



1. A diesel switcher with its train of tank cars on David Outteridge's dual-gauge Nepenthes, Gestalt, & Delirium Railway.

Visit the Nepenthes, & Gestalt, Delirium Railway

A small, freelance railway in the front yard

by David Outteridge | Littleton, Colorado | Photos by Marc Horovitz unless otherwise noted



2. This train, hauled by a modified Roundhouse live-steam locomotive, is equipped with link-and-pin couplers as were the prototype cars. Kadee couplers are normally used on this line, so this coal train is also equipped with them at the ends—the link-and-pins are used only within the train. An interesting assortment of hen-and-chicks keeps ballast from washing down the retaining wall.



DAVID OUTERIDGE

3. The “green train,” headed up by an Aster “Schools” class 4-4-0, is a model of a train from the author’s childhood. Hosta, variegated iris, impatiens, and coral bells are visible in the background. Variegated sedum edges the walk in front.

The NG&DR is a freelance garden railway. The intention is that the garden and the railway enhance each other, with neither being predominant. Also, since the railway is freelance, there is no rigidity caused by the need to adhere to scale, time period, or any other modeling dictum. The railway things must only look good in the garden. I like the “free” in freelance because I am able to run trains of different scales and gauges, or those that are made up of carnival floats (for kids and other non-railway people), or models of past steam-age legends.

The name

The railway’s name came about as follows: **Nepenthes** first appeared in Homer’s *Odyssey*, a Greek epic poem, which you may think has little connection

with railways. However, the description of nepenthes that I like is that it is “a drug that dispels the cares of the world.” If my railway becomes the nepenthes for anyone, I shall be well pleased.

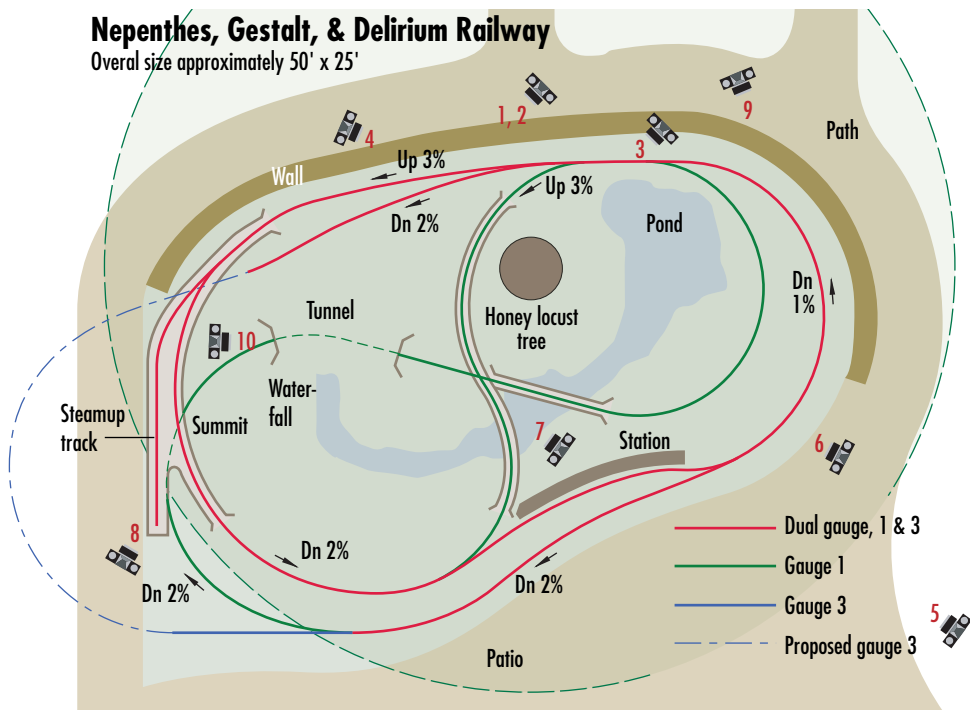
Gestalt is “a whole that is greater than the sum of the parts.” It comes from the work *Über Gestaltqualitäten* by Christian von Ehrenfels. Briefly, my gestalt is the

spirit-lifting feeling that can come from a miniature train threading its way through the flowers and garden.

Delirium is admittedly heavy-duty: “Temporary and reversible severe confusion and rapid changes in brain function.” However, if one segues into “delirious,” the concept becomes rather inviting: thrilled, excited, ecstatic. If I become

Nepenthes, Gestalt, & Delirium Railway

Overall size approximately 50' x 25'



Railway at a glance

Name: Nepenthes, Gestalt, & Delirium Railway

Size of railroad: 40' x 25'

Scale: Individual trains to various scales

Gauges: 45mm & 63.5mm

Era: Today

Theme: The garden, trains, and the gestalt that results

Age: 9 years

Motive power: On-board battery, diesel outline; live steam; a little clockwork

Length of mainline: 96'

Maximum gradient: 4%

Type of track: Llagas Creek code 215, gauge-1 flex track and handlaid, dual-gauge 1 and 3

Minimum radius: 7' for the flex-track; 9' for the dual-gauge track

Structures: Station platform and a small, trackside deck, both redwood

Control systems: 2.4GHz radio control for both electric and steam engines

thrilled, excited, or ecstatic, simply by a miniature train wandering through a garden, to the extent that I forget about real life for a while, then it truly is a drug that dispels the cares of the world. Given all this, you will understand my railway's slogan: The Mental Health Road.

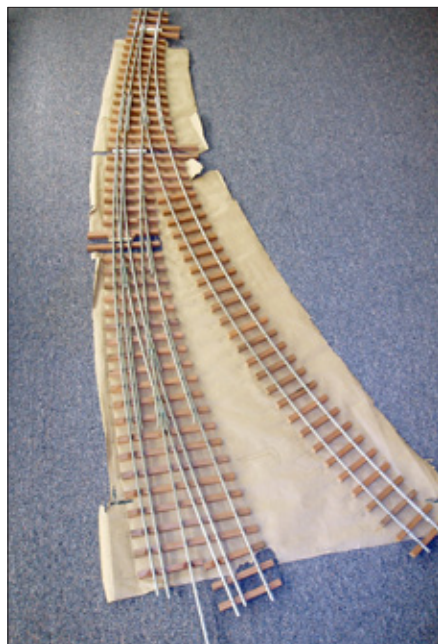
How it started

In the autumn of 2003, the loss of a large tree in our front yard resulted in an

extensive redesign of the garden. This was begun in 2004 and continued in the following years, with paths, flower beds, a retaining wall, and many cubic yards of new dirt. The railway was an afterthought that came along in the summer of 2004, together with a stream and tiny pond.

For the first five years or so after the new installation, the dirt settled substantially, so the railway track settled a lot, even though the dirt was initially tamped.

This settling caused repeated work. The settling has more or less ceased by now, eight years later, but a cautionary note for the wise remains.



4a. Handlaid switches, just after completion. The dual gauge, curved switch in the foreground incorporates gauge 1-track and gauge-3 track.



4b. The same switch installed in the railway. Wooden ties and small rail help the track to blend well with its surroundings.

Trackplan

The semi-formal garden layout, with its walls, patio, and sloping terrain, dictated a lot of the track design, as there was a strong desire to enhance, not fight with, the garden. I wanted to run live steam, gauge 3 (63.5mm), as well as gauge 1, fun-operation, and a lot of other things—some eventually realized, some not.

The gauge-1 trackplan is a folded double-reverse loop with a cut-off (the track alongside the station platform) from one loop to the other loop, with an additional dual-gauge siding. The gauge-3 trackplan has not been completely implemented but connects the dual-gauge siding and another gauge-3 siding, which then joins one of the gauge-1 dogbone loops. The gauge-3 line does not follow the dogbone because the track through the tunnel has too-tight curves.

There is a steam-up track at the high point of the line, connected to the



5. An overview of the entire railway, taken in the early summer. The train just visible on the right is a work train that carries tools. As the train is run around the track, any plants that interfere with the white and blue, loading-gauge-sized “boxcar” are trimmed with scissors. The boxcar is the dump for the horticultural debris.

continuous oval via a manually operated switch. The cut-off provides a continuous oval used by both gauges. This oval track is the default when all the switches are in their un-activated positions.

Track

The rail used is Llagas Creek nickel-silver. The solely gauge-1 track is Llagas Creek flex track with code-215 rail. The rest (gauge 3 and dual G1/G3) is homemade, using code-250 rail. The ties (sleepers) all came from the wood from a rebuilt house deck. Armed with a table saw, you can get a lot of ties from an old redwood 2x4.

All switches, with the exception of that from the steam-up bay, are pneumatically operated. A line from an air compressor in the garage runs into the garden to the control box, which features a schematic track diagram. This box is on a 50'-long umbilicus, which allows plenty of operator freedom to wander around the garden. The umbilicus also contains the lines that feed air to the point-actuators at the switches. I have been happy with pneumatic control; it works in all weather here in Colorado.

Power and control

There is no track power on the railway. Locomotives must use their own motivation—either on-board batteries or boilers. A dozen rechargeable AA batteries is adequate for a few hours of running. Steam engines’ run times vary.

Most of the railway’s locomotives are controlled by one radio controller, a re-packaged Spektrum 2.4GHz racing-car transmitter, with a 300° potentiometer

replacing the standard 85°, short-travel, trigger throttle unit. The system has three channels. My diesel-outline engines use all three to control speed, direction, and horn. My steam engines use one for the throttle if they have slip-eccentric valve gear: otherwise, two.

Operation

There are three ways to operate the railway. The simple mode is to run a train, in either



This radio-control box, designed like a locomotive’s backhead, was built by the author from a Spektrum 2.4GHz transmitter. It is used to operate all trains on the line.



The pneumatic-switch control box contains a schematic diagram of the railway. A 50' umbilicus exiting the right side of the box contains the air lines and allows the operator to wander with the controls.



6. A gauge 3, 1:22.5 scale, British goods train. The green carpet behind the train, with the tiny white flowers, is Irish moss.



7. Emerging from the tunnel next to the waterfall (at far left), the diesel switcher passes a bright-green carpet of Scotch moss.

direction, around the continuous oval. This mode is the default setting for the switches when the air supply is not connected.

However, I like to see trains running down different tracks, and visitors, particularly kids, like to see trains switched onto the track going through the tunnel. I

admit to getting a bit of a charge from a visitor suddenly becoming animated and saying, "Oh, it's going the other way!" (It's that gestalt again.)

A second mode of operation is to route a train simply by switching points according to one's fancy. The problem with that

is that it is surprisingly easy to derail a train with badly set switches. Almost always, when this happens, it is because someone spoke to the operator, distracting him from his job.

The third operation mode is a variation of the second: disciplined instead of casual point switching. It sounds terrible but it is not, in practice. An effective way of using a double reverse loop is to switch the points of a junction that is the entry to one of the loops once the train has passed and is clear of the points. A rigorously applied single rule that the points are always switched once the train is through works nicely, leading to a train using all the available loop trackage in both directions without much thought, and avoiding derailments caused by the casual approach.

A benefit of using the reverse-loop trackage exclusively is that a second train can be simultaneously parked on the cut-off track: i.e., in the station. The points on the switches protecting access to the station track are never moved in the third operation mode.

Engines & rolling stock

I have created a few trains, each with a theme. Most trains are made to a specific scale. For the most part, I do not mix



8. The dual-gauge steamup siding. A rerailer built into the end of track facilitates the placement of locomotives and rolling stock on the line.

Plants on the Nepenthes, Gestalt, & Delirium

Littleton, suburb of Denver, Colorado
USDA Hardiness Zone 5

I think of Colorado as a lush desert. It is hard to grow things in the West—it is hot, cold, and the growing season is short. The winter snow from the mountains is our year-round drinking water and we waste it on garden irrigation

GROUNDCOVERS

Ice plant
Delosperma sp.
Sweet woodruff
Galium odoratum
Hosta, plantain lily
Hosta sp.
Japanese spurge
Pachysandra terminalis
Moss rose
Portulaca grandiflora
Irish moss
Sagina subulata
Scotch moss
Sagina subulata 'Aurea'
Variegated stonecrop
Sedum spurium
'Variegatum'

Hen-and-chicks
Sempervivum sp.
Woolly thyme
Thymus pseudolanuginosus
Mother of thyme
Thymus serpyllum
Pink Chintz thyme
Thymus serpyllum
'Pink Chintz'
Turkish Veronica
Veronica livanensis
Periwinkle
Vinca minor

SELF-SEEDING BIENNIALS

Columbine (Colorado state flower)
Aquilegia caerulea
Forget-me-not
Myosotis sylvatica

Rose campion
Lychnis coronaria

PERENNIALS

Artemesia
Artemesia sp.
Chrysanthemum
Chrysanthemum sp.
Crocus
Crocus sp.
Daphne
Daphne sp.
Coral bells
Heuchera sp.
Iris
Iris sp.
Daffodil
Narcissus sp.
Stonecrop
Sedum 'Autumn Joy'

Yellow-eyed grass
Sisyrinchium californicum
Blue-eyed grass
Sisyrinchium montanum
Tulip
Tulipa sp.

ANNUALS

Snapdragon
Antirrhinum sp.
Impatiens
Impatiens sp.
Lobelia
Lobelia sp.
Petunia
Petunia sp.



9. The Golden Arrow posing on the NG&DR. Sadly, the railway's gradients and tight curves prevent this train from running here.



About the author

David Outteridge is a retired mechanical/aerospace/software engineer. His partner, Nancy, is the gardener. It was Nancy who made the original suggestion in 2004 that the railway be built.

David has had an interest in railways from childhood. Steam engines are his greatest interest. During his teenage years he spent many hours driving 3½"-, 5"-, and, occasionally, 9½"-gauge engines in Great Britain.

More recently, the creation and maintenance of the NG&DR roadbed and track has consumed a lot of time, as have the associated garden tasks.

rolling stock of different scales. One exception is a freelance Carnival Train—a train of floats—over which there is no rule concerning content or proportion.

A USA Trains NW2, (purchased by the NG&DR from the Atlantic Coast Line, hence the color scheme), hauls some USA Trains tank cars with a paint scheme loosely modeled on Coors beer tankers that I drive by when I visit the Colorado Railroad Museum. The locomotive has been converted from track to battery power (12 AA re-chargeables), controlled by the 2.4GHz radio already mentioned. The engine has a MyLocoSound diesel card and a Speed-Max Electronic Speed Control.

The blue coal train is a favorite and, of the live steamers on the NG&DR, its engine has the running characteristics best



10. Competing for attention with the beautiful rocks over the portal, several groundcovers burst into bloom: (clockwise from lower left near the red hen-and-chicks) yellow ice plant, white ice plant, and creeping veronica beginning to show a few blue flowers on the right.

suiting to the railway. The train's scale is considered 1:20.3, although the engine is freelance and scaleless as purchased.

The engine is a Roundhouse, butane-fired "Lady Anne," with cosmetic alterations reflecting an Englishman's idea of a nineteenth-century Colorado narrow-gauge engine. The engine is fitted with radio control for regulator and reverser. The leading boxcar and the coal gondolas were made from Hartford kits. The caboose I scratchbuilt, based on a design by North-East Model Products.

The green train models trains that I grew up with in England. The locomotive is a Southern Railway "Schools" class, while the coaches are non-corridor suburban equipment used for local and commuter service. The train is comprised of an Aster, alcohol-fired locomotive hauling steel coaches made by Pete Comley. The locomotive is fitted with a radio-controlled regulator. Valve gear is a version of slip-eccentric. Driving the "Schools," particularly with a three-coach train, requires 100%

concentration. I like this 1:32-scale train and think it looks attractive on the railway.

I have just one gauge-3 train. For the most part, I have been too busy with gauge 1 and the NG&DR to spend time on gauge 3. The locomotive is a live-steam model of a Great Western Railway 0-6-0 tank engine. The train is a typical British goods (freight) train from years ago when the standard configuration for goods wagons was four wheels.

Another model I have of a train that was part of my childhood is the "Golden Arrow," which, between 1920 and 1960, was the way to travel between Paris and London. I saw this train hundreds of times. Unfortunately, I have been unable to get the model to run successfully on the NG&DR because it will not negotiate one of the switches, which has a tight radius in conjunction with a gradient change.

Reflection

The railway does not have a future. The keeper of the garden in which it resides

has decided that it is time to retire from gardening because it is becoming too much work. Such retirement will lead to our moving house and lifting the railway.

With respect to the railway and its creator, this is not a bad state of affairs. The railway has run its course and has matured to the point where its shortcomings are becoming a nuisance. The railway and the process of creating it have, of course, been instructive. Should there be a second garden railway in the life of its creator, the lessons learned from the NG&DR will live on. 🚂

Visit the railway's website

To learn more about the Nepenthes, Gestalt, & Delirium, visit the railway's website at www.ngdr.net.

There you can also learn about the author's railway history, a clockwork locomotive under construction, radio controlling a live-steam locomotive, and rebuilding a gauge-3 locomotive.