

**EVENT REPORTS: Hereford, Burton on Trent & Statfold Barn**

THE MAGAZINE FOR MODEL ENGINEERS

# ENGINEERING in Miniature

# It's Showtime!

See this plus much more at the MMEE

Build a  
simple  
steam-powered  
'Put-Put'  
boat

OCTOBER 2017 | £3.75



**PROUD  
SPONSORS OF**  
  
**MIDLANDS  
MODEL  
ENGINEERING  
EXHIBITION**

**19 – 22 OCTOBER**

**WARWICKSHIRE EXHIBITION CENTRE,  
FOSSE WAY, NR LEAMINGTON SPA**

**A FANTASTIC 1/8TH SCALE DUMP TRUCK**



Please come & see  
us at the Midlands  
Model Engineering  
Exhibition at  
Leamington Spa  
Oct 19th - 22nd



# STUART MODELS

FOUNDED 1898

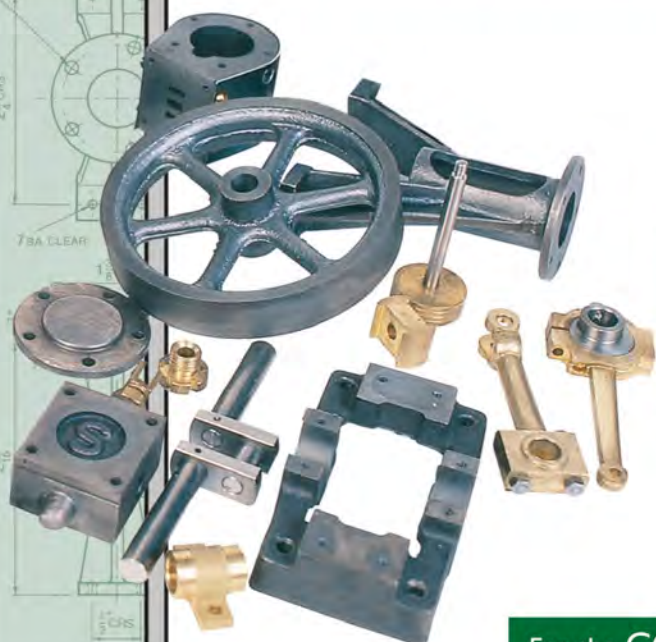
## For the **MODEL ENGINEER** SETS OF CASTINGS

We offer Sets of Castings suitable for both those starting out in model engineering as well as those looking for a new and challenging project.



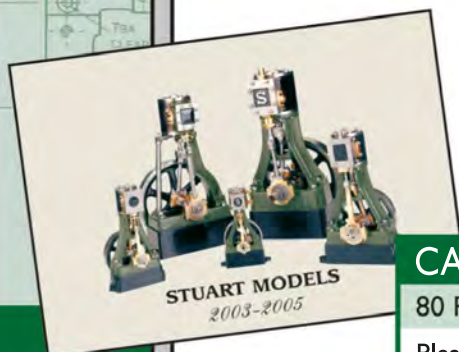
## For the **ENTHUSIAST** PRE-MACHINED KITS

Many of our engines are available as Pre-Machined Kits allowing you to finish the model with a set of spanners and simple hand tools.



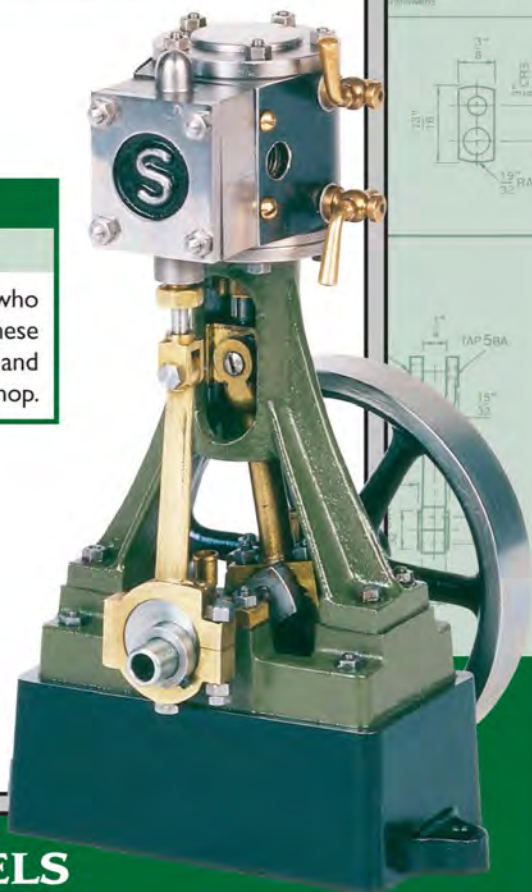
## For the **COLLECTOR** READY TO RUN MODELS

The perfect choice for anyone who has an interest in steam. These models are assembled, painted and thoroughly tested in our workshop.



**CATALOGUE - £6.00**  
**80 PAGE FULL COLOUR**

Please send £6 for our eighty page comprehensive full colour catalogue which covers our entire range of models and accessories.



# STUART MODELS

GROVE WORKS, WEST ROAD, BRIDPORT, DORSET, DT6 5JT

• TEL 01308 456859 • FAX 01308 458295 • [www.stuartmodels.com](http://www.stuartmodels.com) •

# CONTENTS

OCTOBER 2017 Volume 39 Number 4

7



16



34



## 7 A 1/8<sup>TH</sup> SCALE 771 D DUMP TRUCK

By Brian Palliser

## 9 BUILDING A PANTHER TANK

By Chris Meyer

## 13 HEREFORD GALA

By John Arrowsmith

## 16 PUTT-PUTT BOATS

By Jan-Eric Nyström

## 21 YOUNG ENGINEERS

By John Arrowsmith

## 23 MIDLANDS MODEL ENGINEERING EXHIBITION SHOW GUIDE

## 27 A BIGGER BITE FOR CONWAY CASTLE

By John Harrison

## 29 NARROW GAUGE IMLEC RESULTS

## 30 THE MIDLANDS FEDERATION RALLY 2017

By Terry Dell

## 34 THE GIANT MINIATURE WEEKEND

By Mark Smithers

## 39 CLUB NEWSROUND

By John Arrowsmith

## 42 DIARY OF EVENTS

By John Arrowsmith

## FRONT COVER

The sort of sight that will great visitors to this years Midlands Model Engineering Exhibition.

# EDITORIAL



## LET'S ALL GO TO THE SHOW

*"You know what I enjoy about model engineering shows? The wide range of disciplines on display." – Trader at Bristol ME show.*

Getting out and about, and away from the computer, is one of the pleasant aspects of sitting in the EiM Editor's chair. Chatting at Bristol, it was great fun to see just how broad-minded model engineers are. Where else, other than an engineering show, will you find a 5ft long model of Concorde, hot air engines and a miniature peal of bells all within a few feet of each other?

Other hobbies are not nearly so lucky – as a railway modeler, I despair of those who won't look at a model because it's the "wrong" scale or not from the precise era that interest them. It's a terrible shame as I feel they miss out on so much. If someone has put effort into making a model then it's a rare person who can't get something out of studying it.

I'll be trying to explain this to friends as the Midlands Model Engineering Exhibition (MMEE) approaches. As it's my local show, I've been a visitor for longer than I care to recall, certainly since the venue before the current Warwickshire Exhibition Centre. In recent years, my attendance has been as part of the Knightcote Model Boats Club stand and that's where you'll find me this year wearing a suitable badge for ease of identification. Or, at least you will if I haven't wandered off to photograph something interesting for an appearance on these pages.

Please feel free to collar me for a chat. If your model is on display and you could be persuaded to write it up for us, I'll be happy to make a special effort with the photos so your work looks as good as it possibly can in print to.

**Phil Parker**  
Editor

*The November issue will be on sale on October 19th*

**Editor:** Phil Parker  
Email: phil.parker@warnersgroup.co.uk

**Publisher:** Steve Cole  
Email: steve@warnersgroup.co.uk

**Advertising manager:** Bev Machin  
Tel: 01778 392055 Email: bev@warnersgroup.co.uk

**Sales executive:** Allison Mould Tel: 01778 395002  
Email: allison.mould@warnersgroup.co.uk

**Advertising design:** Amie Carter  
Email: amiec@warnersgroup.co.uk

**Ad production:** Pat Price  
Tel: 01778 391115 Email: patp@warnersgroup.co.uk

**Marketing manager:** Carly Dudge  
Tel: 01778 391440 Email: carlyd@warnersgroup.co.uk

**Published by** Warners Group Publications Plc,  
The Maltings, West Street, Bourne, Lincolnshire  
PE10 9PH. [www.engineeringinminiature.co.uk](http://www.engineeringinminiature.co.uk)  
[www.facebook.com/engineeringinminiature](https://www.facebook.com/engineeringinminiature)

**Articles:** The Editor is pleased to consider contributions for publication in Engineering in Miniature. Please contact us to discuss your work.

© **Publishers & Contributors**

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the Publishers. This periodical is sold subject to the following conditions; that it shall not without the written consent of the publishers

be lent, resold, hired out, or otherwise disposed of by way of trade at a price in excess of the special recommended maximum price, and that it shall not be lent, resold, hired out, or otherwise disposed of in mutilated condition, or in any unauthorised cover by way of trade, or affixed to as part of any publication or advertising, literary or pictorial whatsoever.

Whilst every care is taken to avoid mistakes in the content of this magazine the publishers cannot be held liable for any errors however arising. The reader, in pursuing construction and operation of any product, should exercise great care at all times and must accept that safety is their responsibility.

Engineering in Miniature (ISSN 0955 7644) is published monthly by Warners Group Publications Plc.



**A.m.€** 01952 879607

Abbotts Model Engineering  
Makers of fine 5" & 7 1/4" Gauge  
Locomotives & Rolling Stock

See Website for up to date info.  
Please re-fresh your website browser.



## All new "Project build" range.



Saturn 2 / Jupiter 2 from  
£850

Saturn 3 / Jupiter 3 from  
£995

Saturn 4 / Jupiter 4 from  
£1400



Class 67 from  
£2500



Class 59, 66 from  
£2900

**What you get with a Project build locomotive:**  
Un-painted body, R2R wheel sets  
Welded, powder coated chassis  
Ready for you to add your own DNA to the project.

Unit D7, Haybrook Ind Est, Halesfield 9, Telford, Tf7 4QW

Shop open Mon to Fri 9.00am to 4.00pm  
Locomotives, Coaches & Trucks all on display  
(See website for products & updates)

[www.ametrains.co.uk](http://www.ametrains.co.uk)

## GS MODEL SUPPLIES

LTD Directors : Geoff Stait & Helen Verrall-Stait

Introduce 2 **NEW** 5"g Locomotives

### AQUILA 2-6-0

(designed by Stephen Wessel)



### LINCOLN GNR N1 0-6-2 Tank Locomotive

(designed by Martin Evans)



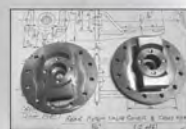
[www.gssmodelengineers.com](http://www.gssmodelengineers.com)  
[info@gssmodelengineers.com](mailto:info@gssmodelengineers.com)  
[01278788007](tel:01278788007)



## CNC MACHINING SERVICES



Custom parts machining by people who understand railways



## 17D MINIATURES MINIATURE RAILWAY SPECIALISTS

Locomotives, Rolling Stock, Components

W: [www.17d-miniatures.co.uk](http://www.17d-miniatures.co.uk)

T: 01629 825070 - E: [tech@17d-miniatures.co.uk](mailto:tech@17d-miniatures.co.uk)

## ENGINES THAT RUN FROM BODY HEAT

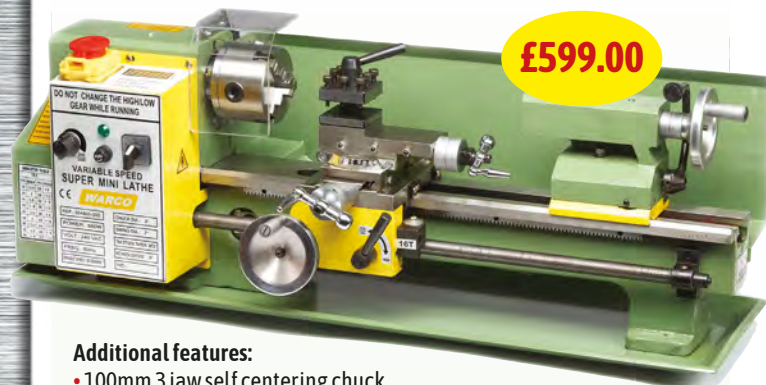


Choose from kit or assembled at  
[WWW.STIRLINGENGINE.CO.UK](http://WWW.STIRLINGENGINE.CO.UK)



# WARCO

## ALL NEW SUPER MINI LATHE



**£599.00**

### Additional features:

- 100mm 3 jaw self centering chuck
- Steel gears fitted to headstock • Steel change gears
- Brushless 450w motor • Steel and aluminium handwheels

### SPECIFICATION:

Centre height: 90mm

Distance between centres: 350mm

Speed range: 50-1100/120-2500 rpm with back gear for maximum torque. Hardened and ground slideways Weight: 39 kg

Wide range of accessories available including fixed and travelling steadies, 4 jaw chuck, vertical slide, quick change toolpost. Huge range of cutting tools.

## NEW WM150 VARIABLE SPEED LATHE



**£499.00**

- Infinite speed control 160 – 3,000 rpm
- 2 speed bands allow maximum torque in the lower speed range
- Induction hardened and ground bedways
- Digital rev. counter • Forward/reverse 450w motor
- Adjustable gib on cross slide • Friction dials • All steel gears
- Longitudinal power feed
- Leadscrew handwheel for sensitive saddle feed • Weight 25kg

### Standard equipment:

3 jaw 80mm self centering chuck with inside and outside jaws, 2 dead centres, rear splash guard, compound top slide, change gears, toolbox with maintenance tools.

A choice of metric or imperial machines.

### SPECIFICATION:

Centre height: 75mm Distance between centres: 300mm

## NEW DRO WM14 MILLING MACHINE

**£1,095.00**



Same features as our established WM14 milling machine, with 3 axis DRO fitted as standard.

- Magnetic scales • XY and Z traverses • Switchable between metric and imperial • Compact illuminated digital counter

### SPECIFICATION:

Table size: 500 x 140mm

Longitudinal traverse: 330mm Distance spindle to table: 280mm

Speed range: 50 – 2,250rpm infinitely variable, with back gear for maximum torque Motor: 500w.

## NEW DRO WM180 LATHE



**£1,095.00**

- Fitted with 2 axis DRO
- Magnetic scales

### SPECIFICATION:

Centre height 90mm

Distance between centres: 300mm

Speed range 50 – 2,500rpm infinitely variable

Weight 70kg

Supplied 3 and 4 jaw chucks, fixed and travelling steadies, face plate.

*In addition to these new DRO versions, we will continue with our standard machines. All prices quoted include VAT and UK mainland delivery, excluding Highlands and Islands.*

***Our next exhibition is the Midlands Model Engineering Exhibition, Leamington Spa, 19th to 22nd October 2017.***

**Our next Open Day is on Saturday, 11th November 2017, at Warco House, 9am to 1pm.**

T: 01428 682929 Warco House, Fisher Lane, Chiddingfold, Surrey GU8 4TD  
E: sales@warco.co.uk W: www.warco.co.uk

# WARCO



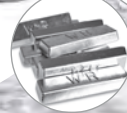
## WILLIAMROWLAND CASTING ALLOYS

With over 180 years of experience, we're proud to be one of the oldest trading metal companies in the world. We strive for excellence, innovation, quality and service at the core of everything we do.

Our casting alloys are a range of low temperature alloys based on tin, lead or bismuth that are suitable for production of jewellery, models, figures, artwork, collectibles, ornaments and memorabilia. Suitable for the professional or hobbyist, we produce many different grades as well as custom specifications.

Our alloys are made onsite in our Birmingham foundry and Quality Assured to BS EN ISO 9001:2008.

[www.william-rowland.com](http://www.william-rowland.com) e: [info@william-rowland.com](mailto:info@william-rowland.com)



## College Engineering

Material provider to model engineers  
Catalogue available with full range of products

Email: [sales@collegeengineering.co.uk](mailto:sales@collegeengineering.co.uk)

Website: [www.collegeengineering.co.uk](http://www.collegeengineering.co.uk)

Tel: 0121 530 4600

### HORLEY MINIATURE LOCOMOTIVES

#### 7 1/4" Drawings and castings

Dock tank  
BR STD Class 2 2-6-0  
BR STD Class 2 2-6-2T  
BR STD Class 4 2-6-4T  
BR STD Class 5 4-6-0  
BR STD Class 7 4-6-2  
BR STD Class 9 2-10-0

L.M.S. Coronation Class 8 4-6-2  
(Duchess)

#### 5" Castings only

Ashford. Stratford. Waverley.

#### 7 1/4" Castings only

Dart, Roedeer. Green Queen

**HORLEY MINIATURE LOCOMOTIVES LLP**  
Phone: 01293 535959 E-mail: [hml95@btinternet.com](mailto:hml95@btinternet.com)

[www.horleyminiaturelocomotives.com](http://www.horleyminiaturelocomotives.com)

## LYNX MODEL WORKS



**WORKING LIVE STEAM SCALE MODELS, SPECIALIST PARTS  
MANUFACTURE. PRE-MACHINED KITS FOR WORKING  
STEAM LOCOMOTIVES IN 5" AND 7 1/4" GAUGES**

- BESPOKE PARTS MACHINING
- STATIONARY AND MARINE ENGINES MANUFACTURED
- FULL PAINTING & LINING SERVICE
- EC COMPLIANT BOILERS FOR SALE
- UNFINISHED MODELS COMPLETED



ALL MAJOR CREDIT AND DEBIT CARDS ACCEPTED

### LYNX MODEL WORKS

Dovecote House, Main Road,  
Maltby Le Marsh, Alford, Lincs,  
LN13 0JP

Tel/Fax: 01507 206006

Email: [info@lynxmodelworks.co.uk](mailto:info@lynxmodelworks.co.uk)

[www.lynxmodelworks.co.uk](http://www.lynxmodelworks.co.uk)

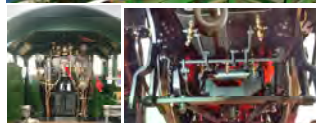


### POLLY Model Engineering Limited

Manufacturers of the famous POLLY kit-build 5" locomotives  
Suppliers of drawings, castings, materials, parts, accessories, tools and books to the  
model engineering hobby.



Choose from the wide variety available and build a POLLY LOCO using the most basic workshop tools. Move on to more advanced projects as your workshop develops. Whether your interests are stationary engines, fine scale standard gauge locos, or narrow gauge, whatever your requirement, there is so much available from POLLY, from nuts and bolts to complete loco kits.



7 1/4" Narrow Gauge Koppel 0-6-0  
Designed by Ken Swan.

7 1/4" gauge GWR Collett Goods Doncaster 2016



Polly Model Engineering Limited

Atlas Mills, Birchwood Avenue, Long Eaton  
NOTTINGHAM, ENGLAND, NG10 3ND

Tel: +44 115 9736700 Fax: +44 115 9727251 email: [sales@pollymodelengineering.co.uk](mailto:sales@pollymodelengineering.co.uk)

[www.pollymodelengineering.co.uk](http://www.pollymodelengineering.co.uk)



SEE  
THIS MODEL  
AT THE  
MIDLANDS  
MODEL  
ENGINEERING  
EXHIBITION



# A 1/8<sup>th</sup> scale 771 D Dump Truck

What do you build after a large scale Caterpillar digger?  
A matching dump truck which was just as challenging

BY BRIAN PALLISER

I decided to have a try at building one of these massive Dump Trucks after successfully completing my CAT Digger. Unable to obtain any plans from Caterpillar to help with the construction, I did manage to get a catalogue which gave me the basic overall dimensions. Visiting a local quarry, I took about 100 photos of a 771D, then it was a matter of converting all the dimensions to 1/8<sup>th</sup> scale.

Before starting to cut metal, I made a complete truck in ply and timber to check if my scales were correct and the model "looked right." Like the digger, this is a big model, just over a metre long and nearly half a metre wide. Happy with the proportions, the next job was sourcing various components. I had decided to make the truck in aluminium as a friend who could provide a supply of the necessary material in different thicknesses and sections.

Using the Internet, I managed to find a 1/4 scale differential in America which was being used for a 1/4 scale four wheel drive lorry. It was too wide for my truck so I split it and then shortened it to the size I needed for the construction. In doing this I also gained a couple of universal joints for the front end. These differentials are still available from R.C. Bitz Banbury (usual disclaimer).

The chunky tyres and wheel hubs are also from R.C. Bitz but were far too soft for the weight of the truck. In the end I ended up making my own moulds and casting new inner tubes with liquid rubber. Another problem then emerged as it was quite a struggle to get them onto the hubs without splitting. Eventually I succeeded in getting a good fit and the wheels support the model with a realistic amount of deforming.

More Internet surfing provided me with an excellent 24 volt 150 rpm motor with plenty of torque which provided the power

I needed, the real truck boasts 510hp and my scale version is no slouch. I made the steering unit with a straight 24v DC ram which when assembled worked very well with the universal joints.

I made the chassis unit from 2" x 3/4" box section and assembled the diff, the front steering unit and suspension together with the drive shaft and motor. I was very pleased when all this construction came together and worked! With the wheels on, it was beginning to look the part but the next obstacle was getting

## BELOW:

My driver moves his head in response to the radio control. Obtaining a suitable hard hat was one of the challenges, I ended up making one.





**LEFT:**

With the hopper raised, you can see just how little space there is for electrical and mechanical systems. Appropriately, batteries are found in the fuel tanks.

**RIGHT:**

The lifting rams are operated by electricity rather than hydraulics to save complicated plumbing.



the dump bucket to look right and getting the correct angle was not easy, but eventually after just a few choice words I completed the task. That was the big part done. All the strengthening pieces around the bucket were glued on using a special two part glue from Central Tapes & Adhesives. The CTA 2105 glue is not cheap but it sticks like the old proverbial saying.

Moving on to the cab, this required several attempts to get the shape right. I made the handles and hinges work but fitting the rubbers and trims to the windows caused some head scratching. Eventually I settled on some H-section rubber bought from Seals and Adhesives UK Ltd fixed together with rubber adhesive.

Hand rails were made from  $\frac{3}{16}$ " copper brake pipe bent and soldered to suit as was the exhaust pipe and air filters. The steps and radiators were fabricated from perforated aluminium and the inside cab details were added to complete the installation along with a cab light. I also added a robotic driver to provide a realistic looking cab scene.

Squeezing the electronics into the available space was another major task. Two 12v batteries connected in series to provide 24 volt power are fitted in the fuel tanks. The space behind the radiator holds all the other electronic parts, three speed controllers and two transformers which provide 12v and 5 v supplies for other components. A sound box and speaker completed this assembly, sixty four wires in total which when switched on it actually worked.

Having got it all assembled it was stripped down to paint. Traditional company yellow and black finished it off and it looked like the real thing. One final detail required was the hard hat for the driver. I could not find one commercially so I made a mould and made my own.

I added the right stickers and road tested it to complete 16 months of hard work. Satisfied, there would be no more swearing or sleepless nights, after all I am only a cabinet maker. ■

**LEFT:**

From ground to the top of the hopper is just over 12ft on the prototype.

**BELOW:**

Brian and the truck photographed at Hereford SME.





# Building a Panther Tank

Chris moves on to the all important turret and gun.

BY CHRIS MEYER – CONTINUED FROM PAGE 32 AUGUST 2017

## TURRET

I built the turret in a similar fashion to the superstructure, using two 14SWG plates screwed together each side making it easier to machine the rebates along the top edges to take the roof plate. The sides and rear angled in at 25 from the vertical, also the sides had a bend about 5.5in from the front plate. This did make it quite difficult to fabricate, or so I found anyway. The side plates had one tenon at the front and a single mortice at the rear. The front plate was a bit complicated, being made up from seven separate pieces screwed and riveted, then soft soldered together.

After screwing the sides to the back and front plate, I clamped the turret upside down to mill a rebate which locates the base plate. This piece has a large hole the same diameter as the inner bearing, the 32 bolt holes are drilled around this hole. (I will give details of the turret bearing further on.) I made up a temporary Aluminium front to hold the sides and rear plate in the correct position and soft soldered them to the baseplate. I then screwed and cemented (Araldite) the front plate to the assembly, as I did not want to risk melting the joints on the front.

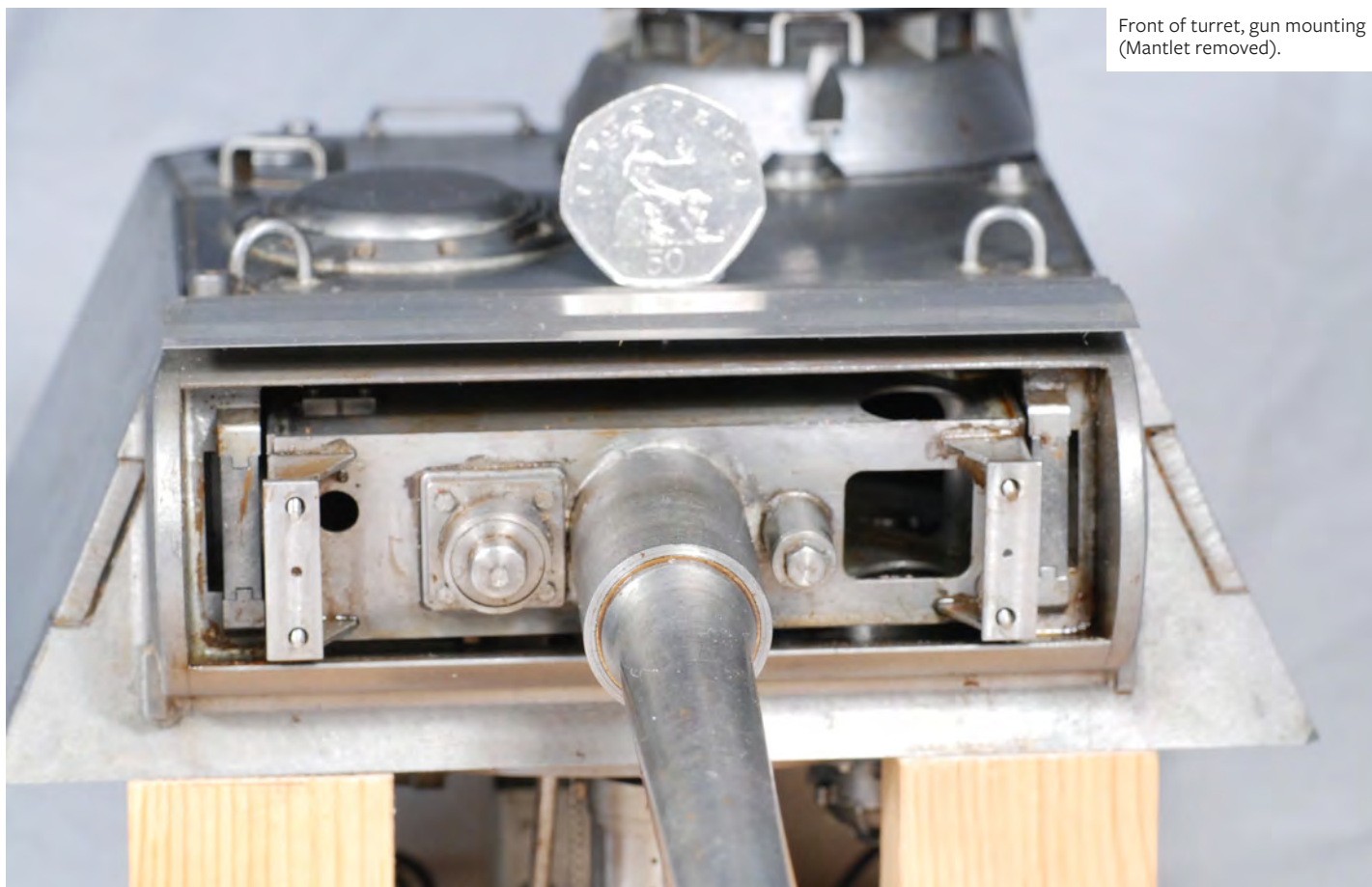
The cupola, mounted on the roof has a hatch which lifts and swings to one side, also there are seven hoods, they cover apertures through which the viewing prisms protrude. The prisms are made from Perspex sheet. The rear hatch has two latches with links connected to the opening handle.

Below the turret there is the platform, which on the FSV had the three crew seats, a large bin into which the empty cases dropped and the hydraulic traversing drive unit was fitted. My vehicle has the bin and a non-working copy of the drive unit and no seats, in their place, two small motors (ex servo) are connected by jointed shafts up to the traversing and elevating units. These both have compound worm drives to give the required reduction, this includes the traversing ring and the elevating quadrant and gear.

Because the worm drives are irreversible, I fitted spring loaded slipping drives to protect the gears from being overloaded by people pulling the long barrel around or up and down. On both the FSV and my model, the platform hangs from two tubes (rods on mine) at the front and the bin which has a curved back, this bolts to the rear of the base plate.

The large turret race posed a problem as I could not find any commercial bearings that would be suitable. Even had I done so, I wouldn't be able to drill and tap the bolt holes, leaving me with no choice but to try and make my own.

Having already obtained some slices of six and a half inch diameter steel bar which I required for the bearing support ring and the traversing rack, I also trepanned a hole in two more pieces. It was then a matter of machining all over and using form tools to cut the seatings for the ball tracks, hoping the rings would not



Front of turret, gun mounting (Mantlet removed).



distort too much. After rough turning and then annealing them, I ground the faces on a surface grinder before completing the finishing cuts on the tracks. A semicircular cut was made in the inner and outer race to load the  $\frac{1}{8}$ " balls. After easing the fit by polishing the tracks, I managed to get the bearing to rotate quite nicely. Drilling and tapping 32 blind 12BA holes in each ring was a bit of a heart in the mouth operation.

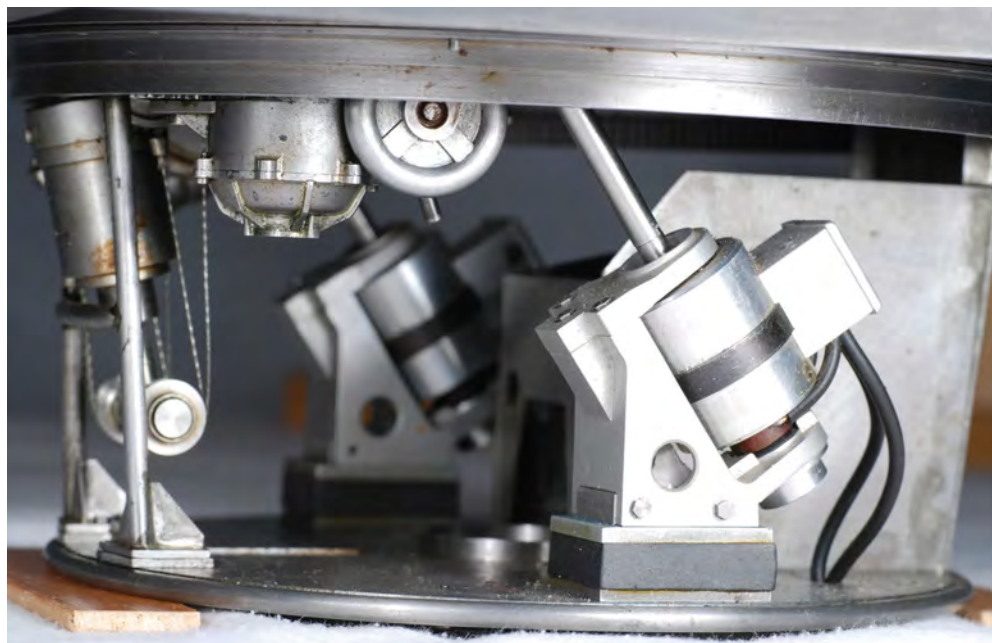
Finally I turned the 'L' section traversing ring and with a reciprocating 'chopping' head, I cut 220 internal teeth, using a rotary table fitted with an indexing plate. Another tedious job, needing constant attention to avoid missing a turn etc. When I got to the last cut successfully, I was very relieved to say the least. The tooth DP is 40.

## GUN AND MOUNTING

The mounting is mainly fabricated from sheet built around the sleeve, within which the barrel recoiled, controlled by two cylinders. The right hand one being the main recoil unit, on the left there is a smaller cylinder, called the recuperator. On the FSV this unit helped run the barrel forward after firing. Each side of the mounting there is a short trunnion pin which carries a square bearing block. These have grooves top and bottom that engage in slides machined inside the turret front plate, see photo. Two bolts hold each block against a register face. This allows the gun mounting to elevate and depress.

A quadrant with 40dp. teeth is fitted under the recoil cylinder. This engages with the 20 tooth pinion on the elevating unit fitted in the turret. The quadrant has to be unbolted to install or remove the mounting, a very fiddly operation on my vehicle.

A hydro-gas balancing unit, or equilibrator was fitted on the FSV owing to the gun being muzzle heavy. This was a compact cylindrical device bolted to the turret base plate, with cables running upwards from a piston rod to clamp at the rear of the gun mounting. Something like this was needed on mine, as it requires a pull of  $2\frac{1}{2}$  lb. to balance the barrel and mantlet. I managed to achieve this by fitting five compression springs into a piston inside the cylinder and running cables over pulleys each side, clamped to the gun mounting. The five springs were actually pushing the piston rod down with a force of 10 lbs. but running the cables over a few pulleys cut the pull to the desired  $2\frac{1}{2}$  lb.



**ABOVE:** Turret platform, gun balancer, traversing motor and empty shell case bin.



**ABOVE:** Cupola, perspex prisms and sighting vane.

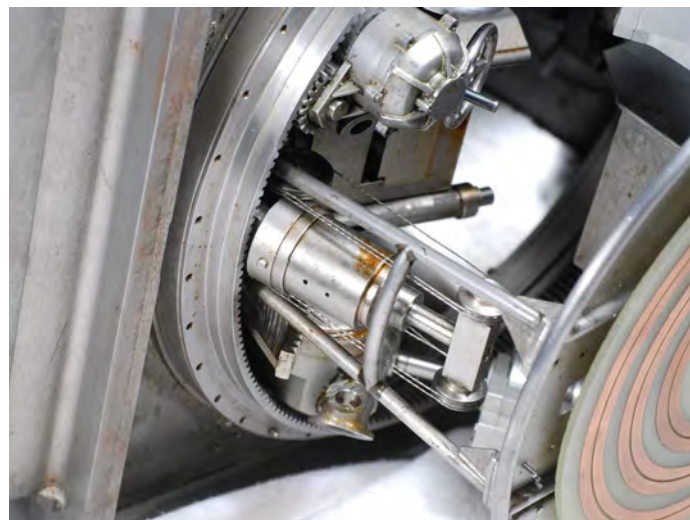
**BELOW:** Rear hatch, showing latches.







**ABOVE:** Elevating motor, gun balancer (equilibrator).



**ABOVE:** Partial view, balancer, lower part of traversing unit and circuit board.

The breech follows the common design seen on most tank and anti-tank guns, a rectangular shape with lugs each side. These lugs retain the recoil and recuperator piston rods. I fitted compression springs in both cylinders, the recoil cylinder has a nylon piston. I hoped this would slow down the return stroke when the barrel was pushed back, rather than slamming forward. It seems to work quite well, also acts as a shock absorber in the not uncommon event of the muzzle hitting an obstacle, due to my bad driving.

The breech block opens downwards and so far I have not attempted to make the breech open by using the lever mounted on the right, later on maybe.

The barrel is made from a length of thick walled tube, with a parallel section that fitted in the sleeve. There is a short collar at the rear end, to enable a threaded ring to lock the barrel into the breech, with a key to stop the barrel rotating. There are two taper sections including a short steep part right by the mantlet, taking the dia. from .75 to .625. From this point, it tapered for 1.9in., then at a reduced taper to the muzzle brake. The barrel length, from mantlet to brake was 11.4 in.

At the tank museum, I had been allowed to climb on the Panther to measure the mantlet and the portion of the barrel I had just mentioned. A step ladder enabled me to obtain the dimensions at the front end of the barrel and muzzle brake. I later did a bit of trigonometry to work out the degrees to apply to the lathe slide.

To make the mantlet or gun shield, which on the FSV, was a steel casting, I did think of making a pattern and getting it cast in iron but then decided to fabricate it. I made it in two halves, boring a pilot hole in a short length of 2 in. dia. bar.



**ABOVE:** Rear hatch.

**BELOW:** Turret platform, uncompleted hydraulic unit, traversing motor.







then using a thin slitting saw, I cut lengthwise, to give me two semicircular pieces. After more machining, the two halves were screwed and soldered to the tapered nose, which fitted over the end of the gun mounting sleeve.

« TO BE CONTINUED »

**ABOVE LEFT**  
Traversing unit components.

**ABOVE RIGHT**  
Traversing unit complete.

**RIGHT**  
Roof removed, gun breech, below is empty shell case bin.

**BELOW**  
Turret platform from underneath.







# Hereford Annual Gala Day

A wide variety of different disciplines were on show at the Hereford SME annual gala

BY JOHN ARROWSMITH

**T**he Hereford SME held their Annual Gala day at the beginning of July and with excellent weather and a good attendance from visiting clubs adding to the efforts of the HSME members it was a great weekend for all involved. The Boating lake was well used with lots of different boats from a number of clubs enjoying the good sailing conditions.

On the track the new Dutch Class 6400 locomotive owned by Mike Tandy performed quite well after some remedial tweaking of the petrol engine. One of the Hereford Juniors, James Newby put his new 7¼" gauge 0-4-0 through its paces, it has plenty of pulling power for such a small engine and is a credit to its young builder.

A small display in the clubs marquee showed off a wide range of models including an excellent selection of horse drawn waggons by Hefin Jones from the Guild of Model Wheelwrights. A full size steam lorry sitting quietly

## ABOVE PHOTOGRAPH 1

Henry Netherway's Steam lorry simmers quietly in the sunshine. The 1920-built Foden steam wagon 10320, registered BS 9983 was originally a tipper but has been restored as a flatbed.

in steam adjacent to the steaming bays added to the overall open weekend atmosphere.

As usual the ladies of the club provided a good selection of food and drinks for the whole weekend which was appreciated by both the invited visitors and the general public who enjoyed the opportunity to ride behind the visiting locomotives.

On Sunday in complete contrast to the usual model locomotives and boats on display a selection of highly tuned "Hot Rods" put in an appearance and provoked a great deal of interest from all the visitors. ■

## WEB LINK

Hereford Model Engineering Society  
[www.hsme.co.uk](http://www.hsme.co.uk)

## PHOTOGRAPH 2:

A stern wheel Paddle Steamer leaves the dock past the lighthouse.



## PHOTOGRAPH 3:

A gauge 1 Wisbech & Upwell Tramway locomotive with a train of vintage coaches progresses over the girder bridge on the Garden Railway.





**PHOTOGRAPH 4**

Brian Palliser displayed his latest 75t CAT Dumper truck (See page 7) alongside his CAT Excavator while the drivers have a mug of tea.

**PHOTOGRAPH 5**

This fine display of horse drawn waggon was presented by Hefin Jones a member of the Guild of Model Wheelwrights.

**PHOTOGRAPH 6**

SS Waverley Paddle Steamer manoeuvres sedately on the lake.

**PHOTOGRAPH 7**

A superb 7¼" gauge GWR Armstrong 4-4-0 gets its train underway from Broomy Hill Junction.

**PHOTOGRAPH 8**

Dave Robinson with his wife as passenger passes the elevated track station with his 5" gauge Sweet Pea.

**PHOTOGRAPH 9**

A nice little selection of 5" gauge wagons form the Merthyr Tydfil club.







10



11

**PHOTOGRAPH 10**

A visitor from the Cardiff club, this 5" gauge B1 pauses at Compton High Level on the elevated track.



12

**PHOTOGRAPH 11**

The excellent Threshing machine and wagon built by Hefin Jones.

**PHOTOGRAPH 12**

This very nice 4" scale Burrell entertained the visitors over the weekend.

**PHOTOGRAPH 13**

Mick Tandy concentrates on taking his new Dutch class 6400 off shed onto the main line.

**PHOTOGRAPH 14**

One of the Hot rods on show at the Gala.

**PHOTOGRAPH 15**

Charlie Warmesley drives Len Steel's 7 1/4" gauge Q class through the station.



13

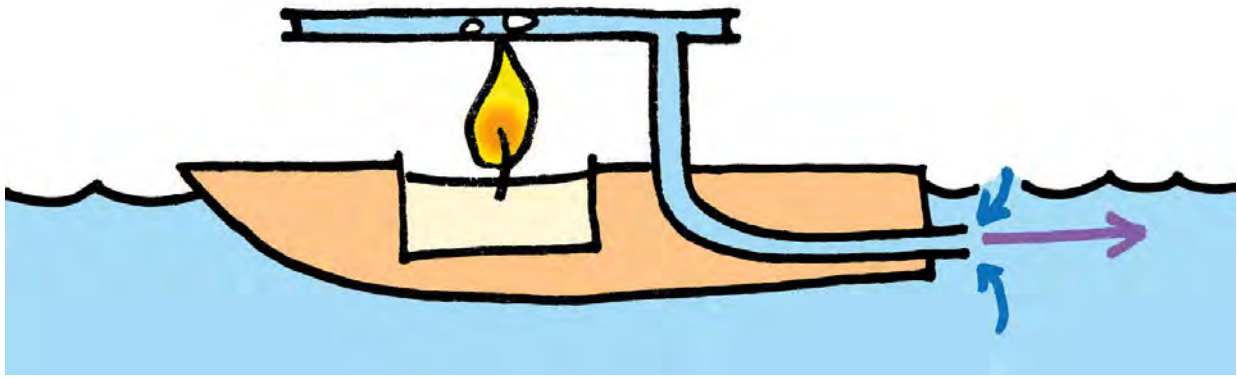


14



15





# Putt-putt boats

As the nights draw in, **Jan-Eric** brings us a little project ideal for older modellers to use to introduce youngsters to some basic construction techniques

BY **JAN-ERIC NYSTRÖM**

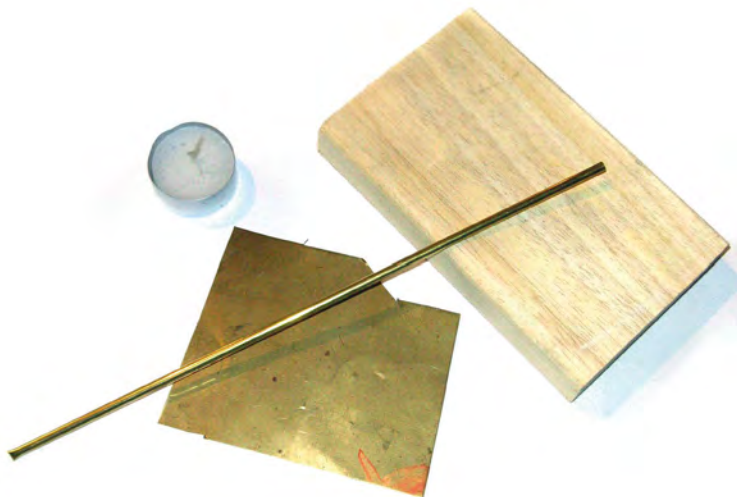
During the long winter months up here in the North, there is not much you can do out on the snow-covered track, either running or maintenance. Whoever called Finland “The Land of the Midnight Sun” must have visited only in the summer – during the days around the winter solstice, we only have about six hours of daylight here in Helsinki, and up in Lapland, the sun isn’t seen for weeks.

Because of this, our only live steam activity during winter happens in the workshop. Not everyone has a live steam locomotive on the workbench, but any hobby project, large or small, is good therapy for the “seasonal affective disorder” that plague many people here during the long, dark winter days...

One little steam engine that can also be a great Dad-and-youngster (or Granddad-and-youngster) project is the classic “Putt-Putt Boat”. Sure, you can buy one, often made in India, from street vendors or in a toy shop for just a few dollars, but making one yourself, and understanding the principle behind its operation can be rewarding. So, gather up your youngster(s) and the materials and you’re ready to embark!

## PHOTOGRAPH 1:

The materials for a “Putt-Putt Boat”: a piece of wood, thin brass tube and plate, and a tea-light candle.



This article shows but one way of making this little toy – the hull of a Putt-Putt boat can be made of virtually any material and I chose a piece of leftover wood. In addition, you need a small piece of thin brass, say, 0.3 mm thick, and a 25 cm length of 3 or 4 mm o.d. brass tube for the “engine”. These can be bought in most hobby stores, in the UK, try the K&S or Albion Alloys range of metals. The “power unit” is a simple tea-light candle.

If you have a little tube bending tool, such as the one shown in the photo 2, costing around £15, you can get really nice looking bends, but this is in no way mandatory. Finger strength is enough to bend thin brass tubing, but there is a risk of it buckling, so some caution is needed. Annealing the tube by heating it to dull red in a propane flame softens it, and makes bending easier. Filling the tube with fine sand, salt or even stearine from a candle, will certainly prevent it from collapsing, but it can be hard to remove all the material from the tube afterwards.

## PHOTOGRAPH 2:

Bending the tube is easy with this little tool.





**PHOTOGRAPH 3:**

The brass is cut and drilled, and a boat hull is formed from the wood.

The wood is cut to a boat shape, and a hole is drilled in the middle, large enough to accept the candle.

Two oval pieces, about 1 by 2 inches in size, are cut from the brass plate, and in one of them, two holes, the size of the tubing, are drilled close to one end. The dimensions are not critical, just follow the photo. Ordinary, sturdy scissors cut thin brass easily.

Next, a fiddly operation, which should only be performed by an adult: The silver soldering of the brass parts.

For this, you need a small propane or butane torch, and a stick of silver solder and flux. I use silver solder sticks that have a flux coating, but separate brush-on flux works just as well. Some hardware stores may sell silver solder "by the stick" from larger boxes, or even individually packaged sticks. One stick,

1.5 mm diameter and 300 mm long, was more than enough for this project – silver solder should always be used sparingly. (Note that solder containing tin is not suitable – it would melt in use!)

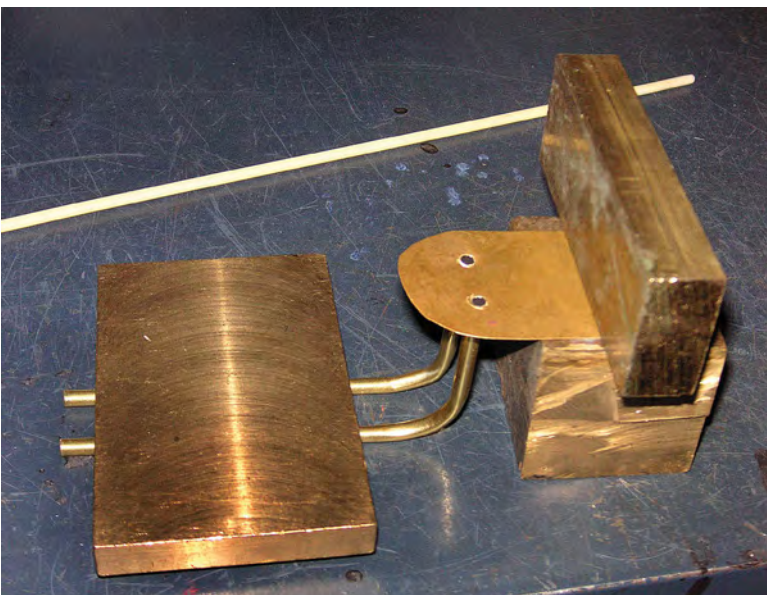
I used a few brass blocks to position and steady the parts, but any heavy fireproof objects will do – even stones from your yard.

After soldering, check that the joints are good – the silver solder should have spread all over the joint as you can see in the photo. No leaks are allowed in this engine.

Next, a thin strip of the brass is cut and bent to an oval shape, slightly smaller than the circumference of the oval pieces. The ends are folded together, so that you can get a steam-tight joint.

**PHOTOGRAPH 4:**

Positioning the tubes for soldering.

**PHOTOGRAPH 5:**

The silver solder must flow freely over the joints.







**ABOVE**  
**PHOTOGRAPH 6:**

A thin brass strip, approx. 2 mm wide, is cut and formed.

The final soldering operation needs a bit of dexterity, and a couple of spring-loaded clamps or similar implements to hold everything together. The idea is to form a thin “boiler”, no thicker than 2 mm, from the two oval pieces and the strip. The photo shows my setup. I had a slight problem at first, and had to redo the soldering: Thermal expansion during heating caused the brass to buckle inwards, reducing the “steam space” in the boiler. You could slightly bend, or make a dent in the metal before soldering, in order to prevent this.

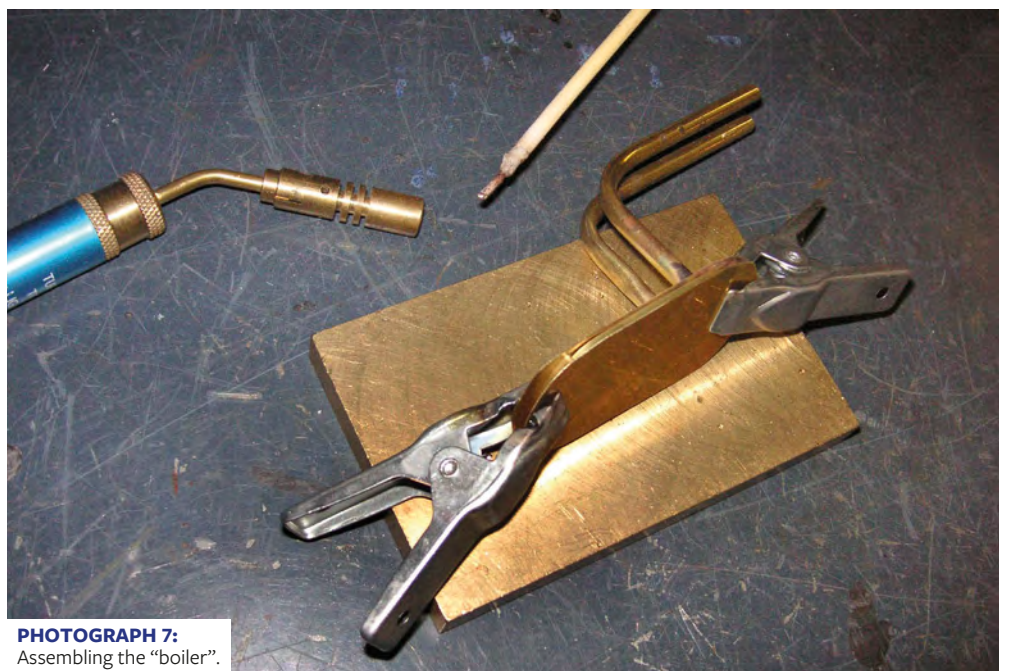
In order to attach the “engine” to the boat, I just cut two slots in the wood and pressed the tubes so far down that they protrude below the water line – then, the project was ready for its maiden run.

First, you have to fill the boiler: put one of the tubes under a tap, and wait until water emerges from the other tube.

Then, light the candle, and wait a minute or two; the boat will soon start putt-putting around, like it did in my workshop sink.

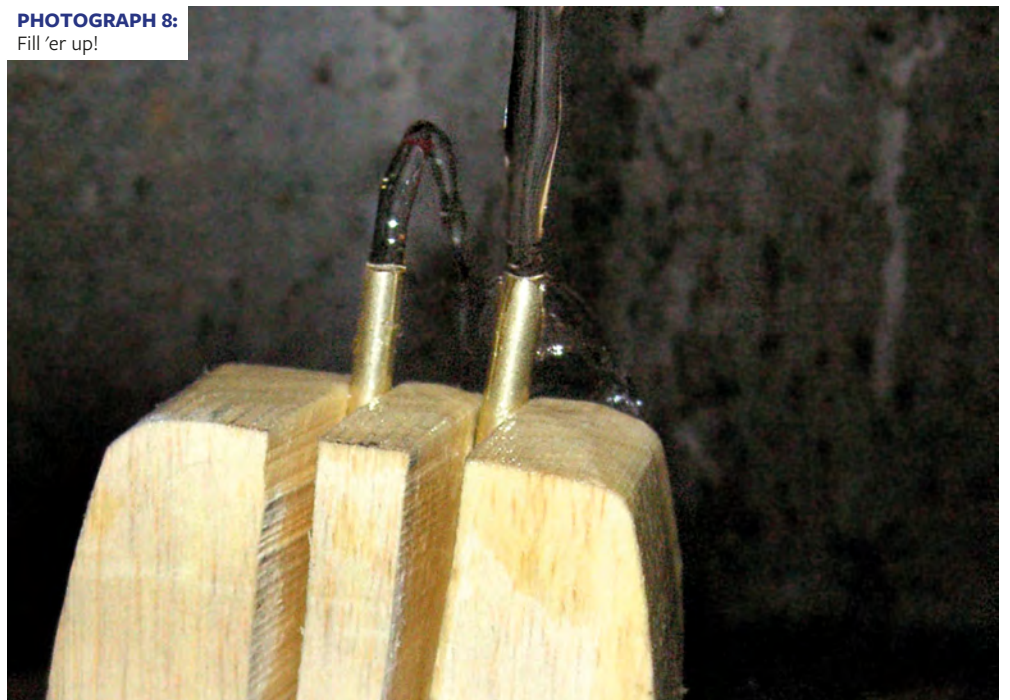
If you want the boat to go in circles, a simple rudder can be wedged into the stern.

Note the wake that forms behind the boat is pulsating in step with the “putts”. This is a clue to the theory of operation of this “engine”: The candle heats the water inside the boiler, and a steam bubble forms. This forces water out of the tubes, but as the pressure drops, cold water is sucked back into the boiler and the steam bubble condenses. This back-and-forth pulsing of water propels the boat forward.

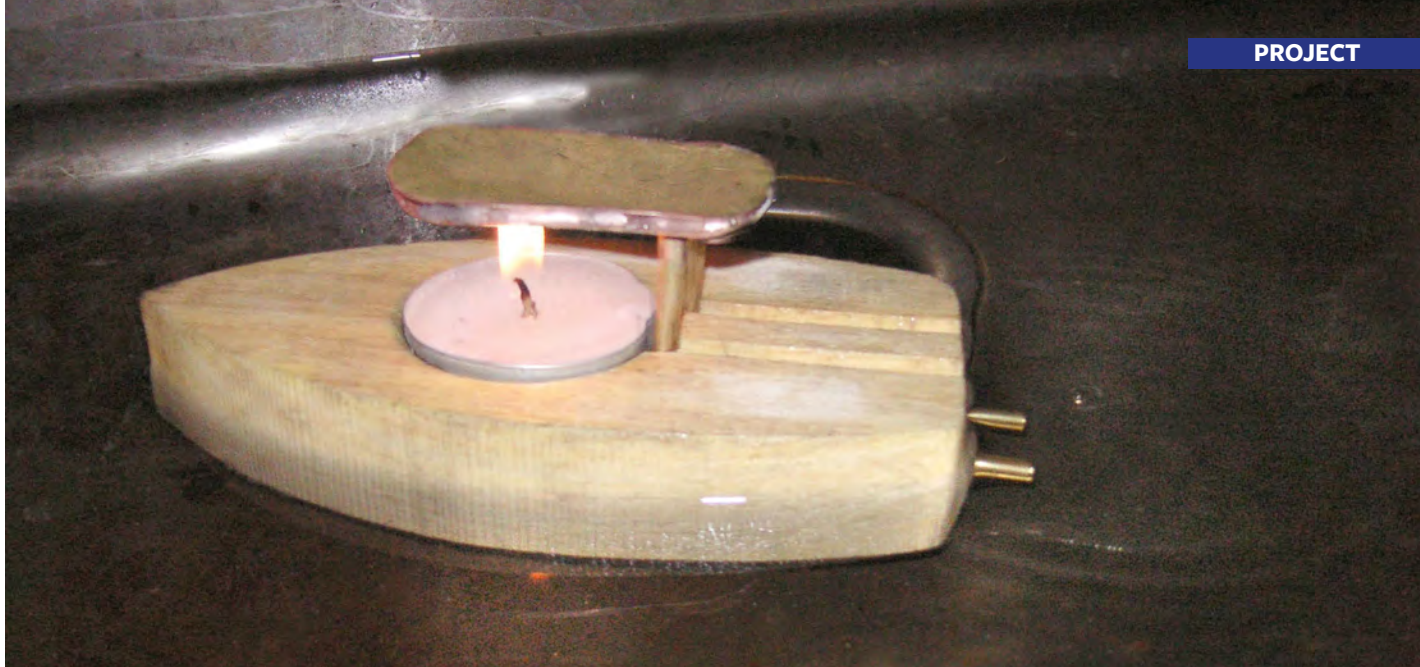


**PHOTOGRAPH 7:**  
Assembling the “boiler”.

**PHOTOGRAPH 8:**  
Fill ‘er up!







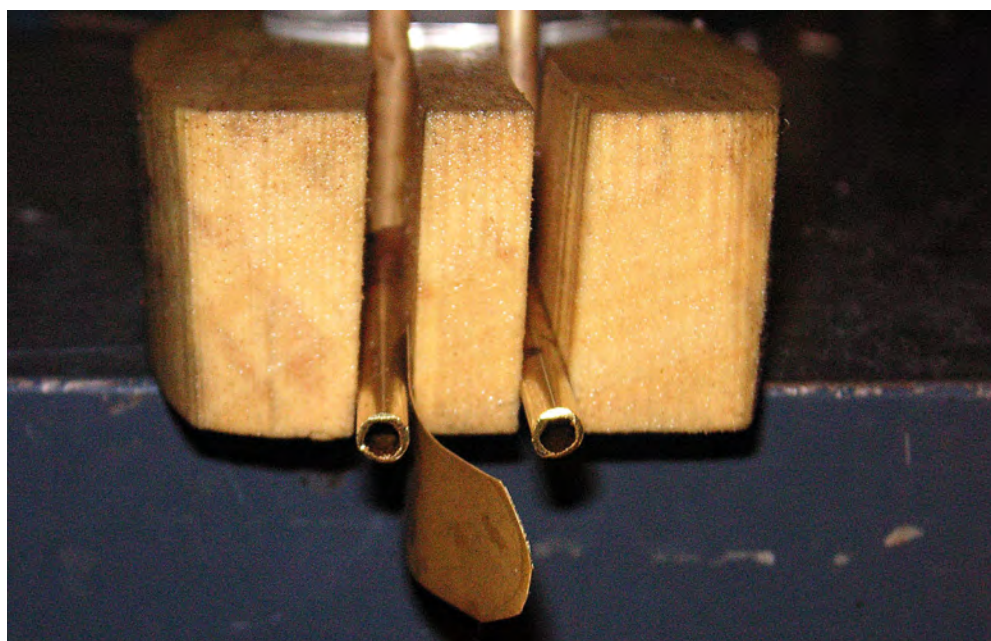
**ABOVE  
PHOTOGRAPH 9:**

Lighting up for the maiden voyage.

“How come?” you may ask – shouldn’t the boat itself also go back-and-forth? Well, it all has to do with the movement of the water; when expelled, it is as a concentrated jet, but when sucked back in, it comes from all around the “mouth” of the tube. Thus, the net effect is that the boat is pushed forward. The sketch at the top of this article should clarify this. Happy sailing! ■

**RIGHT  
PHOTOGRAPH 10:**

A rudder is wedged into the stern.



**RIGHT  
PHOTOGRAPH 11:**  
Putt-putting around the sink. Note the oscillating wake!



## USEFUL LINK

There is also a nice article in Wikipedia that provides details of the Pop-pop boats history and principles of operation.

[www.wikipedia.org/wiki/Pop\\_pop\\_boat](http://www.wikipedia.org/wiki/Pop_pop_boat)



# Midlands Model Engineering Exhibition

Warwickshire Exhibition Centre – CV31 1XN

THURSDAY 19<sup>TH</sup> TO SUNDAY 22<sup>ND</sup> OCTOBER 2017

**T**his year, the ever-popular Midlands Model Engineering Exhibition will be celebrating its 40th anniversary! It is established as one of the leading model engineering exhibitions and the second longest running show of its kind in the UK. The show runs from the 19th to 22nd of October at the Warwickshire Exhibition Centre and is THE show for model engineers.

Over 50 of the leading suppliers to the Model Engineering world will be present – check out the confirmed list of trade attending on the website, as well as around 40 clubs and over a 1,000 models will be on display from both societies and individuals.

There are also a wide range of outside attractions to see, like the well regarded 5" gauge outdoor track, operated by the Coventry Society of Model Engineers and the Polly Owners Group, who will return with the magnificent Fosse Way Steamers.

2017 will also see the Midlands Meccano Group celebrate their 50th anniversary with a special display and the 40th birthday of the exhibition will also be celebrated. Don't forget there is also a

full lecture programme which is presented by leading specialists, together with various workshop demonstrations. There will also be a display to mark the anniversaries of Henry Greenly and Bassett Lowke which will include a 10¼ locomotive and a Bassett Lowke Super Enterprise Live Steam 0 gauge 4-6-0 engine with 4 Gresley Teak Coaches. The later locomotive was manufactured between 1937 and 1950 and the owner has spent considerable time researching and restoring the locomotive to its present condition.

The exhibition remains focussed on the core model engineer modellers who have a real passion for what they do – whether they be new to the hobby or experienced and acknowledged modellers.

Why not be part of the show and enter your work? Entry is free and there are 32 classes of which 16 are competition and 16 are display. Please call the organisers for an entry form on 01926 614101 or download it from the website. The closing date for entries is Monday 2nd October.

Go to the website to get all of the latest exhibition information and to buy entrance tickets. Buy your tickets online for discounted prices. [www.midlandsmodelengineering.co.uk](http://www.midlandsmodelengineering.co.uk).





# — YOUNG — ENGINEERS

BY JOHN ARROWSMITH

Recruiting new people into model engineering a challenge but one the hobby needs to face up to. John looks at some new initiatives to help.

**T**he Southern Federation of Model Engineering clubs has published a document which has been sent to all the clubs under its affiliation regarding the recruitment and retention of younger people into the world of model engineering, as they say in this note the Federation does not have an answer to that question, but it is extremely interested in finding one.

*It is easy to come up with reasons, but the key thing is that clubs must also make themselves more attractive to potential members of all ages. Emphasis has been largely on building and operation of railways, but there are other equally worthy endeavours out there which we have tried to demonstrate by the different exhibits which we have fielded at shows recently. Some clubs do have thriving junior memberships, and it would be useful to pool expertise in an attempt to identify the key features which lead to this happy situation.*

*Once the germ is planted it may become a lifelong interest, with the benefits of a relaxing hobby and/or a worthwhile profession in the engineering industry in its widest sense. It is suggested that we hold a one day conference of interested delegates from our affiliated societies. We would particularly welcome societies that have been successful in recruiting and keeping junior members, those who would be interested in actively participating in trialling approaches that might be identified, and those with ideas (even if they are not fully formed) which may merit further consideration and development. The future direction may be that a specialist group is set up to deal with this important topic.*

*We would like to hear from anyone who would be interested in taking part in the initial meeting by the end of July 2017 with a view to holding that meeting sometime in the autumn/winter. We would welcome hearing from any society who would be willing to host such a meeting.*

This initiative sounds like a good idea to me and I hope that there is a good take up by all clubs because as I have said so many times in these pages, if there is no progress in this area in a few years time there will not be the club scene we all currently enjoy. The signs are already there as I mentioned in the August issue, one club on the South coast are already saying they might not exist in 10 years time if they cannot recruit more members. The answer lies with the clubs themselves so don't miss this opportunity to have your say.

There are a number of different ideas about how to attract young people into the world of model making and a number of clubs run successful Junior sections and try different approaches to recruitment. I have mentioned the Model Railway Club before and their efforts to recruit younger members. Some months ago they started a regular meeting on a Saturday morning at their Keen House headquarters in London where these young people are being shown how to build smaller gauge railway layouts. ►

## — BOOK REVIEW —

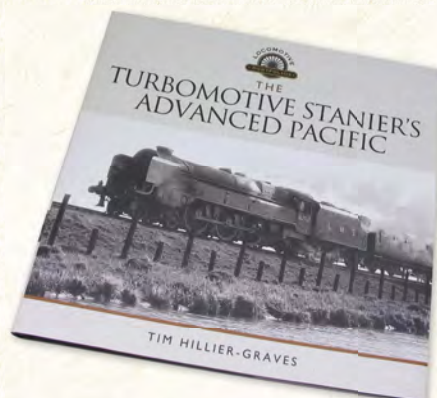
### THE TURBOMOTIVE: STANIER'S ADVANCED PACIFIC

BY TIM HILLIER-GRAVES

Published by Pen and Sword  
Price: £25.00. Pages: 224.  
ISBN: 978-1473885745

**A**s one of the highest profile experimental locomotives built in the UK, Turbomotive's history has been extensively documented in the past but still continues to fascinate enthusiasts.

The author starts with a very personal connection to the prototype, opening with a description of the Harrow disaster in which the locomotive was effectively destroyed. We then move on to look at the personalities involved, biographies being included in an appendix, and most



importantly, the ideas they brought that could have changed the way steam traction developed.

Trials and operations are covered in some detail, Turbomotive was a popular topic in the railway press, so much of this information will be known to those with a special interest in her but for everyone else, it's the comprehensive coverage

you would hope for. The complete service history of repairs and modifications from 1935-52 is included, as are the notes given to crews to help them handle the unique machine.

What lifts this book above "coffee table" type publications are the appendices that explain the science of steam turbines, developments around the world and finally detailed design with drawings of all the major parts large enough to be studied without constant need of a magnifying glass.

Black and white photo reproduction is well up to modern standards and we see both images from the works and out on the line.

Very readable, I wonder if we really needed so much coverage of the events at Harrow. While interesting, it distracts a little from the main subject matter. If you have an interest in turbine application on rail and want more than just pretty pictures, this is well worth a look. ■





Now I appreciate that this is not model engineering in its true sense but it is teaching young people the joy of building something, working with others to achieve a target and in the process it is laying the seeds to expand both their abilities and knowledge for the future. How many model engineers started with an OO gauge electric train set years ago, and then progressed into the larger gauges as they got older and more experienced? Quite a lot I would suggest.

#### ABOVE

Young Engineers Display at Pickering on the North Yorkshire Moors Railway.

#### BELOW

Young Engineers Centre at the Severn Valley Railway Highley Museum.

Another new initiative to encourage younger people into the world of engineering and science is being promoted by Chris Vine author of Peters Railway and "Bongo" fame and his ideas can be found by looking at the Schools section of his website. There are a number of video clips explaining how steam engines work and a suggestion of where schools or anyone in fact can visit to see railways in operation together with a list of model engineering clubs who

welcome school party visits. This is yet another way of getting your club noticed in the local community and could be beneficial to you. Two of the major preserved railways now have Young Engineer's centres located at the Severn Valley and North Yorkshire Moors. I hope these details help to show you that there are lots of ideas to try and rectify the decline in our younger membership. Consider getting your club or society involved in something like this, it might be rewarding. ■



#### WEB LINKS

Peters Railway – [www.petersrailway.com](http://www.petersrailway.com)

The Model Railway Club – [www.themodelrailwayclub.org/youngmrc](http://www.themodelrailwayclub.org/youngmrc)



40th ANNIVERSARY



# MIDLANDS MODEL ENGINEERING EXHIBITION

## SHOW PREVIEW



## THE SHOW FOR MODEL ENGINEERS

### PREVIEW OF THE MIDLANDS MODEL ENGINEERING EXHIBITION 2017

We look forward to welcoming you to the 40th Midlands Model Engineering Exhibition, sponsored by Engineering in Miniature.

The exhibition is gearing up to be yet another superb display of model engineering in all its fascinating variety. With hundreds of models of locomotives and rolling stock, traction, stationary and hot air engines, boats etc. plus workshop equipment and clocks – virtually every interest is represented.

We will have over a thousand models on display for your enjoyment on over 40 club and society stands and in the competition and display classes.

We also have a full complement of specialist suppliers with nearly 50 companies represented so, in addition to viewing the model displays, you'll be able to purchase virtually anything you might need for your modelling activities.

Our lecture programme is detailed on the back page and the centre pages provide a full plan of both the clubs and societies as well as specialist suppliers so you can plan your day well in advance and organise your shopping list.

In addition to the hundreds and hundreds of models on static display we have live steam on the 16mm narrow gauge layout and outside the exhibition hall the model steam road vehicles and a miniature railway will be in action for your enjoyment.

We hope that you will join us and enjoy the exhibition, meet old friends and renew acquaintances.

Chris Deith  
Exhibition Director

Tickets are available online at discounted prices or full price at the exhibition on the day of your visit.

**Thursday 19<sup>th</sup> to  
Sunday 22<sup>nd</sup>  
October 2017**

Thursday - Saturday: 10am-5pm  
Sunday: 10am-4pm  
Last admission 1 hour before closing

**Warwickshire  
Exhibition  
Centre**

Fosse Way, Nr Leamington Spa, CV31 1XN  
On Junction of A425/B4455

 **Meridienne  
Exhibitions LTD**  
 @MeridienneEx

Sponsored by  
THE MAGAZINE FOR MODEL ENGINEERS  
**ENGINEERING  
in Miniature**

Presented by  
  
Meridienne Exhibitions



[www.midlandsmodelengineering.co.uk](http://www.midlandsmodelengineering.co.uk)





## SPECIALIST SUPPLIERS

**Stand: 89**  
**17D MINIATURES**  
 Unit 1 Via Gellia Mills, Bonsall, Matlock, DE4 2AJ  
 T: 01629 825070  
 E: enquiries@17d-miniatures.co.uk  
 W: www.17d-miniatures.co.uk

**Stand: 6**  
**ABBOTS MODEL ENGINEERING**  
 Unit D7, Haybrook Industrial Estate,  
 Halesfield 9, Telford, Shropshire, TF7 4QW  
 T: 01952 879607  
 E: peter@ametrains.co.uk  
 W: www.ametrains.co.uk

**Stand: 73**  
**AEROSPACE SURPLUS TRADER**

**Stand: 75**  
**ALLENDALE ELECTRONICS/MACHINE DRO**  
 Pindar Road, Hoddesdon, Herts, EN11 0BZ  
 T: 01992 455921  
 E: sales@machine-dro.co.uk  
 W: www.machine-dro.co.uk

**Stand: 81**  
**ALUTIGHT/PERMAGRIT**  
 Tennissgatan 8, 27150, Ystad, Sweden  
 E: alutighteurope@hotmail.com

**Stand: 87+88**  
**AXMINSTER TOOLS AND MACHINERY**  
 Unit 8, Bermuda Trade Park, Hamilton Way,  
 Nuneaton, Warwickshire, CV10 7RA  
 T: 02476 011402  
 E: Nuneaton.toolcentre@axminster.co.uk  
 W: www.axminster.co.uk

**Stand: S1+S2**  
**BB ENGINEERING SERVICES**  
 VMB 18 Bretton Street Enterprise Centre,  
 Dewsbury, W Yorks, WF12 9DB  
 T: 07976 539675  
 E: bbeng@btinternet.com  
 W: www.bbengineeringsupplies.co.uk

**Stand: S7**  
**BEUGLER PAINT PINSTRIPING TOOLS**  
 P O Box 183, East Grinstead,  
 West Sussex, RH19 1GJ  
 T: 01342 317363  
 E: info@beuglereurope.com  
 W: www.beuglereurope.com

**Stand: 85+86**  
**BLACKGATES ENGINEERING**  
 Unit 1 Victory Court, Flagship Square,  
 Shawcross Business Park, Dewsbury,  
 West Yorkshire, WF12 7TH  
 T: 01924 466000  
 E: sales@blackgates.co.uk  
 W: www.blackgates.co.uk

**Stand: 95-97**  
**CHESTER MACHINE TOOLS**  
 Clywd Close, Hawarden Industrial Park,  
 Hawarden, Nr Chester, CH5 3PZ  
 T: 01244 531631  
 E: sales@chestermachinetools.com  
 W: www.chestershobbystore.com

**Stand: S5**  
**CHILTERN MODEL STEAM ENGINES**  
 6 The Pingle, Slitting Mill, Rugeley,  
 Staffs, WS15 2UR  
 T: 07941 800103  
 E: modelsteam@btinternet.com  
 W: www.chilternmodelsteam.co.uk

**Stand: 56+57**  
**CNC4YOU**  
 37 Alston Drive, Bradwell Abbey,  
 Milton Keynes, MK13 9HA  
 T: 01908 315011  
 E: sales@cnc4you.co.uk  
 W: www.cnc4you.co.uk

**Stand: 22**  
**COLLEGE ENGINEERING SUPPLY**  
 Barnfield Industrial Estate, Speed Road,  
 Tipton, West Midlands, DY4 9DY  
 T: 0121 530 4600  
 E: sales@collegeengineering.co.uk  
 W: www.collegeengineering.co.uk

**Stand: S6**  
**CRO FITTINGS**  
 Myholm, Eridge Road, Crowborough, TN6 2SR  
 T: 07725 629975  
 E: contact@crofittings.co.uk  
 W: www.crofittings.co.uk

**Stand: 2**  
**CUP ALLOYS (METAL JOINING)**  
 Unit 36, Matrix Business Centre, Nobel Way,  
 Dinnington, South Yorkshire, S25 3QB  
 T: 01909 547247  
 E: sales@cupalloys.co.uk  
 W: www.cupalloys.co.uk

**Stand: 63**  
**DA & BEMURKIN/LANGDON (LONDON)**  
 81 Northumbria Road, Maidenhead,  
 Berkshire, SL6 3DQ  
 T: 01628 548840  
 E: mail@letonkinoisvarnish.co.uk  
 W: www.letonkinoisvarnish.co.uk

**Stand: 74**  
**DUNCHURCH TECHNICAL SERVICES**  
 1 Siddeley Way, Royal Oak Industrial Estate,  
 Daventry, Northants, NN11 8PA  
 T: 01327 879606  
 E: support@dunchurchtechnical.co.uk  
 W: www.electric-arc.co.uk

**Stand: 46**  
**EMS (INTERNATIONAL)**  
 Unit 7, Kingsley Business Park, New Road,  
 Kibworth Beauchamp, Leicestershire, LE8 0LE  
 T: 0116 279 3035  
 E: info@ems-i.co.uk  
 W: www.ems-i.co.uk

**Stand: 3+4**  
**ENGINEERING IN MINIATURE**  
 Warners Group Publications Plc,  
 The Maltings, West Street, Bourne,  
 Lincolnshire, PE10 9PH  
 T: 01778 392484  
 W: www.engineeringinminiature.co.uk

**Stand: 50+53**  
**ENGINEERS EMPORIUM/L. A. SERVICES**  
 Bramcote Works, Bramcote,  
 Warwickshire, CV11 6QL  
 T: 01455 220340  
 E: info@theengineersemporium.co.uk  
 W: www.theengineersemporium.co.uk

**Stand: 49**  
**FIVESTAR/STARLOC ADHESIVES**  
 W: www.shop4glue.com

**Stand: 54**  
**GREENWOOD TOOLS**  
 2a Middlefield Road, Bromsgrove,  
 Worcestershire, B60 2PW  
 T: 01527 877576  
 E: greenwtool@aol.com  
 W: www.greenwood-tools.co.uk

**Stand: 92**  
**GS MODEL SUPPLIES & WESTERN STEAM**  
 Unit 4A, Love Lane, Burnham on Sea,  
 Somerset, TA8 1EY  
 T: 01278 788007  
 E: westernsteam@fsmail.net or  
 info@gssmodelengineers.com  
 W: www.westernsteam.co.uk or  
 www.gssmodelengineers.com

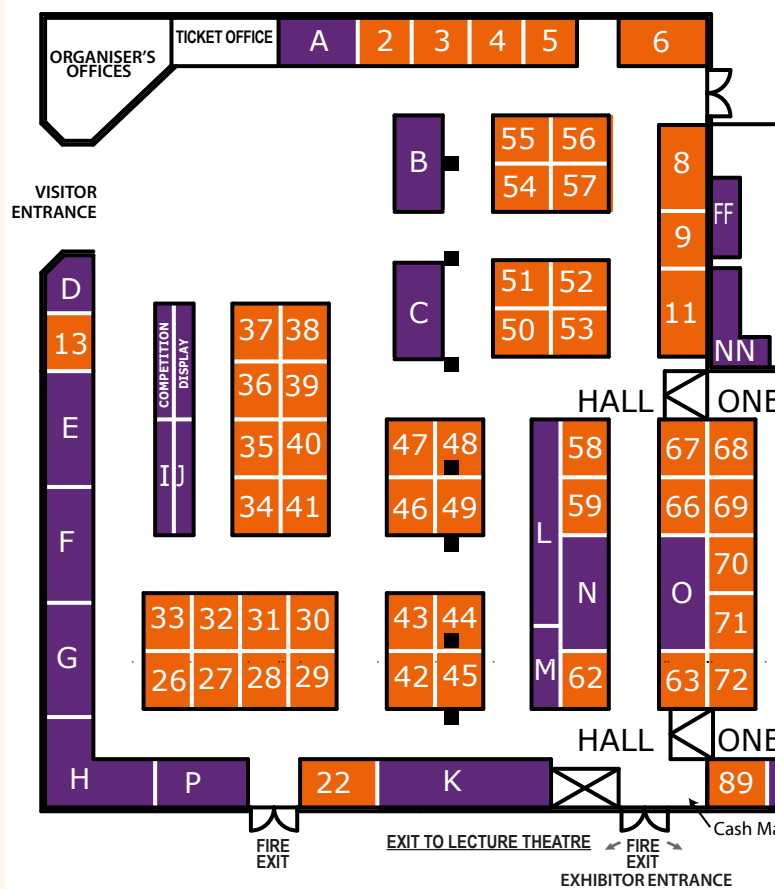
**Stand: 76**  
**HAFIX INDUSTRIAL PRODUCTS**  
 Unit 10 Park Royal Business Centre  
 9-23 Park Royal Road, London, NW10 7LQ  
 T: 0208 969 3034  
 E: sales@hafix.co.uk  
 W: www.hafix.co.uk

**Stand: 58**  
**HJH TOOLING**  
 Unit D2 Commerce Park,  
 Frome, Somerset, BA11 2RY  
 T: 07785 717004  
 E: info@hjhtooling.co.uk

**Stand: 79+80**  
**HOME & WORKSHOP MACHINERY**  
 144 Maidstone Road, Foots Cray  
 Sidcup, Kent, DA14 5HS  
 T: 020 8300 9070  
 E: sales@homeandworkshop.co.uk  
 W: www.homeandworkshop.co.uk

**Stand: 48**  
**JB CUTTING TOOLS**  
 19 Princess Road, Dronfield, Sheffield, S18 2LX  
 T: 01246 418110  
 E: jenny.blackwell60@hotmail.com  
 W: www.jbcuttingtools.com

## FLOOR PLAN



**Stand: S10**  
**JLD FITTINGS**  
 16 Stuart Street, Thurnscoe,  
 Rotherham, S63 0EF  
 T: 01709 891 841  
 E: jldfittings@sky.com  
 W: www.jldfittings.com

**Stand: 59**  
**KONTAX ENGINEERING**  
 Unit 11A Waldeck House, Waldeck Road,  
 Maidenhead, SL6 8BR  
 T: 01452 905001  
 E: kontax@stirlingengine.co.uk  
 W: www.stirlingengine.co.uk

**Stand: 62**  
**LIVE STEAM MODELS**  
 Unit 7, Old Hall Mills, Little Eaton,  
 Derbyshire, DE21 5EJ  
 T: 01332 830811  
 E: info@livesteammodels.co.uk  
 W: www.livesteammodels.co.uk

**Stand: 78**  
**MODEL ENGINEERS LASER**  
 Miller House, Main Street, Hampole,  
 Doncaster, DN6 7ET  
 T: 01302 337772  
 E: sales@modelengineerslaser.co.uk  
 W: www.modelengineerslaser.co.uk

**Stand: 68**  
**MYCROCAM (ORGANISE MY CAR)**  
 2 Avondale Road, Clacton-On-Sea,  
 Essex, CO15 6ER  
 T: 0330 22 33 108  
 E: info@organisemycar.com  
 W: www.organisemycar.com

**Stand: 42+43**  
**MYFORD**  
 Rockwood House, Caldene Business Park,  
 Mytholmroyd, West Yorkshire, HX7 5QJ  
 T: 01422 885766  
 E: myfordinfo@aol.com  
 W: www.myford.co.uk

**Stand: 55**  
**NOGGIN END METALS**  
 Mail Order Address (no callers please)  
 83 Peascroft Road, Norton,  
 Stoke on Trent, ST6 8HG  
 T: 01782 865 428  
 E: mike@nogginend.com  
 W: www.nogginend.com

**Stand: 5**  
**PHOENIX PRECISION PAINTS**  
 Phoenix Precision Paints Ltd, 13 Orwell  
 Court, Wickford, Essex, SS11 8YJ  
 T: 01268 730549  
 E: sales@phoenix-paints.co.uk  
 W: www.phoenix-paints.co.uk

**Stand: 8-11**  
**POLLY MODEL ENGINEERING**  
 Atlas Mills, Birchwood Avenue,  
 Long Eaton, Nottingham, NG10 3ND  
 T: 0115 9736700  
 E: sales@pollymodelengineering.co.uk  
 W: www.pollymodelengineering.co.uk

**Stand: 26-33**  
**RDG TOOLS**  
 Grosvenor House, Caldene Business Park,  
 Mytholmroyd, West Yorkshire, HX7 5QJ  
 T: 01422 885069  
 E: rdgtools@aol.com  
 W: www.rdgtools.co.uk

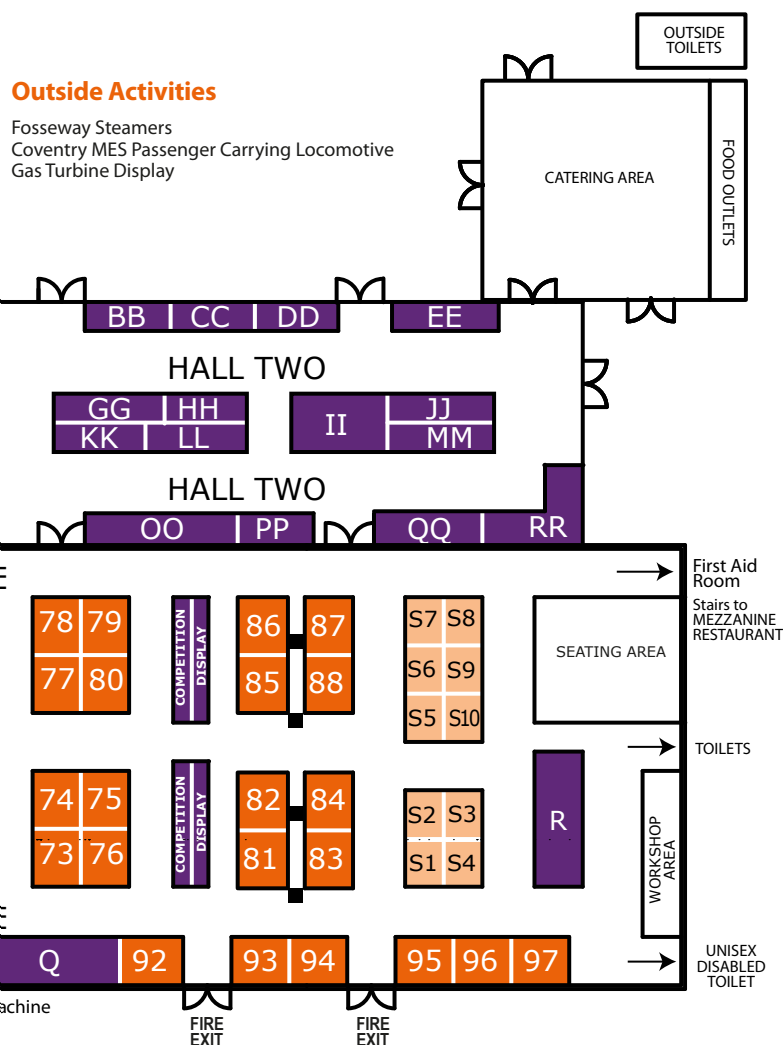
**Stand: S3**  
**SOLDER CONNECTION**  
 Unit 5, Severn Link Distribution Centre,  
 Chepstow, Monmouthshire, NP16 6UN  
 T: 01291 624400  
 E: sales@solderconnection.co.uk  
 W: www.solderconnection.co.uk

**Stand: 93+94**  
**STATION ROAD STEAM**  
 Unit 16+17 Moorlands Industrial Estate,  
 Metheringham, Lincolnshire, LN4 3HX  
 T: 01526 328772  
 E: info@stationroadsteam.com  
 W: www.stationroadsteam.com



## Outside Activities

Fosseway Steamers  
Coventry MES Passenger Carrying Locomotive  
Gas Turbine Display



#### Stands: 44+45 STUART MODELS

Grove Works, West Road, Bridport  
Dorset, DT6 5JT  
T: 01308 456859  
E: sales@stuartmodels.com  
W: www.stuartmodels.com

**Stands: 66+67  
TEE PUBLISHING**  
The Fosse, Fosse Way, Nr Leamington  
Spa, Warwickshire, CV31 1XN  
T: 01926 614101  
E: info@teepublishing.co.uk  
W: www.teepublishing.co.uk

**Stand: S8  
THE CRAFTLIGHT COMPANY**  
32 Gunton, Church Lane  
Lowestoft, Suffolk, NR32 4LF  
T: 01502 587598  
E: sales@craftlights.co.uk  
W: www.craftlights.co.uk

**Stand: 52  
THE LMS PATRIOT COMPANY**  
The Hub, 17 Eastgate Street,  
Stafford, ST16 2LZ  
T: 01785 244156  
E: sales@lms-patriot.org.uk  
W: lms-patriot.org.uk

**Stands: 70-72  
TRACY TOOLS**  
Unit 1 Parkfield Industrial Estate  
Barton Hill Way, Torquay, Devon, TQ2 8JG  
T: 01803 328603  
E: info@tracytools.com  
W: www.tracytools.com

**Stand: 47  
TRANSWAVE CONVERTERS T/A  
POWER CAPACITORS**  
30 Redfern Road, Tyseley, Birmingham,  
B11 2BH  
T: 0121 7084522  
E: transwave@powercapacitors.co.uk  
W: www.powercapacitors.co.uk

**Stand: 77  
TURBOCAD**  
Signal View, 61 Station Road, Liss,  
Hampshire, GU33 7AA  
T: 07724882403  
E: paul@paulthecad.com  
W: www.paulthecad.com

**Stand: 51  
TURBOTRADE UK**  
10 Kenmore Road, Wibsey, Bradford, West  
Yorkshire, BD6 3JH  
T: 07926 256551  
E: turbotradeuk@tesco.net  
W: www.turbotradeuk.co.uk

**Stand: 13  
WALKER MIDGLEY INSURANCE BROKERS**  
Yorkshire Bank Chambers, Fargate,  
Sheffield, S1 2HD  
T: 0114 2502770  
E: enquiries@walkermidgley.co.uk  
W: www.walkermidgley.co.uk

**Stands: 34-41  
WARREN MACHINE TOOLS (WARCO)**  
Warco House, Fisher Lane  
Chiddingfold, Surrey, GU8 4TD  
T: 01428 682929  
E: sales@warco.co.uk  
W: www.warco.co.uk

**Stand: 54  
WHOTZHOT**  
8 Southway, Southwell Business Park,  
Portland, Dorset, DT5 2NL  
T: 01305 823888  
E: whotzhot@btconnect.com  
W: www.whotzhot.info/superwrench

**Stand: 84  
WUHU BRANDS ARTS & CRAFTS CO.**  
E: bowande@vip.163.com  
W: www.bowandeusa.com

#### 7¼" GAUGE SOCIETY

**Stand: M**  
www.sevenandaquarter.org

#### 10¼" GAUGE SOCIETY

**Stand: B**  
www.tenquarter.org

#### BIRMINGHAM SOCIETY OF MODEL ENGINEERS LTD

**Stand: J**  
www.birminghamsme.com

#### BLACKHEATH MODEL POWERBOAT CLUB

**Stand: P**

#### BROMSGROVE SOCIETY OF MODEL ENGINEERS

**Stand: R**  
www.bromsgrovesme.co.uk

#### BURTON ON TRENT MODEL ENGINEERING SOCIETY

**Stand: G**  
www.burton-upon-trentmes.org.uk

#### CITY OF OXFORD SOCIETY OF MODEL ENGINEERS

**Stand: E**  
www.cosme.org.uk

#### COVENTRY MODEL ENGINEERING SOCIETY LTD

**Stand: K**  
www.coventrymes.co.uk

#### EREWASH VALLEY MODEL ENGINEERING SOCIETY

**Stand: MM**  
www.ewr.org.uk

#### GAS TURBINE BUILDERS ASSOCIATION

**Stand: DD**  
www.gtba.co.uk

#### GAUGE 1 MODEL RAILWAY ASSOCIATION

**Stand: A**  
www.g1mra.com

#### GUILD OF MODEL WHEELWRIGHTS

**Stand: NN**  
www.guildofmodelwheelwrights.org

#### HEREFORD SOCIETY OF MODEL ENGINEERS

**Stand: KK**  
www.hsme.co.uk

#### KINGSBURY WATER PARK MODEL BOAT CLUB

**Stand: EE**  
www.kwpmbc.co.uk

#### KNIGHTCOTE MODEL BOAT CLUB

**Stand: II**  
www.kmbcmodelboatclub.com

#### LONDON & NORTH WESTERN RAILWAY SOCIETY

**Stand: QQ**  
www.lnwrs.org.uk

#### MELTON MOWBRAY & DISTRICT MODEL ENGINEERING SOCIETY

**Stand: F**  
www.mmmes.co.uk

#### MIDLAND FEDERATION OF MODEL ENGINEERS

**Stand: LL**  
www.mfmes.org.uk

#### MIDLANDS MECCANO GUILD

**Stand: C**  
www.midlandsmecanoguild.com

#### MILTON KEYNES CLOCK CLUB

**Stand: D**  
www.bhi.co.uk

#### MODEL STEAM ROAD VEHICLE SOCIETY

**Stand: RR**  
www.msrvs.co.uk

#### NATIONAL 2½" GAUGE ASSOCIATION

**Stand: I**  
www.n25ga.org

#### NATIONAL TRACTION ENGINE TRUST

**Stand: PP**  
www.ntet.co.uk

#### NORTHAMPTON SOCIETY OF MODEL ENGINEERS

**Stand: JJ**  
www.nsme.org.uk

#### NORTHERN ASSOCIATION OF MODEL ENGINEERS

**Stand: L**  
www.normodeng.org.uk

#### NOTTINGHAM SOCIETY OF MODEL & EXPERIMENTAL ENGINEERS

**Stand: OO**  
www.nsmee.org.uk

#### REMAP (COVENTRY & WARWICKSHIRE)

**Stand: FF**  
www.remap.org.uk

#### RUGBY MODEL ENGINEERING SOCIETY

**Stand: GG**  
www.rugbymes.co.uk

#### SOCIETY OF MODEL & EXPERIMENTAL ENGINEERS

**Stand: O**  
www.sm-ee.co.uk

#### SOUTHERN FEDERATION OF MODEL ENGINEERING SOCIETIES

**Stand: HH**  
www.southernfed.co.uk

#### STEAM BOAT ASSOCIATION

**Stand: Q**  
www.steamboat.org.uk

#### STIRLING ENGINE SOCIETY

**Stand: N**  
www.stirlingengines.org.uk

#### THE MUSIC BOX SOCIETY GB

**Stand: CC**  
www.mbsgb.org.uk

#### TYDDYN BACH LAYOUT

**Stand: H**

#### WOLVERHAMPTON & DISTRICT MODEL ENGINEERING SOCIETY

**Stand: BB**  
www.wolverhampton-dmes.net

#### 50TH ANNIVERSARY OF THE MIDLANDS MECCANO GUILD

**Stand: C**

#### 70 YEARS SINCE THE DEATH OF HENRY GREENLY

**Near Main Entrance**

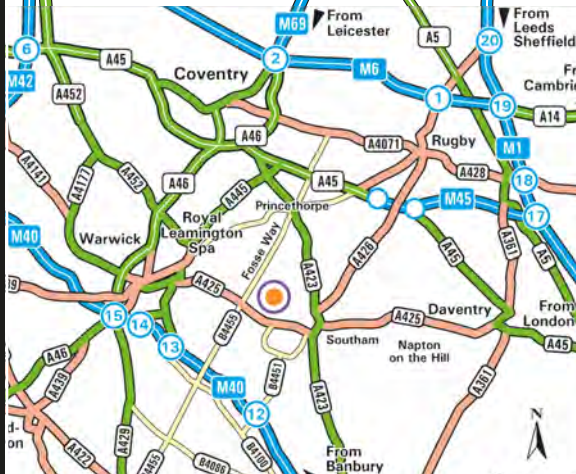
#### 140 YEARS SINCE THE BIRTH OF WENMAN JOSEPH BASSETT-LOWKE

**Near Main Entrance**



## HOW TO FIND US

The exhibition will be held at the Warwickshire Exhibition Centre, Fosse Way, nr. Leamington Spa, Warwickshire, **CV31 1XN** on the junction of the A425/B4455, which is readily accessible from most parts of the country. It is at the centre of the national motorway network, with the M1, M6, M40, M42, M45 and M69 all nearby; Leamington Spa Railway Station is only 3.5 miles away. Birmingham Airport, with its domestic and international flights, is just 30 minutes away.



### Exhibition Link Bus

Running from Leamington Spa Railway Station on Thursday, Friday and Saturday. Please check website for full details.

| ADMISSION PRICES | ONLINE TICKETS* | FULL PRICE TICKETS** |
|------------------|-----------------|----------------------|
| Adult            | £9.50           | £10.50               |
| Senior Citizen   | £8.50           | £9.50                |
| Child (5-14 yrs) | £3.00           | £4.00                |

\* Online tickets see our website.

Call SEE Tickets on 0871 3861118 if you would like to book a ticket by phone or have any questions when booking your tickets. Calls cost 13p per minute plus network extras.

Meridienne Exhibitions cannot process any telephone orders for this exhibition and you must call SEE Tickets.

If you have a general query other than to order tickets please call 01926 614101.

\*\* Full price tickets are available on the day of your visit from the cash box.

**Group Discounts: Order 10 or more tickets online to receive 10% discount - please enter code GRP10.**



## VISITOR INFORMATION

### Cash Machine

This is located at the exit door to the lecture theatre next to stand 89.

### Exhibition Bus Link

This service operates between the exhibition and LEAMINGTON SPA Railway Station. The pick up/drop off point is at the end of the walkway in front of the exhibition centre or at the front of the station.

The service runs continuously at 30 minute intervals. Journey time is approximately 10 minutes. There is no service on Sunday. Charges are £2.50 each way.

### First Aid

If you require first aid please see any member of our security staff or go directly to the first aid room which is situated in Hall 1 at the foot of the stairs to the restaurant.

### Lost Property

Please go to the organisers' office at the main entrance or see any member of our security staff.

### Organisers' Office

Located by the main entrance.

### Places To Eat And Drink

Restaurants are available in both halls. Hall 1 has a first floor restaurant whilst Hall 2 has a catering marque along side it.

### Toilets

Ladies and Gents facilities are located underneath the mezzanine in Hall 1 and outside behind Hall 2. There is also a unisex disabled toilet under the mezzanine in Hall 1.

### Opening Times

Thursday – Saturday: 10.00am – 5.00pm, Sunday: 10.00am – 4.00pm (Final Admissions 1 hour before closing)

Should you require any assistance whilst at the exhibition, please contact either the organisers or a member of the security team or go to the main entrance.

## LECTURE PROGRAMME

### Thursday 19<sup>th</sup> October

| Time    | Lecture Topic                                               | Presented By    |
|---------|-------------------------------------------------------------|-----------------|
| 11.00am | The dos, don'ts and "oh hell" of painting                   | Chris Stapleton |
| 12.00pm | Silver soldering - a simple process made difficult          | Keith Hale      |
| 1.00pm  | Interesting properties of precious metals                   | Gary Wooding    |
| 2.00pm  | Hints and tips for clock dial restoration and painted dials | Mark Brockley   |
| 3.00pm  | Some thoughts on shaping sheet metal                        | Peter Stevenson |

### Friday 20<sup>th</sup> October

| Time    | Lecture Topic                                                                                                      | Presented By                |
|---------|--------------------------------------------------------------------------------------------------------------------|-----------------------------|
| 11.00am | The dos, don'ts and "oh hell" of painting                                                                          | Chris Stapleton             |
| 12.00pm | 3D modelling - warts and all!                                                                                      | Derek Brown                 |
| 1.00pm  | Silver soldering - a simple process made difficult                                                                 | Keith Hale                  |
| 2.00pm  | The process of making scale locomotive plates using home CNC machinery and tooling available to the Model Engineer | David Fieldhouse            |
| 3.00pm  | Mechanical music, singing birds and automata                                                                       | The Music Box Society of GB |

### Saturday 21<sup>st</sup> October

| Time    | Lecture Topic                                               | Presented By    |
|---------|-------------------------------------------------------------|-----------------|
| 11.00am | The dos, don'ts and "oh hell" of painting                   | Chris Stapleton |
| 12.00pm | Some thoughts on shaping sheet metal                        | Peter Stevenson |
| 1.00pm  | Silver soldering - a simple process made difficult          | Keith Hale      |
| 2.00pm  | Hints and tips for clock dial restoration and painted dials | Mark Brockley   |
| 3.00pm  | 3D modelling - warts and all!                               | Derek Brown     |

### Sunday 22<sup>nd</sup> October

| Time    | Lecture Topic                   | Presented By                  |
|---------|---------------------------------|-------------------------------|
| 11.00am | Steam in model boats            | Phil Abbott                   |
| 12.00pm | Youngsters in model engineering | Angus French & Patrick Hendra |
| 2.00pm  | PRESENTATION OF AWARDS          |                               |

**Book your tickets at [www.midlandsmodelengineering.co.uk](http://www.midlandsmodelengineering.co.uk)**

All details correct at time of going to press. Subject to change. Please check website for up to date information.





# A Bigger Bite for Conway Castle

John's locomotive had the speed but not enough pulling power.  
A new clutch was the solution

BY JOHN HARRISON

My 3rd scale, 7 ¼ gauge "Conway Castle" loco was originally built in 1989/90 based around my dad's old 1965 Suffolk Colt 14" cut motor mower. The loco has been great for short trains with only a few passengers, but struggled with heavier trains.

This wasn't a problem for a while – the locomotive spent a long time on display at Wirral Transport Museum where I worked at the time, but after a 14 year break from running in 2014, a refurbishment was started. Several jobs for improving the loco were planned, but the most urgent was the clutch.

The engine, clutch and certain chains and sprockets were used from the original mower, even the petrol tank and throttle originated there.

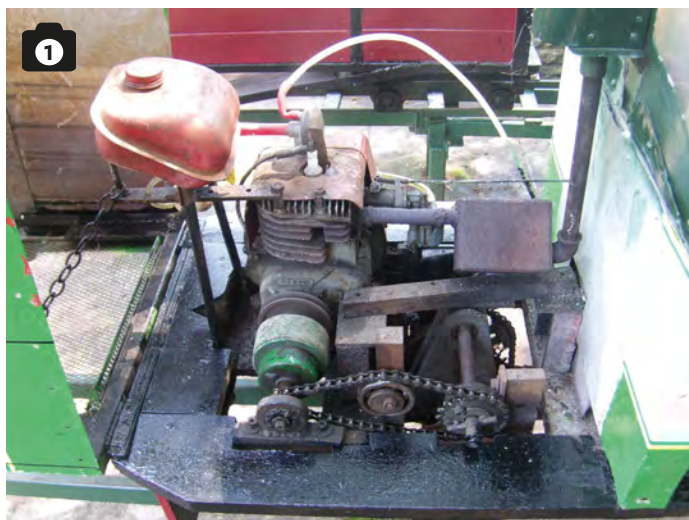
The engine is around 95cc providing 4 Horse Power, but the centrifugal clutch was quite small being designed only to pull a

12" blade mower and a box of grass. After a change of sprockets it now travels at about 1-12 miles per hour, but with reduced pulling power.

Scanning eBay, another clutch was found. This was about 1" larger than the original and seemed to fit with the existing shaft components.

Before I fitted it, I had the new part checked out by a lawn mower specialist and found that it was from a larger, 24" wide cylinder Suffolk mower so it did indeed match up to the engine I was using. The friction pads were also in good condition and in his words, "Would last for ages".

There was one thing that was different though. Besides the larger diameter, the boss on the back of the friction drum was too deep, and put the chain out of line with the gearbox drive sprocket. The other reason for this was that I had fitted a pulley



**PHOTOGRAPH 1:**

Old clutch in place.

**PHOTOGRAPH 2:**

Old clutch; dog clutch and support removed.

**PHOTOGRAPH 3:**

Old clutch drum inside new clutch drum.







wheel onto the engine crankshaft; between the clutch and the engine. This drives and alternator to charge a battery to supply power for lights, horn and air brake compressor in the future. I thinned down the pulley as much as I could on a lathe at work, facing off about 10mm from the clutch boss length.

I removed the old clutch and stripped out the spindle that contained the dog clutch which I planned to re-use. This only required the removal of one circlip and a gentle tap with a small persuading hammer. I then took off the bearing support from the end bearing. To my disappointment, the outer shell of the roller bearing was split in two halves!

Onto the Internet again, with the bearing sizes to hand, and a brand new bearing appeared the next day. Wonderful service!

The bearing replaced, and clutch reassembled, it was time to off the new clutch assembly up into position.

Despair! The gearbox support was fouling, stopping the outer drum of the assembly from sliding home onto the crankshaft.

Never downhearted, out came my trusty angle grinder. This quickly sparked through the offending support, which had been built to my usual standard of over engineering butchery (My motto: If it works, it's right), and home the clutch assembly went, pulley and all.

The clutch assembly now fits in the right position and the chains and sprockets all line up. The support has not been tidied up yet, but the clutch has been tested on the track at Royden Park Frankby. Towards the end of the test, there was a marked difference in pulling power as the friction pads bedded in to their new position. ■



**PHOTOGRAPH 4:**  
Old clutch next to new clutch.

**PHOTOGRAPH 5:**  
Old clutch removed showing keyed crankshaft and modified modified gearbox support.

**PHOTOGRAPH 6:**  
New clutch showing chain out of line.

**PHOTOGRAPH 7:**  
Pulley for alternator.

**PHOTOGRAPH 8:**  
New clutch showing bigger shoes.







**PHOTOGRAPH 9:**  
New clutch assembly  
showing machined  
boss and new thrust  
bearing.



**PHOTOGRAPH 10:**  
New clutch in place  
and ready for action.

# Narrow Gauge IMLEC results

Last month we reported on the Narrow Gauge IMLEC held at the Oswestry Society of Model Engineers. Sadly, the results table didn't make it into the magazine, so here it is now.

## Leaderboard

| Position | Locomotive Type | Name        | Gauge | Driver          | Society                         | Running Time (mins) | Distance Travelled (ft) | Coal Used (lbs) | Work Done (ft lbs) | Average Drawbar hp | Av. Speed | Coal Consumption Rate (lb/hr) | Specific Coal Consumption (lb/hp/hr) | Thermal Efficiency (%) |
|----------|-----------------|-------------|-------|-----------------|---------------------------------|---------------------|-------------------------|-----------------|--------------------|--------------------|-----------|-------------------------------|--------------------------------------|------------------------|
| 1        | SAR             | Lawley      | 5"    | Trefor Milns    | Derby SMEE                      | 29.5                | 11617                   | 1.8250          | 378780             | 0.389              | 4.4750    | 3.712                         | 0.159                                | 1.87%                  |
| 2        | Garratt         | K1          | 5"    | Mike Barnett    | North Staffs                    | 29                  | 8978                    | 2.4438          | 392690             | 0.410              | 3.5180    | 5.056                         | 0.20536                              | 1.45%                  |
| 3        | Alco            | Mountaineer | 3½"   | Norman Tuck     | Wrexham DMES                    | 28                  | 10278                   | 1.2188          | 174780             | 0.189              | 4.1713    | 2.612                         | 0.23011                              | 1.29%                  |
| 4        | Hunslet         | Charles     | 5"    | Steve Milns     | Oswestry & North Shropshire MES | 31                  | 9031                    | 3.5438          | 437070             | 0.427              | 3.3105    | 6.859                         | 0.26756                              | 1.11%                  |
| 5        | Polly           |             | 5"    | Marcus Peel     | Southport MES                   | 27.5                | 10265                   | 1.0438          | 90910              | 0.100              | 4.2417    | 2.277                         | 0.37888                              | 0.78%                  |
| 6        | Sweet Pea       |             | 5"    | Alan Reid       | Fylde SME                       | 28                  | 7764                    | 1.2000          | 89170              | 0.097              | 3.1510    | 2.571                         | 0.4441                               | 0.67%                  |
| 7        | Conway          | Betty       | 3½"   | Nigel Thompson  | Erewash Valley MES              | 29                  | 7704                    | 1.2375          | 91075              | 0.095              | 3.0188    | 2.560                         | 0.44839                              | 0.66%                  |
| 8        | Conway          |             | 3½"   | Marcus Peel     | Southport MES                   | 29                  | 6969                    | 1.0000          | 71775              | 0.075              | 2.7308    | 2.069                         | 0.45977                              | 0.65%                  |
| 9        | Sweet Pea       | Oswald      | 5"    | Roger Pugh      | Oswestry & North Shropshire MES | 27                  | 7708                    | 2.7813          | 71130              | 0.080              | 3.2441    | 6.181                         | 1.29033                              | 0.23%                  |
| 10       | Sweet Pea       | Hero        | 5"    | Matthew Higgins | Oswestry & North Shropshire MES | 29.5                | 3838                    | 1.7375          | 24280              | 0.025              | 1.4784    | 3.534                         | 2.36151                              | 0.13%                  |

|   |              |  |                                                         |
|---|--------------|--|---------------------------------------------------------|
| R | Retired      |  | Past Winners and International Narrow Gauge Locomotives |
| D | Disqualified |  | Narrow Gauge Locomotive Trophy                          |
|   |              |  | Best placed 3.5" Gauge Locomotive                       |



# The Midlands Federation Rally 2017

**Terry** reports on this well-attended summer rally which featured a wide range of visiting steam and diesel outline locomotive types

BY TERRY DELL

**B**urton-upon-Trent Model Engineering Society hosted the 2017 Midlands Federation Rally at their track and facilities on 'Bass's Meadow' (yes, that Bass, it is a brewery town), an attractive riverside site on the outskirts of Burton-upon-Trent, itself an area steeped in railway history.

The Burton Society was founded in 1947, so this rally was held in its 70th anniversary year. A celebration to mark this important milestone in the history of the society is being planned for later this year.

While the Society might be a small club in terms of numbers of members, it has impressive facilities with an 850 foot long ground level track for both 7¼" and 5" gauge locomotives as well as a raised track for 3½" and 5" gauges approximately 775 ft long. These are supported by ground level steaming bays and turntable, and raised level covered preparation bays, along with stations and clubhouse facilities.

## A FAIR WEATHER DAY

Everything came together on Sunday 11 June to make the 2017 Midland Federation Rally a successful and most enjoyable day. Unusually for a Sunday in June the weather was kind, warm and mostly sunny.

From early morning a steady stream of visitors arrived with locomotive owners outnumbered many times over by visiting members of other society's who came to enjoy a day in the company of like-minded model engineering enthusiasts. This excellent attendance made the effort of organising the rally well worthwhile.

### PHOTOGRAPH 1:

John Dutton with his highly detailed 5" gauge 'Baby Deltic' D5901 on the raised level track where it runs alongside the River Trent at the far side of 'Bass's Meadow'.



## VISITING VARIETY

Fortunately visiting locomotives were divided between gauges and track preference so drivers were able to spend as much time on the track as they wished. Only a limited amount of control was needed on the raised track to ensure everyone had a reasonable run.

First out of the ground level steaming bay was John Ward with his extensively modified 5" gauge Sweet Pea 0-4-2 'Alicat'. What makes John's locomotive so very unique is that the frames, cylinders, cab, saddle tank, connecting rods, buffer beams and the firebox cladding are all aluminium! 'Alicat' ran well on both the ground and raised tracks with visitors trying their hand at driving this most unusual and particularly well engineered locomotive. 'Alicat' was the first model to run in the morning, and the last to leave the track in the late afternoon.

Following closely behind from the ground level bay was Mike Edmonds with his 5" gauge Class 15 Bo-Bo diesel outline D8234 'Arlees' in BR green livery, complete with digital sound system. Mike is a prolific diesel outline loco builder, having previously built a finely detailed and weathered Class 50 as well as a 'Western' Hydraulic Class 52.

Bob Daniels brought his magnificent 5" gauge 'Midland Single' 4-2-2 No 2603 which he built in 1990 and this performed particularly well for most of the day on the raised track. Bob is well known as a very skilled model engineer. We suspect he had difficulty deciding which of his superb collection of hand built locomotives to bring to the rally.

### PHOTOGRAPH 2:

Bob Daniels at the raised track water point with his superb 5" 'Midland Single' No 2603. The model attracted plenty of admirers during the day.







3

George Moore, grandson of Rugeley chairman Derek Moore drove his 5" '08' 0-6-0 D8402. In a hobby where the age profile is quite high it was a pleasure to see George and other young enthusiasts attend the rally and enjoying the day.

One of the 3½" gauge visiting locomotives was Bryan Wilson's 'Katherine Anne' 2-8-0 Canadian Pacific locomotive, loosely based on the Martin Evans 'Buffalo'. This locomotive has a reputation as a particularly good hauler having been known to pull 5 fully loaded passenger trolleys at its home track, performing much more like a 5" narrow gauge locomotive. Brian has built several excellent models including a magnificent highly detailed 5" gauge 9F 92220 'Evening Star', and his current project at an advanced stage is a 3 cylinder 5" gauge rebuilt 'Merchant Navy'.

Another good 3½" performer was Jim Smith's black 2-6-0 Stanier Mogul 42980, which he finished building in 2016, to a design often referred to as a 'Princess Marina'.

#### PHOTOGRAPH 3

Jim Smith passes the walkway approaching the raised level station with his impressive 3½" gauge Stanier 'Mogul'.

#### PHOTOGRAPH 4

David Osborn's very finely detailed 'Vale of Rheidol' coaches, complete with passengers along with the Midland Federation cups for presentation in the afternoon.

#### PHOTOGRAPH 5

With a young enthusiast looking on, David Brownjohn prepares his modified Polly 6 ready for the 'off'.



4

Another special visitor was David Brownjohn with his modified 5" gauge Polly 6 'Gillian'. Although based upon an original 'Polly' design, David has carried out extensive modifications and a lot of additional work on his locomotive, which steamed well all afternoon.

John Dutton 'powered up' and ran his highly detailed 5" Bo-Bo 'Baby Deltic class 23 diesel electric D5901. Along with installing both a sound system and smoke generator, (yes, it exhausts artificial fumes) John has put a lot of work into detailing this locomotive and it is finished in a prototypical BR 'deep bronze green' with a late BR crest exactly as would have been seen on the Kings Cross suburban services in the early 60's.

A regular 'Mid Fed Rally' attendee was John Ollerenshaw with his modified 0-4-2 Sweet Pea 'Sweet Sue' looking very nice in 'Caledonian Blue'. Unusually for Sweet Pea owners, John always prefers to run his locomotive on ground level tracks.



5





6

Well known NW Leicester member Dave Waldren decided to bring his 5" diesel outline Co-Co 47091 to the rally on this occasion. After some frantic searches for a replacement fuse, the Class 47 eventually ran flawlessly for most of the afternoon.

Although arriving later in the day, there was still time for Maurice Bennett to drive his 5" 'D' Class 15 Bo-Bo diesel outline. Maurice began constructing this loco from a kit in 2016, and it is still 'work in progress'. Although mechanically the model runs well, Maurice still has detailing work to do before he can call it 'finished' (are any of our models ever 'finished'?), Maurice has visited several previous 'Mid Fed's' with his 5" 'Meter Maid' and 7¼ 'Sweet William'.

Visitors were well looked after with food and drinks during the day by the very capable Burton catering team of Chris, Wendy and Roy.

#### PHOTOGRAPH 6

With a much lighter passenger load than he is accustomed to at his home track, Bryan Wilson approaches Bladon Halt on the raised level track with his powerful 3½" gauge 'Buffalo'.

#### PHOTOGRAPH 7

John Ollerenshaw steams his lovely example of a 5" 'Sweet Pea' out of the low level station and across the steaming bay trailing pointwork.

#### PHOTOGRAPH 8

There is time for conversation as Maurice Bennett waits for the 'all clear' to depart Bladon Halt with his Class 15.





**PHOTOGRAPH 9**

Now on the raised track, John Ward passes alongside the River Trent with his unique aluminium 'Alicat' 5" gauge Sweet Pea.

**PHOTOGRAPH 10**

Drivers wait to enter the station during a busy spell on the raised track during the afternoon of the rally.

## COMPETITION RESULTS

During the afternoon, judging of the competition for the Midland Federation Trophies took place.

The Campbell Cup (Best finished locomotive) – Bob Daniels of Rugeley MES for his 'Midland Single'.

The Addenbrooke Cup – David Osborn of Sutton Coldfield MES for his 'Vale of Rheidol' coaches.

Highly recommended certificates were awarded to:

John Ward of Rugeley MES for 'Alicat'.

David Brownjohn of Birmingham MES for his modified Polly 6.

John Dutton of Rugeley MES for the 'Baby Deltic'.

Jim Smith also of Rugeley MES for his 'Mogul'.

## A DATE FOR YOUR DIARY

Next year's Midland Federation Rally has been provisionally booked to take place at the Northampton Model Engineering Society. Details will be published on their website:

[www.nsme.co.uk/index.html](http://www.nsme.co.uk/index.html) and on the Midland Federation website: [www.midfedmodeng.altervista.org/index.html](http://www.midfedmodeng.altervista.org/index.html)

## WEB LINK

A collection of photographs taken by Burton members at the 2017 Rally can be found as a link from the NEWS page of their society's website.

[www.burton-upon-trentmes.org.uk](http://www.burton-upon-trentmes.org.uk)

**PHOTOGRAPH 11**

Keith Bloor, Chairman of Burton-upon-Trent Model Engineering Society, presents the Campbell Trophy for best locomotive to Bob Daniels of the Rugeley Power Station Society of Model Engineers.





# The Giant Miniature Weekend

Last month, **Mark** showed us some of the full-size treasures to be found at Statfold Barn, but that wasn't why he visited. He was looking for some miniature steam

BY MARK SMITHERS

**T**he Great Miniature Weekend of May 6th-7th 2017 provided the opportunity for road steam to take centre stage at Statfold Barn and the home-based fleet was represented in steam by 1927 vintage 3-ton Wallis and Stevens 'Simplicity' roller Emily (W/N 7939 of 1927). There was a representative selection of visiting full-size road steam vehicles including products of Aveling & Porter, Marshall and John Fowler & Co.

In addition to these items, the range of models on display, both outdoors and inside the Locomotive

#### ABOVE

A popular event staged on a few occasions during the Giant Miniature Weekend was the 'Big Whistle' and this view shows many of the model exhibits 'in fine voice' during the 'Big Whistle'.

Running Shed was extensive, and the indoor display was enhanced by the presence of a stand belonging to the Kinver & West Midlands SME, which contained items ranging from 5 inch gauge railway locomotives and rolling stock to a fine 3 inch scale Burrell showman's engine and fairground organ, the latter still in the course of construction.

Most of the models of road vehicles on display were built to either 3 inch or 4 inch scale, as was to be expected, but one of Statfold Barn's most recent projects is worthy of special mention. This is the 9 inch

scale Tasker single cylinder 'Little Giant' tractor. This engine carries a plate with an inscription dedicated to Catherine McArthur, mother of the late Charles Matthews.

One of the highlights of the Giant Miniature Weekend was the 'Big Whistle', in which the assembled collection of miniature road vehicles was given the opportunity demonstrate the power of steam in making its voice heard. All in all, this event has been a thoroughly enjoyable addition to the Statfold Barn events calendar, which it is hoped can be repeated in future years. ■

2

#### PHOTOGRAPH 2

This view shows another John Fowler product, Class 'DNB' compound roller W/N 17492 of 1928, on May 6th 2017.

3

#### PHOTOGRAPH 3

By way of contrast with the previous view Aveling & Porter 5NHP single cylinder roller Rosetta (W/N 9024 of 1919) is seen here on May 6th 2017.







4



5



6

**PHOTOGRAPH 4**

The Giant Miniature Weekend of May 6th-7th 2017 was a great success and it featured many traction engines, both full-size and miniature. Here, John Fowler W/N 12761 of 1911 *Elsa*, an 'A8' Class 7NHP General Purpose Engine is seen close to the railway terminal on May 6th 2017.

**PHOTOGRAPH 5**

A Marshalls of Gainsborough representative amongst the items on display at the Giant Miniature Weekend was this 4NHP 5-ton compound tractor W/N 68872 of 1915.

**PHOTOGRAPH 6**

Amongst the models on display was a fine pair of 3 in. scale Class 'K5' John Fowler ploughing engines built by the late Jack Elliott of East Leake and currently owned by Stephen and Shirley Leedham of Lutterworth. This one is completed in 2004 and is named *Black Beauty*.

**PHOTOGRAPH 7**

Unmistakable by reason of its distinctive inclined boiler barrel was this Wallis & Stevens 'Simplicity' 3-ton 1 NHP roller W/N 7939 of 1927. This roller is part of the Statfold collection and carries the name *Emily* on its left hand side.



7





8



9

**PHOTOGRAPH 8**

This view shows *Black Beauty's* sister, *Black Bess*, completed in 2002.

**PHOTOGRAPH 9**

The Burrell two-cylinder single crank compound design was represented in model form during the Giant Miniature Weekend by this 4 inch scale example, named *Gemini II*.

**PHOTOGRAPH 10**

One of the Giant Miniature Weekend's attractions was a miniature railway in the Grain Store area and one of the locomotives on display was another 5 inch gauge Hunslet, *Lady Madcap*, built and owned by Steve Milns of Shropshire.

**PHOTOGRAPH 11**

Another of the Kinver & West Midlands S.M.E. exhibits was this 5 inch gauge G.W.R. '9400' pannier tank locomotive.

**PHOTOGRAPH 12**

The second 4 inch scale Foster single cylinder, this time with the drivers seat built in rather than attached as a trailer.



10



11



12





13

**PHOTOGRAPH 13**

One of the indoor stands that featured in the 'Giant Miniature Weekend' belonged to the Kinver & West Midlands S.M.E. The 'star attraction' of this stand's exhibits was this 3 inch scale Burrell showman's engine built by Stephen Harbach.

**PHOTOGRAPH 14**

By way of contrast with the '9400', the Kinver & West Midlands S.M.E. stand also featured a 5 inch gauge 'Quarry Hunslet' 0-4-OST *Rough Pup*.

**PHOTOGRAPH 15**

One of the more unusual large-scale models on display was this vertical boiler steam tractor, based on an original constructed by the Waterous Engine Works Co. of Brentford, Ontario, Canada.

**PHOTOGRAPH 16**

Foden vehicles were also to be found amongst the models on display, including this 4 ½ inch scale Foden wagon.

**PHOTOGRAPH 17**

Putting on a fine show with its patriotic flags was this 4 inch scale Burrell showman's engine, *Jane*.



14



15



16



17





18



19

**PHOTOGRAPH 18**

Another 3 inch scale single cylinder tractor, this time based on a John Fowler prototype.

**PHOTOGRAPH 19**

A fine 3 inch scale single cylinder Allchin tractor.

**PHOTOGRAPH 20**

The more conventional Burrell double crank compound design was also represented, as can be seen in this view.

**PHOTOGRAPH 21**

Another classic single cylinder tractor reproduced in 4 inch scale was this Garrett.

**PHOTOGRAPH 22**

A manufacturer appropriately represented during the Giant Miniature Weekend was McClaren of Leeds, which had Manning Wardle, Hunslet Engine Co. and Hudswell Clarke as close neighbours. This 4 inch scale compound showman's engine is named *Lady Jennifer*.

**PHOTOGRAPH 23**

The classic overtype Foden tractor was represented in 6 inch scale by this example, seen posing with Statfold Junction station in the background.

**PHOTOGRAPH 24**

The Foster single cylinder tractor was well represented during the Giant Miniature Weekend two examples, both built to 4 inch scale.



20



21



22



23



24



# CLUB NEWSROUND



BY JOHN ARROWSMITH

With the clocks going back this month thoughts are no doubt turning to less outside activities and more workshop time, so dust off those projects that have been sitting there for months and get them completed.

Looking through the Summer edition of the Gauge 1 MRA I could not help but be impressed by both the quality and content of this magazine. It is excellent and I do hope that members appreciate their club magazine to its fullest extent.

We have all heard of the Watercress line, the Poppy line and the Strawberry line, now in North Yorkshire we have the Asparagus line. A new 7¼" gauge line has been built in North Yorkshire to carry asparagus from the picking area on the farm to the farm shop and to carry pickers in the opposite direction. It has a brand new "Warship" electric locomotive and a rake of carriages and a freight wagon. It also carries consignments of strawberries and pumpkins. It seems there is no end to all the new lines that are operating this year, does anyone know of any others?

The Summer edition of the **Bristol SME** Club magazine has some interesting articles and points of view within its pages. One of the articles is about a well known Auction house that specialises in selling models. There were some very fine models available but they did not reach their reserve prices in some cases which is surprising when you see the quality. For example, a Gold medal prize winning 7¼" LSWR Beyer Peacock 2-4-0 did not sell, as the highest offer was £17000 which was below the reserve price. However, there were some excellent examples which exceeded the asking prices so it was a real mixed bag but useful information. The clubs "On the Table Evening" earlier in the year produced a wide range of models for members to enjoy ranging from a Hoglet V Twin motorcycle engine to a home made polishing machine with lots

of others under construction, locos and components. Chairman Norman Rogers is now asking members to consider starting a Saturday morning workshop session for young members to try and encourage them to look at the club and enjoy model engineering. The club have also joined the scheme set up by Chris Vine, he of "Bongo" and Peters Railway fame which encourages youngsters to develop an interest in science and engineering. There is a good website explaining the details and a number of UK model engineering clubs have already joined so we will wait to see how this evolves.

At the **Gauge 1 Model Railway Association** there is a fairly detailed discussion going on regarding changes to their Articles of Association which no doubt will all be sorted out at the

Built by James Stanton from the SLSV in Australia, an excellent example of a 0-6-0 in 5" gauge.







Enjoying the Summer sun at Broadfield boating lake on the Isle of Wight, a fine ocean liner.

AGM to be held this month at the Wood Green Animal Centre in Godmanchester Cambridgeshire. PE29 2NH. The AGM and Show is open to the general public so we hope this will be another successful event for them. The Association needs a new editor for their Journal and Newsletter which as I mentioned above is an excellent publication. The Yorkshire Group assisted in a STEM event at the NRM in July with the aim of attracting young people to get involved with Engineering and Technology. They had a LEGO Challenge operating to get a train with a small clockwork motor to run on a length of track. The gear ratio could be altered by the youngsters, they were also shown how friction could be an important factor and was dependant on the build quality of each model. It produced some excellent results. The length of each run was recorded so that the participants were fully involved with their efforts. There is to be another of these events during the October half term. This is a great idea by the group to attract new talent into the science and engineering world. In addition to this "hands on" feature there was also the group's small Branch line terminus layout demonstrating its workings together with a rolling road where a steam loco was in operation.

In the latest "Leedslines" the newsletter from the **Leeds SME** Chairman Jack Salter, makes some very relevant points concerning a very "Green" hobby. He recalls comments from visitors to Eggborough who comment about steam engines creating pollution and then are appreciative of the clubs electric loco's which are of course powered by the coal fired power station next door !! He suggests that model and experiment engineers are the real greens because they reuse, repair and recycle while the general position among the public is to go straight to recycling. Makes you think doesn't it. At the clubs Trophy Night earlier in the year, The Wanless Trophy was awarded to Nigel Bennet for his new "Tom Rolt" regulator. This seems to be a very precise piece of work in which Nigel has incorporated a 5 start thread of M10x 5mm pitch. Not many people would attempt that these days. The Leeds Trophy for 2017 was awarded to Phillip Moore for his Halton Tank locomotive. At the April running day and Phillip then spent most of the day passenger hauling with his engine. The club will be holding their 81st AGM at the Sports Club on Wednesday 18th October.

There has been a great deal of activity taking place at the "Puffing Field" tracksite of the **St Albans & District Model Engineers** with the arrival of a new storage container

which when it is fitted out will enable the club to end their tenancy of the rented storage space. In addition they have built a new toilet block which will greatly enhance the clubs facilities. A good sum was raised at the clubs auction night which will no doubt please the treasurer. The opening day for the steaming bays was due in August so we hope all went well with that event and we also hope their annual exhibition was a success too. The club enjoyed a good weekend at the Oaklands Steam Fair with lots of visitors admiring their display. The star attraction was the 2½" gauge Kenya – Uganda Railways EC3 class Beyer Garratt, at almost eight feet long it was an impressive model.

As always, members at the **Stockholes Farm Railway** have been busy with all the usual jobs required to maintain a miniature railway system. At their AGM they remembered one of their longest serving members, Phil Amson who has passed away. Phil was the newsletter editor and committee member while his wife Sue looked after the booking office. Concern was expressed about the number of members who turn up for operational days which sometimes does stretch the available resources. However, on a more positive note they have had a number of new members join so hopefully this will help the situation. It was surprising to note that the railway operated on about 60 days last year which equates to more than once a week. Wednesday working evenings are well supported so much so that a new locomotive D5514 has joined the operational fleet. Their Easter Open Day was very busy with probably a record number of both passengers carried and trains run, in addition the tea room sold out of everything they had so poor Barbara and Ivan had to go hungry for the night! Another private visit by a group of photographers was also very successful with lots of satisfying complements being exchanged. A training day for old and new members was also well supported in June and will be repeated as required. With the completion of the goods circuit there is now a requirement to add watering services at two locations so this is being actively progressed by obtaining water tanks and ball valves to complete the installations. ■

A demonstration by the G1MRA at the National Railway Museum.









# OCTOBER DIARY

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>1</b> <b>Ashmanhaugh Light Railway.</b> Public running Open Day 14.00pm – 17.00pm.</p> <p><b>1</b> <b>Basingstoke MES.</b> Public running at Viabes Craft Centre 11.00am – 16.00pm.</p> <p><b>1</b> <b>Bournemouth SME.</b> Public running at Littledown Park 11.00am – 15.30pm every Sunday.</p> <p><b>1</b> <b>Burnley &amp; Pendle MRS.</b> Public running in Thompson Park 12.00noon – 16.00pm every weekend.</p> <p><b>1</b> <b>Chelmsford City SME.</b> Public running at Meteor Way 14.00pm – 16.30pm. CM1 2RL.</p> <p><b>1</b> <b>Cheltenham SME.</b> Public running at Hatherley Lane 14.00pm – 17.00pm.</p> <p><b>1</b> <b>City of Oxford SME.</b> Public running at Cutteslow Park 13.00pm – 16.30pm.</p> <p><b>1</b> <b>2½" National Association Rally</b> at the Chesterfield &amp; DMES Hady from 10.00am.</p> <p><b>1</b> <b>Crawley MES.</b> Public running at Goffs Park Light Railway 14.00pm – 17.00pm. RH11 8PB.</p> <p><b>1</b> <b>East Herts Miniature Railway.</b> Public running at the Van Hage Garden Centre, Great Amwell from 11.00am.</p> <p><b>1</b> <b>Frimley Lodge M R.</b> Public running Sturt Road 11.00am – 17.00pm.</p> <p><b>1</b> <b>Fylde SME.</b> Public running at Thornton Cleveleys 13.30pm – 16.00pm.</p> <p><b>1</b> <b>Gravesend MEMS.</b> Public running at Cascades Leisure Centre 14.00pm – 17.00pm every Sunday.</p> <p><b>1</b> <b>Great Cockrow Railway.</b> Public running 13.30pm – 17.00pm. KT16 0AD.</p> <p><b>1</b> <b>Grimsby &amp; Cleethorpes MES.</b> Public running at Waltham Mill 12.00noon – 16.00pm every Sunday.</p> <p><b>1</b> <b>Harrow &amp; Wembley SME.</b> Public running at Roxbourne Park 14.00pm – 17.00pm</p> <p><b>1</b> <b>Leicester SME.</b> Public running at Abbey Park 13.00pm – 17.00pm every Sunday.</p> <p><b>1</b> <b>Leyland SME.</b> Public running in Worden Park from 11.00am.</p> <p><b>1</b> <b>Malden DMES.</b> Public running at Thames Ditton Railway 14.00pm – 17.00pm.</p> <p><b>1</b> <b>Merthyr Tydfil MES.</b> Public running in Cyfarthfa Park 12.00noon – 17.00pm.</p> | <p><b>1</b> <b>Mid Cheshire MES.</b> Public running at Sandiway Wood 12.00noon – 16.00pm.</p> <p><b>1</b> <b>Milton Keynes MES.</b> Public running at Caldecotte MR 13.00pm – 17.00pm. MK7 8HP.</p> <p><b>1</b> <b>North London SME.</b> Public running at Colney Heath 14.00pm – 17.00pm.</p> <p><b>1</b> <b>Northampton SME.</b> Public running at Delapre Park 14.00pm – 17.00pm.</p> <p><b>1</b> <b>Nottingham SME.</b> Public running at Ruddington with Road Transport event 11.00am – 16.00pm.</p> <p><b>1</b> <b>Polegate MEC.</b> Public running at Polegate Oaks, William Daly Recreation Grd 14.00pm – 17.00pm.</p> <p><b>1</b> <b>Portsmouth MES.</b> Public running at Bransbury Park 14.00pm – 17.00pm every Sunday.</p> <p><b>1</b> <b>Plymouth MS.</b> Public running at Goodwin Park 14.00pm – 16.00pm.</p> <p><b>1</b> <b>Reading SME.</b> Public running in Prospect Park from 13.30pm.</p> <p><b>1</b> <b>Rochdale SME.</b> Public running at Springfield Park from 12.00noon every Sunday.</p> <p><b>1</b> <b>Saffron Walden DSME.</b> Public running at Audley End from 12.00noon.</p> <p><b>1</b> <b>Sale Area.</b> Public running at Walton Park 12.00noon – 16.30pm.</p> <p><b>1</b> <b>Southport MES.</b> Public running at Victoria Park 11.30am – 16.30pm.</p> <p><b>1</b> <b>Southampton SME.</b> Public running at Riverside Park 13.00pm – 16.00pm. SO18 1PQ.</p> <p><b>1</b> <b>Sutton Coldfield MES.</b> Steam Up at Little Hay from 10.00am. WS14 0QB.</p> <p><b>1</b> <b>Taunton SME.</b> Public running at Vivary Park 14.00pm – 17.00pm.</p> <p><b>1</b> <b>Teesside SGR.</b> Public running at Preston Park, Stockton on Tees 13.00pm – 16.00pm. TS18 3RH.</p> <p><b>1</b> <b>Urmston DMEC.</b> Public running at Abbotsfield Park 10.00am – 16.00pm every Sunday.</p> <p><b>1</b> <b>Vale of Aylesbury MES.</b> Autumn Steam Gala at Quainton from 11.00am.</p> <p><b>1</b> <b>West Country Guild of MES.</b> Public running at Curwen Park 13.30pm – 15.30pm.</p> <p><b>1</b> <b>West Huntspill MES.</b> Public running at New Road 14.00pm – 16.30pm every Sunday. TA9 3QE.</p> <p><b>1</b> <b>West Riding SLS.</b> Public running at Freedom House 13.30pm – 16.30pm.</p> | <p><b>1</b> <b>Wirral MES.</b> Public running at Royden Park 13.00pm – 16.00pm most Sundays.</p> <p><b>7</b> <b>Bridgend MR.</b> Public running in Parc Slip Nature Reserve 12.00noon – 16.00pm.</p> <p><b>7</b> <b>Brighton &amp; Hove MR.</b> Public running in Hove Park 13.30pm – 16.30pm.</p> <p><b>7</b> <b>Ickenham DMES.</b> Public running in Ickenham 12.00noon – 17.30pm.</p> <p><b>7</b> <b>North Wales MES.</b> Public running West Shore 12.00noon – 16.00pm every weekend.</p> <p><b>7/8</b> <b>East Somerset SME.</b> Open Weekend at Shepton Mallet from 10.00am daily. Contact 01747 860719.</p> <p><b>7/8</b> <b>Welling &amp; DSME.</b> Open Day for visiting clubs and Public running on Sunday from 12 noon.</p> <p><b>8</b> <b>Avonvale MES.</b> Public running at Dinnington 11.00am – 16.00pm.</p> <p><b>8</b> <b>Bedford MES.</b> Public running at Summerfields Railway 10.30am – 16.00pm.</p> <p><b>8</b> <b>Bracknell Railway Society.</b> Public running at Jocks Lane 14.00pm – 16.30pm.</p> <p><b>8</b> <b>Brighouse &amp; Halifax Open Day</b> at Ravenssprings Park 13.00pm – 17.00pm.</p> <p><b>8</b> <b>Cambridge &amp; DMES.</b> Public running at Fulbrooke Road 13.30pm – 17.30pm.</p> <p><b>8</b> <b>Canterbury DMES.</b> Public running at Marlow Meadows, Sturry 14.00pm – 16.00pm.</p> <p><b>8</b> <b>Cardiff MES.</b> Public running at Heath Park 13.00pm – 17.00pm.</p> <p><b>8</b> <b>Canvey Island MR.</b> Public running at Waterside Farm Centre SS8 9RA.</p> <p><b>8</b> <b>Harlington LS.</b> Public running at High Street, Harlington 14.00pm – 17.00pm.</p> <p><b>8</b> <b>Hereford SME.</b> Public running at Broomy Hill 12.00noon – 16.30pm.</p> <p><b>8</b> <b>Sheffield MES.</b> Public running at Abbeydale Railway 13.00pm – 17.00pm.</p> <p><b>8</b> <b>South Durham MES.</b> Exhibition of Models &amp; Steaming Competition 10.00am – 15.00pm DL2 2BN.</p> <p><b>8</b> <b>Worthing &amp; DMES.</b> Public running at Field Place 14.00pm – 17.00pm.</p> <p><b>14/15</b> <b>Klondike Mill Staffordshire Steam Party</b> with the North Staffs &amp; Cheshire TEC from 10.00am each day.</p> | <p><b>14</b> <b>G1 MRA AGM &amp; Trade Show</b> at Wood Green, Godmanchester. Contact <a href="http://www.g1mra.com">www.g1mra.com</a> for more information.</p> <p><b>15</b> <b>Chesterfield &amp; DMES.</b> Public running at Hady 12.00noon – 16.00pm.</p> <p><b>15</b> <b>Guildford MES.</b> Public running in Stoke Park 14.00pm – 17.00pm.</p> <p><b>15</b> <b>Huddersfield SME.</b> Public running at Highfields Railway 11.00am – 16.00pm.</p> <p><b>15</b> <b>Pinewood (Wokingham) MR.</b> Public running at Pinewood Leisure Centre 13.30pm – 16.00pm.</p> <p><b>15</b> <b>Rugby MES.</b> Public running at Rainsbrook Valley Railway 14.00pm – 17.00pm.</p> <p><b>15</b> <b>Yeovil &amp; Westland MES.</b> Track running day at Westland Leisure Centre 11.00am -16.30pm.</p> <p><b>18</b> <b>North West Leicester SME.</b> Public running Hermitage Leisure Centre 13.00pm – 16.00pm LE67 5BZ.</p> <p><b>19/22</b> <b>Midlands Model Engineering Exhibition</b> at the Warwickshire Exhibition Centre from 10.00 am each day.</p> <p><b>21</b> <b>West Wilts SME.</b> Club Track meeting 10.00am – 16.00pm White Horse Country Park.</p> <p><b>22</b> <b>Staines SME.</b> Public running at Commercial Road 13.00pm – 16.00pm. TW18 2QJ</p> <p><b>28/29</b> <b>Claymills PS.</b> October Steaming 10.00am – 17.00pm each day.</p> <p><b>28/29</b> <b>Millerbeck Light Railway</b> Halloween running 11.00am – 16.00pm.</p> <p><b>28/29/31</b> <b>Bromsgrove MES.</b> Trick or Treat Event 11.30am – 15.00pm.</p> <p><b>28</b> <b>Basingstoke MES</b> Halloween at Viabes Craft Centre.</p> <p><b>28</b> <b>Birmingham SME</b> Halloween Party 16.00pm – 19.00pm.</p> <p><b>28</b> <b>Coventry MES</b> Halloween running at Ryton Pools Railway 18.30pm – 20.30pm.</p> <p><b>28</b> <b>Evergreens Miniature Railway</b> Open Day 10.30am – 16.00pm Nr. Boston Lincs.</p> <p><b>28</b> <b>Hereford SME.</b> Halloween running at Broomy Hill from 14.00pm – 18.00pm.</p> <p><b>28</b> <b>Sale Area</b> Halloween Event in Walton Park.</p> <p><b>28</b> <b>Stockholes Farm Railway</b> Halloween running 16.00pm – 20.00pm.</p> <p><b>29</b> <b>Maidstone MES.</b> Public running in Mote Park from 14.00pm.</p> <p><b>31</b> <b>Lancaster &amp; Morecombe MES</b> Halloween event at Cinderbarrow.</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Details for inclusion in this diary must be received at least EIGHT weeks prior to publication. Please ensure that full information is given, including the full address of where every event is being held. Whilst every possible care is taken in compiling this diary, we cannot accept responsibility for any errors or omissions.





## INSURANCE FOR CLUBS SOCIETIES & INDIVIDUALS

Club & Society Public Liability automatically includes all members anywhere in the UK or Europe without extra charge.

Road Traffic Act insurance for miniature road vehicles  
Models & Home Workshops, Road Trailers, Portable Track,  
Personal Accident, Directors & Officers  
Boiler Testers Professional Indemnity  
Modelling & Model Engineering Businesses  
Commercial Miniature Railways up to 2ft gauge

**PLUS**

Vintage Tractors, Stationary Engines, Traction Engines, Motor Rollers  
Lorries & Low Loaders, Steam Cars, Memorabilia & Collectables  
and, of course, Home Buildings & Contents and Cars



**Insurance for  
Modellers and  
Model Engineers**

Please contact us for details

**Suite 6D, The Balance, Pinfold Street, Sheffield S1 2GU**  
**Tel: 0114 250 2770 [www.walkermidgley.co.uk](http://www.walkermidgley.co.uk)**

Walker Midgley Insurance Brokers is a trading name of Towergate Underwriting Group Limited  
Registered in England No. 4043759 Registered address: Towergate House, Eclipse Park, Sittingbourne  
Road, Maidstone, Kent ME14 3EN. Authorised and regulated by the Financial Conduct Authority



## MAXITRAK.COM

**5" & 7 1/4"**  
**Planet II**  
**from**  
**£1,750**

**Catalogue -**  
**£3.50**



**Finance available -**  
**ask for details**



**5"**  
**Class 25**  
**from**  
**£2,015**

**5"**  
**Class 20**  
**from**  
**£1,845**



**MAXITRAK.M.E.S 10 Larkstore Park Lodge Road Staplehurst Kent**  
**TN12 0QY Tel : 01580 893030 Email : [info@maxitrak.com](mailto:info@maxitrak.com)**

## THE MOST VERSATILE TOOL FOR TURNING & FACING

It's easy to see why our best selling turning tool is the SCLCR. It can turn and face a bar without altering the toolpost, and the 80° nose angle gives much more strength than a 60° (triangular) insert. The NJ17 insert cuts steel, stainless, cast iron, phosphor bronze, aluminium, copper, brass etc. Please state shank size required - 8, 10 or 12mm square. Spare inserts £6.64 each for 8-10mm tools, £7.78 for 12mm.

**SPECIAL OFFER PRICE £39.20**

## USE THE OTHER 2 CORNERS FOR ECONOMY!

Our SCRCR rough turning tool uses the same inserts as the SCLCR tools above. The good news is that it uses the other two corners! These very strong 100° corners are rigid enough for rough or intermittent turning. The insert is mounted at 75° to the lathe axis. 10mm sq section (for CCMT06 insert) and 12mm section (for CCMT09 insert).

**SPECIAL OFFER PRICE £39.90**

## PROFILING WHEELS or SHAPING AXLES & PILLARS?

If you need to create complex shapes, our SRDCN button tool is invaluable. The 10mm square shank holds a 5mm dia cutting insert, and gives great versatility, superb strength and excellent tool life. The late Mr D Hudson of Bromsgrove SME used these tools for many years to profile the special form of tyre treads for his self-steering wheel sets with great consistency. Spare inserts just £5.79 each.

**SPECIAL OFFER PRICE £39.20**

## TURN SMALL DIAMETERS with LIVE CENTRE IN PLACE!

The SDJCR tool uses a 55° insert, allowing access to small diameter components when using a tailstock centre. It can also profile back-angles.

The NJ17 insert cuts steel, stainless, cast iron, phosphor bronze, brass, copper, aluminium etc. Shank size 10mm square section. Spare inserts just £6.64 each.

**SPECIAL OFFER PRICE £39.20**

## A TOP QUALITY BORING BAR FOR YOUR LATHE

Here's your chance to own a top quality boring bar which uses our standard CCMT06 insert. Steel shank bars can generally bore to a length of approx 5 times their diameter. Please state bar dia req'd - 8, 10, 12 or 16mm. Spare inserts just £6.64 each.

**SPECIAL OFFER PRICE £42.58**

## WAKE UP FROM YOUR NIGHTMARE WITH KIT-Q-CUT!

The original and famous Kit-Q-Cut parting tool fits the vast majority of ME lathes, including ML7 & ML10 machines, regardless of toolpost type. The tool can effortlessly part through 1.5/8" dia. bar. It comes complete with key to insert and eject the tough, wear resistant insert. Cuts virtually all materials. Spare inserts just £10.43 each.

**SPECIAL OFFER PRICE £67.50**

## 55° NEUTRAL THREADING and PROFILING TOOL

Our SDNCN tool with neutrally mounted 55° insert allows Whitworth, BSF & BSP threads to be generated, as well as profile turning - both towards and away from the chuck. The 10mm square shank comes as standard with 0.2mm point radius insert. Inserts also available with 0.4mm or 0.8mm radius at the same price of £6.64 each.

**SPECIAL OFFER PRICE £39.90**

## EXTERNAL THREADCUTTING TOOL

These tools use the industry standard 16mm 'laydown' 3-edge inserts. With tough, tungsten carbide inserts, coated with TiAlN for wear resistance and smooth cutting, threads can be cut at very slow speeds if required. Tools are right hand as shown. 55° or 60° insert not included - order separately at £13.65. See our website for more info.

**SPECIAL OFFER PRICE £43.80**

## INTERNAL THREADCUTTING TOOL

These tools use the industry standard 11mm 'laydown' 3-edge inserts. With tough, TiAlN coated tungsten carbide inserts, quality threads can be cut with ease. Tools are right hand as in picture. 10, 12 and 16mm dia's available. 55° or 60° insert not included - order separately at £11.37. See our website for more info.

**SPECIAL OFFER PRICE £43.80**

## NEW! MACHINE REAMERS IN INCREMENTS OF 0.01 mm

Our Walter Titex machine reamers are made in Germany from HSS-Co5 (HSS-E). They are right hand cutting with left hand spiral flutes. Available from 0.95 mm to 12.00 mm diameter, these reamers can be ordered directly from our website.

## TURNING, BORING & PARTING TOOLS COMPLETE WITH ONE INSERT.

Please add £2.75 for p&p, irrespective of order size or value



## GREENWOOD TOOLS

Greenwood Tools Limited

2a Middlefield Road, Bromsgrove, Worcs. B60 2PW  
Phone: 01527 877576 - Email: [Greenwood@aol.com](mailto:Greenwood@aol.com)

**Buy securely online: [www.greenwood-tools.co.uk](http://www.greenwood-tools.co.uk)**



# The Steam Workshop

Now Incorporating D.Hewson Models

*All steam models bought, sold, exchanged, valued, restored, repaired, finished, painted, lined,  
.....and of course,.....played with!*

4 1/2" Burrell Showmans



5" Maxitrak Sapphire



7 1/4" GWR 1366



3" Foden Lorry



5" GWR Metro



3 1/2" Gresley V2



5" LNER Q5



We always have a huge number of models in stock, and are always interested in anything from a set of castings to a gold medal winner. Please do visit our website, or simply give us a bell for the most friendly, helpful, fair and knowledgeable,..... (if we do say so ourselves),..... service available.



By Enthusiasts



For Enthusiasts

07816 963463

[www.steamworkshop.co.uk](http://www.steamworkshop.co.uk)

Tracy Tools Ltd

Model Engineering Supplies

Visit our website:

We ship anywhere in the world

[www.tracytools.com](http://www.tracytools.com)

## PRODUCTS

- Taps and Dies
- Centre Drills
- Clearance Bargains
- Diestocks
- Drill sets (HSS) boxed
- Drills
- Drills set (loose) HS
- Endmills
- Lathe Tooling
- Reamers
- Slot Drills
- Specials
- Tailstock Die Holder
- Tap Wrenches
- Thread Chasers

Acme  
Taps



Taper Shank  
Drills HSS



Reamer



Taps &  
Dies



UNIT 1, PARKFIELD UNITS, BARTON HILL WAY, TORQUAY, TQ2 8JG



**Tracy Tools Ltd**

Tap & Die Specialist, Engineer Tool Supplies

Tel: 01803 328 603

Fax: 01803 328 157

Email: [info@tracytools.com](mailto:info@tracytools.com)

[www.tracytools.com](http://www.tracytools.com)



## LIVE STEAM MODELS

SPECIALISTS FOR DRAWINGS, CASTINGS,  
MACHINING AND FITTINGS  
FOR A RANGE OF  
3" - 6" TRACTION ENGINES  
INCLUDING  
RUSTON-PROCTOR, FOSTER,  
FOWLER, BURRELL, MARSHALL.

Celebrating 25 Years Trading 1992-2017



Send £4.00 for our Catalogue which includes our MES list to -  
Live Steam Models Ltd., Unit 7, Old Hall Mills, Little Eaton,  
Near Derby. DE21 5LA 01332 830811  
or visit  
[www.livesteammodels.co.uk](http://www.livesteammodels.co.uk)  
[info@livesteammodels.co.uk](mailto:info@livesteammodels.co.uk)

## 40th ANNIVERSARY



## MIDLANDS MODEL ENGINEERING EXHIBITION



### THE SHOW FOR MODEL ENGINEERS

**Thursday 19<sup>th</sup>  
to Sunday 22<sup>nd</sup>  
October 2017**

Thursday - Saturday: 10am-5pm  
Sunday: 10am-4pm

Last admission 1 hour before closing

**Warwickshire  
Exhibition Centre**

Nr Leamington Spa, CV31 1XN



...more than just an exhibition  
- it's an experience...

**Meet** over 40  
clubs & societies.  
**See** over 1,000  
models. **Learn**  
from the experts  
in the workshops &  
lectures. **Buy** from  
nearly 50 specialist  
suppliers.



SPONSORED BY  
THE MAGAZINE FOR MODEL ENGINEERS  
**ENGINEERING  
in Miniature**

**ENTER THE COMPETITION**  
Prizes & Certificates for Winners

**BOOK YOUR TICKETS NOW**

| ADMISSION PRICES | ONLINE TICKETS* | FULL PRICE TICKETS** |
|------------------|-----------------|----------------------|
| Adult            | £9.50           | £10.50               |
| Senior Citizen   | £8.50           | £9.50                |
| Child (5-14 yrs) | £3.00           | £4.00                |

\* Tickets are available via our website at discounted prices.

\*\* Full price tickets are available on the day from the ticket office.

Please call SEE Tickets on 0871 3861118 if you would like to book a ticket by phone. Calls cost 13p per minute plus network extras.



**FREE SHOW GUIDE**

SHUTTLE BUS FROM LEAMINGTON  
SPA RAILWAY STATION (not Sun)

FREE PARKING AT VENUE

**f** Meridienne  
Exhibitions LTD  
**@MeridienneEx**

**GROUP DISCOUNTS: 10+ enter code GRP10 on website.**

Lecture programme, exhibitor list & bus timetables online.

[www.midlandsmodelengineering.co.uk](http://www.midlandsmodelengineering.co.uk)



Organised by Meridienne Exhibitions Ltd

All information subject to change, correct at time of printing.



## Ride On Railways

UK manufacturer  
of 5" and 7 1/4"  
gauge railway  
equipment



Tel: 01708 374468 • [www.rideonrailways.co.uk](http://www.rideonrailways.co.uk)

## SPG TOOLS

• Mills • Lathes • Bandsaws  
• Accessories • Tooling



Tel: 01455618825  
07786182253

[www.spgtools.com](http://www.spgtools.com)



# CLASSIFIED ADVERTISEMENTS

**RATES:** Display box: £10.50 for scc (plus VAT) (min 25mm), Classified lineage 70p per word (inc.VAT) (min 20 words)  
All classified advertisements must be prepaid. ALL ADVERTISEMENTS SUBJECT TO VAT AT RATE AT TIME OF PRINT

**THE MAGAZINE FOR MODEL ENGINEERS**  
**ENGINEERING in Miniature**

## BACK ISSUES

Vol. 1 No. 1 (Apr 1979) to Vol. 18 No. 6 (Dec 1996) .....£2.20 each  
Vol. 18 No. 7 (Jan 1997) to Vol. 2 No. 4 (Oct 2000) .....£2.40 each  
Vol. 22 No. 5 (Nov 2000) to Vol. 28 No. 3 (Sep 2006) .....£2.60 each  
Vol. 28 No. 4 (Oct 2006) to Vol. 30 No. 6 (Dec 2008) .....£2.70 each  
Vol. 30 No. 7 (Jan 2009) to Vol. 18 No. 6 (Jun 2011) .....£2.95 each  
Vol. 33 No. 1 (Jul 2011) to Vol. 34 No. 2 (Aug 2012) .....£3.10 each  
Vol. 34 No. 3 (Sep 2012) to Vol. 36 No. 6 (Dec 2014) .....£3.30 each  
Vol. 36 No. 7 (Jan 2015) to Vol. 38 No. 2 (Aug 2016) .....£3.50 each

Early issues may be facsimiles (Photocopies - not original)  
Individual issues postage (UK) - quantity/cost 1/£1.35 2-3/£1.75 4-5/£2.35 6-12/£2.95  
pre-1997 for £21.00, 1997-2006 for £28.00, 2007-2012 for £32.00

**ANY 12 ISSUES** (All subject to availability - no stock of Volume 1):  
Volumes 2-19 inc. £32.95 (F) each, Volumes 20, 21 & 22 £35.95 (F) each  
Volumes 23-25 inc. £38.95 (F) each, Volumes 26-37 £42.95 (F) each

**BOUND VOLUMES** (All subject to availability - no stock of Volume 1):  
Volumes 2-19 inc. £32.95 (F) each, Volumes 20, 21 & 22 £35.95 (F) each  
Volumes 23-25 inc. £38.95 (F) each, Volumes 26-37 £42.95 (F) each

**All volumes, Unbound, Loosebound or Bound are subject to availability**  
UK Postage £5.95 per volume. Order over £50.00 sent free. Overseas postage please enquire.

**ORDER NOW** [www.teepublishing.co.uk](http://www.teepublishing.co.uk) or Call 01926 614101  
TEE Publishing, The Fosse, Fosse Way, Nr. Leamington Spa, Warks. CV31 1XN

**TO  
ADVERTISE  
HERE CALL  
ALLISON  
ON  
01778  
395002**

**BRITAIN'S FAVOURITE PHASE CONVERTERS**

**Transwave**  
CONVERTERS

STATIC CONVERTERS, ROTARY CONVERTERS  
**IMO** INVERTERS  
MOTORS, INVERTER-MOTOR PACKAGES  
PRICES FROM £106 + VAT

**0121 7084522 or FREEPHONE 0800 0352027**  
[transwave@powercapacitors.co.uk](mailto:transwave@powercapacitors.co.uk)  
[www.transwaveconverters.co.uk](http://www.transwaveconverters.co.uk)

MADE IN BRITAIN BY A 100% BRITISH OWNED COMPANY  
3-YEAR WARRANTY ON ALL CONVERTER PRODUCTS  
BS EN 9001:2008 QUALITY ASSURED MANUFACTURING ENVIRONMENT  
CE MARKED PRODUCTS COMPLIANT WITH EMC REGULATIONS,  
THE LOW VOLTAGE DIRECTIVE and BS EN ISO 61000-3-2:2006.

### VIEW MODELS

We trade in locomotives and traction engines in the model engineering scales. We have various models in stock for which a list is available on request. We are also interested in purchasing models and can provide a repair and restoration service for those without facilities.

**Telephone 01252 520229 or e-mail:**  
[viewmodels@yahoo.co.uk](mailto:viewmodels@yahoo.co.uk)

**MACC Model  
Engineers Supplies LTD**  
0161 408 2938 [www.maccmodels.co.uk](http://www.maccmodels.co.uk)

We supply a vast range of materials  
Brass, Steel, S/Steel Phos Bronze  
Sheet and Bar.  
Copper and Brass tube upto 6" dia

We also stock a range of high  
quality, British made steam fittings.  
BA Nuts and bolts, taps and Dies.....

**MODEL ENGINEERING PRODUCTS (Bexhill)**

[www.model-engineering.co.uk](http://www.model-engineering.co.uk)  
Email: [mep1@btconnect.com](mailto:mep1@btconnect.com)

**Manufacturer of 5 inch gauge  
diesel outline battery electric locos  
and accessories**

**PHONE: 01424 223702 MOBILE: 07704 256004**  
17 SEA ROAD, BEXHILL-ON-SEA  
EAST SUSSEX TN40 1EE

**ITEMS MAIL ORDER LTD**  
MAYFIELD, MARSH LANE, SAUNDBY  
RETFORD, NOTTS DN22 9ES  
Tel/Fax 01427 848880

BA SCREWS IN BRASS STEEL AND STAINLESS  
SOCKET SCREWS IN STEEL AND STAINLESS DRILLS,  
RIVETS, TAPS, DIES, END MILLS, SLOT DRILLS, ETC

BA SOCKET GRUB SCREWS FROM £1.72/10  
STAINLESS FROM £2.05/10  
BA SOCKET CAP SCREWS FROM £1.18/10  
STANDARD PACK SIZES 10, 25, 50 AND 100

**PHONE FOR FREE LIST**

## LASER CUTTING

**CNC Folding and Machining  
Fabrication and Welding**

All Locomotive & Traction Engine parts.  
Your drawings, E-files, Sketches.  
e: [stephen@laserframes.co.uk](mailto:stephen@laserframes.co.uk)  
m: 0754 200 1823  
t: 01423 734899 (answer phone)

Well Cottage, Church Hill, North Ripton, Leeds, LS17 0DF

[www.laserframes.co.uk](http://www.laserframes.co.uk)

**PRO  
MACHINE  
TOOLS LIMITED** Tel: 01780 740956

Precision machines made in Germany  
for the discerning engineer!

**EXCLUSIVE  
IMPORTERS FOR**

**We regularly ship worldwide**  
Please contact us for stock  
levels and more technical detail

**All of our prices can be  
found on our website**

[sales@emcomachinetools.co.uk](mailto:sales@emcomachinetools.co.uk)  
[www.emcomachinetools.co.uk](http://www.emcomachinetools.co.uk)

**Iseasteamdesigns.uk**

Currently in design 5" Gauge M&GN Railway  
'MELTON' Class 4 4 2 Tank Locomotive.  
Boiler/ locomotive fittings manufactured to order.  
Easy payment terms available.  
Contact Ian at [iseasteam2@gmail.com](mailto:iseasteam2@gmail.com) or  
Home 01485 541627 Mobile 07511 198943  
for more information.

## ADVERTISERS' INDEX

|                                           |              |
|-------------------------------------------|--------------|
| 17D Miniatures .....                      | 4            |
| Abbots Model Engineering.....             | 4            |
| College Engineering Supply.....           | 6            |
| Gauge 1 Model Railway Association .....   | 41           |
| Greenwood Tools.....                      | 43           |
| GS Model Supplies Ltd .....               | 4            |
| Home and Workshop Machinery.....          | 48           |
| Horley Miniature Locomotives .....        | 6            |
| Iseasteam .....                           | 46           |
| Items Mail Order Ltd.....                 | 46           |
| Kontax Engineering Ltd .....              | 4            |
| Laser Cutting.....                        | 46           |
| Live Steam Models Ltd .....               | 45           |
| Lynx Modelworks .....                     | 6            |
| Macc Model Engineers .....                | 46           |
| Maxitrak Ltd.....                         | 43           |
| Meridienne Exhibitions Ltd.....           | 25 - 28 & 45 |
| Model Engineering Supplies (Bexhill)..... | 46           |
| Parkside Railways .....                   | 41           |
| Polly Model Engineering Ltd.....          | 6            |
| Power Capacitors Ltd .....                | 46           |
| Pro Machine Tools Ltd.....                | 46           |
| Ride On Railways .....                    | 45           |
| Spg Tools .....                           | 45           |
| Station Road Steam .....                  | 47           |
| Stuart Models.....                        | 2            |
| Tee Publishing Ltd.....                   | 41 & 46      |
| The Steam Workshop (Hewson Models) ....   | 44           |
| Tracy Tools Ltd .....                     | 44           |
| View Models .....                         | 46           |
| Walker Midgley Insurance .....            | 43           |
| Warco.....                                | 5            |
| William Rowland Ltd .....                 | 6            |



# STATION ROAD STEAM

## ENGINEERS • LINCOLN

### LOCOMOTIVE BUILDERS • BOILERMAKERS

Full-size and miniature engines of all types bought, sold and part-



#### 7 1/4 INCH GAUGE "BRIDGET"

A well-built "Bridget" to Ken Swan's popular design, an older engine that came to us recently having remained unsteamed from new. It has a commercially built boiler by Swindon Boilers, chassis is particularly well made, running very quietly. Steamed once to check everything over, it's in fine condition and ready for (what remains of) the season £6750



#### 3 1/2 INCH GAUGE ATLANTIC

GNR large-boilered Atlantic to LBCS's popular "Maisie" design. Silver soldered copper boiler, 80psi working pressure, feed by axle pump and injector with auxiliary hand pump in the tender. Gunmetal cylinders with slide valves actuated by Stephenson's gear, pole reverser. £2350



#### 4 1/2 INCH SCALE BURRELL 6NHP AGRICULTURAL ENGINE

An older 4 1/2 inch scale Burrell 6NHP agricultural engine, built to the Plastow design. A well-built engine, paintwork is getting tired and it requires some minor work. Boiler is sound, it's recently had a twice working pressure hydraulic test and ultrasonic thickness survey. Steel boiler with expanded tubes, 110psi working pressure, twin Ramsbottom safety valves. Complete with a driving seat which fits onto the tender £12500



#### 5 INCH GAUGE "SIMPLEX" 0-6-0T

A nicely made "Simplex" 0-6-0T, a popular club engine with sufficient adhesive weight and power to handle continuous passenger hauling. Silver soldered copper boiler, feed by axle pump and injector. Gun metal cylinders with slide valves actuated by Walschaerts gear, mechanical lubricator. £3850



#### 5 INCH GAUGE POLLY "CAROLINE"

An exceptionally well-built "Caroline" 0-4-0T. New and unsteamed, the engine has been painted to a professional standard and nicely detailed throughout. Runs well on air, it awaits its first fire. £5950

**We keep a large, constantly-changing stock of second-hand in all scales and gauges. We are always interested in buying engines - from part-built through to exhibition-winning models.**



### NEW BUILD LOCOMOTIVES "STAFFORD" & "FELDBAHN"

We build a range of narrow gauge inspired locomotives in a variety of styles and sizes - from 5 inch gauge engines that fit into an estate car up to 10 1/4 inch gauge engines weighing over half a ton - suitable for all applications, from small garden railways to large commercial operations. Designed and built at our works in Lincolnshire, see our website for full specifications of the entire range,



### PARTS SHOP

We manufacture an ever-growing range of parts and accessories.



- Safety Valves
- Mechanical Lubricators
- Whistles
- Vacuum brake equipment
- Reverser kits
- Fusible plugs
- Chimneys
- Marine boilers

For more information please visit our website.

**We are always interested in acquiring engines of the type that we sell. If you know of a steam engine for sale, in absolutely any condition, please let us know. Engines bought outright, or we are happy to take them on a commission sale basis, or pay you a finder's fee if you put us in touch with an engine which we later purchase.**

**All engines listed are on our premises, available for inspection by appointment.**

**For full details, high resolution photographs and video see our website**

**Unit 16-17 Moorlands Trading Estate, Metherringham, Lincolnshire LN4 3HX - visitors welcome by appointment**  
**email: [info@stationroadsteam.com](mailto:info@stationroadsteam.com) www.[stationroadsteam.com](http://www.stationroadsteam.com) tel: 01526 328772**



# HOME AND WORKSHOP MACHINERY

## Genuine Used Machines & Tooling

144 Maidstone Road, Fooks Cray, Sidcup, Kent DA14 5HS

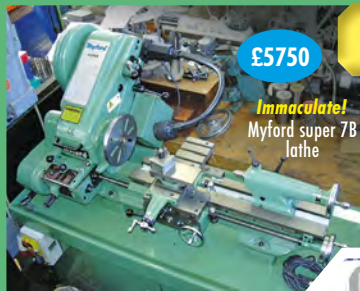
Tel: 0208 300 9070 - Evenings: 01959 532199 - Fax: 0208 309 6311

[www.homeandworkshop.co.uk](http://www.homeandworkshop.co.uk) • [sales@homeandworkshop.co.uk](mailto:sales@homeandworkshop.co.uk)

Opening Times: Monday-Friday 9am-5.30pm • Saturday Morning 9am-1pm

10 minutes from M25 - Junction 3 and South Circular - A205

**Lots of aluminium - just in!**



£5750

Immaculate!  
Myford super 7B  
lathe



£1725



£1175



£10-£49



£845



£145



£7 each



£950



£425



£345

**MYFORD GENUINE PARTS**  
Running out fast!  
Purchased from Nottingham  
Check the web site for full list!



£2450



£625



£425



£425



£2950

just arrived!



£2450



£3950



£3950



£525



£2250



£675



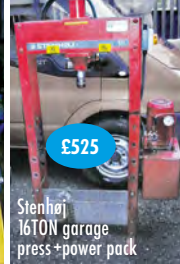
£2450



£750



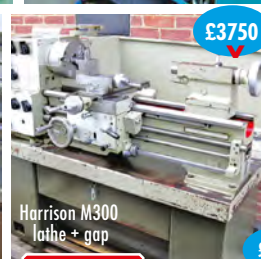
£725



£525



£2450



£3750



£525



£345



£625



£20 each



£165



£20 each



£3750



Just in!

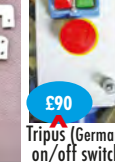
Myford 254S, 3 & 4 jaws, face 240 volts



£7 each



Special 5 for £20



£90



£245



£875

**Coming in... + more!**

- Boxford VM30 mills
- Harrison M300 lathes
- Harrison M250 3000rpm lathe
- Colchester Colt 40" centre lathes
- Myford 254 lever collet chucks

New even easier to use Web site!



Please PHONE 0208 300 9070 to check availability or to obtain our list  
DISTANCE NO PROBLEM! • DEFINITELY WORTH A VISIT • ALL PRICES EXCLUSIVE OF VAT  
Just a small selection of our current stock photographed!  
We are currently seeking late 'Myford Super 7B' & 'Super 7 large bore' model lathes!

**SHIPPING WORLDWIDE**