



Pushbutton command

With many of today's advanced control systems, it seems that some handheld throttles have enough buttons on them to fly the space shuttle. This isn't necessarily a bad thing but, for those who crave simplicity, it can be a little overwhelming. It's refreshing to see a manufacturer take a step in the other direction, simplifying the user interface for controlling the trains and doing so without a lot of sacrifice in terms of functionality.

G-Scale Graphics' new Railboss 4 throttle and receiver is just that kind of product. G-Scale Graphics has been doing R/C electronics for a while now, and this board is the latest in their evolving product line. The throttle fits easily

into the palm of your hand. It has six buttons to control the locomotive and its available functions. The functions of these buttons are labeled on a sticker at the bottom of the transmitter. I'd probably take a paint marker and paint arrows or other symbols on the buttons themselves, just for an easier-to-see reference, especially for the little engineers. The transmitter is powered by button-type batteries but only draws power when the buttons are pressed, so the batteries should last for a reasonable amount of time.

The receiver measures 3¼" x 2" x 1", and has inputs for battery power; outputs for the motor; a row of outputs for lights and sound functions; and reed-switch inputs for automation, bell, and whistle triggers (more on that later). The motor driver will handle 5 amps, easily sufficient for a large-scale locomotive. The system will operate on from 7 to 25 volts.

I wasn't sure what to expect with this. I've used simple pushbutton systems in years past and found them to be basic in their operation (hence my gravitation toward newer, more feature-filled systems). I was pleasantly surprised to find that many of the features I like with the more advanced control systems are available with this throttle as well. You can set start voltage and top speed, and adjust the level of momentum your locomotive has. Because you can link multiple receivers to

the same transmitter, you can run as many locomotives together in a consist as you like. (Unlike more complex systems, however, if you want to run multiple locomotives independently, you must use a different transmitter for each locomotive. But, because of the 2.4 GHz technology, you can run many transmitters at the same time without interference.) So, after reading what it could do, I was eager to give the unit a try.

I installed the system in the tender of my Bachmann K-27, for no other reason than it was easy to remove the existing control system and replace it with this one. I've got an old Sierra sound board installed in that locomotive (out of production), which also allowed me to test how the system controls sounds.

Installation was easy; the online instructions illustrate which wires need to go where. One neat thing is that there are separate taps for using LEDs for the headlights that do not require the use of dropping resistors in series. If there are already resistors installed with your LEDs or you're using incandescent bulbs, you can connect those to another tap. All connections are made with screw terminals so it's easy to hook everything up.

The receiver must be linked to the transmitter, which is a simple matter of turning on the receiver, then pushing a button on it and a button on the transmitter. The link was made almost immediately. From that point, I was up and running.

Right off the bat, I was impressed with the control. Pushing the "raise" button slowly increased the motor speed. Quick pushes of the button raised it just a bit, while holding it down raised it more quickly. I'm personally a fan of a little momentum dialed in to smooth things out, so I turned that on as well. Control was very responsive with regard to what I

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Radio-control system for large-scale trains

G-Scale Graphics
4118 Clayton Ct.

Fort Collins CO 80525

Prices: Railboss 4 receiver, \$89;
six-button transmitter, \$89

Website: www.gscalesgraphics.net

Railboss 4 radio-control system; 2.4 GHz; controls speed, direction, plus four sound and/or light functions, with automation capability

Pros and cons

Pros: Small transmitter size; easy installation; simple operation; low-battery warning

Cons: Whistle trigger does not allow for "real time" playing of whistle; directional lighting the only means of visually telling which direction you're set to travel

PRODUCT REVIEWS CONTINUED

wanted the locomotive to do. I could get the engine to crawl fairly slowly to couple up to the train, and stop and start easily and smoothly.

The one thing I did miss was an indicator on the throttle that showed what direction the engine is going. If you've got directional headlights hooked up on your locomotive, you can use them as indicators, but I like my forward headlight on all the time so, unless I was looking at the back of the locomotive when switching, I was never certain it was in reverse. The reason this is an issue is that the locomotive will stop moving when the throttle voltage gets low enough but not necessarily be at zero volts. "Stop" and "change direction" are the same button; pressing it before the voltage gets to zero stops the motor, while pressing it when it is at zero changes the direction. I found myself pressing it, thinking the voltage was at zero when it really wasn't, so my train didn't change direction as I thought it would. I'd have to stop again, and change direction. One notable thing is that pressing the "stop" button while the train is moving will bring the motor to a stop fairly quickly, but not instantly, which will prevent damage to gears by sudden stops.

Range was very good. I could control

the locomotive from any spot in my backyard and even around the side of the house, which is probably about 100' from where the train was at its furthest. The instructions claim ranges of twice that but that's about as far away as I can get and still see and hear my train.

The buttons to trigger the sounds work well, with one issue; the whistle does not allow for "real time" blowing of the whistle. All the sound triggers are quick, momentary pulses. This is fine for sound systems programmed to blow a particular whistle pattern (grade crossing, etc.) when the whistle trigger is pressed, but you cannot hold the whistle button down and have it blow for the duration you're holding it down. (You can—at least with the Sierra board in my K-27—keep continually pressing the whistle button to make it blow longer. It just gets tiring.) G-Scale Graphics tells me they're hoping to fix that in a future software upgrade.

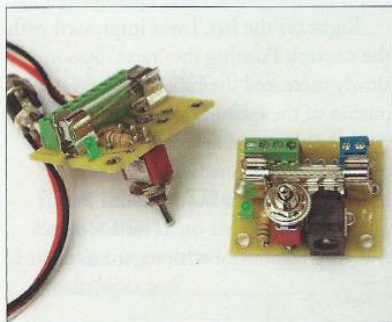
You can also use track magnets and reed switches to trigger these sounds. Another feature of the Railboss allows you to tell the receiver to "skip" magnets, so the whistle doesn't blow every time it crosses over the magnet.

Track magnets and reed switches can also be used to program in some

automation. With this, you can do automatic station stops, back-and-forth operations, even run multiple trains on the same loop of track. (The receivers "talk" to one another through some technical wizardry.) I did not mount reed switches on the test locomotive to test these features on my railroad, though I did simulate some of their operations on the workbench. (Also, with only one receiver provided, multiple-train operation could not be tested.) Programming these features is done via the transmitter and programming buttons, as well as switches on the receiver itself. All of this is spelled out in the instruction manual, which I found to be readily understandable, though you'll want to pay particular attention to which button combinations on the transmitter you have to press to get to the various features you're trying to program.

Overall, I was pleasantly surprised by this system. It was simple to install, simple to operate, and it did much more than I expected it to do, given the simplicity of the interface. The lack of a real-time "playable" whistle is really the only operational weakness I found, and that's only an issue if you're controlling a sound system that allows you to play the whistle in real time. —Kevin Strong

Just charge it!



Perhaps one of my least favorite aspects of doing a battery-power installation is figuring out where to put the power switch and charging jack to run everything. It's not that this is particularly difficult, just tedious. You've got the power switch, the charging jack, a

fuse, and some kind of terminal from which all the power is fed to the various components.

G-Scale Graphics' Battery Conversion Module makes this task easier. Everything you need to get power where it needs to go is included on this small, easy-to-install board. There's a power switch, charging jack, screw terminals for the battery input, and two sets of power outputs for whatever you need to power, be it a throttle or sound system. There's also an LED on the board to let you know the power is on.

The board comes in two varieties; a floor-mounted version that's ideal for on-board installations in locomotive tenders or diesel bodies (wherever it is convenient), and what they call a "door mounted" version, which is designed to be mounted inside the door of a boxcar or similar enclosure where you can easily

access it. This second version is ideal for power cars.

Installation of these units is straightforward. On the "door mount" version, you simply attach the board to the floor of

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Battery conversion module

G-Scale Graphics

4118 Clayton Ct.

Fort Collins CO 80525

Prices: Floor mount, \$39;

door mount, \$29

Website: www.gscalesgraphics.net

Power-and-charging-interface circuit for battery R/C installations; two versions—one for mounting in a power car, one for mounting to the floor of a locomotive; power switch, charging jack, and 5-amp fuse included



the car, inside the door opening of the boxcar, and hook the appropriate wires to the appropriate screw terminals to get power from the battery to the control electronics. G-Scale Graphics recommends screws for mounting the board, and provides small spacers to raise the board a fraction of an inch off the floor of the car. You could probably get away with using double-sided tape as well. The “floor mount” version is simply attached via the power switch. The switch is soldered to the PC board so, once the switch is mounted to the floor of the locomotive (tender, or wherever), the PC board is held in place. The charging jack must be mounted elsewhere, but comes with around 10" of wire attached, so you should be able to find a place nearby without too much issue.

The PC board itself is around 1½" square, so it doesn't take up a lot of space—not much more than the space taken up by just the fuse holders I currently use, so it's nice to have everything in such a neat package. It might not be able to fit in really tight quarters but, for many of the electronics installations I've done over the years, there's usually ample room for a board like this. For those who haven't learned to solder, having the screw terminals for all your power connections makes installations a lot less daunting.

—Kevin Strong

Pros and cons

Pros: Simple installation provides power, charging, and circuit protection, all in one small board

Cons: None

New book for railway gardeners

Book review

Planting your Garden Railway

by Becky Pinniger

Atlantic Publishers

83 Parknash Avenue

Southend-on-Sea, Essex SS1 3JA

United Kingdom

8¾" x 11", 128 pages, hardbound

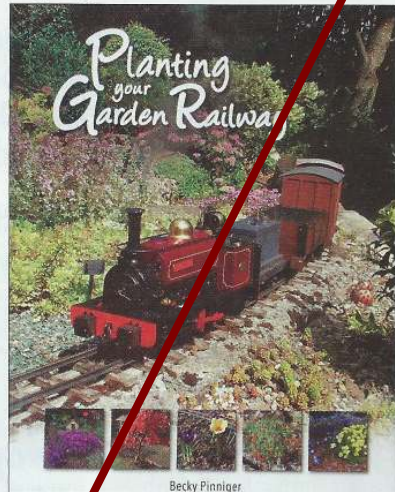
Price: £22.50

Website: www.atlanticpublishers.com

This book is for railway gardeners and garden railroaders. The first thing a gardener does, when opening a book on garden railroading, is to gaze at the photos and imagine the place, the plants, and the day. If the railroad is of primary interest, one inspects the trains to see what propels them, who manufactured them, and how accurately they are modeled. In Becky Pinniger's new coffee-table-worthy book, *Planting your Garden Railway*, both the gardener and the railroader will find much to appreciate in its hard covered, 128 glossy pages.

Before we divide this book into gardener vs. railroader topics, it's plain to see that each photo shows a well-integrated world in which both facets of the hobby support each other. Long-time garden-railway enthusiast, David Pinniger, took the photos of mature railway gardens to show us how it's done in Great Britain. In the first chapter (which he wrote) he offers, “How to make a start—size and scale.” Here he helps beginners understand the difference between the “commonly used gauges and scales in garden railways.” For example, on page 14, after listing the many scales, he notes what more experienced modelers have been dealing with: “G” scale is a very confusing mixture of gauges and proportions when modeling 2'6" gauge to 3'6" gauge. His photos show the difference between appropriately and inappropriately scaled trains and how much easier it is to model larger-scale trains in a garden where leaves can grow too large.

Because so many of the photos are



large, covering whole pages, the bigger pictures of the completely landscaped yard better displays the thoughtful placement of elements. On page 10, a long viaduct with horizontal stonework brilliantly reflects horizontal boards on the background fence, and then the train of multiple passenger cars underscores the simple theme without distraction. We see the close-up train, the surrounding scale plants, then the background shrubs or fences, which complement the railroad, and vice-versa. Obviously, the garden designers considered how to fit the railroad into their particular yard.

Although almost all of the photos show gardens of Great Britain, the railway vignettes range from mountain to village—from busy industry to uncluttered countryside. Trains look natural in these gardens. Becky Pinniger tells us why. She explains the need for structure, which we can create using scale trees, and particularly conifers for year-round height and form. She outlines the growing requirements and advantages of growing dwarf Japanese maples and small specimen trees, mostly deciduous, to give spot color and showcase a scale feature. Critical for preventing the consumption of trains by hungry shrubs, several chapters show how judicious choice of groundcovers, alpinas, low annuals, heathers, ferns, and bulbs will keep trains from being swallowed.