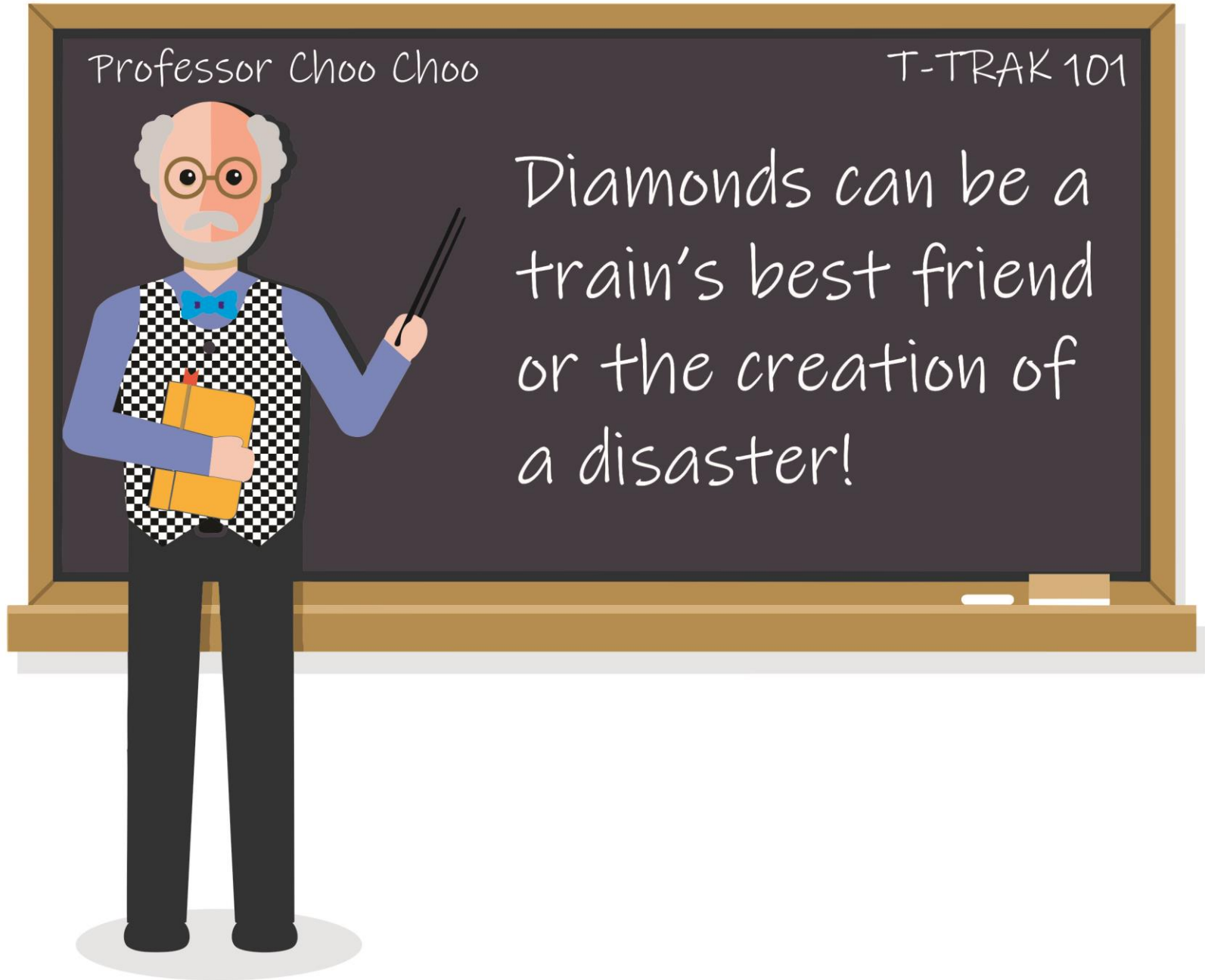
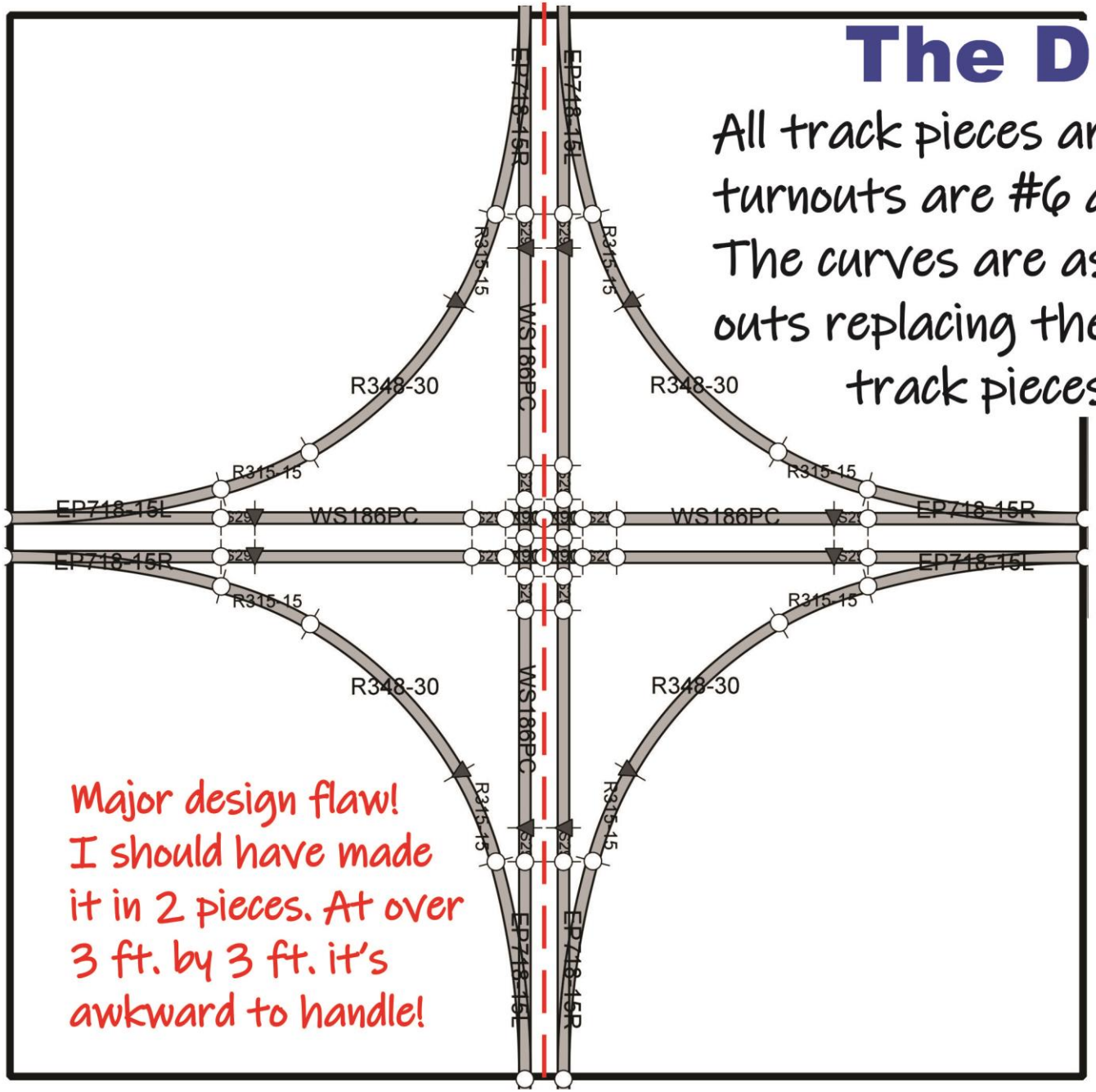

TALKIN'
TETRAK
the DIAMOND JUNCTION

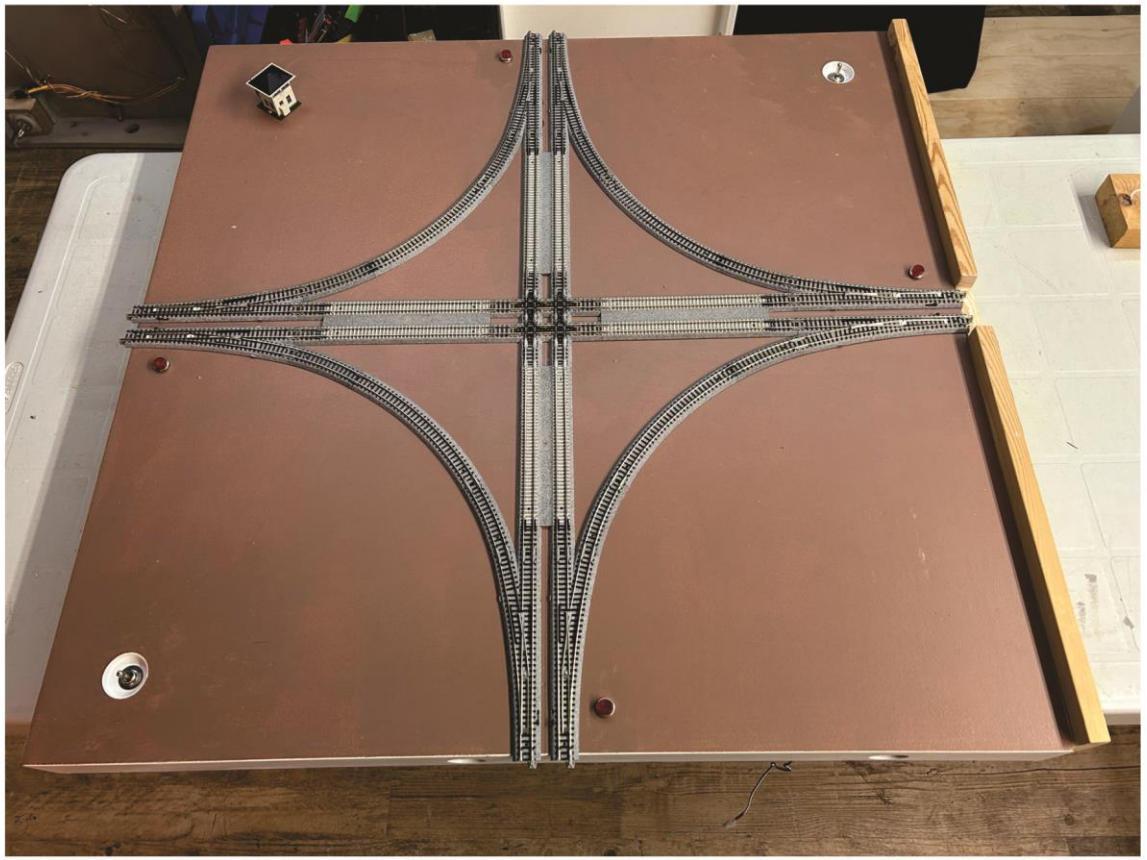

Professor Choo Choo
T-TRAK 101
Diamonds can be a train's best friend or the creation of a disaster!

The DIAMOND JUNCTION

All track pieces are standard, unmodified KATO pieces. The turnouts are #6 and those small straight pieces are 29mm. The curves are as my large junction design with the turn-outs replacing the 15 degree 718 mm R curved track. Other track pieces used are as labeled in the diagram.



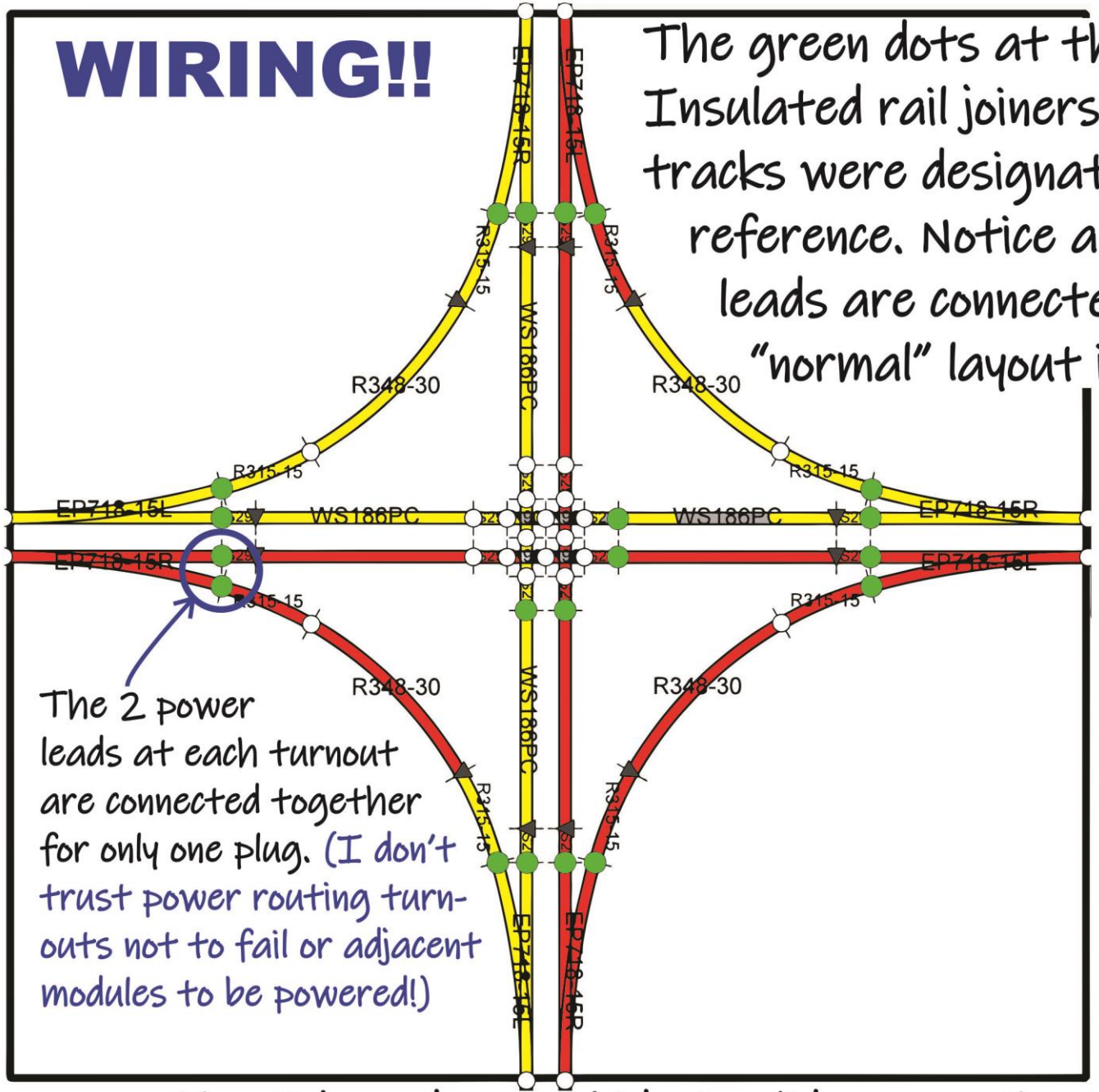
Major design flaw!
I should have made it in 2 pieces. At over 3 ft. by 3 ft. it's awkward to handle!



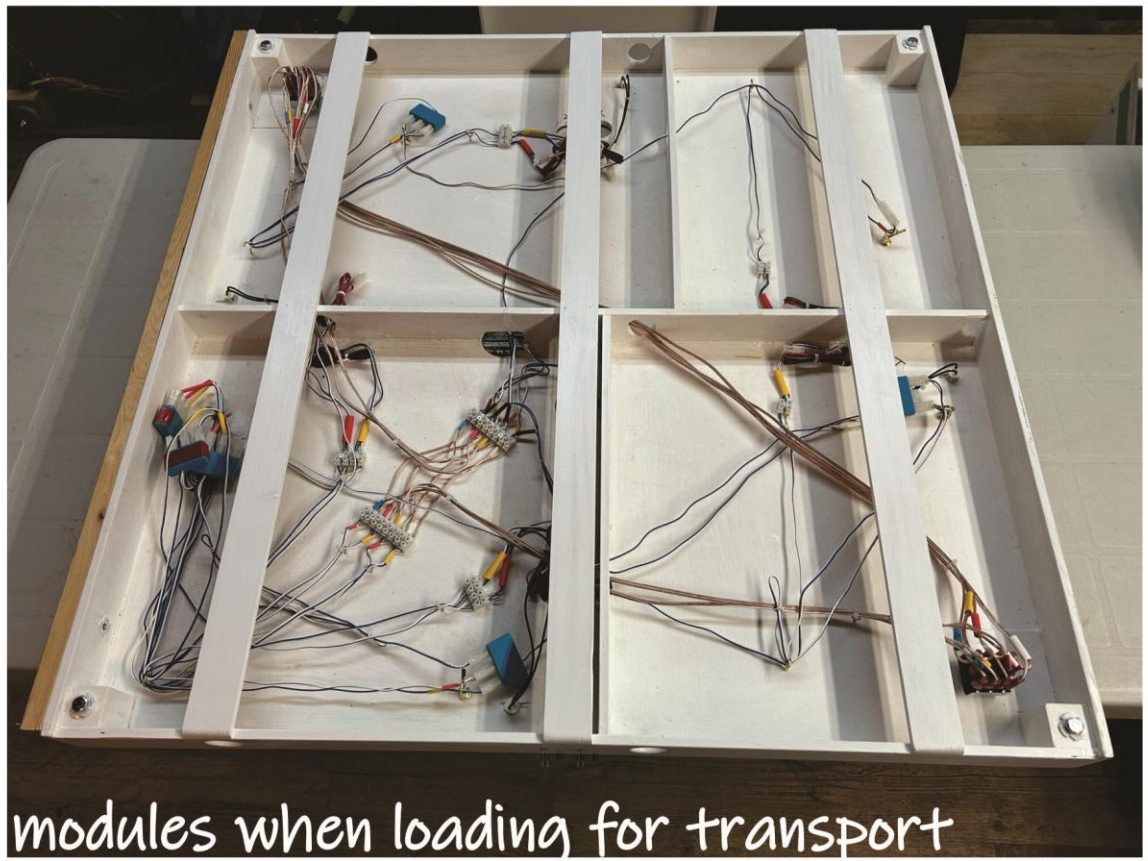
The small tower oversees the junction

WIRING!!

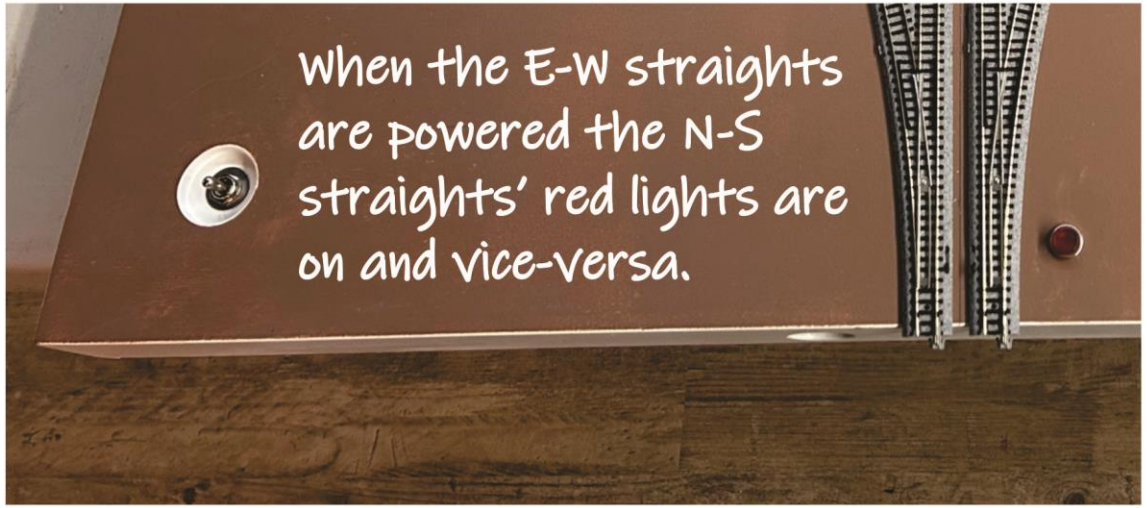
The green dots at the track joiners are power feeder drops. Insulated rail joiners are shown by the black triangles. The tracks were designated Red and Yellow for future layout wiring reference. Notice all the 3 way extension cords - ALL power leads are connected together with only one plug out for "normal" layout inclusion. (ALL Red bus!!)

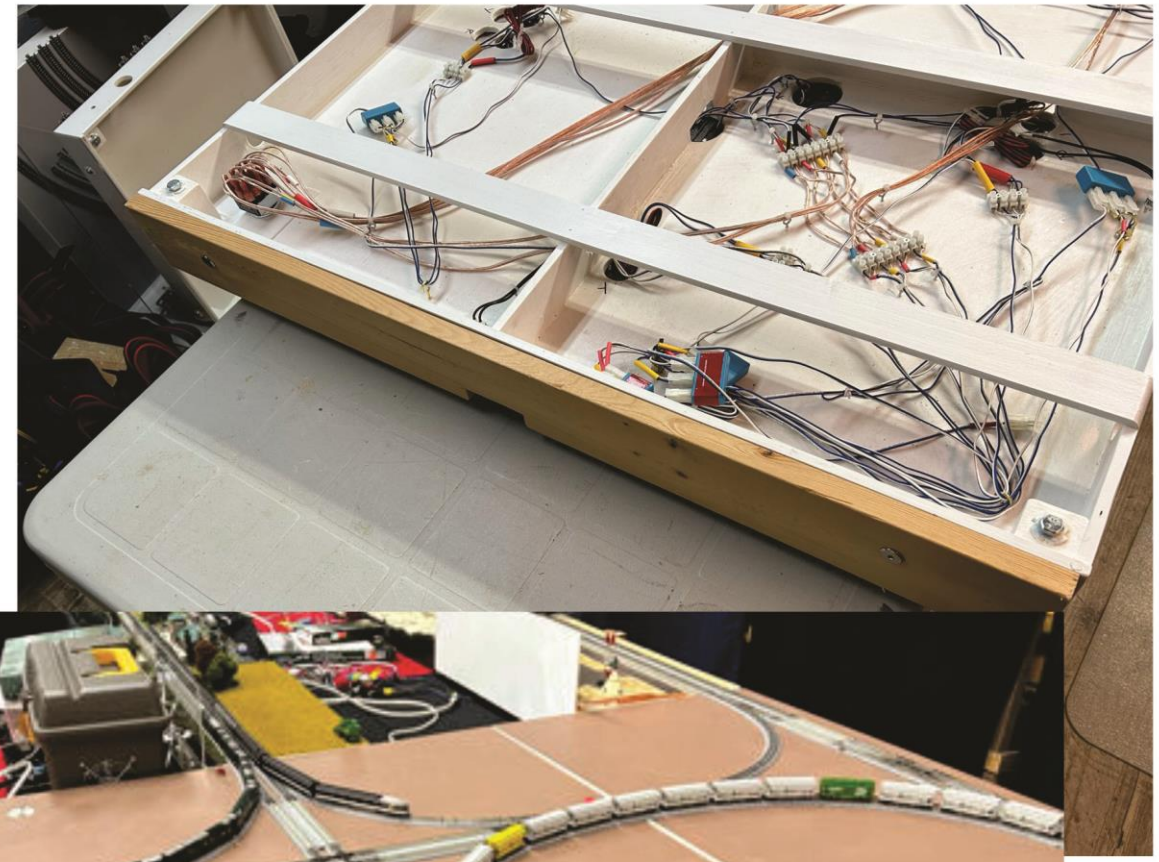


The 2 power leads at each turnout are connected together for only one plug. (I don't trust power routing turn-outs not to fail or adjacent modules to be powered!)



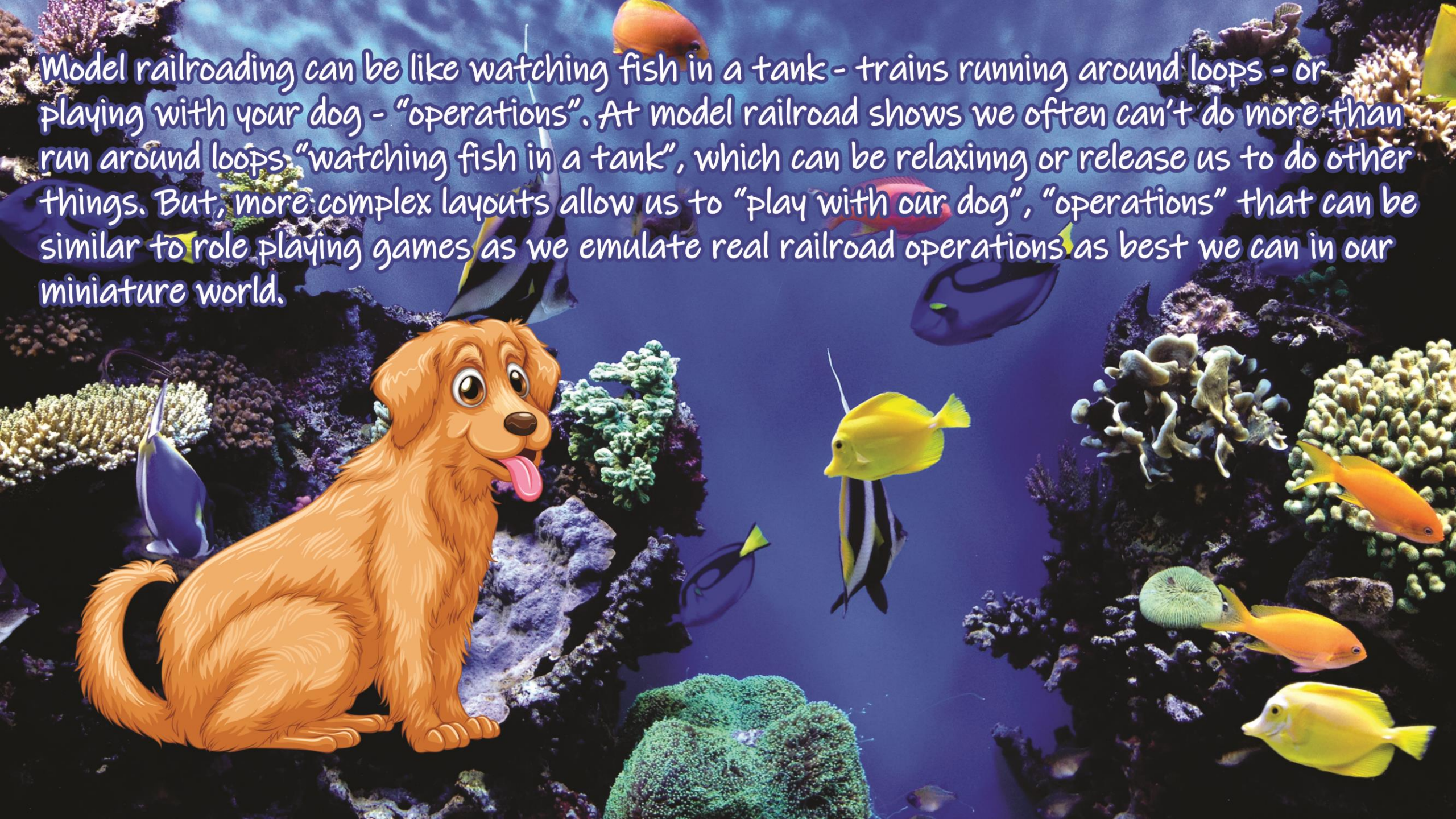
The 3 boards are skids to slide over other modules when loading for transport

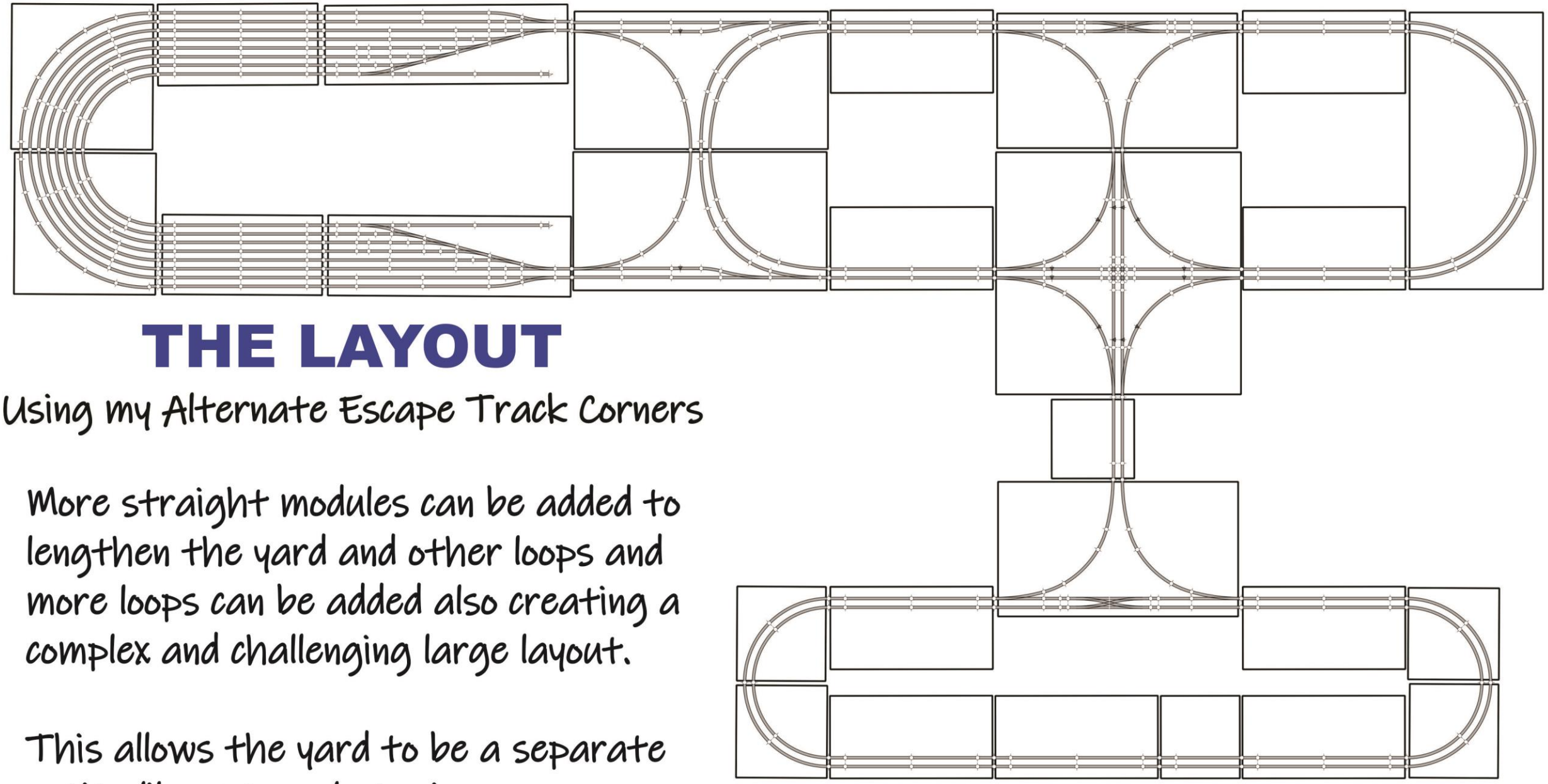




The crossing is controlled by two four pole double throw center "off" toggle switches on opposite corners for accessability. The indicating lights are powered by track power indicating which through route is "off". (These can be replaced with more prototypical signal lights at a later time if desired - but they might not be so easy to see!). The removable board is a "foot" allowing the module to stand on end without protruding track end damage.

Model railroading can be like watching fish in a tank - trains running around loops - or playing with your dog - "operations". At model railroad shows we often can't do more than run around loops "watching fish in a tank", which can be relaxinng or release us to do other things. But, more complex layouts allow us to "play with our dog", "operations" that can be similar to role playing games as we emulate real railroad operations as best we can in our miniature world.



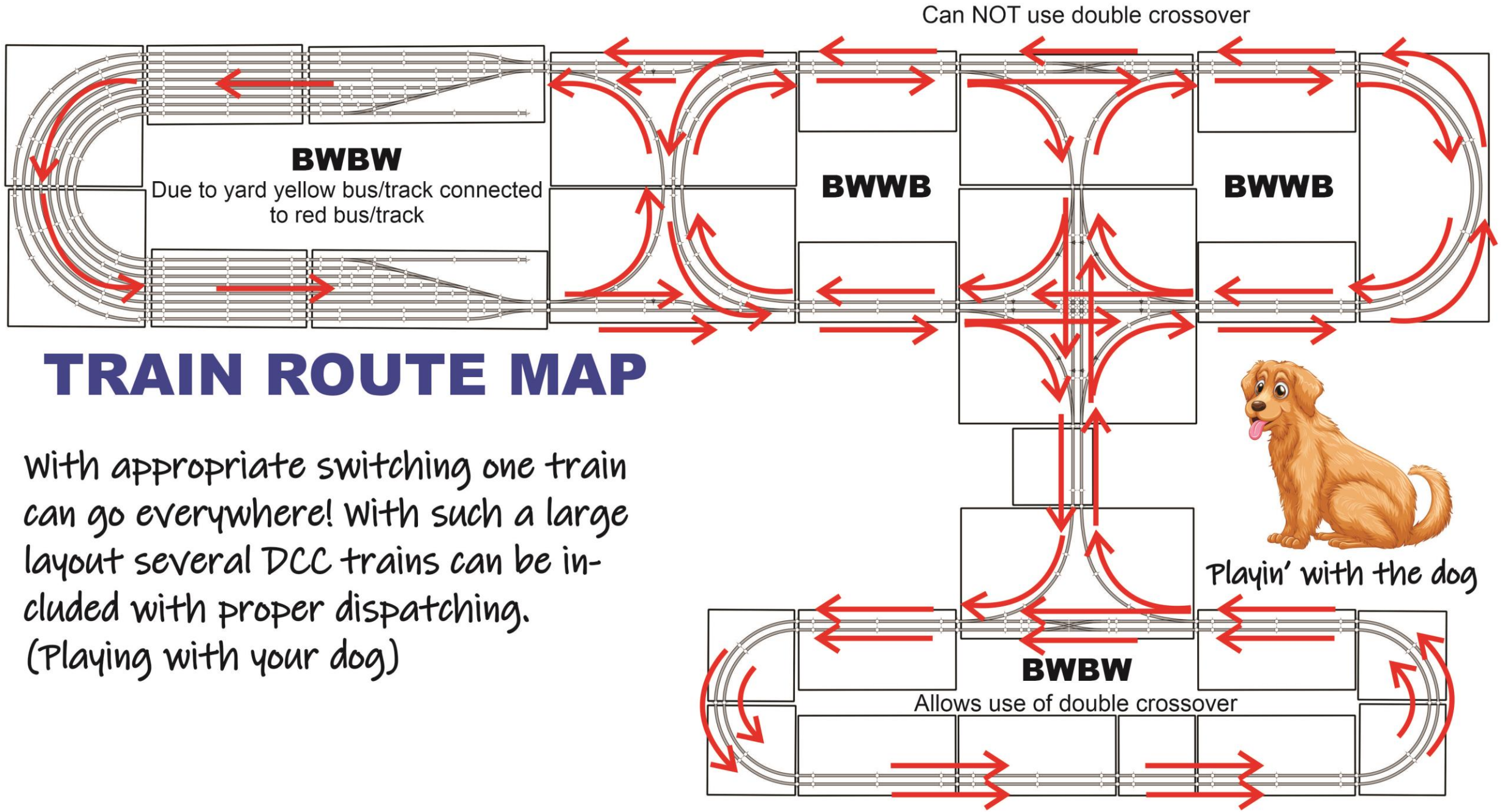


THE LAYOUT

Using my Alternate Escape Track Corners

More straight modules can be added to lengthen the yard and other loops and more loops can be added also creating a complex and challenging large layout.

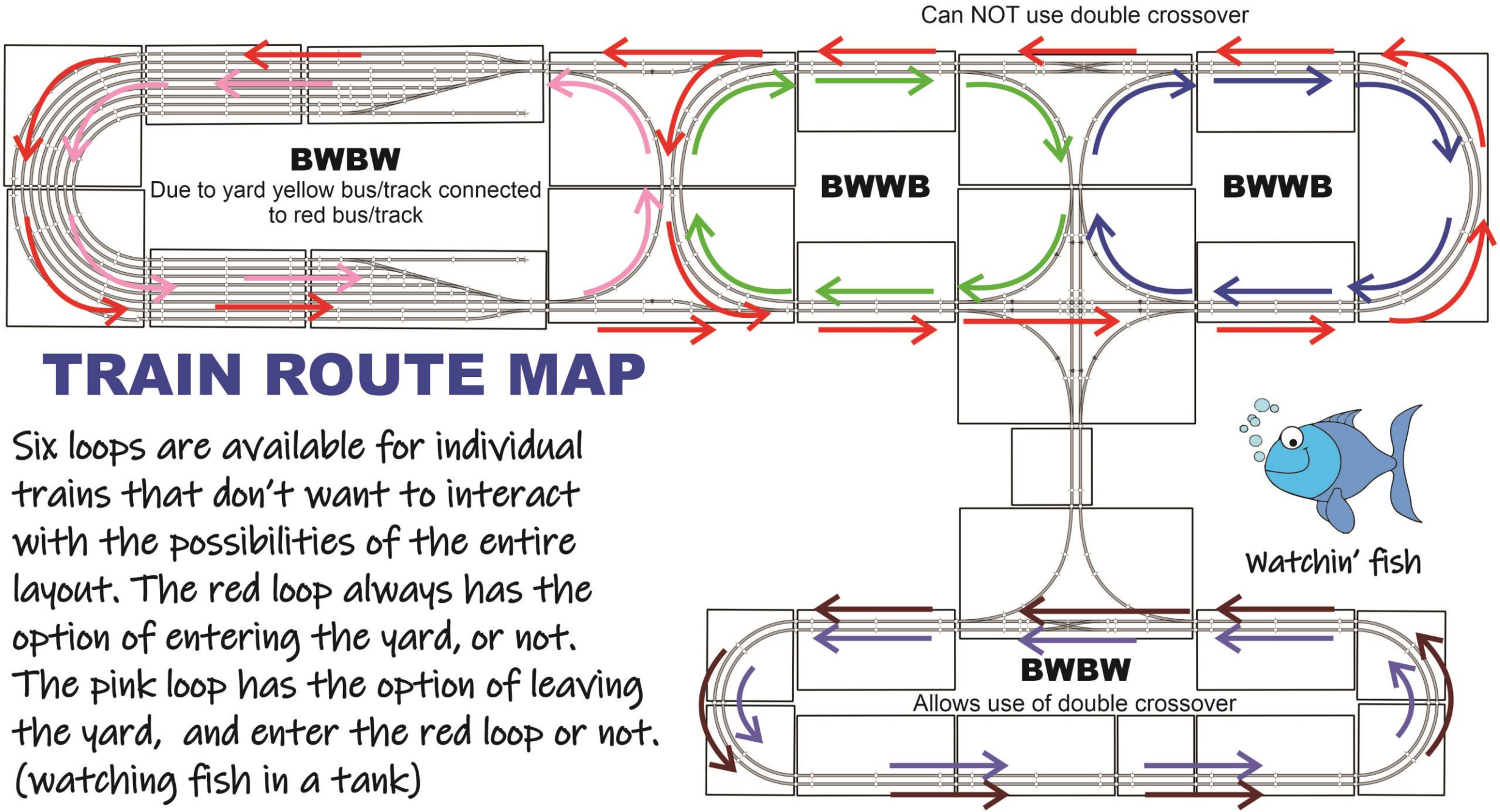
This allows the yard to be a separate entity like external staging.



TRAIN ROUTE MAP

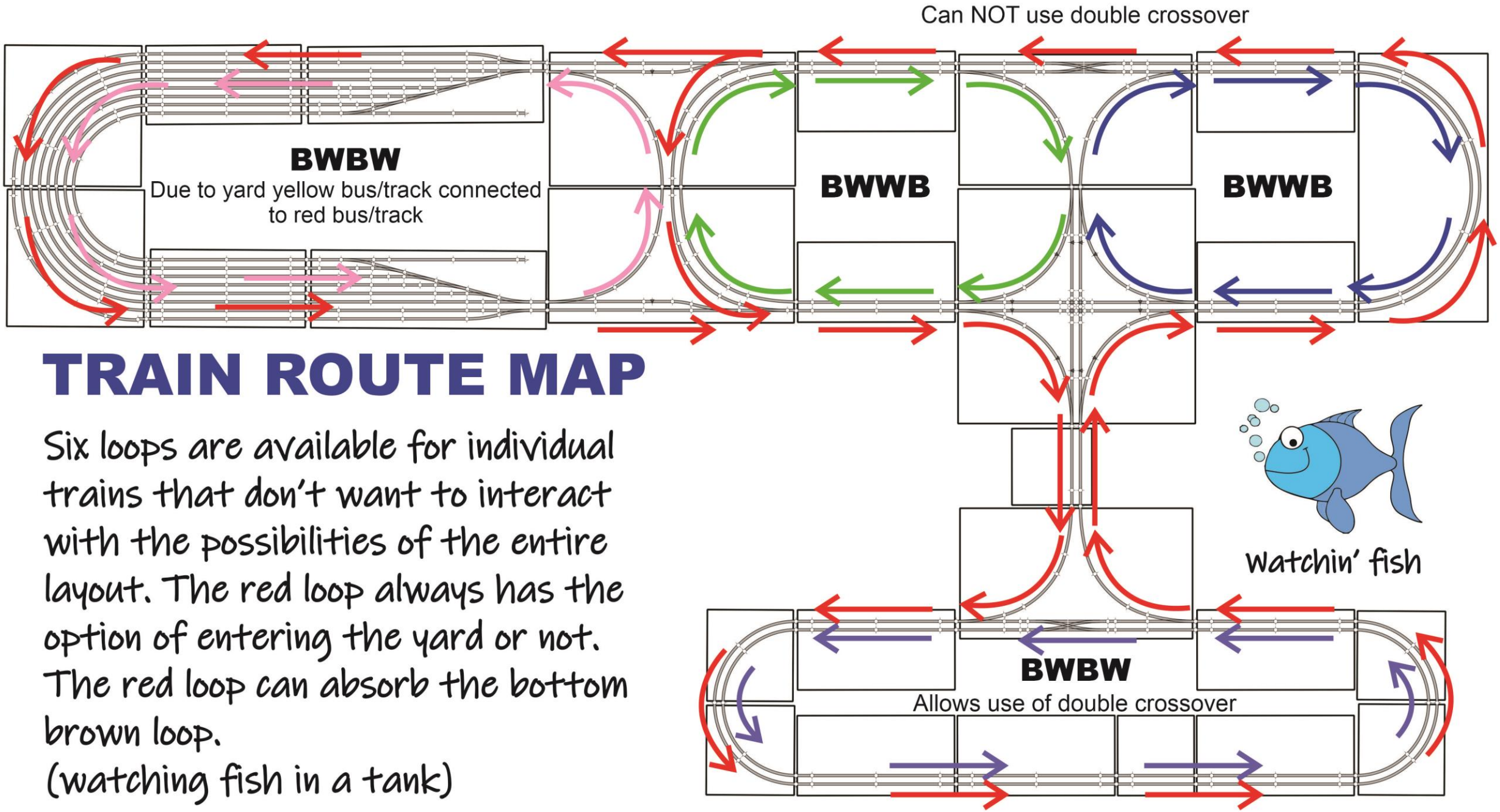
With appropriate switching one train can go everywhere! With such a large layout several DCC trains can be included with proper dispatching. (Playing with your dog)

Playin' with the dog



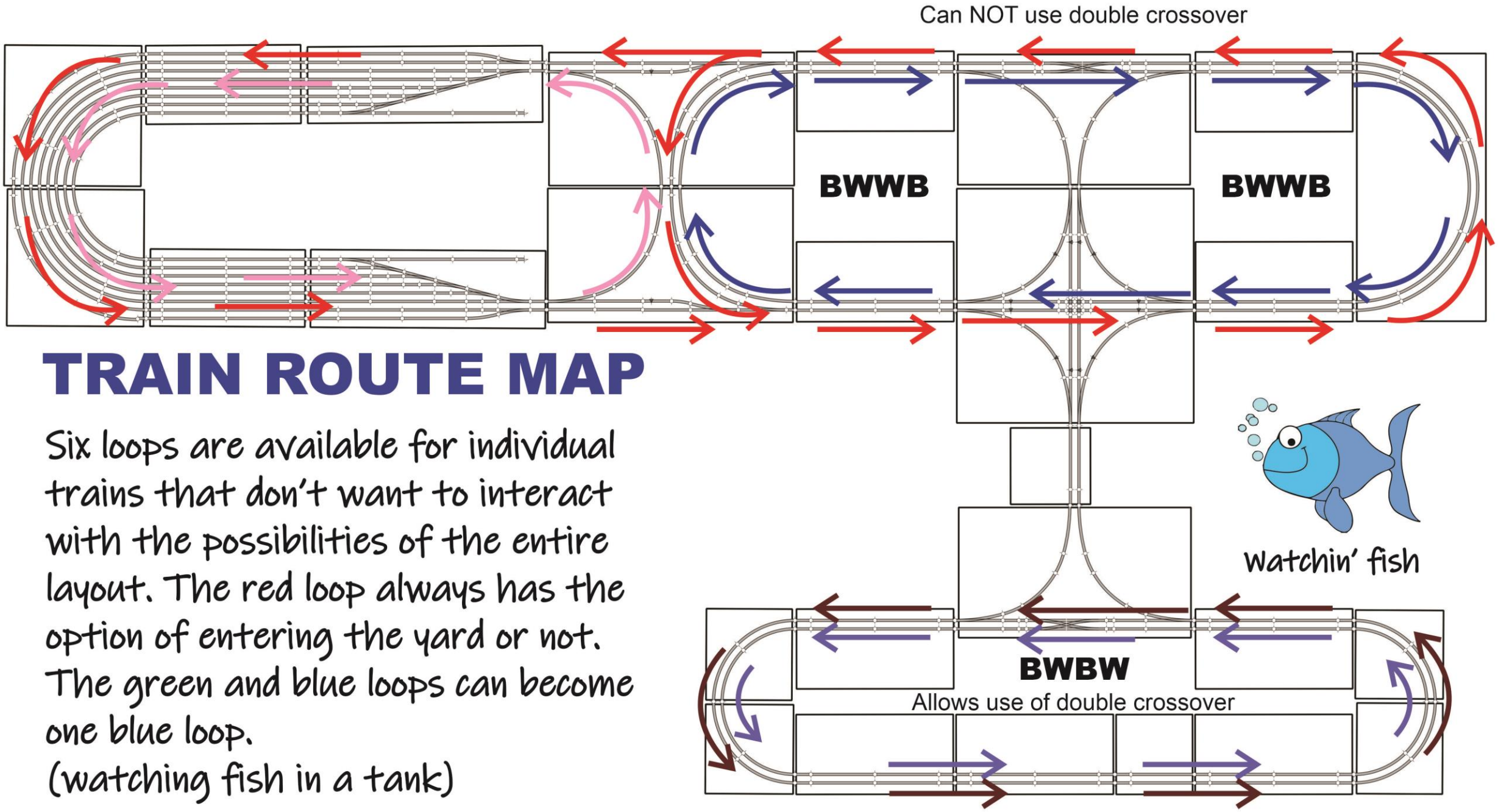
TRAIN ROUTE MAP

Six loops are available for individual trains that don't want to interact with the possibilities of the entire layout. The red loop always has the option of entering the yard, or not. The pink loop has the option of leaving the yard, and enter the red loop or not. (watching fish in a tank)



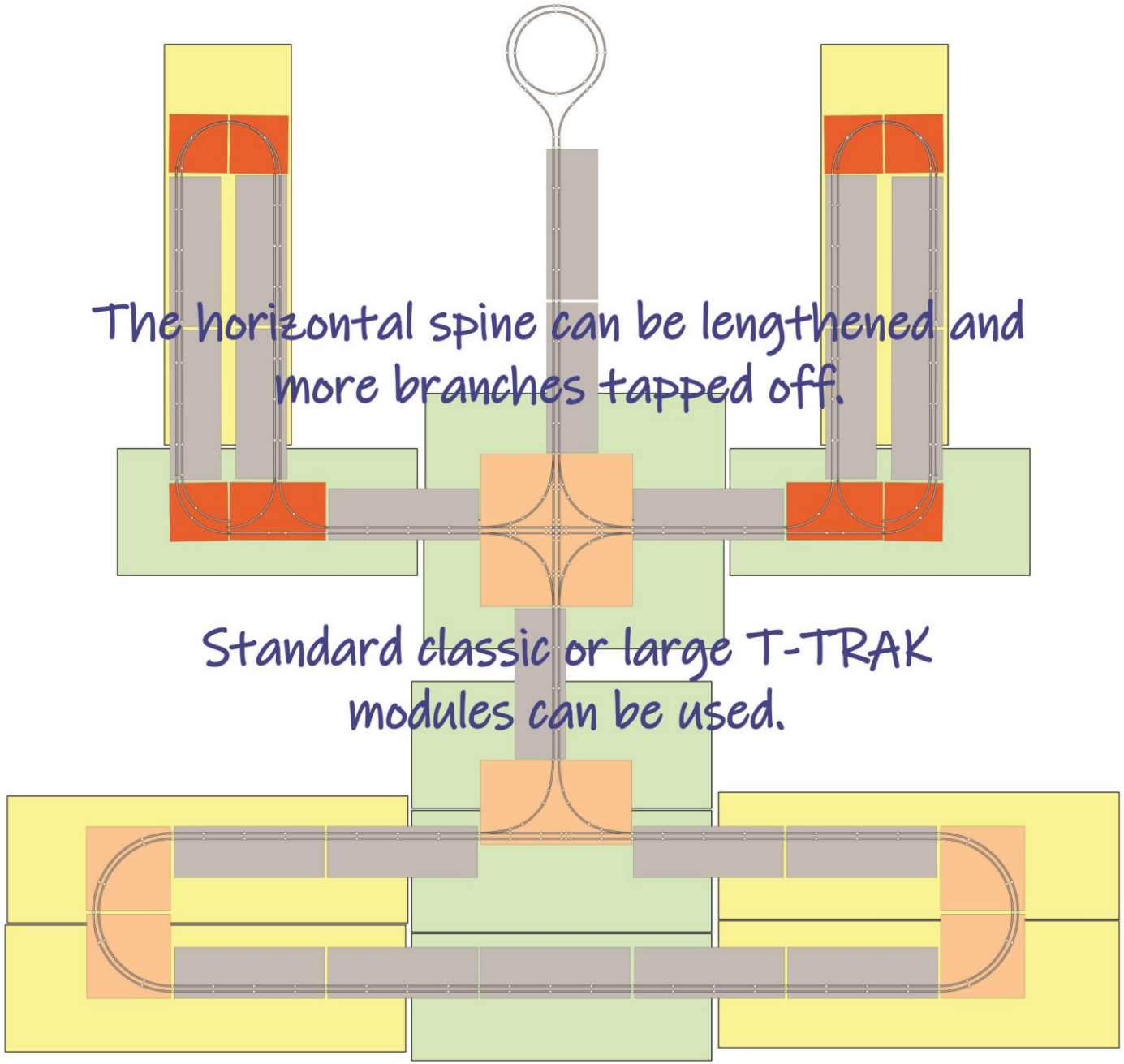
TRAIN ROUTE MAP

Six loops are available for individual trains that don't want to interact with the possibilities of the entire layout. The red loop always has the option of entering the yard or not. The red loop can absorb the bottom brown loop.
(watching fish in a tank)



TRAIN ROUTE MAP

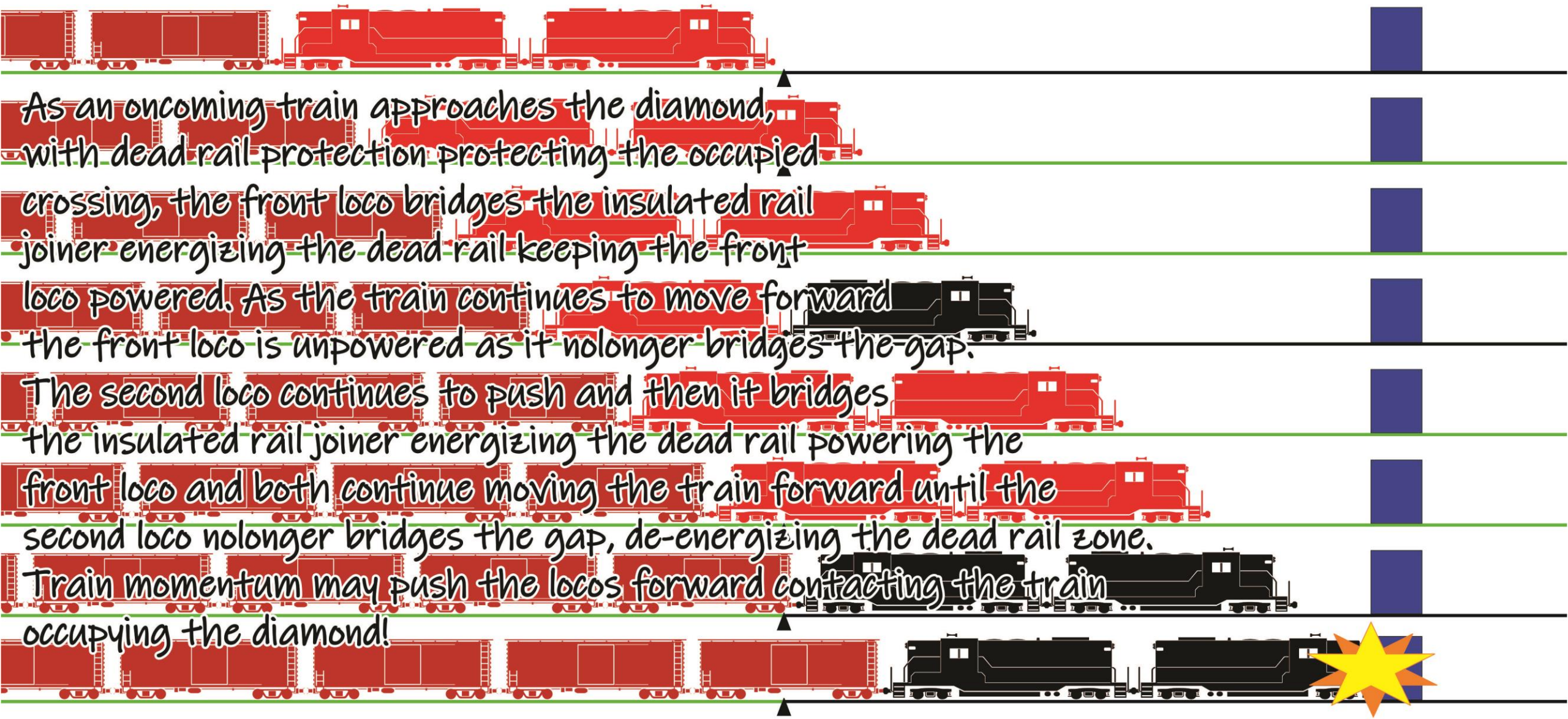
Six loops are available for individual trains that don't want to interact with the possibilities of the entire layout. The red loop always has the option of entering the yard or not. The green and blue loops can become one blue loop.
(watching fish in a tank)



This is the reason for the Diamond Junction concept: to create an interface between 4 separate layouts of 4 independent displayers to allow them to showcase their own group or club and have the option of operating trains on their home display or travel the world provided by their fellow T-TRAKers. The outer loops of all branches, the Diamond Junction and the single rows of modules of the spines that join them all are supplied by the red bus. All branch inner loops would be on their own yellow bus and use the electrical supply of choice. (DC, DCC, BWWB or supply reversed BWBW)

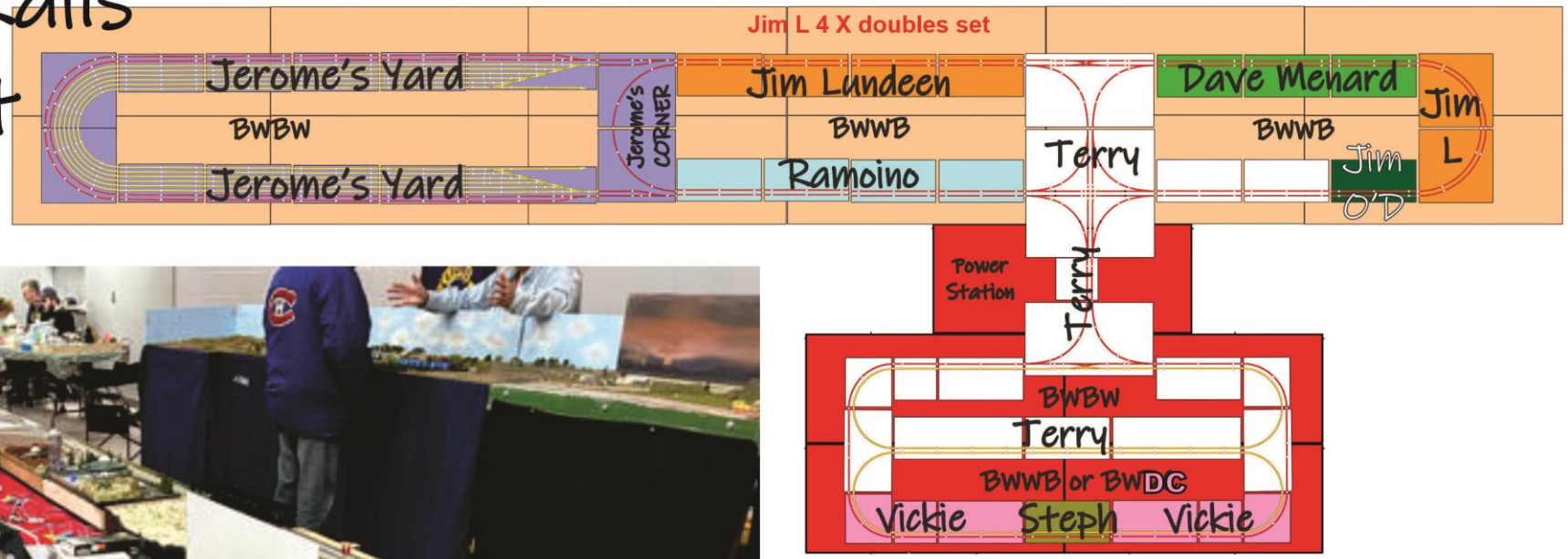
Dead Rail Protection May Not Prevent Crashes!

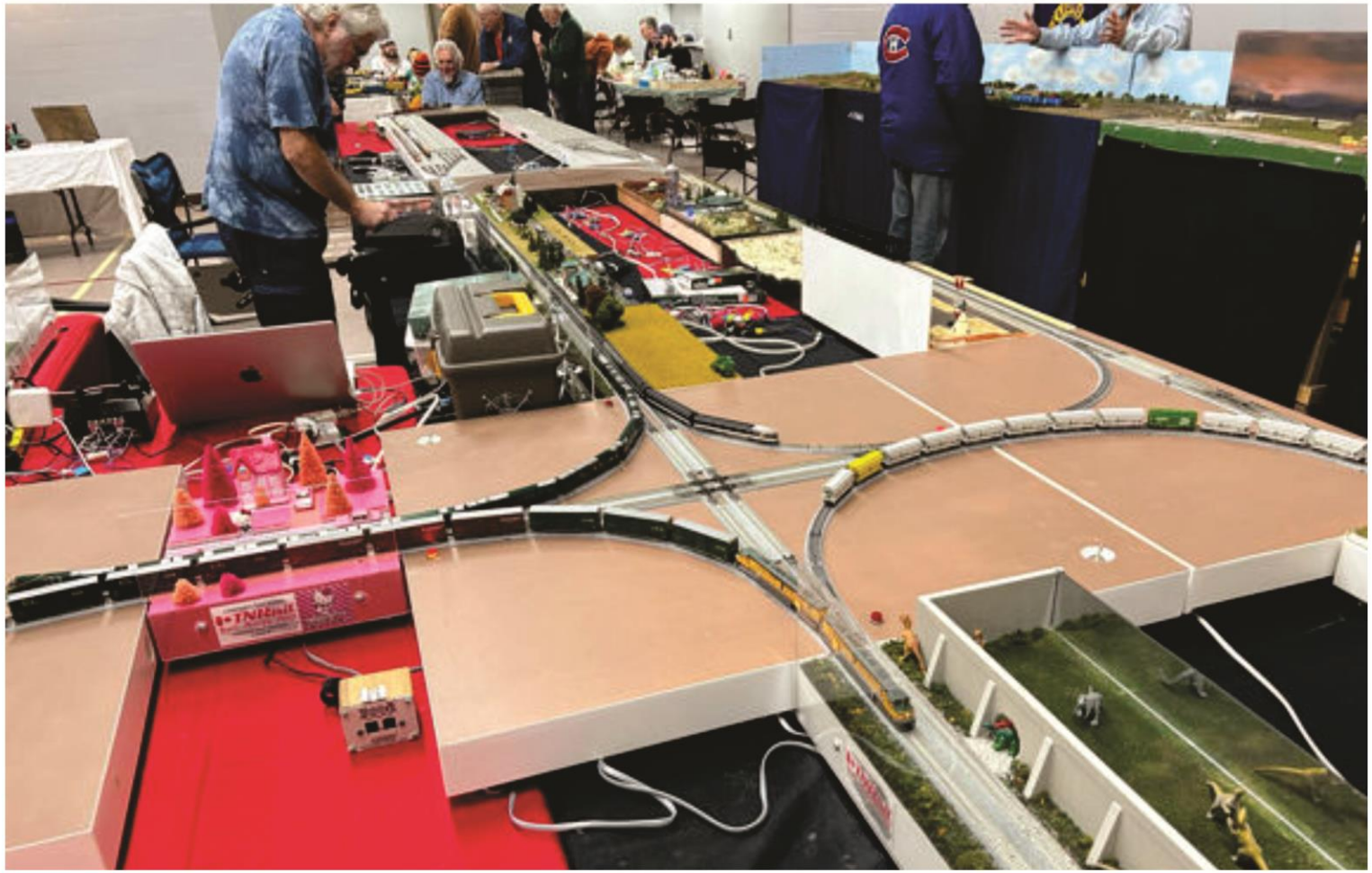
Depending on the length of the dead rail zone automatic or manual protection may not be enough!



As an oncoming train approaches the diamond, with dead rail protection protecting the occupied crossing, the front loco bridges the insulated rail joiner energizing the dead rail keeping the front loco powered. As the train continues to move forward the front loco is unpowered as it nolonger bridges the gap. The second loco continues to push and then it bridges the insulated rail joiner energizing the dead rail powering the front loco and both continue moving the train forward until the second loco nolonger bridges the gap, de-energizing the dead rail zone. Train momentum may push the locos forward contacting the train occupying the diamond!

The Thunder on Rails T-TRAK layout





The Diamond Junction prototype in action. All we did was watch the fish but I did steal a train from the right loop to the left loop leaving a friend wondering where his train went! Now that the concept and build have been proven it's time for scenery!

NRail's VP Andy Zimmerman couldn't wait for concept proofing so he built his own Diamond Junction. At over 3 X 3 feet he had plenty of scenic space shown nearing completion here.

THANKS
For Watching

A ZoomTRAK presentation by True North Rail