



AN EVOCATIVE INSIGHT INTO MODEL RAILROADING....pt 18

By; Barrie L. Roberts www.dewintonstation.com

Topic – "Building a stationary platform and engine carrying case"

PDF supplement

As a yearend supplement this month I decided to take on a relatively easy project to share as a **"Build it yourself" engine carrying case** which doubles as a **stationary operating platform**, as viewed in the photos below. Being a certified carpenter early in life has helped me to master certain challenges within the woodworking trade that could assist you to complete this unique box design with a little tutorial help. Forty years ago, I made 35 wooden cases for a fledgling highland band for the youths to carry their bagpipes, all with a stain finish that likely are still in use today, perhaps not in the same condition but sturdy enough yet to protect the contents.



This is a practical solution to enjoy all your favorite steam engines year-round despite unfavorable or seasonal weather conditions.

These engines are at best fragile to handle, costly to purchase; thus requiring special care to **protect your investment**. Cardboard boxes are difficult to handle and do not showcase your engines like a custom built sturdy case such as this.

To access the comprehensive **"How To" -"PDF document"** simply click on the following link to my **DSGR website** at www.dewintonstation.com/g-scale.htm



View the document and follow the instructions to download the 10 page tutorial PDF complete with multiple photos showing the entire construction process. I have also prepared a 2 ½ minute video at www.youtu.be/8NgyhCk4ejg&feature=youtu.be

Complete with sound effects of the #73 Mikado (as shown below) going through its paces on the platform station. For those without internet access arrangements can be made by direct mail or telephone call to;

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Provide me with a **return e-mail address** to which I can forward. I have no objection to allowing this template to be duplicated for financial gain but will not endorse another's quality of work.

For the next few months I will be taking a break from writing articles (a hiatus) to concentrate on my own layouts, revamping my WebPages and to enjoy nature's wilderness via my motorized recreational pursuits. When topics of interest present themselves I will surely return to forward them with anticipated eagerness via this marvelous medium available here. I would encourage others to offer themselves to fill the void of my allotted space with input of their own design. **Contact** and discuss with **Barrie** at info@dewintonstation.com or 1-403-680-7061



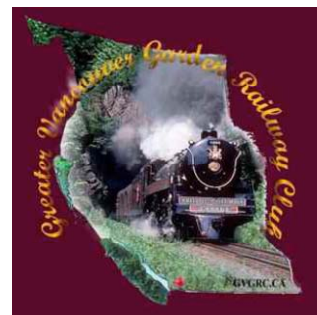


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Artwork by Tom Newsom



**Greater Vancouver Garden
Railway Club (GVGRC)**



Building a stationary operating platform and engine carrying case

12/25/2012

DeWinton Station Garden Railway, DeWinton, Alberta Canada

Barrie L. Roberts- CEO -Chief Engineer of Operations

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By; **Barrie L. Roberts** www.dewintonstation.com

Topic – Building a stationary operating platform & engine carrying case

For those of us that have a **special engine** that we would like to display on a stationary platform, for the sheer enjoyment of watching and listening to when it is not convenient to run on a layout, I have designed a unique display stand and carrying box for that purpose. The **separate box portion** is suitable to transport your engine(s) safely to another location, therefore providing an optional dual purpose function. To make this **display stand** practical for a variety of engine wheel configurations and to include the accompanying tender, I elected to use the most common and readily available style of roller bearing wheel sets,

as shown in the photos. This track design and overall length **may also be modified** to meet the specific requirements of certain engines, such as the "Big Boy", x-8-8-x like Mallets, Garrets or others that will require additional wheel sets.

For my own project, I have maximized the overall length to **46 1/2"** which will encompass most steam

engines with tender, plus simplify the material cutting list requirements (seen below) to one piece of 4' x 8' @- 1/2" Birch or Maple plywood for the construction of **two boxes**, longer engines may require a short add on track section with scenery and/or to carry the tender separate. The first consideration is to build a sturdy base stand of plywood's, laminated together to resist warping or sagging under the weight of the heaviest of engines. Two pieces of 3/4" ply and one piece of 1/2" ply will be sized at 6 3/8" W x 44" L, one piece of each size will have a 3 3/4" x 12 1/4" cutout section(s) to recess a 12" length of track. << (as shown at left)

TIPS: 1- Rough precut the plywood into 4' lengths for ease of handling, if using a circular saw, for this maneuver, then turn the sheet with the finish side down and cut across the backside. All other cuts must be done on a table saw with a sharp finishing blade.

2- When building a box it is imperative to construct as a solid closed unit... then cut the top lid later to maintain a tight matching fit.

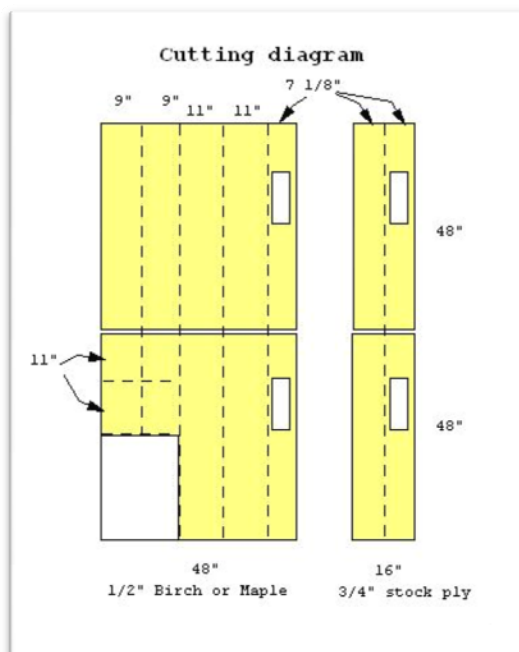
3- Being a finishing carpenter in a previous vocation I do suggest if you are about to tackle this project with minimal skills or tools, it would be advisable to team up with another and build a box apiece. This will help to share the overall costs, labor and experience between friends to achieve a mutual preferred outcome. **Estimated cost to complete with track and hardware is approximately \$500+ for two painted units.**



This prototype design seen in the June 2012 issue of the B-Journal is the basic footprint for this series. Refer to the article for other detailed construction information with additional photographs for clarity of design format.



This box is similar in design to the one we are about to make, the difference being ours will have a drop off bottom, the hinged top will be useful for final packing use to stabilize the engine for transport with foam inserts. **Note;** It would also be feasible to simply cut away a platform base from any closed unit such as this.



Note: "Two heads are sometimes better than one."

Be prepared to do some thinking outside of the box (Pun) as I cannot build it for you! Take the time to do a good job with quality materials for a finely crafted finished project you will be proud to display. Please enjoy the article....**B.L.R.**

As per usual at any reasonable time I would be willing to offer my learned assistance.

Contact and discuss with **Barrie** at info@dewintonstation.com or 1-403-680-7061



This photo is the basis for the concept of this design; recessed track is positioned 1" lower to accept the roller bearing wheel sets, which will transfer power to the engines running wheels.

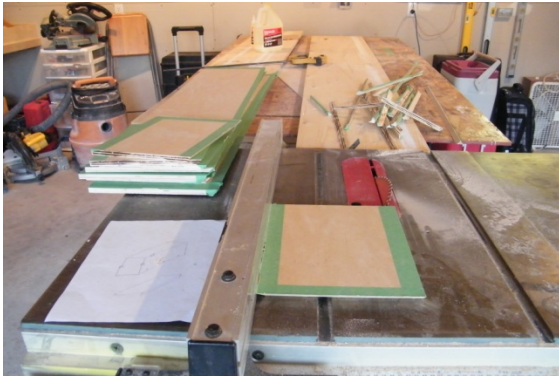


This Christmas 2012 supplement is presented to enhance the spirit of model railroading and to also encourage better communications and comradeship between modelers everywhere.

Card artwork by Tom Newsome



Once you have cut the full sheets into smaller pieces, as shown on the cutting diagram (Page 2), I strongly recommend that you place masking tape around the edges prior to proceeding; to reduce the chances of the surface veneer lifting when cutting the 45 degree edges and as a precaution to avoid excess glue from effecting the surface grain, especially if you are intending to do a stain finish. For my purpose, I plan (and recommend) finishing the boxes with solid color eurothane paint; as it is the practicality and durability of the project rather than the finished furniture look I desire. There are some **valuable tips** I have learned about applying the finishing products either stain or paint which will be discussed periodically throughout the article.



This is the most delicate and dangerous part of the construction process. Measure twice and cut once, keep your fingers clear from the saw blade and take the time required to assure smooth cuts. Avoid distractions and have a helper for the longer pieces.

The finish dimensions determined, **as per your specific needs**, cut all pieces, to finish sizes, on the table saw (face upwards) with care to hold steady to avoid wandering. The bottom edge is left square to sit



A bar clamp will assist to hold the material square to the cutting blade for the crosscuts, considering the length of sides.

over top of the base section which is to be made as a separate entity to fit within. **Note;** - It is recommended to cut a stock piece to the actual inside dimensions of the box **now** to act as a clamping form for ease of assembly.

Only use yellow **stainable carpenters glue** and pin nail securely together to assemble a closed box as seen below, once the glue has taken an initial hold then remove the masking tape with any excess glue, then sand the edges to obtain a unified appearance using the residual glue/sawdust to fill any voids, rounding the edges slightly to avoid splintering later on. **It is important to remember** the top lid will be cut off as a separate maneuver which will assure a tight fit when closed together. From the top I measured 3" down for the back cut and 6" in the front @ 1 1/4" in depth to which a diagonal line will be drawn, the finishing cut will be done with a sharp saber/jig saw **after the first coating of a finish color** of paint. Wood filler is to fill and round the **inside corners** for appearance, applied as a thin bead to fill any gaps for a clean smooth look to the **inside of the box**. Grey primer is then sprayed to the entire project followed by a first coating

of finish color. In my case Rust-oleum Painters Touch aerosol spray paint will be used for 1- blue and 1- red box. For those wishing a stained look it is imperative to avoid using any filler until after the stain color **and** first coating of clear varnish or sealing oils have been applied, otherwise discoloration will be visible. I also recommend a selected wax colored pencil to color match rather than petroleum based wood fillers.



Assembled boxes showed here prior to edge sanding. Front and back cuts for lid location will follow but not across the sides, to retain unity of assembly until after first coating of finish color.

Carefully cut away from the bottom of the boxes a 2 1/2" rectangular section that will be used for the building of the stationary platform portion of the project. Take care in handling, to avoid the corners from separating, until reinforcement materials are fastened. Select the engine or engines that you would like to proudly display and prepare to determine the placement of the wheel roller sets, **maximum inside track length available 44"**.



Above- primer and blue paint shown with wood filler.

Cut across at the diagonal line to separate top lid section as seen at the right, plus cut 2 ½" from the bottom to form part of the base platform section.



Pre assembled sections all test fitted together– ready for final finish 220 grit sanding and finish coating of paint products to be applied.

Note; - Now is not the time to rush the production, do a good job to fill any nail holes or gaps and prepare for the final application of the paint colors, in my case one blue box and one red box both with beige removable bottom platform sections. Cover any bare wood with primer and sand smooth between subsequent coats of paint, after drying time.

At this point in the box construction the filler, primer & first coating of finish color paint has been applied and the outside cases have been set aside to cure. Excessive handling will surely cause minor scratches or blemishes which can be fixed prior to completion with surface putty. The bottom cut will also need to be performed at this point and touch up primer and painting will be required thereafter. Those attempting a furniture finish I can only advise to take extra precautions and offer my sincere advanced sympathy. E-mail info@dewintonstation.com for further advice if needed.

The stationary platform can be assembled together as follows:-



Firstly chamfer a 3" wide piece of solid maple to frame the scenery portion which will surround the train. The mitered outside dimensions will correspond to the inside measurement of the box. Then attach a piece of 3/4" plywood **within** to form the bottom of the box. Place within the bottom section cut off from the painted box as shown at right. The next cutting procedure is critical to provide clearances when joining the sections together; the two ends and front side must be trimmed by 1/8" as shown below and the material removed as demonstrated with a sharp knife. **Once sanded** the exterior of the entire lower section together can be primed and painted with a first coating of beige Rockerguard paint (Can Tire) for durability and set aside to cure.



The next cutting procedure above is critical to provide clearances when joining the sections together; the two ends and front side must be trimmed by 1/8" and the excess material removed as shown with a sharp knife.

Finally cut the remaining 1/2" & 3/4" plywood pieces to the inside measurement of the solid maple frame allowing a further 1/4" spacing all around for the applied denim scenery application to follow.

Now comes the tricky part; 1- Set your engine(s) up on the roller sets. 2- Measure the running wheel configuration(s) on your steam locomotive(s) with tender attached or diesel engine if that is your choosing, this will determine the placement location(s) of the recessed track to carry the G-gauge wheel rollers (Aristocraft – ART11905). 3- Center the holes from the sides and allow equal spacing in front and rear of the engine for packing materials. 4- Transfer these measurements to the plywood

platform base, (as shown) cutting corresponding holes into the 1/2" & 3/4" pieces @ 3 3/4" wide for the lower track placement. 5- Fasten these two pieces together, which will receive the scenery application.



NOTE: Do not attach to the box interior as this component can stand as a separate entity and multiple choices of platform base configurations could utilize the same box exterior when on display or for transport.



The above photo of the USA J1e Hudson 4-6-4 will share the pedestal with a Mikado 2-8-2 nicely with a single 12" dropped opening.

The Mallet 2-8-8-2 engine shown above with tender will require two sets of four rollers spaced apart.

The Mallet 2-8-8-2 engine shown with tender will be a snug fit inside the box but will work well without the tenders coupler pin attached to the engine and using a foam spacer substitute between to cushion any movement when transporting.

Materials list (2-boxes) with approximate costs; \$500 +

1- 4x8 ½" maple plywood	\$ 60.
½ sheet ¾" fir plywood	\$ 25.
1- 1"x8" x 10' solid maple	\$ 20.
4- 3/8" x 1 ¼" door stop trim	\$ 10.
2- Cans spray primer- grey	\$ 16.
4- Cans of spray paint- red, blue	\$ 32.
1- Can of Rockerguard beige paint	\$ 12.
2- Pieces of LGB 4' track	\$ 100.
3 sets – Aristo ART 11905 rollers	\$ 165.
Suitcase hardware @ (Lee Valley)	\$ 170.
150 Brass #6 x ¾" RD head screws	\$ 25.
32 Brass #8 x ¾" Machine screws	\$ 5.
2 pr brass ½" x 1 ½" corner brackets	\$ 8.
Misc, glue and scenery materials	\$ 30.

A further breakdown of the suitcase hardware is as follows;-

**4 pair hinges, 4 pair top corners,
10 pair latches, 4 pr bottom corners,
8 pair side protectors, 2 pair handles.**



Final painting procedures;-



Primer applied at left to be followed with beige colored Rockerguard paint as shown above, two bases displayed. Paint the underside too.



How are you doing so far? Count your fingers to see if any are missing, the hardest part is behind you now.



Do not use spray paints around any open flame and always insure adequate fresh air ventilation &/or wear a proper breathing mask.

Prior to diverting my efforts to the interior portion that will allow for train operations I wanted to finish the paint color applications, before the onset of our winter weather and to install the brass hardware. I did manage to complete the painting just prior to a heavy snowfall in late October, that would have delayed production. Temperatures were becoming colder and to finish the painting was now a priority. Safety is always a concern when spraying highly flammable products. Under no circumstances should spray paints be used around an open flame, which are the heat sources for my construction areas. Instead I prepared an area inside a non heated workshop room and waited until the afternoon warmth of the day before applying the aerosol products. It is important to assure the room is clear of dust particles floating about and an adequate supply of fresh air is available to breathe. Paint fumes are also toxic and can cause irreparable damage to your lungs.



Painted boxes with brass hardware installed on display, shown in closed tote and /or storage mode.



As we near the end of the project there are just a couple of tips to share with regard to completing the interior platform section. I took an old pair of denim trousers and stapled to the joined $\frac{1}{2}$ " & $\frac{3}{4}$ " boards with the cutout portion(s), this will provide adhesion qualities for gluing ballast if desired. Drill a small hole into the ends of the lower

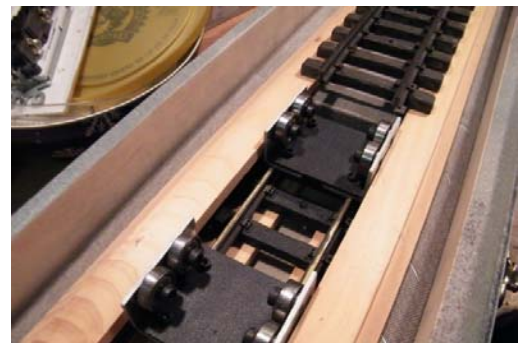
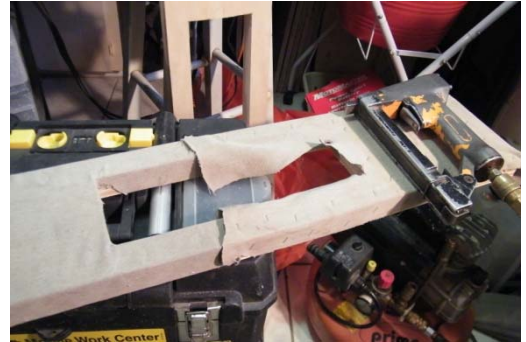
track rails, cut to fit within the recess hole and then solder a pair of heavy gauge alligator clip end wires to the track, leaving enough length to protrude out the end of the box when opened. Two strips of $\frac{3}{8}$ " x $1\frac{1}{4}$ " stop material (to simulate raised ballast) was nailed equally aside the roller bearing sets positioned upon the lower track. Allow some slack for easy movement along the track section

Note; as you are lifting the upper track - similar $\frac{3}{8}$ " pieces must be placed below the recessed track **also** to maintain the required 1" difference in elevation needed.

Compare your assembly to the photos at right ... >>

Cut the remaining track to fit to the inside measurements of the platform section and fasten securely, for this I used $\frac{3}{4}$ " brass round head nails but any small nail with a flat head would do just as well.

Looks like we are done!



All that is left to do is place your engine onto the stand and apply power to the track by connecting the power source of your choice to the alligator clip ends.





The three engines seen here at top Aristocraft 1/29 live steam Mikado, center USA trains 1/29 Hudson and the LGB 1/20.5 Mikado (electric powered DCC or analog), each with different sized wheels and/or configurations can share the same stationary platform plus can any other smaller steam engines with up to 4 main driver wheels.



At left the Aristocraft 1/29 Mallet 2-8-8-2

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Visit YouTube at;
<http://www.youtube.com/watch?v=8NgyhCk4eJg&feature=youtu.be>

To view this #73 engine in operation.

