be given to using the new Märklin reed switches, #7555, and car mounted magnets, #7556, when they become available.

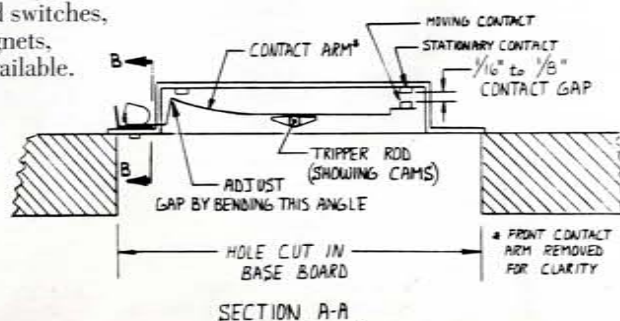
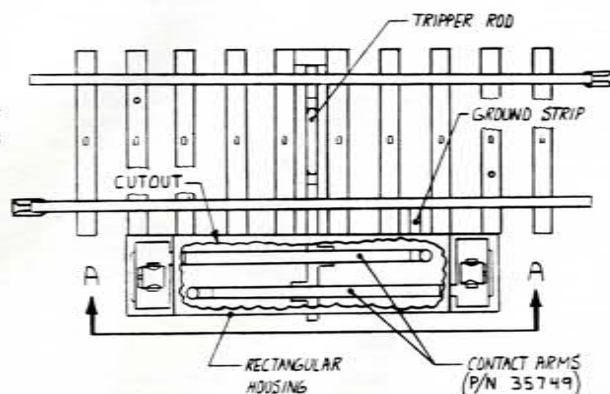
Based on my experience with another vendor's reed switches on my Märklin layouts, I expect the new Märklin reed switches to work great. Also, they have the added advantage in that: 1) solenoids remain undisturbed by cars equipped with pickup shoes for interior lighting; and 2) can be installed after the track has been laid.

These tips are also applicable to the older contact sections #2129, #2139, and #2199. On the other hand, M Track contact sections are more reliable and do not have replaceable parts.

Procedure For Testing And Replacing Contact Arms

Testing

1. Push the plastic lever on the tripper rod in both directions, as a locomotive pickup shoe would, which ensures that it will never stick in a closed position. You should also note that it is absolutely imperative that the tripper rod always return to the center. A solenoid can burn up if a contact sticks and goes unnoticed.
2. Using an ohmmeter hooked up between the terminal clip of a contact arm and the closest rail (test light and battery can be used), verify an infinite resistance (light off) while the tripper rod is in the center position.
3. Using the same connections, verify a low resistance of less than 3 ohms (light on) while the tripper rod is in its closed position.
4. Repeat steps 2 and 3 to test the contact arm for the other direction.

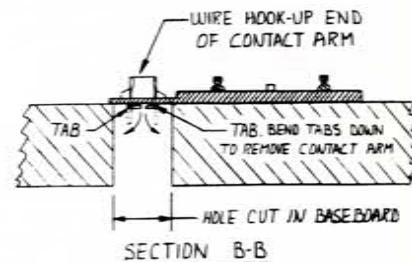


Removal

1. Determine which arm is faulty, or replace both.
2. From underneath the track, bend both tabs on the contact arm straight down. If the track is installed, a hole in the base board is required.
3. Grasp hold of the terminal clip end of the contact arm and pull out.
4. Clean the stationary contact with a pencil eraser.
5. Be sure the tripper rod rotates freely. Do NOT oil the rod.

Installation

1. Obtain a new contact arm, Märklin #35749.
2. Position the arm into place, above the tripper rod. Gently push down on the terminal clip, positioning the tabs into their slots. With a helper keeping a steady downward pressure on the arm, secure it in place from beneath the track. To secure it, simply bend both tabs over.
3. Adjust the arm so that it is centered on its cam.
4. Bend the arm's angle as shown in the diagram to obtain the correct gap.
5. Test, following the steps described in the testing procedure described earlier.



Product News

Free HO Spare Parts List Now Available

A partial list of spare parts (couplers, springs, trucks, and wheels) for most HO freight and passenger cars produced within the past 10 years is now available through the Märklin Club at no charge to Club members. To receive the list, simply send a self-addressed stamped (45 cents postage is required) standard business envelope to: The Märklin Club, P.O. Box 795, Elm Grove, WI 53122.

Converting to Märklin Digital

By ROBERT FROWENFELD
Contributing Editor

People are often amazed when I tell them that I'm still using the same Märklin switches, signals, and engines that my father bought more than 30 years ago. There's no secret to it: the quality and durability of Märklin train equipment are legendary. I've been enjoying model trains—Märklin trains in particular—for most of my life.

So, about four years ago, when I received information about a new system that was going to revolutionize the model train industry, I was really excited. The concept was easy enough to understand: each locomotive would have a miniature circuit board located inside its housing. This circuit board would have the ability to give each locomotive its own number, or "address." Using the associated control boxes, I would be able to run several engines on the same section of track without having to concern myself with separate circuits and multiple transformers. Each engine would be controlled individually. It sounded great!

Digital Update

The promised advantages of this new system went far beyond the ability to independently control a virtually unlimited number of locomotives. By also using other electronic circuit boards to control all my switches, signals, and accessories, I could reduce considerably the wiring on my layout.

The system was to be called Märklin Digital. Because of the rugged and lasting quality of the Märklin equipment I had enjoyed for many years, I took the first opportunity to purchase the equipment necessary to convert my layout to Digital.

Digital Eliminates Need To Wire Accessories To Transformer

Probably the most significant concept that one must understand about Märklin Digital is that the voltage on the tracks is always a constant 16 volts. Unlike a conventionally wired system where the voltage varies depending on the position of the speed control dial on the transformer, the Digital System maintains a constant maximum voltage to the track.

The biggest advantage of having constant voltage is that your accessories no longer have to be wired to the transformer to receive operating current—only to the nearest piece of track. My layout—it's only a 4' x 9' rectangle—may be modest in size, but with over 40 switches and signals, I wish I had a dollar for each foot of wire I removed when converting my system!

People are sometimes a little hesitant when I suggest that they convert their system to Digital. The biggest argument I hear is that it's too complicated to re-wire and they don't want to add more wire to further complicate matters. Moreover, I've also found many model railroaders who want to build a new layout, but can't decide whether Digital is right for them.

What I'd like to do in this article is explain how I developed an easy to follow step-by-step method for converting an existing, conventionally-wired Märklin layout to the Märklin Digital System. For those of you considering the construction of a new layout, the article will: 1) show you how to wire your system; and 2) point out the advantages of using Digital from the start.

Wiring With Digital Is Quick And Easy

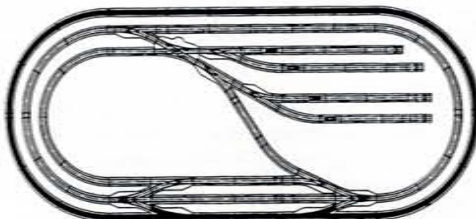
First, let's clear the air about wiring a Digital layout. Digital is simpler, easier, and requires considerably less wire to configure than a conventionally wired system. As with any other project, if you take a few minutes to plan what you are going to do, it will pay off in time saved, reduced aggravation, and a system that works flawlessly with a minimum of effort.

Here's my "tried and true" method for wiring a Digital layout, starting with wiring the track for locomotives, followed by wiring switches and signals.

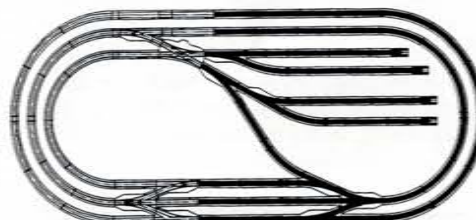
Wiring Your Track For Locomotives

STEP ONE

If you have an existing layout and you have sections of track isolated for separate transformers, you will want to rethink how you have your paper track insulators arranged. A Digital layout still requires circuit isolation, but for an entirely different reason. A conventional layout requires multiple transformers when different trains are to be run independently from separate transformers. A Digital layout requires multiple transformers only if the layout is so large that one transformer cannot handle the electrical load. In this case, I suggest separating the layout from a physical standpoint rather than a logical one, as illustrated below:



Conventional Layout



Digital Layout

In this illustration, you can see the Digital layout was simply split in half to balance the electrical load of the switches. The left and right halves will each have their own transformer. When splitting a Digital layout into separate circuits, a Booster Unit, #6015, is required for each additional circuit after the first. (The term "booster" isn't really appropriate, since the signal is not being boosted. It is merely being split to service a separate part of the layout.)

When considering how many transformers you need, be sure to properly consider how much power your engines and accessories consume. Engines will require between 5 and 10 watts of power, depending on various factors such as the weight of the engine, the age and condition of the motor, and the number of cars it is pulling. Switch and signal lamps consume about one watt each when lit. When activated, each switch or signal will pull an additional 6 to 8 watts. This is important to consider when using the Märklin Digital Memory and Interface units which I'll cover in a future article.

STEP TWO

Now that you have your layout electrically isolated the way you want, there are four wires which need to be connected for each transformer.

First, we'll connect the brown (ground) and yellow (hot) wires. Any Märklin transformer will suffice. Märklin's conventional 30-watt transformer, #6627, works fine. For a little more power, you may want to consider the Märklin 42-watt Digital transformer, #6601. However, if you already have a conventional transformer, it will work fine; you don't have to buy a Digital one.

The next two wires that need to be connected will be the brown (ground) and the red (hot) wires from the Central Unit to a feeder track section such as Märklin part #5111. (#2290 for K-track).

Connecting these wires is simple, just match the colors on the Central Unit, transformer, and feeder track section for M-track. For K-track, be sure that the red wire from the Central Unit goes to the terminal clip on the feeder track marked with a B and that the brown wire goes to the terminal marked with O.

That's all there is to wiring the track. If you are using a Booster, you will have to attach the short ribbon cable between the Central Unit and the Booster, and then attach the same four wires between the second transformer, Booster and the feeder track section on the second circuit of the layout as illustrated. The ribbon cable is what supplies the Digital signal from the Central Unit to the booster and, subsequently, the track.

As a suggestion, and to be sure you do it right the first time, don't use inexpensive single-strand telephone cable to wire your layout. Use a proper gauge multi-stranded wire. Märklin wire is an excellent choice. It's color coded so that months (or years) from now, you will be able to tell what each color is for. It's also relatively inexpensive... most Märklin Digital layouts can be wired for less than \$15!

IMPORTANT NOTE

Do not use Märklin part #5131 (#2292 for K-track). These sections contain a capacitor which is intended to reduce radio frequency (RF) interference for nearby television and radio signals. Use of these track sections, or any track section that contains the noise reducing capacitor will cause a variety of problems. However, you don't have to throw these track sections away; just clip the leads of the capacitor and remove it.

The track can then be used as a normal feeder track. In case you're wondering what kind of problems these capacitors can cause, don't experiment! Among other things, they cause your Digital engines to malfunction, such as changing direction while running for no apparent reason. Moreover, the Central Unit might overheat and possibly become damaged. If you have an existing layout, always be sure to remove any noise suppression capacitors.

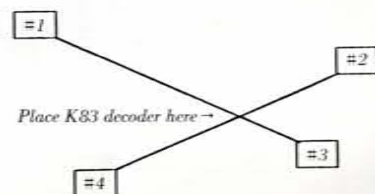
Wiring Your Switches

A little planning is in order here. For every 4 switches, you will need a Märklin Switch Decoder, #6083. Also, for every 16 switches, you will require a Keyboard Unit, #6040.

STEP 1 If you are starting a new layout, you can skip this section. For those of you who have an existing layout, you will want to disconnect all the wires from your switch boxes, #7072. Go to all your switches and disconnect all connecting wires, leaving only the wires with the red, yellow, and green plugs attached as originally packaged.

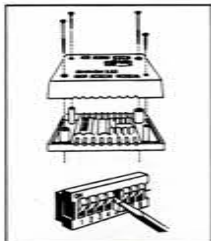
STEP 2 Separate all switches into groups of 4; this may be easier in some cases than others, but it must be done. The simplest way I've found to do this is to start at one corner of the layout and take a group of four switches that are in close proximity to each other, move over to the next section and mentally group another set of 4 together. If you have an existing layout and you want to preserve your old number scheme, it can be done, but you must remember that each K83 decoder must have consecutively numbered switches attached to it. I was able to preserve some of the old numbers (for the most part) around the layout. In some cases, however, I had to use new numbers.

STEP 3 By figuring out which switches belong to which group, you've done the hardest part. Now, for each group of 4, you will want to position a K83 switch decoder so that it's an equal distance from each of the 4 switches it controls. My method is simple and effective. I take 2 strands of wire (2 yardsticks will do) and place them over the 4 switches so they form an "X" (see diagram).

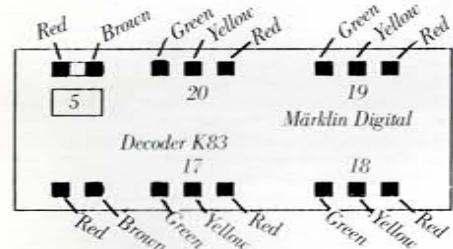


Where the lines cross is going to be the mathematically closest distance to all four switches, thereby requiring the least amount of wire. This is where you will want to mount your K83 decoder (under the table, of course). If your switches are in more of a straight line, or one of the 4 is considerably farther from the other 3, you will have to use your judgement on where to place the decoder.

STEP 4 Before you place the decoder under the table, be sure to set the switches inside of it appropriately. Remove the 4 screws holding the decoder together, then remove the cover. Inside you will find a circuit board and a set of 8 switches. Refer to the instructions that come with the decoder to determine which module number this will be. The first K83 (#1) will control switches 1-4. The second K83 (#2) will control switches 5-8, etc. You don't have to start your numbering with #1, you can start with any number you want, from 1 to 64. In this manner, you will be able to control as many as 256 different solenoid accessories such as switches and signals. Always double-check your settings to be sure they are correct, and replace the 4 cover screws.



When you replace the cover, be sure to write on top of the cover which module number it is. Also, write above each red-yellow-green marking what the switch number will be. When you get on your back under the table and you're trying to figure out which sockets go to which switch, you'll appreciate that you did this! It's very difficult to write on these plastic covers, and not much sticks to them very well either. A soft, dull pencil or a felt-tip pen will work well enough.



Note how the switches are numbered sequentially, starting in the lower left corner and proceeding counterclockwise.

STEP 5 Place the decoders under the table in the location you determined in Step #3, placing the bottom of the decoder against the table bottom. I use double sided foam squares available from Scotch (3M) for mounting my K83 decoders under the table. They stick very well, but can be removed.

STEP 6 Now attach the red, yellow, and green plugs from the switches and signals to the appropriately marked sockets on the decoder box. Be sure to match the switch/signal number with the number you wrote on the K83 cover.

STEP 7 You will note that there are two red and brown pairs of sockets at the left of the K83 decoder. For your first decoder (or any other decoder for that matter), you will only have to connect either red socket to the center rail of the closest piece of track. This can be done conveniently with the #5111 (straight) or #5103 (curved) M-track or #2290 K-track feeder track sections. This wire will provide the Digital signal to select the proper switch/signal and direction, as well as the power to operate the solenoids. Next, connect any nearby ground wire from any accessory or feeder track section to the brown socket on the K83 decoder.

Connecting the red and brown sockets on additional K83 decoders is easier. Simply connect them to the nearest feeder track, if you wish. But, I recommend a different approach. Connect each K83 to another K83. Depending on your particular layout, you may find a "bus" type arrangement (Figure A), a "star" type configuration (Figure B), or another combination may work best for you. The important thing to remember is that each decoder

must be connected to obtain the Digital signal, either from a track section or another decoder.

If you are using one or more Boosters, you may want to split your decoder connections between your Central Unit and your Boosters. This is an equitable way to distribute the electrical load. If you do this, remember: do not connect the red wires between decoders that are being served by different power sources. If you prefer, you may just want to relegate a separate Booster and transformer to all your signals and let your Central Unit (and other Boosters) power only the locomotives.

With a little preparation and forethought, it's possible to convert your layout in one weekend — I did! And I'm glad I did. Now I can do things I only dreamed of on non-Digital layouts. Märklin Digital control has added an entirely new level of enjoyment to model railroading for me. Come to think of it, I think I'll go to the basement and "work" for a little while!

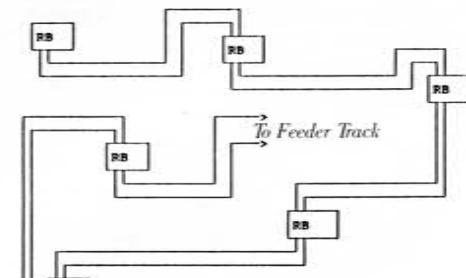


Figure A

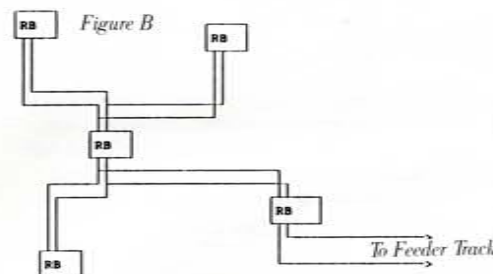


Figure B

Note: "R" and "B" refer to the red and brown sockets on the left side of the K83 decoder. You may want to show the wires and connection points in color.

Digital Special Interest Group

As a member of the new Märklin Digital Special Interest Group, you'll receive a bi-monthly newsletter dedicated solely to the Digital System. Each newsletter is filled with in-depth articles, computer programming tips, and technical expertise. There's no better way to get the inside track on the world's most technologically advanced model railway system! The newsletter is edited by Dr. Thomas Catherall, our Digital consultant. Plus, as a member, you'll have access to an exclusive Digital HotLine, so if you ever have a problem or question regarding your Digital layout, you can get it resolved quickly.

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Digital Conversion Easy & Economical With New Central Control Unit

Available Soon In U.S. & Canada Only

A new Central Control Unit for the Märklin 3-rail HO Digital System — one which combines all Digital functions into a single easy-to-use and easy-to-afford unit — will soon be available to Märklin enthusiasts in North America.

The new unit, #6023, combines the Control 80, Central Unit, Keyboard, and Interface functions. Best of all, its suggested retail price is less than half of the cost of acquiring these units separately.

The unit controls as many as four different trains and four turnouts/signals. All you need to make the conversion is a basic understanding of wiring, a 30-watt transformer, #6627, and a #6083 decoder for your turnouts/signals. The 42-watt transformer, #6001, can be added later when expanding with other Digital components, such as the #6015 Booster.

Plus, if you own a personal computer now, or are planning to purchase one, you'll be interested in knowing the interface circuitry built into the unit lets you operate your entire layout with your computer. Using the computer gives you an enormous amount of operating potential, which will prove to be a tremendous benefit as you develop and expand your layout.

However, you do not have to have a personal computer to take advantage of the operating potential of the Digital System. The conventional Control 80 and Keyboard units can be easily added to the Central Control Unit for expansion to the full Digital control panel, enabling you to operate as many as 80 Digital locomotives and 256 accessories!

The #6023 is being produced at the special request of Märklin, Inc. Therefore, it will be available only in the United States and Canada, and only from authorized Märklin Digital Dealers in these countries. Moreover, the unit will not be featured in the Märklin HO catalog. We expect delivery by August. For more information, or if you would like a demonstration of the #6023 unit, we suggest you visit your nearest Märklin Digital dealer.

Central Control Unit, #6023

The new Central Control Unit makes converting to Digital easy and economical. The new unit, a non-catalogued item, will be available only from authorized Märklin



Digital dealers in the U.S. and Canada. Delivery is expected in August. The #6023 also will be included in the new #2612A Deluxe Digital Starter Set and the new #2622A Basic Digital Set. These new sets, like the new unit, will be available in North America only. Delivery of the sets is expected in September.

Part Three: Building A Z-Gauge Layout

By RILEY O'CONNOR
Contributing Editor

Having discussed the virtues of track planning and design in my first two columns, I'd now like to take a look at an example. The layout is a basic oval, but there are things that make it interesting to operate while fitting in a space of 100cm x 60cm, or 39" x 24".

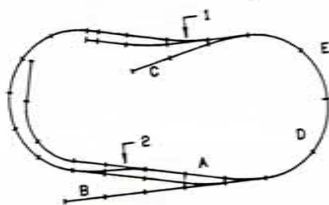
The basic layout features two stub sidings which open in opposite directions. When you start to operate the layout you will discover the train does not simply back into both sidings to leave cars. To service one siding, the locomotive must uncouple from its train at the passing siding, run around to the other end of the train, then push the car into the siding. This helps to eliminate the monotony that can befall a simple oval layout.

This plan uses the track of the Starter Set, the E Extension Set, two additional turnouts, #8504 and #8592, plus track bumpers. Because of a track geometry problem, the #8592 is used to fit an odd sized space on the passing siding (location A on diagram). The #8592 is very handy if you are designing your own layout, since it adjusts and bends to fit (its length ranges between 100cm and 120cm).

If you wish, you can add more turnouts at Point #1 and Point #2 (on diagram) and use the track pieces which they replace to extend and curve the different sidings. Also, the siding on the left can be extended by using two #8510 pieces. Their sharp curvature enhances the industrial nature of this siding.

Adding the #8198 overhead wire set would put overhead catenary wire on the main line and the passing siding. Typically, such overhead wire would not appear on industrial sidings. A second transformer and an electric type locomotive would let you run two trains on the same layout without special wiring. In prototype fashion, the electric locomotive would handle the main line trains, while the other locomotive handles the switching duties on the sidings.

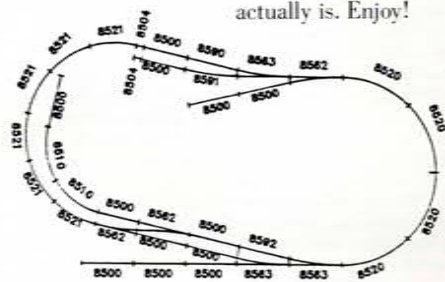
Location A is a natural spot for the #8971



freight house or a station. Should you add the extra turnouts, then Location B is a natural spot for the #8981 engine house and a locomotive servicing facility. Location C can support an industry. One of my favorites is the Faller #2750 oil facility and the Faller #2745 gas holder. Location D is an alternate location for a passenger station.

Any of these locations could be the "theme" of the railroad, with all the activity being related to that theme. The area around Location E is a good spot for a view block, breaking up the potential monotony of the oval. Even if the train just passes under an overhead bridge at this location, it will seem to go further.

Finally, you will improve the appearance of the layout by positioning the track so that the straight track does not run parallel to the edge of the layout. Even a very slight rotation makes the train appear to go further than it actually is. Enjoy!



A Short Course On Soldering

By CARL WEAVER
Contributing Editor

Soldering is one of the most valuable skills you can have as a model railroader. If you know how to properly handle a soldering iron, there are many basic techniques and procedures you can do on your own to expand, improve, maintain, and repair your trains and layout.

In this column, I'd like to share with you some of my experiences with soldering, including the 13 Basic Rules of Soldering (listed on this page) which I developed through trial and error. Here are some other tips and advice to help guide you:

Locomotive Repair

One of the most important times to meticulously follow the Soldering Rules is when you're repairing a locomotive. Some parts on Märklin locomotives are plastic. One common repair is to reattach a wire to the reversing unit of an older locomotive. Your iron has to be hot and the solder fresh. In order to not melt the plastic housing of the reverse unit, you must be quick and accurate. If you try this repair, make sure you use a low-wattage setting or a low-wattage iron.

Soldering Wires

Soldering two wires together is simple. Be sure to twist the wires together before soldering. Let the melted solder flow between the wire strands before removing the tip of the iron.

Heatsink Clamps Safeguard Against Damage

A heatsink is a kind of a clamp which is a useful item for reducing the risk of damaging components connected to a solder joint.

For example, if you have to solder a wire to one leg of a light emitting diode, a heatsink clamp should be placed between the solder point and the diode. The clamp then absorbs the heat rather than the heat damaging the diode.

Heat-Shrink Tubing Makes Great Insulation

Most everyone is aware of electrical tape to insulate a bare wire joint. But are you aware of heat-shrink tubing insulation? It is a soft plastic tubing that is usually black and comes in various diameters and lengths. You can buy the tubing at most electrical supply stores. Simply slip the tubing over the wire before it is joined. Once the wire is soldered, move the tubing over the joint and heat it with a match or lighter. Hold the flame on the tubing for no more than an instant (just long enough for the tubing to shrink, but not long enough for it to burn).

Useful Items And Tools To Have On Hand While Soldering

Tools

Small needle-nose pliers with very thin points for fine work. Small diagonal cutter for cutting wire. Wire stripper. A simple one like a "General" N. 68 is good. Heatsink clamps to protect components near a soldering area. Heat-shrink tubing or thin insulating electrical tape. Small fine flat file for renewing soldering tips. Small sponge for cleaning soldering tips of debris. Fine, pointed tweezers for handling small work. Eye protection. Helping Hands ("Radio Shack" 64-2093). This is a device with six ball joints and two alligator clips that adjust to hold small items that you are soldering.

Parts

A Typical Low-Wattage Soldering Iron
Hottest Point Soldering Tip
Wire Rack
Heating Element
Heat Shield
Watt Selector Switch
Power Cord
Heatsink Clamp

CARL WEAVER'S 13 BASIC RULES OF SOLDERING

RULE 1: Always Use A Low-Wattage Soldering Iron. The best type for model railroad use is generally in the 15 to 30 watt range, and never more than 40 watts. The soldering iron that I use is the Radio Shack 64-2055 which has a switch - 15 watts for locomotive repair, and 30 watts for layout wiring.

RULE 2: Always Use Small Diameter Rosin Core Solder. Rosin is the flux that will prepare the surfaces to be joined and help the solder to adhere. Solder is hollow in the middle, sort of like macaroni noodles; the flux is in the middle. Acid core solder will eventually cause corrosion. Sometimes in wire connections, the corrosion is hidden in the joint and cannot be seen. Problems become very difficult to find. This is why it is important to always use rosin core solder. Another thing, do not use previously melted solder. There is no flux and the parts to be joined may come apart later. This is known as a cold solder joint. Also avoid using large diameter solder which requires a lot of heat to melt. Usually, too much ends up on the joint. I use .032 diameter rosin core solder for everything.

RULE 3: Always Be Sure Your Iron Is Hot Before Beginning. Give your iron adequate time to heat up. Before doing any job, test your iron with fresh solder. One way to make sure that you do not run surrounding components when you solder is to have the tip of the iron hot so that the solder melts quickly.

RULE 4: Always Tin The Tip Of A New Iron With Fresh Solder. Following the manufacturer's instructions, melt a little solder on the hot tip of a new soldering iron.

RULE 5: Always Clean Any Parts Before Soldering Them. Solder will not adhere to grease, oil, paint, or insulation. You can easily remove any foreign materials with sandpaper or solvent, copper or brass should be shiny before it is soldered.

RULE 6: Always Melt Solder On Heated Parts. NOT On Your Iron. The point is the hottest part of the tip. Carefully heat the parts to be joined with the point while holding the solder against them. Do not apply too much solder. Allow the solder to flow between the joined parts before removing the iron. Hold the joint very still while the solder cools (you will see the solder change from shiny to dull as it cools and hardens).

RULE 7: Clean The Tip Of Your Soldering Iron Often. Cleaning is fast and easy. While the iron is hot, use a damp sponge to wipe off any collected debris. You should clean the tip of your iron while you work as well as when you're finished.

RULE 8: Regular Maintenance Preserves Your Iron. After several uses, and when your soldering iron is cold, use a fine, flat file to clean the tip. Then, be sure to re-tin the tip with fresh solder.

RULE 9: When Soldering Beneath Your Layout, Wear Eye Protection. A pair of safety glasses or goggles will provide inexpensive but valuable protection.

RULE 10: Always Use Caution. A hot soldering iron can burn a finger quickly.

RULE 11: Always Use A Wire Rack To Hold Your Tip As You Work. A hot soldering iron can start a fire. Most soldering irons come with a wire rack. If yours did not, make one.

RULE 12: Always Be Sure Your Power Cord Is Out Of Your Way. Tripping over your power cord may sound unlikely, but it can and does happen - especially if you use an extension cord. So always be sure your cord is out of the way.

RULE 13: Always Unplug The Iron When You're Finished. After you unplug your iron, place it on your wire rack so it will cool down.

1989 Members-Only Series Car Celebrates Canada

Imprinted Cars



The Märklin Club is proud to announce its 1989 Members-Only Series Car salutes Canada, with an imprint of the Canadian flag emblazoned on a refrigerator car.

To protect your investment, and ensure the authenticity of your cars in future years, each car will also be imprinted with the Märklin Club's private Members-Only Series mark and the official registered trademark of Märklin.

Canadian Cars will be offered in both HO and Z-gauge, but production is limited. Your Märklin Club membership entitles you to purchase one car in each gauge. Delivery is expected by late summer.

Reserve Your Car Now

Historically, these cars have sold quickly. Advance reservations are being accepted now. To place your order, simply call the Club toll free, 1-800-772-2490 (from Wisconsin, 782-6381), and use your MasterCard or VISA. Or, complete and return the order form enclosed with this issue.

The HO and Z-gauge cars are \$26.00 each, plus \$2.00 shipping and handling per car — unless you order both cars, then all shipping and handling are free — and you save \$4.00!

Orders will be filled on a first-come, first-served basis. To be absolutely sure you do not miss this opportunity, call the Club now. The call is free. So is shipping and handling, if you order a car in both gauges.

1989 HO Imprinted Beer Car Sets Now Available; Delivery Of 1989 Z-Gauge Sets Expected Soon

Special Edition Cars

The 1989 HO edition of the popular Collector's Series Beer Car Sets is now available from your authorized North American Märklin dealer. The Z-gauge set will be available later this summer. The HO set, #4400C, features six refrigerator cars imprinted with logos of famous Swiss breweries. The Z-gauge set, #8400B, also includes six refrigerator cars, but the imprints are from breweries in the Baden-Württemberg area in the Southwest region of West Germany. Both sets have a suggested retail price of \$159.00.

Collector's Series™ 3

Märklin, Inc. is the Art

THE BREWERIES OF SWI

Trade Shows

Following is a list of the trade shows we'll be attending this year. Mark your calendar for those in your area. If you're able to attend, be sure to stop by our exhibit. All dates are 1989.

JULY/NMRA 1989
AstroRail Convention
& Train Show
 Astroarena Exposition
 Center
 Houston, TX
 July 31st-August 6th
 Booths 207, 209

NOVEMBER/Chicago
Model & Hobby Show
 O'Hare Expo Center
 Chicago, IL
 November 2nd-5th

#4400C HO Collector's Series Beer Car Set—Six refrigerator cars imprinted with logos from famous Swiss breweries.

#8400B Z-Gauge Collector's Series Beer Car Set—Six refrigerator cars imprinted with logos from breweries in the Baden-Württemberg region of West Germany.

Showcase Your Layout In HotTraks!

The Märklin Club is proud to announce the beginning of yet another regular Club Member feature in HotTraks: The Club Members' Layout Showcase.

This is your chance to show off your layout to thousands of Märklin Club members in the United States, Canada, and elsewhere around the world. How?

Simply send us a black and white photograph of your layout, along with a brief description. In 100 words or less, tell us what era your layout represents, which Märklin trains you run on it, and anything else of interest you would like to share with your fellow Club members.

We will feature at least one HO and one Z-gauge layout in all future issues of HotTraks. There's no set criteria for choosing which layouts will be published, although innovation, creativity, and authenticity (or fantasy) in design and technique will be considered.

Best of all, if your layout is published, you'll receive your choice of the Märklin sport shirt, the Märklin commemorative stein, or an extension of your Club membership!

Get started now! The HotTraks Layout Showcase will premiere in the Fall '89 Issue. Send your black and white layout photos (feel free to send multiple photos) and layout description to:

HotTraks Layout Showcase
c/o The Märklin Club
P.O. Box 795
Elm Grove, WI 53122

Be sure to include your name, address, Club membership number, your Märklin dealer's name, and your choice of gifts (if you choose the shirt, be sure to include your size (Adult sizes only, S, M, L, or XL)). The Märklin Club reserves the right to substitute gifts based on availability.

Delivery Update: New Arrivals

Delivery dates are set by the Märklin Factory. These dates are approximate and are subject to change without notice.

SOLD OUT items are those items which are no longer available from the Märklin Factory or from Märklin, Inc. Certain **SOLD OUT** items, however, may be available from authorized Märklin dealers. If you are interested in purchasing a **SOLD OUT** item, check with the authorized Märklin dealer nearest you.

OUT OF STOCK items are those items which are still available from the Märklin Factory, but are on backorder by Märklin, Inc. Your best and most reliable sources for accurate delivery information on these items are your authorized Märklin dealers in the U.S. and Canada, and HotTraks.

SPECIAL ADVISORY: Märklin trains and accessories have a history of selling out quickly. This is why we recommend advance reservations (especially for new items and limited quantity items). As soon as you know which trains and/or accessories you would like to acquire, see your authorized Märklin dealer right away. If he doesn't have them in stock, he'll be more than happy to reserve them for you.

NOW IN STOCK

Type	Item #	Description	Price
HO	3181	Burlington Northern F-7 Diesel	\$138.00
HO	3186	DB CL 141 Electric Locomotive (P)	\$137.00
HO	3302	2-6-8-0 Borsig Locomotive w/Tender	SOLD OUT
HO	3602	DGTL DRG Borsig 2-6-8-0 Locomotive	SOLD OUT
HO	4181	Burlington Northern F-7 Non-Powered	\$ 82.00
HO	4215	Express Coach 1st Cl. SBB	\$ 47.50
HO	4216	Express Coach 2nd Cl. SBB	\$ 47.50
HO	4217	SBB Dining Car	\$ 63.75
HO	4255	Commuter Coach 1st & 2nd Cl. SBB	\$ 47.00
HO	4256	Commuter Coach 2nd Cl. DB	\$ 46.50
HO	4257	DB 2nd Cl. Commuter Cab Car	\$ 76.00
HO	4291	DB 1st Cl. Express Coach	\$ 40.00
HO	4292	Express Coach 2nd Cl. DB	\$ 40.00
HO	4400C	Swiss Beer Car Set (6 imprinted cars)	\$159.00
HO	4594	Primex Car Set w/Truck & Trailer	\$ 36.00
HO	4791	Berlin Regional Car Set	SOLD OUT
HO	4794	North Regional Car Set (L)	SOLD OUT
HO	4999	Digital Vista Dome Car (see photo)	\$295.00
HO	6036	Digital Control 80F	\$246.50
HO	7205	Close Coupler 50 per pkg.	\$ 42.00
HO	8318	Suburban Train (P) (HAMO 2-RAIL DC)	\$133.00
1	5820	DB Gondola	\$ 97.00
1	5821	Local Coach DB	\$138.00
1	5824	Gls 205 Boxcar DB	\$138.00
1	5825	Kbs 443 Stake Car w/Ties	\$138.00
1	5826	DB Boxcar w/marker lights	\$208.00
1	5827	Weihenstephan Beer Car DB	\$152.00
1	5828	Milka Boxcar SBB	SOLD OUT
1	5834	Aproz Boxcar SBB	\$152.00
1	85853	Logging Train Car Set	SOLD OUT
1	85878	Thyssenstahl Telescoping Car	\$425.00
1	85893	Peine-Salzgitter Telescoping Car	\$425.00
Z	8691	Berlin Regional Car Set (see photo)	SOLD OUT
Z	8644	Märklin Container Car DB	\$ 15.00
Z	8690	North Regional Car Set	SOLD OUT



The Z-Gauge Berlin Regional Car Set #8691
—SOLD OUT. However, your authorized Märklin dealer may have this set in stock. Check with him today!



The HO Digital Vista Dome Car With Moving Passengers #4999—Now In Stock!

Answers To Your Questions

The following questions were submitted by Märklin Club members Roger C. Burk, #6182; William Harold Smith, #6692; Edward Kerr, #6804; and Peter Fragasso, #0215. All will receive the official Märklin Club coffee mug.

Question: Should I use a solvent to remove old oil and dirt in servicing engines?

Answer: There are solvents available for use with sonic cleaners which are suitable for this purpose. Care must be taken to avoid solvents which will attack plastics. Also, repeated exposure of the model to a solvent will dull or remove the model's paint, so exposure should be monitored to avoid this.

Question: Is there a place where I can get old shoes to fit my old engines? I am particularly interested in locomotives #3005, #3011, #3029.

Answer: Current catalog numbers for replacement pickup shoes to fit these locomotives are:

For #3005, #20157
For #3011, #20157
For #3029, #7164

This and other information about older Märklin locomotives will be available in the #0733 maintenance manual scheduled for delivery later this summer.

Question: Why was #8616 Sealand Container Car discontinued?

Answer: A decision by Märklin on whether to continue or discontinue certain models is not usually a matter of public policy. Usually, items are discontinued when the factory feels that the sales/demand for that item no longer warrants producing it, or when a new item is to be introduced which may have greater appeal to Märklin customers.

Question: How can I operate a remote turnout from a 9-volt controller?

Answer: It would be best to use a separate 9-volt battery with the switch controller to operate the turnout. This would leave the power from the first 9-volt battery solely for the operation of the train.

Question: Please advise me on how to properly maintain my catenary trains. Despite my efforts to keep the track and trains clean, they do not run as smoothly as my other trains. Also, there seem to be a lot of sparks from my pantographs. Is there anything I can do?

Answer: There may be a residue from the wadding polish left on the catenary wire. This should be cleaned off with contact or TV tuner spray. These products are non-flammable and leave no residue.

A certain amount of arcing, the sparks you have noticed between the pantographs and the catenary wire, is normal. To improve the operation of electric engines from the catenary, you might consider running them with both pantographs up.

The pantographs, both the black and the older shiny ones, have a contact strip of copper which formerly was nickel plated, hence the shiny appearance. In recent years, the factory has been applying a dull black oxidized plating to reproduce the appearance of the pantographs in real life after repeated use. This oxidation does not interfere with electrical contact.

Club Members' Q & A

HOTTRAKS

Märklin Club, P.O. Box 795, Elm Grove WI 53122

The Märklin Club: Making A Fun Hobby Fascinating

The Märklin Club is dedicated solely to serving the special interests of the Märklin enthusiast. Our goal is to help you get the most from your Märklin trains and model railroading; we want to make a fun hobby fascinating...for you.

To do this, the Märklin Club publishes one of the most highly informative newsletters in model railroading, HotTraks. The newsletter is your direct line to all the latest product news and developments from the Märklin Factory in Göppingen, West Germany. HotTraks is also a valuable resource for articles and features on a broad range of model railroading subjects.

Membership in the Märklin Club is renewable annually for only \$10. Your satisfaction is guaranteed. If at any time, for any reason, the Club or HotTraks is not as fulfilling or exciting as we promise, tell us why in writing and we'll refund your dues for the remaining months in your membership term.

