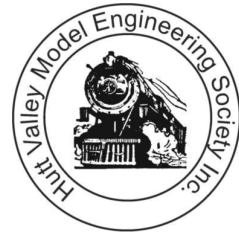


Blast Pipe



Newsletter of The Hutt Valley Model Engineering Society and
The Maidstone Model Engineering Society

October 2026

Hutt Valley Model Engineering Society Inc.

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Notice of Meetings

Hutt Valley MES

Our next meeting will be on Wednesday
7th October at 7.45 pm at the clubrooms in
Petone.

HVMES Notes

The club's September meeting was well
attended with about half a dozen members.
There was no speaker, so it was an
interesting night with 'bits on the table
theme' followed by the typical chat.

Caleb had the smokebox and cylinder
arrangement for a 45mm gauge Japanese
locomotive he is working on. A truly
exceptional example of detailed modelling.

John brought along another oddity: a
rectilinear stationary engine he has nearly
completed.

Pete had the regulator and reverser controls
for an engine he is currently working on.
The regulator quadrant was laser cut by
[ES3](#), the quadrant for the reverser was

already done. The notches for that will be
cut once the valve timing has been finally
set. Pete had made all the other parts.
Caleb donated the return springs from an
old refrigeration unit. Annealed, cut to size,
drilled, then quenched in oil and annealed.



Photo: Targett

Lachlan brought along a CNC-machined
wheel for the easy-to-build electric
locomotive he is working on. He sourced
the wheels from E J Winter in Australia,
which landed in New Zealand at around
\$45 each. A comparative quote to get
them custom-machined locally came in at
over \$150 each.



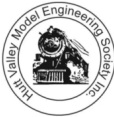
Andy captured this bird's-eye view of the club's facilities with his new drone during the running day on September 13th. Photo: Henerson

New Website

The Society's refreshed website is now live, bringing our online home up to date and helping us share more about what we do. Visit HVMES.com to take a look.

The Members' page is still in progress, and previous editions of Blast Pipe will be added soon.

We're looking for photos, videos and other content to help promote the Society. If you have something you'd be happy to share, please email it to hvmes.sec@outlook.com.



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The Hutt Valley Model Engineering Society Inc



The Hutt Valley Model Engineering Society in Wellington, New Zealand. The society aims to promote all forms of model engineering. Our members have a wide range of interests, from clocks to precision tools to miniature trains, traction engines, marine plant, electronics, CNC, and 3d printing.

Garden End - a 7/8th scale micro layout

By Ben Calcott



Micro layouts are a great way to practise model-making techniques without requiring much time, space, or expense. This layout was built on a 55 cm Kmart shelf at a scale of 7/8" to 1' (1:13.7). It depicts a 5" and 3.5" gauge railway in someone's backyard.

The track follows American practice, using dimensions I found on the International Brotherhood of Live Steamers website. It's made from Peco N gauge track, with an extra rail added so Z gauge trains can represent the 3.5" gauge. A diode wired around a rail break stops the trains at each end, while a simple Arduino-based controller lets them shuttle back and forth.

Both fence types were laser-cut: the tall fence from 2 mm plywood and the picket fence from 1.5 mm Formacote card.

The ride car is a little top-heavy with its driver figure aboard, so it can derail if the layout is knocked. The layout is really designed for Kato Pocket Line trains, though I've also run Märklin and Rokuhan Z gauge trains on it, even if they struggle with the ride car's weight.

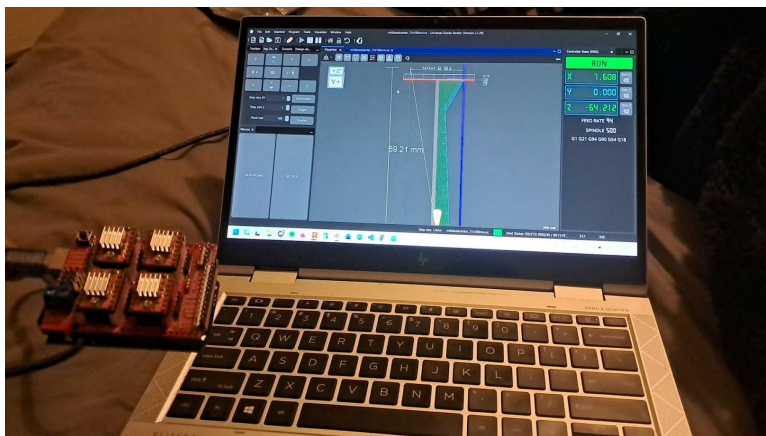


Bringing My Sherline CNC Lathe Back to Life

By Abi Bjerre

When I bought a Sherline CNC lathe on TradeMe, I knew I was getting a good little machine; however, one important thing was missing: the control box.

The lathe came with the stepper motors already fitted, but without the electronics needed to actually control them. Rather than seeing this as a reason to give up on the machine, I decided it would be a good opportunity to build my own control system from the ground up.



GRBL running on the laptop, GRBL is a free, open-source software firmware that controls the motion of CNC machines, the Arduino with stepper motor drivers is to the left. Photo: Bjerre

Of course, it wasn't quite as straightforward as I first thought.

The project quickly became a learning experience involving stepper motors, drivers, wiring, limit switches, CNC firmware, and a fair amount of troubleshooting. One of the first challenges was working out exactly how the motors were wired. The stepper motors weren't the simple four-wire type I expected, so I used a multimeter to figure out which wires belonged together and how they should connect to the drivers.

I decided to use commercial off-the-shelf A4988 stepper driver boards and an Arduino-based controller. This gave me a relatively inexpensive way to put together a CNC control box using parts I was already familiar with.

Then came the software side.

Getting the Arduino and [GRBL](#) talking to everything proved to be another challenge. I ran into issues with firmware compatibility, pin assignments, and limit switches. At one point, the machine would immediately go into an alarm state, and another issue was that the pins weren't configured the way I expected. There were also confusing moments when connecting the CNC shield caused the controller to crash completely.

Instead of giving up, I worked through each problem one at a time, checking wiring, testing individual components and going back through the GRBL configuration to understand exactly what each pin was doing.

The project has been a good reminder that building a CNC machine isn't just about bolting motors onto a lathe. The electronics and software matter as much as the mechanical side, and sometimes the smallest configuration mistake can stop the entire machine from working.

What started as a Sherline lathe without a control box has become a project of its own. I'm gradually building the controller, learning more about CNC electronics and getting the lathe closer to becoming a fully computer-controlled machine.

There have certainly been plenty of frustrations along the way, but that's also what makes projects like this rewarding. Every problem has taught me something new, and eventually seeing the machine move because of something I built myself makes all the troubleshooting worthwhile.



Abi getting ready to leave the station. Photo: Henerson



Ben's Galloping Goose waits for its next duty. Photo: Henerson

Halloween Run

We're looking at planning a Halloween Run for Saturday, 31 October 2026. This should be popular with the public and give us an opportunity to do another evening run at the track.

We're looking for volunteers to help out at the event or bring along locomotives to run. If you can lend a hand, please let us know.



RailEx Model Train Show is coming up on 21 & 22 November 2026. Thanks to everyone who has volunteered to help out at the stand or display models. There's still time to help out if you want to get involved.

This newsletter is only as good as the stories our members share. Workshop projects, track day photos, technical tips, club history, or even a good mishap story if it's model engineering related, we want to hear about it. Articles don't need to be polished; send through a few photos and a couple of lines, and we'll help pull it together. Send contributions to the Editor, hvmes.sec@outlook.com by the 20th of each month.