Model Railroading Tips for Plastic Modelers

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Modeling is Modeling

- Tools
- Construction
- Electronics
- Painting
- Dioramas
Tools

• Similar
• Inexpensive Clamps – Clothes pin modifications
  – Bag of wooden Clothespins – $1.99
  – Time to cut off tips – 1 minute
  – Having a small, easy-to-use clamp – priceless

These are great for clamping wings, tails, thin parts, etc.
Construction

• Identical for both models
• Operating lights and animation are standard in Model Railroading
  – Miniature lights
  – LEDs
  – Electronic controls
Electronics

- Digital Command Control (DCC)
Dioramas

- The real crossover is in the scenery/diorama area
  - Trees
  - Bushes
  - Ground cover (grass, turf)
  - Rocks
  - Casting supplies (molds, plaster, spackle)
  - Gravel, dirt
Model Scenery
Building the Basic Ground Shapes

- **Use foam to build the basic outline of hills**
  - Hot wire foam cutter
  - Build up foam into the height you want
- **Add plaster impregnated cloth to smooth out large gaps**
- **Fill in and smooth out using the spackle**
  - Apply with painters trowel
  - Smooth out using paint brush dipped in water
- **When Dry, paint with earth toned acrylic paint**
- **Cardboard lattice supported by wood may also be used**
  - Crumple newspapers for the detailed terrain features
  - This may sag as the plaster soaked cloth is applied

This step will require drying time so go on to another part like building trees.
Building the Basic Ground Shapes

• Fill in and smooth out using the spackle
Building the Basic Ground Shapes

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  – Apply with painter's trowel
  – Smooth out using a paint brush dipped in water
Building the Basic Ground Shapes

- Example of spackle used to build a road on a model railroad
  - Brush strokes are used to simulate ruts and wear
  - Tracks and deep ruts can be made with a vehicle while the spackle is still wet
Ruts and tracks are more visible with a wash
Rocks

• Plaster Rocks for outcroppings and large rock faces
  – Mix and pour plaster into the rock molds
  – Let harden for a few minutes and apply to the terrain
  – Let harden and remove the mold
  – Paint ground color
  – Use washes and dry brush techniques to highlight the shapes

• Carved plaster rock faces
  – Apply about ¼” thick layer of plaster to terrain
  – Shape with carving tools/dentist picks
  – Paint and wash as before

• Real Rocks
  – Caution: they may look dark with normal inside lights
  – They need to be “planted” into the scenery
  – Coloring and washes usually are not needed
Talus

- Talus is the pile of small rocks that are found at the bottom of rock outcroppings
  - You may use appropriate colored kitty litter
  - Woodland Scenics makes various sizes in several colors
  - Apply thinned glue and pour/place the rocks in place
  - Use washes and dry brush techniques might be needed for highlights

- Building steep talus piles (stream banks, etc.)
  - Pour talus as you spray with wet water from misting spray bottle
  - Apply thinned glue to set the rocks in place
  - Paint and wash as before, if needed

- Model Railroad Ballast
  - Lots of colors and sizes
  - Small sizes for most talus
Dirt

• Dirt from your back yard
  – While easy to obtain and low cost, care must be taken
  – Local dirt needs to be cleaned to remove seeds, mold, insect eggs, organic compounds, etc.
  – Iron and metal shards also need to be removed if it will be applied to electrically powered track or wiring

• Bags of dirt
  – Arizona Rock and Mineral has many kinds
  – Woodland Scenics also has some
  – Tile grout is available in many colors and grits
  – Relatively easy to use

• Dirt Application
  – Apply thinned glue to surface
  – Sprinkle on dirt
  – Spray with wet water to reach dry spots
Plants

- Life Like SceneMaster has plants that work well and are very detailed
  - Lily pads, reeds, bushes, etc
  - Very realistic (somewhat expensive)
- Apply a drop of glue to the location where you want the plants and place the plant there
Plants

- Busch Models offers a variety of items that are ready to apply
  - Grape Vines, cornfields, wheat fields, roses, tulips, daisies, cabbage, barley, lettuce, sunflowers, etc.
  - Bushes, hedges, reeds, fruit trees,
  - Very realistic (expensive too)
- Apply a drop of glue to the location where you want the plants and place the plant there
Shrubs and Bushes

• Foliage Clumps
  – Woodland Scenics in their bottles
  – Multiple colors
  – Apply a drop of glue to the location where you want the plants and place the plant there
Shrubs and Bushes

- Parts from trees
  - Small pieces of larger trees
  - Very realistic
  - Poke hole in scenery where you want the bush, apply a drop of glue and press the shrub in place
Grass

- **Ground Foam**
  - Small round bits of colored foam used to simulate turf and grass
  - Not too realistic as it is round and not vertical
  - Paint on glue (with 1” brush) in the area where the grass is to be applied
  - Sprinkle on slight color variations of the ground foam

- **Static Grass**
  - Small pieces of long fibers
  - Very realistic
  - Paint on glue (with 1” brush) in the area where the grass is to be applied
  - Use static applicator to give the fibers a static charge (they will stand up on the wet glue) as you apply them to the area you are working
  - Let dry and then vacuum up the excess
Grass

• Static Grass
  – Small pieces of long fibers are very realistic
  – Paint on glue (with 1” brush) in the area where the grass is to be applied
  – Use static applicator to give the fibers a static charge (they will stand up on the wet glue) as you apply them to the area you are working
  – Let dry and then vacuum up the excess
More Grass

• Fake Fur
  – Excellent for large grassy fields or prairies
  – Purchase a tan piece of fur at the Fabric Store (1 to 2 yards)
  – Cut to the shape of the area you want to have grass
  – Paint on contact glue (with 1” brush) in the area where the grass is to be applied (Hot glue can be used if it is over a plaster coat)
  – Push down to make sure contact is made
  – Trim length of fur to suit your needs using scissors
  – Using airbrush, paint the tops of the grass various shades of green to suit your tastes
  – Sprinkle fine dirt into the fur to hide the fur’s backing
  – Spray on wet water and spray on thinned glue if you wish (it is usually not necessary)
To plant rocks, bushes and grass; apply a watered down coat of white glue. Avoid rock faces.
Working quickly, strew rocks on the down side of hills and below rock castings.
Then apply bushes (Clump Foliage). Use multiple colors. Then squirt on the static grass. Again use multiple colors.
When the glue has dried, vacuum up the excess.
Poke holes in the scenery and plant trees to finish the area.
Painting the tops of rocks with the glue and adding grass helps blend the rock castings into the hillside.
Trees

- Trees add the final touch to the scene
- Both Deciduous Trees and Pine Trees can be modeled

Deciduous Trees
- Available in pre made packages
- Build your own with weeds, roots, or wire armatures
  - Add fiber-fill to the branches
  - Paint the color of the tree and add spray glue
  - Sprinkle on fine ground foam

Pine Trees
- Available in pre-made packages
- Build your own using wire, rope and ground foam
- The next few slides describe this process
Building Inexpensive Pine Trees

1. Select and bend a wire to meet your needs
2. Insert the sizes of rope strands to form a tree
3. Hot glue the strands to the wire
4. Cut the tree to the proper shape
5. Twist the flat tree into a 3D tree
6. Paint the tree (inside the bag in the box)
7. Sprinkle on the ground foam
8. Insert in a piece of foam to take home and plant on your layout
Pine Trees

• Select a strand of wire and fold it in half
• Keep the bend sharp as this will become the top of the tree
  – Pliers may help crimp the end tighter
  – Not too tight as you need to slide rope strands between the folded wire
Assembling the Trees - Rope

- Insert the short sections of the rope strands (1/2”) between the wire to the top where the bend is
- Spread the strands out about ¾”
- Add longer lengths of strands to fill in the tree
  - Vary the spacing a bit
  - Remember not too much at the top
Assembling the Trees - Glue

• Use the hot glue gun to glue the strands in place
• This will form the trunk.
• Repeat for the other side if desired
Assembling the Trees – Trimming to Shape

- Trim the tree to a triangular shape
  - Remember: pine trees are pointed at the top!
  - The top “branches” should fade into the wire
Assembling the Trees - Twist

- Chuck the ends of the wires in a Drill motor
- Clamp the other end in a vise or use pliers to hold the tip
- Slowly turn on the drill to twist the wires
- When the tree takes on a cone shape, stop
- Trim excess “branches” and clean up as needed
Assembling the Trees – Paint

- Spray the tree with brown paint
- Cover tree thoroughly and thickly
- Spray adhesive may be used if desired over the paint
Assembling the Trees – Needles

• While still wet, sprinkle on the ground foam around the sides and from the top
• Shake off excess
Assembling the Trees – More Needles

• For a fuller tree use spray glue to the existing tree and sprinkle on more ground foam or use static grass for that needle look

• Cut off excess wire from the trunk

• Store in a piece of foam until ready to plant on your layout
Remember: Pine trees are tall and slender
Variations and Improvements

• Make cuts into the tree to give it an irregular shape
  – This can be done while trimming the flat tree
  – It can also be done when trimming the tree prior to painting
Variations and Improvements

• Use trimmed off pieces to add a “branch” look
  – Sprinkle the small ends on a newly painted (still wet) tree
  – Use spray glue to attach the small ends to the tree
  – Apply the foam as usual
Variations and Improvements

- Add a light coating of a slightly lighter green to the tops of the branches
  - This gives the impression of sunlight
  - Do not overdo it! There should be some light visible through the tree.
Variations and Improvements

- Use Static Grass to give the tree a needle look
Variations and Improvements

• Match the shape and color to the type of pine you need for the location

Tall and slender with darker green foliage
(picture is in shadow on a cloudy day)

These are at higher elevations ~8,000 to 10,000’

Tall with a slightly rounded top with medium green foliage

Elevations ~6,500 to 8,500’
One cool variation uses snow to obtain that wintry look
Making Plastic Look Like Wood
Remember Midas?

• He was given the capability to turn things to Gold

• Here we have the opportunity to turn styrene into wood, visually
Washes Bring Out Grain and Board Separations

• If using oil based paints for the model color, use water based paints for the washes (and vice versa)

• Add a dark wash to bring out the grain and the separation of the individual boards

• A dark gray replicates older weathered boards

• A dark brown replicates newer boards or dirt laden boards

• Black replicates coal soot or fire damage
So, How Do We Get the Styrene to Look like Wood?

• There are 3 steps to the process

1. Paint the “wood” a base color (using oil based paint)
2. Paint individual boards a variation of the base color with oil paint
3. Antique the wood with an acrylic wash (wipe off)

• Results

• Good wood look
• Little expense
• Medium amount of time
• No fancy tools (no airbrush needed)
Steps in Detail – Base Paint

1. Paint the deck tan
   – Use a soft long bristle brush
   – Paint in the direction of the wood grain (the brush strokes will create a subtle wood grain)
2. Paint random boards with lighter and darker shades of the base color using a brush
   - Add a little white to a portion of the base color
   - Add brown to another portion of the base color
   - Use slightly different colors
   - Paint in the direction of the wood grain
   - Let dry thoroughly before the next step
Step 3 to Improving the Look of Your Plastic

• Use a different type of paint for Step 2
  – Acrylic if oil was used for the tan
  – Oil if acrylic was used for the tan

• Paint sections of the surface with a weathering color – A warm dark gray works best

• Before the paint dries, wipe off the paint from the surface
  – Use a piece of cloth like a bedsheets (paper towels leave fuzz, terrycloth wipes away paint from the cracks)
  – Wipe in the direction of the wood grain
  – Keep cloth tight to wipe away from the tops and leave paint in the grain and between boards

Light wipes leave more paint and make the wood look older, more aged

Heavy wipes leave less paint and make the wood look newer, less aged
Can Styrene Really Look Like Wood?
Resin log car painted to look like wood and iron (wheels are metal)
Showing Wear on “Wooden” surfaces

- Paint in base color
- Paint wood areas with tans
- Use wash of your choice
- Highlight with a thinned light base color and wipe up with a piece of a sheet
Logs, stumps, bark

- Paint in base color (medium brown)
- Highlight bark texture with lighter color (tan)
- Paint exposed trunk area and ends of logs wood color
- Use wash of your choice (dark brown, dark gray, etc.)
Questions?