TIPS AND IDEAS USED ON MY GARDEN RAILROAD

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TRACK AND RAIL JOINTS

My track is mostly 5' lengths of LGB brass with LGB tie strip, and is hand laid on bridges and trestles. I highly recommend using a good quality rail bender (Llgas Creek or Istra) to curve the rail. Rail joiners are also LBG brass. For electrical continuity at rail joints I started by soldering a wire to the bottom of the rail and used wire nuts to connect the wires together. The wire nuts should be filled with a silicone latex caulk such as "DAP Tub and Tile Caulk". I now use stainless steel self-tapping screws down through the rail joiner and the base of the rail. You can use a #2 x 5/16” stainless steel Phillips head self-tapping screw and use a #46 drill for the holes. These screws are presently hard to find. I have these available if you cannot find them elsewhere. I also recommend using conductive grease in all rail joints, I find that over time this washes out of disappears somewhere, so it may not be necessary if you use a screw or rail clamp. The screws are much cheaper than rail clamps. **See my separate document on rail joiner screws. Or email info@mhgrs.com**

OUTDOOR WIRE

For buried wire I used trailer wire from J. C. Whitney, P.O. box 8410, Chicago, Ill. 60680. Phone (312) 431-6102, Call or write for catalog. They have 14 and 16-gauge wire in 3, 4, or 6 wire versions in 25, 50, & 100-ft. spools. They also have copper stranded automotive wire in 7 colors from 10 to 18 gauge and in rolls from 50 to 100’. I also used some buried plastic conduit from the house to a control point. I would suggest using buried plastic conduit to several locations as it makes it easier to add wires when required. You can even bury the junction boxes, be sure to put a good drainage material around the boxes if you bury them. Putting any junction boxes above ground is better and they are easier to get into, they can be concealed by buildings, rocks, or landscape.

SUB-ROADBASE AND BALLAST updated 6/2022

For Sub-roadbase A 2" to 5" fill of "ROADBASE" under the ballast is recommended. Road Base is a material that is from crusher fines to 3/4" rock and packs very well. Use the crusher fines (Red, Black, Brown, Grey, and Dark Grey are the most common) for final leveling and dressing over the road base for color and ballast. Crusher fines are also known as “Breeze”. ***I have recently switched to 3/8”***

granite, this is multicolored, so it looks smaller than it is. It also stays in place better and does not tend to disappear like the crusher fines,(Breeze). These materials are available from sand and gravel yards. This can be mixed with other sharp rock (crushed) for color or size. Various sizes of crushed rock from fine to about 1/4" is ideal. You'll have to look around and see what is available. I have used Grey Breeze (looks like crushed granite and usually is) and it looks good and locks the track in well. If your track has a good base and ballasted, you can walk the rails when dry. If it is really wet, it may squish down some when you walk on it. One word of caution, check your ballast with a magnet, if it picks up anything do not use it, it will also pick up on your motors. DO NOT USE SQUEEGEE FOR BALLAST!!! It is rounded rock. It rolls around and will never pack down to a firm base.

HYPERTUFA ROAD BASE

A more permanent type of road base and can be used for scenic areas, walls, car roads, rock walls, etc.
This is a mixture of cement, sand and peat moss. There are several formulas depending on the usage. This can provide a road base that helps keep your ballast in place and still allows the track to move for expansion. **See separate document on Hypertufa Road Base for more information.**

Ladder type track support at or above ground

This type of support has been around for a long time. Many different types of materials can be used including wood, plastic wood (Trex or similar) metal, and combinations of materials. A moderate support can be made using PVC plastic 1" trim boards (actually ¾" thick) material is available at home supply stores and lumber yards. The trim boards are cheaper, usually white, so you will probably want to paint it. This amounts to using two horizontal support boards with spacers about 1 to 2 feet apart to support your track. The vertical board would typically be ¾" thick and 1 to 3" high with spacers to put these approximately under the rail. To get your initial curve drive temporary stakes along the sides of one vertical board with the spacers attached to it. This board would be aligned with one of the rails. When this is correct, use more stakes to hold the second board in place and check for the correct track placement, when happy with this then anchor the second side in place. PVC stakes ¾" or 1"can be driven into the ground between the vertical boards to hold the proper alignment and vertical height, add a spacer at this point and use deck screws to attach your supports at the correct height, stakes can be cut off after attached to the ladder. If using preformed track and switches, lay these on the ladder to verify correct alignment. If elevating this more than a few inches above grade using heaver materials more vertical rails and more supports would be in order, this general system can be used for elevated track or even a larger area to include space for some structures.

TRACK CLEANING

Buy a pole type drywall sander, in place of the sandpaper, use a GREEN 3-M paint-stripping pad (do not use the red metal polishing pad) and use it dry on the rails. This will polish the edges where the wheels pick up the electricity. The entire top of the rail does not need to be polished but you can do it with this pad. I have also used the fine drywall sanding cloth over the green pad for very dirty rails, this does not tend to scratch the rails. I definitely DO NOT use any type of abrasive such as sandpaper since this roughens up the rails and allows for more corrosion. I find the rails need less cleaning, than any of my indoor HO or N railroads used too. They will need the most frequent cleaning in the spring tapering off to almost nothing in the winter months. Yes I do run in the winter and in the snow.

Tree droppings, sap like material; I found that waterworks to soften and help remove this material, many times a rain or sprinkler will virtually remove it. This may not work for all trees, but it worked great for mine.

COUPLERS

I use and highly recommend Kadee couplers. I experimented with Delton, Bachmann and some other knuckle type and found the Kadee's worked much better. Also Kadee couplers are becoming the standard replacement coupler. Whatever type of coupler you decide to use, make they are the same on all your cars. If you are in process of changing to a different style coupler, create a transition car or two with the different type of coupler on each end, the old on one end and the new on the other. I body mount all couplers when possible as this makes for much improved operation, especially for switching and backing up. I recently backed a 39 car train (about 37' long) up a 3% grade through switches and around curves. You can't do that with talgo (truck mounted) couplers. If you want a smaller coupler you can use the gauge 1 coupler of Kadee's and they will mate with the G coupler however they do not uncouple with the magnet when mixed with the G coupler. The #789 coupler works for body mounting on most cars. Contrary to Kadee's statement, "these couplers are for larger radius curves", these couplers will work easily on 4' radius curves and on most cars will work down to 2' radius. On the smaller radius their delayed uncoupling action may not work. The main criterion on radius is overhang from the truck pivot, the shorter this is, the smaller radius you can use. **See separate document on Kadee Coupler conversions.**

STICK IT UP ANYWHERE

I use LOCKTIE FUN-TACK Mounting Putty to stick down or up anything I may want to move available at Ace Hardware in the area with glues. Other brands of similar material do work as well, follow the instructions and it will almost always come off clean. Examples:

1. All signs on my buildings. This allows moving or replacing signs at will.
2. Secures people in place anywhere including in/on RR cars, platforms, etc.
3. Holds Kadee uncoupler magnets in place on the ties.
4. Temporarily hold parts in place to fit or try them.
5. Holds magnets for bell and whistle on the track, use 1/2" button magnets available from Radio Shack.
6. Also hold magnets on the bottom of locos for automatic controls.
7. Many other uses; all items can be moved, removed, and repositioned.

RAIL ZIP

This is a conductive lubricant; it can be used anywhere you need good conductivity where there is motion. It is especially good where a wiper is picking up power from the wheels, such as on LGB cars and locos where the brush rubs the back of the wheels. Can also be used on the moving parts of the switch points that transmit power. Can also be used on track, however this lubricates the track and may cause traction and wheel spin problems. This drastically reduces the drag from the LGB wipers. This works great and can be found at most train hobby stores.

Storing Those Paint Bottles

Store your paints UPSIDE Down, when reclosing, wipe the top of rim clean, and add a couple of steel balls about 3/16" diameter into the bottle (I found these at a surplus store, you may also use some BB's)then close it, turn it over to make sure it's tight then store it that way. When you get ready to use it shake it well, when the balls start to rattle you are getting close (just like the spray paint cans), do not slam the glass end hard against your hand, it may break the glass, it did this once for me. For storing these model paints, I use a clear plastic storage box with adjustable dividers that is deep enough to hold the bottles upside down so that they will not fall over.

Cleaning Paint Brushes

Do not ever bend the bristles back sharply against the metal retainer. This will break them and you will have the broken pieces of bristle coming out next time you paint.

When using Solvent type paint, keep two jars of solvent available, dip your brush in what I call the dirty one first, and swish it around to get as much paint as possible out of the brush. Then do the same in the other one, this one will be the cleaner of the two. Do not throw these out, seal them up for later use, most of the solids will settle to the bottom. After swishing it in the second then do not wipe it on the side, keep it wet. Next take it to a sink and squirt liquid soap on it and rub it into the brush with your fingers, especially work it into the butt of the brush, this is the hardest place to get it clean (recommend rubber, nitrile, or vinyl gloves) If you have ascrub brush use that to help clean the baut and all the bristles, start at the butt and brush trward the ends of the bristles Then add some warm water and repeat as necessary. When done dry the brush with a paper towel, shape it, and let it dry. If it does not shape properly put some spit on it, for pointed brushes, put it in your mouth and draw it out to a point.

For Water based paints go directly to the sink, put a container of very hot water in the sink and swish it around until it is fairly clean, and then go to the soap and water as above to finish cleaning. I have many paint brushes over ten years old still being used including large brushes used for house painting.

Wearing latex or nitrile gloves when painting keeps your fingers from getting paint on them and allows you to pick out bristles or wipe an area if necessary.

Working with Goop and Silicones- Keep it from sticking to you.

When working with products that tend to stick you along with where they are supposed to be sticking, the best defense is a good offence, most of these will not stick to an oily surface. So take a good quality moisturizer, I use Curel, rub it on your hands and work it in, you do not need to have an oily surface on your hands. Then when you are working with these items, any that gets on your hands will generally rub off with a little work. Give it a try. This also lets you handle the things you are gluing without the oil getting on the surface.