

Couples Taking A Stroll

InvisaTrax™ Transport System



InvisaTrax™ Components List

Quantity Component Name

- 1 90° Motor Turn w / 60 RPM motor mounted¹
- 3 90° Bearing Turns
- 1 Motor Turn Gear
- 3 Bearing Turn Gears
- 2 14 Unit Track Pieces
- 2 8 Unit Track Pieces
- 2 4 Unit Track Pieces
- 88 Chain Links (4 - 3mm RND)
- 4 3mm Round Magnets - Chain
- 4 2mm x 0.5mm Magnets - Figures
- 1 DC Motor Controller
- 1 Power Supply (battery or 6V DC Adapter)



Track Components shown are early test prints, printed in-house using ABS filament on an FDM printer.

1 - This assumes that the wires have already been soldered to the motor. See the InvisaTrax™ Transport System Instructions for details.

Additional Materials Used

Material Name & Description

1 in. x 2 ft. x 2 ft. Rigid Foam Board Insulation

20 x 30 x 3/16 in. Foam Board

92 lb 19.5 x 25.5in Fine Grain Craft Paper - Gray

Scrapbook Paper - Black

Scrapbook Paper - White

Grass Mat - Light Green

Polycarbonate Sheet (0.010" thick)

#18 x 5/8" Wire Nails

Double-Sided Tape

Spray Adhesive

Scrap Foam Board

White Model Striping Tape (1/8" wide)

Images of Buildings

Clear Plastic Sheet Pieces



CatzPaw Products Used

Name & Description

WM40 - Victor, S-Scale (1:64)

(<https://catzpawstore.myshopify.com/collections/figures/products/wm40-victor>)

WM-40 - Heddy, S-Scale (1:64)

(<https://catzpawstore.myshopify.com/collections/figures/products/wm40-hedy>)

Doug Walking, S-Scale (1:64)

(<https://catzpawstore.myshopify.com/products/doug-walking>)

Female Walking 1940's, S-Scale (1:64)

(<https://catzpawstore.myshopify.com/products/female-walking-1940-s>)



WM40 - Loretta, S-Scale (1:64)

(<https://catzpawstore.myshopify.com/collections/figures/products/wm40-loretta>)

WM40 - Lauren, S-Scale (1:64)

(<https://catzpawstore.myshopify.com/collections/figures/products/wm40-lauren>)



Park Bench, S-Scale (1:64)

(https://catzpawstore.myshopify.com/products/park-bench?_pos=1&_sid=3652d13df&_ss=r)

Fire Hydrant, S-Scale (1:64)

(https://catzpawstore.myshopify.com/products/park-bench?_pos=1&_sid=3652d13df&_ss=r)

Mailbox USPS Traditional, S-Scale (1:64)

(https://catzpawstore.myshopify.com/products/mailbox-usps-traditional?_pos=1&_sid=4eada1cfe&_ss=r)



Tools Used

Tool Name & Description

Box Cutter (to cut foam board)

3/4" Forstner Bit (to drill hole for motor)

Double-ended Screw Driver: Flat & Philips Head

Tack Hammer

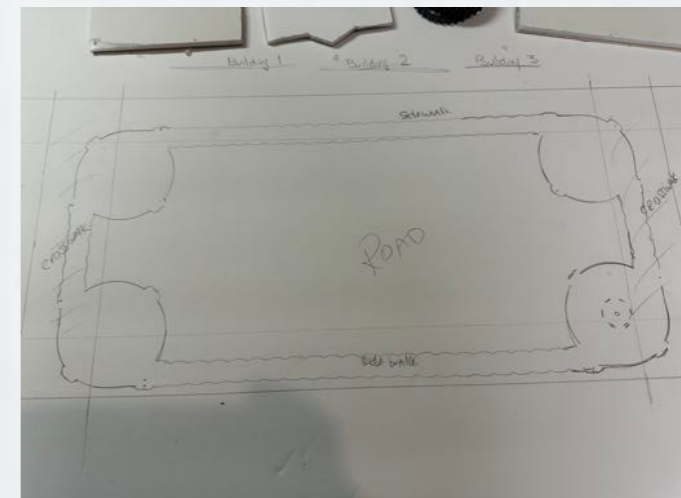
Dremel® Rotary Tool with Router Attachment

1/4" Dremel® Router Bit

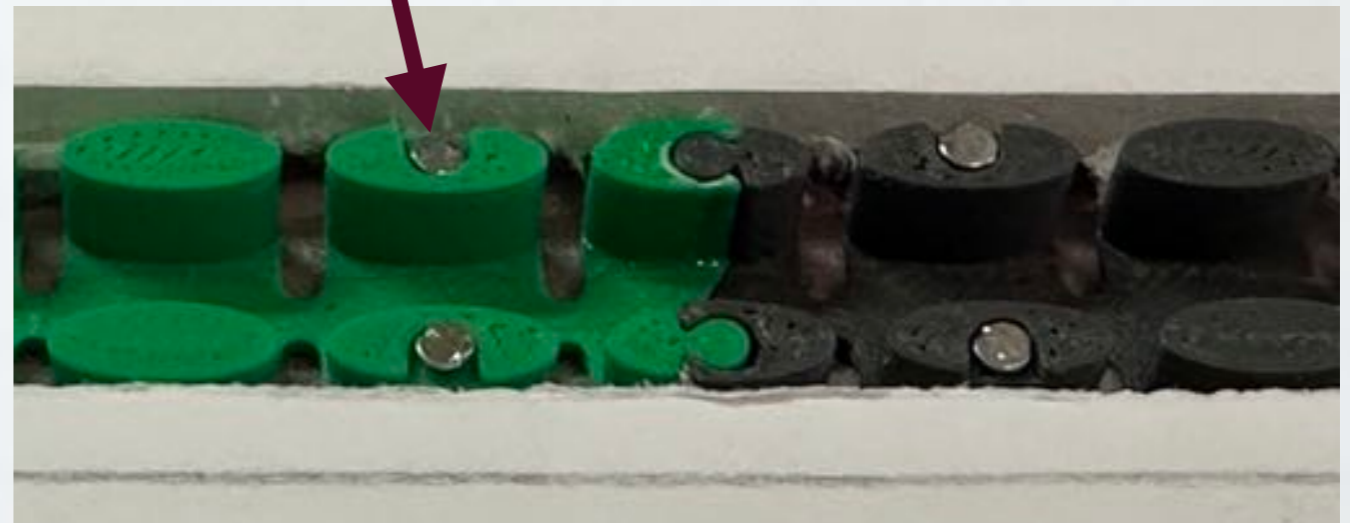
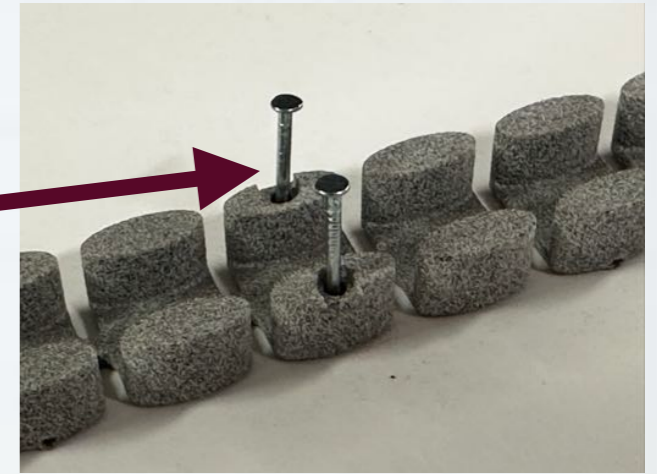


The Process

- ▶ Cut and glue the Foam Board to the Foam Board Insulation.
- ▶ Plan the layout and mark the locations of key items on the Foam Board.
- ▶ Lay the InvisaTrax™ track segments for the desired walking path. Trace around the outside of the track segments to use as a guide for routing a channel for the track.
- ▶ Mark where the motor turn will be placed and drill a hole to house the motor.
- ▶ Use the Dremel® Rotary Tool to route the channel where the track will be placed. Set the router height to match the track height (7.5mm).
- ▶ Assemble and test fit the track and turns. Make any needed adjustments to the routed area.



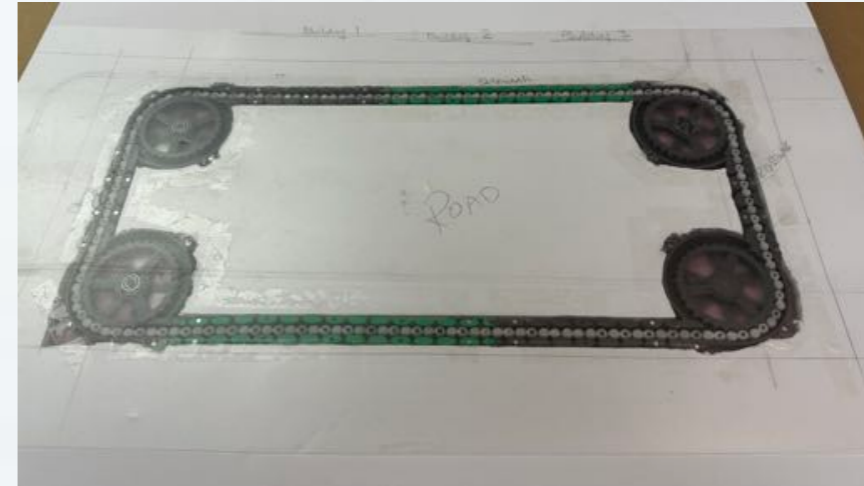
- ▶ Mount the track to the foam boards by placing the track pieces in the routed channel. Line the channel with double-sided tape for extra hold. Add a few wire nails to the track; place in the openings located in the sides of the track sections. Tap with a hammer or push with the flat blade of a screwdriver.



- ▶ Assemble the chain links and drop into the track. Be sure to have installed a minimum of two (2) sets of two (2) 3mm round magnets into two (2) consecutive chain links. Place the magnet sets evenly apart to have the couples walking on opposite sides of the street.
- ▶ Optional: include additional sets of magnets placed a few chain links apart so the couples can walk closer together on the same side of the street.

See the InvisaTrax™ Transport System Instructions for details on mounting the magnets.

- ▶ Attach the motors and power to the motor controller and test the setup. Run the system at all speeds and both directions.
- ▶ Cover the layout with the Polycarbonate sheet and attach using double-sided tape or spray adhesive. Be careful not to get adhesive on the track, chains, or turns.
- ▶ Test the system again. Be sure the chain is moving freely and not hung-up on the Polycarbonate covering.

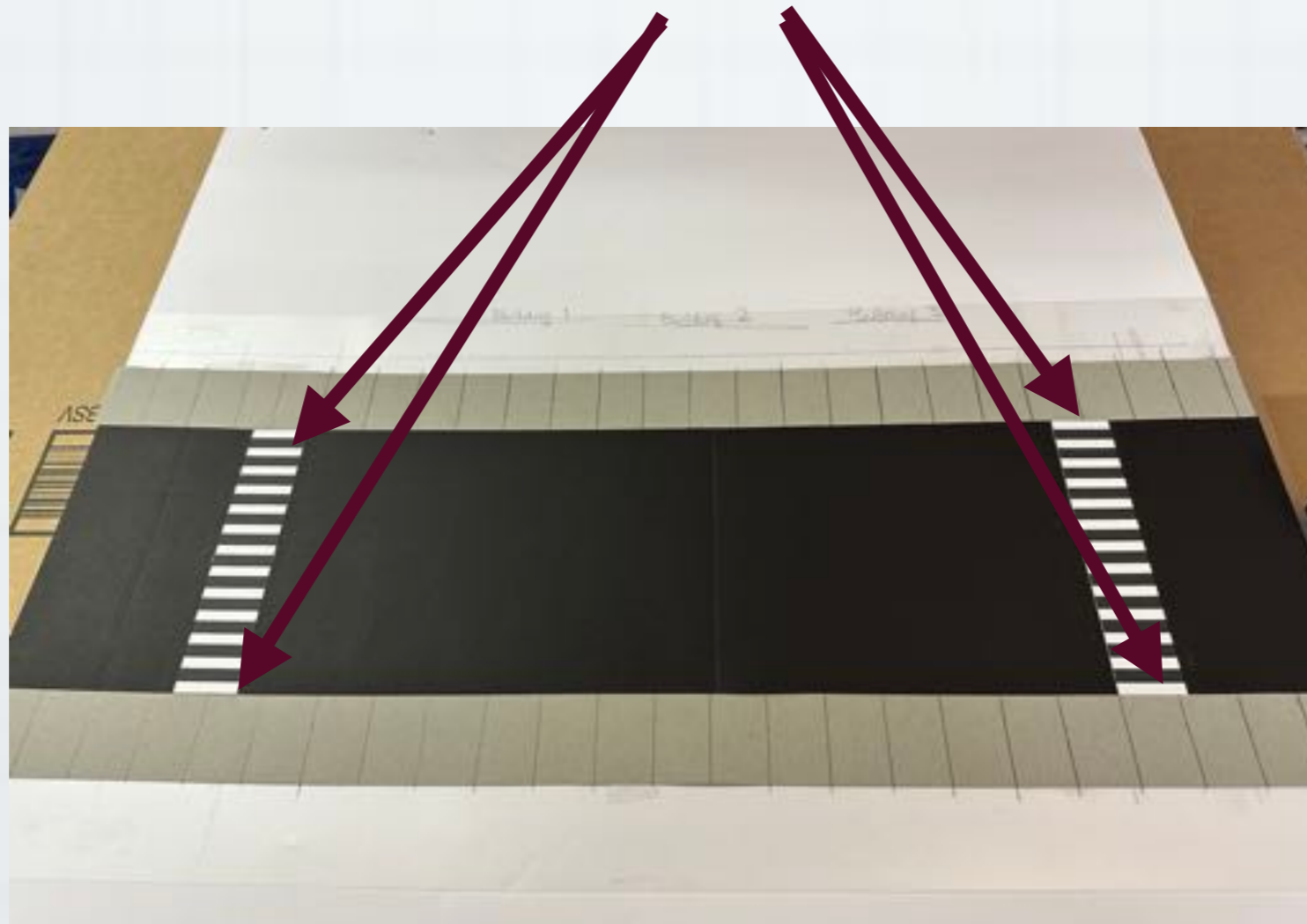


- ▶ Cut two small pieces of clear plastic to mount the walking figures.
- ▶ Superglue two (2) 2mm x 0.5mm round magnets to the clear plastic, spacing the magnets to match the magnets in the chain links. Repeat for the second walking couple.
- ▶ Superglue the figures to the clear plastic, creating two sets of walking couples.

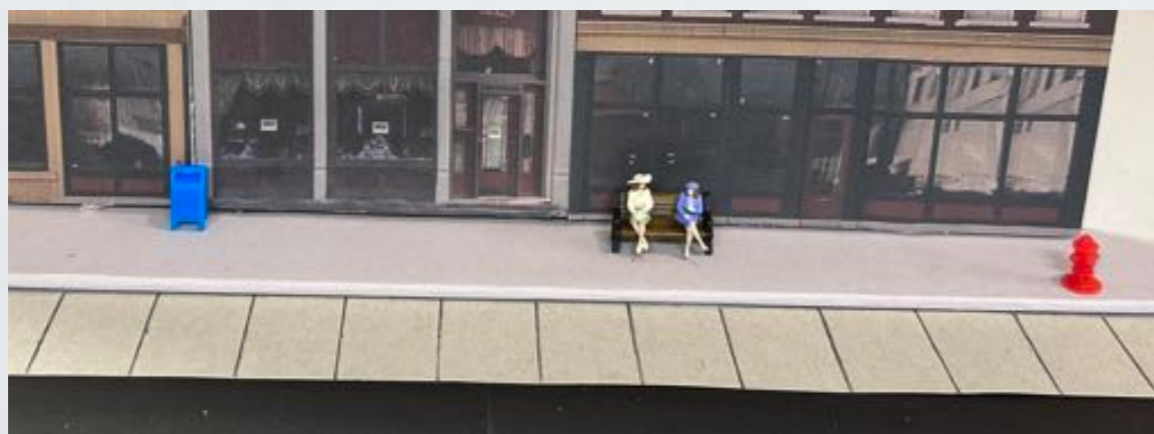
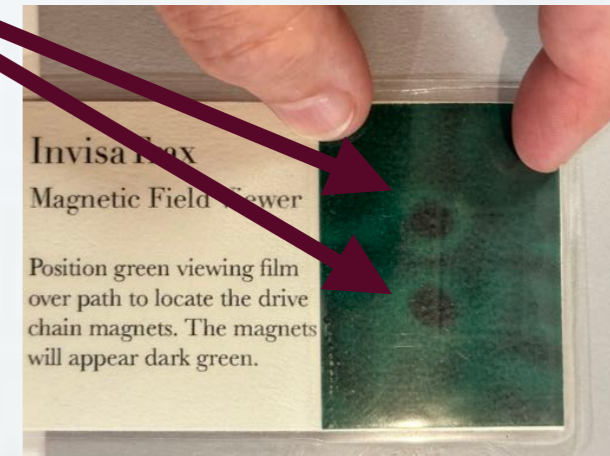


*See the InvisaTrax™ Transport System Instructions for details on connecting motors to the controller.
See the InvisaTrax™ Transport System Instructions for details on mounting the magnets.*

- ▶ Place the figures on the track where chain link magnets are located and test the system again! Make sure the figures run smoothly over the polycarbonate sheet.
- ▶ Cut the gray paper to make the sidewalks.
- ▶ Cut the black paper to make the roadway.
- ▶ Print the crosswalk pattern on the white paper and cut out.
- ▶ Attach the pieces to the polycarbonate sheet using spray adhesive. Make sure where the different sheets of paper are joined together that the edges are smooth and securely bonded.



- ▶ Use the Magnetic Field Viewer to locate the chain links with magnets. Either move the viewer over the area where the track is located or place the viewer over the track and run the system until the magnetic fields appear.
- ▶ Place the figures on the track and test the system again. Make sure the figures move smoothly over the areas where the paper edges are aligned.



- ▶ Print the images of buildings on white craft paper or card stock. Cut them out and glue them to scraps of foam core board.
- ▶ Place the building behind the sidewalk on the far side of the diorama.
- ▶ Cut the light green grass mat and glue it to the base next to the sidewalk on the near side of the diorama.
- ▶ Add the white model striping tape to mark the center line on the roadway.
- ▶ Add the final scenery details: mailbox, fire hydrant, park bench, and seated figures.

Proudly Display the Results



https://youtu.be/mcvXakL2S_A?si=ix-hkjRcRPOEJ1k