

I.M.L.E.C.

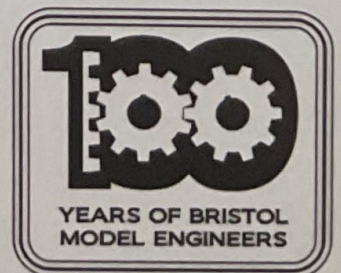
2009



THE 40th INTERNATIONAL MODEL LOCOMOTIVE EFFICIENCY COMPETITION



Hosted by the Bristol Society of
Model & Experimental Engineers
At their
Aston Court Estate Track



FREE!
DOUBLE
SIDED PLAN

SHEET 2 FOR MARTIN EVANS METRO TANK AND
THE TROJAN STEAM ENGINE BY EDGAR WESTBURY

MODEL ENGINEER

Vol. 202 No. 4347

13 - 26 March 2009

CAN \$8.95 | AUS \$6.95 | NZ \$10.50



EQUATORIAL SUNDIAL

- EDWARDIAN
ELEGANCE
PHOENIX CAR
- PSEUDO STEAM
- TIDE CLOCK
- IMLEC
COMPETITION
DETAILS

MAKING
TRACTION
ENGINE LAMPS

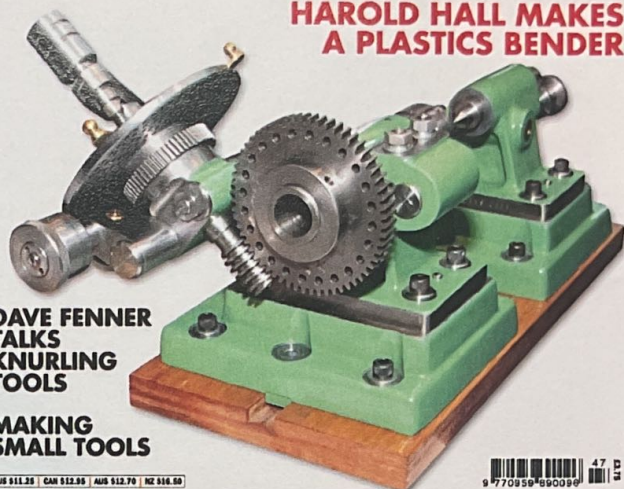
HURRY
OFFER CLOSES
6 August '09

FEBRUARY 2009

MODEL ENGINEERS' WORKSHOP

THE PRACTICAL HOBBY MAGAZINE

**HAROLD HALL MAKES
A PLASTICS BENDER**



DAVE FENNER
TALKS
KNURLING
TOOLS

MAKING
SMALL TOOLS

UK \$11.20 | CAN \$12.95 | AUS \$12.70 | NZ \$16.50

9 770950 800990 47 P



MAKING USEFUL SHEET
METAL CLAMPS



CNC CUTTER GRINDER
PROGRAMMING THE MACHINE



MAKING A DIGITAL
REV-COUNTER

SAVE UP TO 23%

when you
subscribe today

- SAVE 23% WHEN YOU SUBSCRIBE TO MODEL ENGINEER
- SAVE 13% WHEN YOU SUBSCRIBE TO MODEL ENGINEERS' WORKSHOP
- DELIVERED DIRECT TO YOUR DOOR ■ NEVER MISS AN ISSUE



PHONE: 08456 777 807

For Model Engineer, **QUOTE REF. S169**

For Model Engineers' Workshop, **QUOTE REF. S170**



ONLINE:

For Model Engineer: www.subscription.co.uk/mde/S169

For Model Engineers' Workshop: www.subscription.co.uk/mew/S170

The Fortieth Annual

INTERNATIONAL MODEL LOCOMOTIVE EFFICIENCY COMPETITION

For the

MARTIN EVANS CHALLENGE TROPHY

Contents	Page
Bristol S.M.E.E. Officials & Acknowledgements	2
Competition Officials	3
I.M.L.E.C. at Bristol	4
Competition Rules & Organisation	6
Details of this Year's Competitors	11
Competitors & Result Sheet	16
Details of Previous Winners	18
Calculating the Result	19
Track Layout	20

The Overall Winner of the Competition will receive the Martin Evans Challenge Trophy and £150; the Runner-up will receive £100 with £75 awarded to Third place.

A further Prize of £50 will be awarded to the best 3½ inch gauge locomotive, if not in the first three (provided there are 2 or more entries), and a Previous Winners Competition Prize of £50 will also be awarded.

PRESENTATION OF PRIZES

Mr Mike Chrisp, President of SMEE, will present the prizes at the close of the competition, late on Sunday afternoon.

I.M.L.E.C. 2009

Hosted by

The Bristol Society of Model and Experimental Engineers

On Saturday 4th. and Sunday 5th. July 2009

at

Ashton Court Bristol

B.S.M.E.E. OFFICIALS

President:	Mr. Geoff Sheppard
Chairman:	Mr. Mike Keighley
Treasurer:	Mr. Bob Lilley
Secretary:	Mr. Kevin Slater
Website:	Mr. Mike Goom

I.M.L.E.C. OFFICIALS

Leader:	Don Cordall
Site & Facilities:	Mike Keighley
Technical & Competition:	Bernard North
Treasurer:	Bob Lilley
Exhibition:	David Trotham Andy Harding
Catering:	Rosanne Burnett Sylvia North Cherry Trotham
Entry Secretary:	Sandra Pearce
Camping:	Eric Lindsay
Programme Content:	Don Cordall
Programme Production:	Alan Hooper

Bristol Society of Model & Experimental Engineers
I.M.L.E.C. - Ashton Court, Bristol
Competition Team

- Competition Organisation:** Bernard North (Chief Judge)
Bill Burnett (Results)
George Ganley (Scoreboard)
- Observers:** Mike Richardson; Don Rapson; Bob Lilley;
Peter Carr (Sat only); Pete Goodman,
Paul Hutfield, Kevin Slater
- Time Keeping:** Derek Taylor; Mark Phillips; Frank Gribben
- Steaming Bay:** Alan Church, John Coleman
- Station Master:** Terry Phelps
- Train Assembly:** Ian Biddiscombe, Trevor Mortimer Fox, Nigel Gettings
- Official Photographer:** Clem Culverhouse
- Competitor Reception:** John & Barbra Milton
-

Chairman's Welcome

Welcome to the 40th International Model Locomotive Efficiency Competition on the sixth occasion that it has been hosted by the BSMEE. I hope that all competitors, spectators, visitors and traders enjoy their visit to our railway and its surroundings and enjoy the opportunity of the renewal and making of friendships and acquaintances that Model Engineers are justly famous for. But most importantly - please enjoy yourself in this, the Centenary of our Society.

Mike Keighley, Chairman BSMEE

Acknowledgements

We should like to extend our sincere thanks to the following for their help and assistance:
To all the Competitors without whom we would not have an I.M.L.E.C.
To Bristol City Council, Environment & Planning Department for their support and co-operation; to Guildford MES for the loan of the reserve dynamometer car, and to Southport MES for the scoreboard and clock.

I.M.L.E.C. at Bristol

The first I.M.L.E.C. was held in Birmingham in 1969 so this year is the 40th anniversary of its inception. When the event was started, Martin Evans envisaged a contest where new ideas leading potentially to greater locomotive efficiency could be tested against the tried technology of the day. The event has moved away from that early concept and has become more of a loco rally spiced up by the competitive element. Entrants these days have locos with professionally built boilers, laser-cut frames, lost wax castings, etc. Many locos have been purchased from a previous owner who may or may not have been the builder. Kit-built locos are welcomed without so much as a raised eyebrow. Previous generations of I.M.L.E.C. aficionados would have looked down on such goings-on, had they been accepted in the first place. However, times have moved on and although our hobby will never claim to provide instant gratification, some corner-cutting has taken place. Many enthusiasts now enjoy the operational aspect of miniature locos without spending quite so many workshop-years to do so. The entry at this weekend's event is typical of modern I.M.L.E.C.s but let us go back in time to the start of Bristol's involvement with I.M.L.E.C.

In 1974, the railway was just established in Ashton Court. Opened to the public in 1973, we had a continuous raised track on the same concrete beams and piers as today. The steaming bays were in their present location but the rest of the site was bare. The wooden club hut, still in use today, had been moved from our previous location in Canford Park. The ticket office resembled a sentry box and was wheeled out for every public running day. The I.M.L.E.C. event was made possible with borrowed carriages in addition to six of our own. It was decided to run the "wrong" way round for the event as this made easier the logistics of engine changeover and train assembly. It also prevented any "home" advantage since we never run in the clockwise direction except at I.M.L.E.C. The event was a one-day competition and 15 entrants took part.

The winner of the competition that year was Fred Winsall from the Rugby club, driving a 5" "Nigel Gresley" with an efficiency of 2.5%. By a lucky coincidence, his grandson, George Winsall, is an entrant this year driving one of Fred's locos, a 3½ inch gauge GWR 45XX 2-6-2T "Firefly". George claims he is the youngest I.M.L.E.C. entrant ever at 14 in June this year. He beats the record previously held by his father Glyn by a few months. Good luck to George!

I.M.L.E.C. returned to Bristol in 1979. Since the number of people wishing to participate far exceeded the available places, it was decided to hold the event over two days on 7th and 8th July. Initially this did not seem to catch on as the 1980 event was back to one day (we think) at Bedford and 1981 was also one day at Bournemouth. Leyland picked up the two-day idea in 1982 and it has remained so ever since. The winner at Bristol in 1979 was Mr Morris of Urmston with an efficiency of 2.17% with a 5-inch Stirling single. That year there was a problem with the coal provided for locos. The NCB had made us a gift of prime Welsh steam coal for the contest. It burned OK in large fireboxes but was a disaster in the smaller locos which constituted the first four runs. These runs were repeated with our normal fuel and everyone was happy. Never accept gifts from men in suits!

It was another five years before the circus returned to Ashton Court. Les Pritchard of Harlington won for the second year in succession with his LMS Rebuilt Royal Scot No.6103 "Royal

Scots Fusilier". Yes, in those days you could defend your title every year until you lost it, then you were out. On his run, Les came in with an efficiency of 3.66%, a value which at that time had never been approached in I.M.L.E.C. There was panic when the result was calculated. "Must be a mistake. Re-do the sums" This process was repeated several times but still the same answer. "Check the dyno car readings". Still the same result. Then the observer on the run remarked that Les had not picked up any water during his half hour run and there was still some in his tender. That sealed it. The 3.66% still stands in the results list. We are lucky that Les has returned to Bristol this year in the Previous Winners contest, and, yes, driving the same re-built Scot that he drove 25 years ago. So come on, Les, let's see you do it again!

1991 saw a big change. In a wild, ambitious fit of bravado, we decided we would not only run the traditional two day I.M.L.E.C., we would hold the inaugural 7¼ inch gauge rally as well. This became known as SEQLEC. By this time our 5-inch dynamometer car had been stripped of its electro-mechanical instrumentation. This followed the Leeds I.M.L.E.C. in 1988 when its instruments behaved erratically. New analogue/digital measuring gear was built, fitted and tested extensively. It has been in use ever since. Calibration tests are carried out every time the dyno car has an outing and it has been shown to be remarkably reliable, accurate and stable.

So for the new ground level competition we built a copy of the circuitry of the 5-inch car. An almighty scramble ensued to complete the work in time. Tell me something new! In the workshop at 6am before going to work and back in on return. The drawbar test rig was adapted to fit behind the loco, the instrumentation box sat on the observer's knee and the distance/speed measurement was carried out by a converted 7¼ gauge bogie which was the last vehicle in the train. It was kept in good contact with the track by two concrete blocks strapped on top. The connection to the instrument panel was a length of coax cable which ran from the observer at the front of the train to the converted bogie at the rear. At one stage, someone forgot a pin in the coupling between carriages and the train was held intact only by the coax cable. A dry joint or somesuch gave spasmodic trouble on the control panel so that the observer had to constantly monitor the work-done readings and write them down. At the end of the run, he had to make sense of them as there were occasional step changes which could be compensated for by subtraction. Some called it cooking! It meant that the same tame observer had to ride every run on the ground level over the weekend. My backside was sore for about a week.

The 5-inch winner that year was Kevin Ayling from Worthing with a BR proposed 2-8-2 similar to the record breaking loco used by Lionel Flippance for the three previous years.

Our next attempt turned into the only cancellation in the 40 year history of I.M.L.E.C. February 2001 saw the start of the most severe outbreak of Foot and Mouth Disease for many years. To protect the captive deer in the estate, Ashton Court was closed until June. By this time it was too late to crank up the I.M.L.E.C. machine for July. A great pity, but as someone said at the time, there were much more serious issues that year than a mere loco competition. Finally, we made it again in 2003. Curiously, we had a struggle to fill the entry list and for a long time we only had 17 entrants. Eventually we got to 24, I think, by a lot of ringing around and pleading. A blazingly hot weekend, however, saw a good competition won by Geoff Moore's 5-inch Minx, driven by John Ellis of Guildford with an efficiency of 2.46%.

That then is the Bristol/I.M.L.E.C. story. We hope you enjoy your visit, that the weather is kind and you take happy memories away with you.

Bristol Society of Model & Experimental Engineers
I.M.L.E.C. - Ashton Court, Bristol
Competition rules and Organisation

1. On arriving at the track, report to Competitor Reception where a run number will be allocated to you and an approximate run commencement time given. One hour before the commencement of your run you will be called to prepare for your run and you will be allocated with an observer and assistant.
2. Welsh Steam coal will be provided in suitably measured quantities. You will be required to select the quantity of coal you need and the weight will be checked in your presence. Note, you may take as much coal as you like, only that burnt will be debited to the run.
3. You must use your own discretion as to when to commence lighting up, but you must be ready to start your run at the time allotted. Any time slippage will be notified to you before you light up.
4. When ready to raise steam for the run, you will be provided with as much paraffin, charcoal or wood as required to raise steam. You may change over to coal when you like. but all coal used is included in the weighed amount for the run and hence in the calculations. You must have a good coal fire burning before going out onto the track.
5. The train will be prepared for you with the dynamometer car at the front and sufficient passenger cars to carry the number of passengers you require. The train will not include any empty passenger cars. The track marshal will tell you when to go onto the track and will assist in coupling your engine to the train.
6. The engine and train is driven light round to the station with just the driver and observer on board. The passengers will board at the station from where the official run will begin and time recording will commence. Work done measurement will commence from the initial start in the steaming bays and hence the light run up to the station will be included. The observer will tell you when to start.

7. The duration of the run is a nominal 30 minutes. No time allowance will be made for stops except for derailments. A competitor may opt to stop once 25 minutes have been completed but the run must terminate in the station. Any competitor not completing 25 minutes will be deemed to have retired. A lineside clock will be provided so that you can see the progress of you run. You will be advised when you have 10 and 5 minutes to go and when on your last lap.
8. The run will end at the station. Any competitor stopping short of the station because of lack of steam must raise sufficient steam to bring the train into the station before the run is deemed to be completed. All recordings will end at the station. The empty train will be run backwards to the steaming bays.
9. All the unused coal will be collected and weighed in your presence by one of the judges. Only the total coal burnt will be used in the calculations. No allowance will be made for any unburnt coal left in the firebox. The result will be calculated and put up onto the results board as soon as possible.

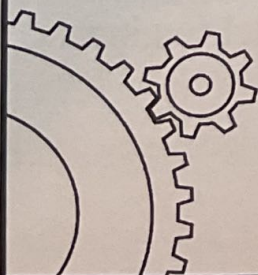
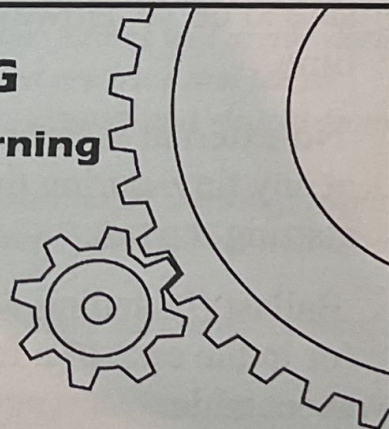
Continued on next page

MANOR FARM ENGINEERING

**CNC and Conventional Milling & Turning
for the Model Engineer**

If you have some repetitive job or complicated shapes or just need something machined very accurately - Manor Farm Engineering can help.

Give us a call for friendly, no obligation, advice.



Contact: Kevin Slater

Tel: 01275 331074

email: kevin@manorfarmengineering.co.uk

website: manorfarmengineering.co.uk

COMPETITION RULES—Continued

10. A maximum speed limit of 10 mph will be in operation for the competition. The dynamometer car provides a speed indication at the drivers position. The observer will give a reminder if your speed should approach 10 mph. He will give you a warning should you exceed 10 mph. Three such warnings will result in disqualification.
11. You must not lean on the locomotive tender or apply the hand brake in such a manner as to increase the drawbar pull. Infringement of this rule will also result in disqualification.
12. The use of the handpump is not permitted except when stationary. However it may be used in emergencies when all other means of waterfeed have failed in which case the locomotive must be retired and the run terminated.
13. Water will be provided in suitable containers during the run to enable locomotive water tanks to be topped up without stopping. The amount of water used is not recorded or limited in any way.
14. Passengers and carriages may be dropped off during the run if the initial load proves to be too heavy but only when the train is stationary and it is safe to do so. However additional passengers may not be added at any time.
15. No external assistance is to be given to the train in any way whatsoever at any time during the run. The use of sand is not permitted except for starting the run.
16. Ballast (including water) added externally to the scale outline of the loco (or in the case of a freelance model, the likely scale outline) is not acceptable.
17. The decision of the Judges is final in all matters relating to the competition. Judges are appointed by Bristol Society of Model Engineers.

Western Steam Model Engineers

Specialising in the production of Copper Boilers for Scale Locomotives,
Traction Engines and Stationary Boilers.

&

G & S Supplies

Great news! Geoff's shop restocked.
For your bar stock, drills, taps and dies,
transfers, books, paints and Steam Oil.
All you need under one roof in the South West.

The following has been extracted from the web page:

Western Steam Supplies has been purchased by G&S Supplies owned by Geoff Stait, Geoff has been involved with supplying Model Engineers for many years Geoff welcomed the opportunity to bring his knowledge and over fifteen years experience of the model engineer trade to the south west and in joining forces with Helen Verrall.

We want to offer a first class supply service to complement the first class high quality finished boilers that Helen is renowned for.

The shop has been restocked with many new items not previously available from the shop including books, paints, transfers, oils ranging from general lubricating right through to light and medium steam oils, Solders and fluxes, A new range of boiler fittings will arrive during mid to late may 2009, these are supplied from English companies and are tried and tested.

We want to offer a good service to the model engineers in the southwest and visitors from the Midlands your first stop on a day out to the west country.

We have set ourselves a target of January 2010 to have a full selection of drawings available. A new catalogue will be available on line very shortly listing current designs as well as current stock list.

Helen and Geoff will be attending a number of rallies and exhibitions during the coming months please check web site for events and dates.

Geoff is intending to offer a casting supply service from your own patterns, so if you have a project in mind ring or email your requirements or any information you require both Helen and Geoff will welcome the chance to help bring your model to the workshop.

E-mail your enquiries to the team; Geoff, Helen and Kieran:-

E-mail: westernsteam@fsmail.net Web: www.westernsteam.co.uk

Shop Address: 4A Love Lane, Burnham-on-Sea, Somerset. TA8 1EY.
Tel: 01278 788007

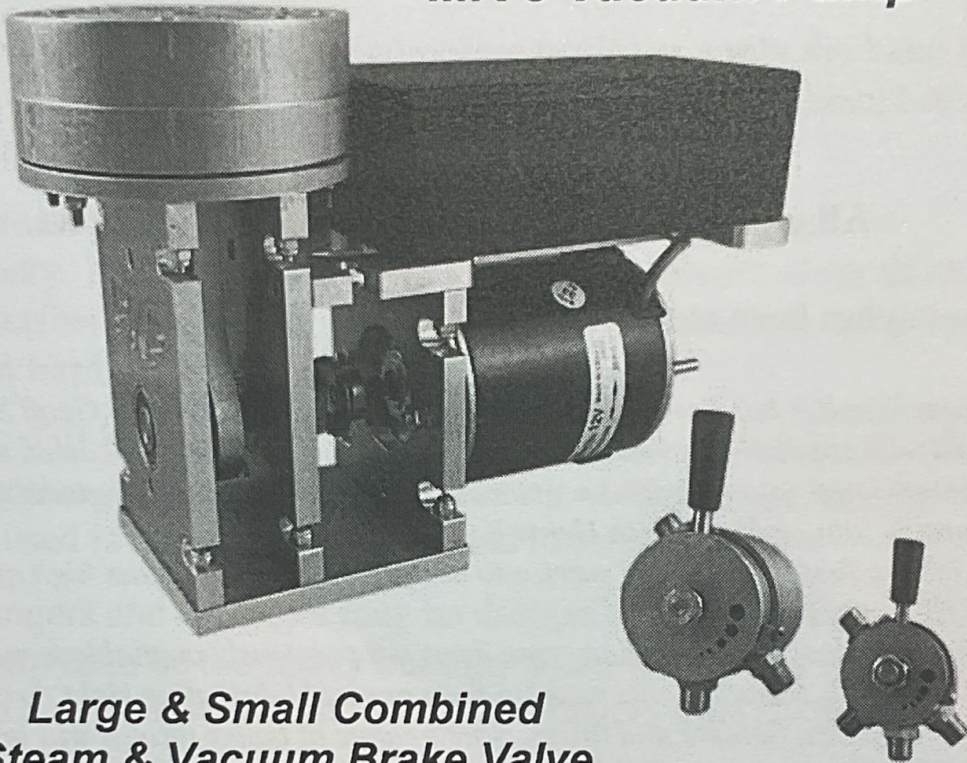
New Catalogue Available

PNP Railways

**Suppliers & Manufacturers of Ready Made Parts for
10¼", 7¼" 5" & 3½" Gauge Model Railways**

New Products ~ New Products ~ New Products

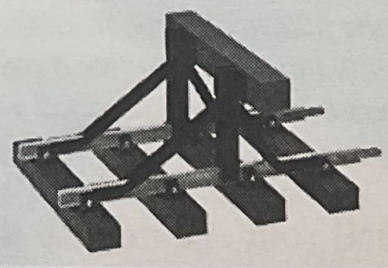
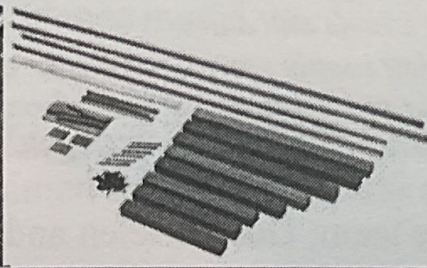
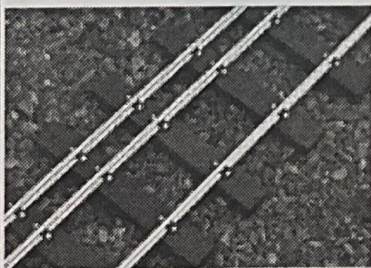
MK 3 Vacuum Pump



***Large & Small Combined
Steam & Vacuum Brake Valve***

Track Work Components

- *Garden & Display Track Kits* • *Hardwood Point Kits* • *Buffer Stops*
- *Rail Benders* • *Colour Light Signals* • *Point Levers*



Our product range can be viewed and purchased on-line at

www.pnp-railways.co.uk

**Paul Norman Plastics Ltd, Unit S5, Inchbrook Trading Estate, Bath Road, Woodchester,
Stroud, Glos, GL5 5EY, Tel: 01453 833388 Fax: 01453 834055
e-mail – info@pnp-railways.co.uk**

ENTRANTS FOR THE MARTIN EVANS TROPHY

IN 3½-INCH GAUGE:

Ben Pavier Southport 3 ½ in gauge LBSC's Maisie 4-4-2 "John C Bailey"
The late John Bailey started this loco in 1999 and it was bought by Ben as a boiler and chassis. An 8-element stainless superheater is the only major change to the original design. Entered in I.M.L.E.C. in 2007, the loco has now run for 240 actual miles.

George Winsall Rugby MES 3½ in gauge GWR 45XX Firefly 2-6-2T
Built in 1969 by George's grandad, Fred Winsall. Bequeathed to George by his Nan. Rebuilt by his father, Glyn Winsall, and driven at tracks and rallies by George ever since. George will beat his father's record as the youngest ever I.M.L.E.C. competitor by a few months; he is 14 in June this year. Good luck to him!

Marcus Peel Wigan MES 3½ in gauge LNER Class B2 "Royal Sovereign"
4-6-0

Loco was built in 1978 by J Chilvers and Marcus has owned it for about two years. He ran the loco in the last two I.M.L.E.C.s and was best 3 ½ inch competitor at Southport. On both occasions he reported a "really wet run". Let's hope he has better weather this time!

Andrew Giffen Reading SME 3½ in gauge SAR Class 15F 4-8-2
Despite being 3½ in gauge, this loco is built to a scale of 1 inch to one foot and is comparable in size to a 5 inch gauge 9F. It was completed in 1970 by Ron Etter in Johannesburg and was awarded a silver medal at the ME exhibition in 1976. Features include a working steam/oil cataract reversing engine, steam/manual rocking grate, vacuum brakes, a 48000rpm turbo-generator and a grate area of 36 sq.ins.

James Duncan North Wilts MES 3½ inch gauge US 0-4-0 Switcher
"Upsy"

James has recently become the owner of this unusual loco. Built by Lou Holland from imported castings from the USA and the loco has a large boiler for 3½ inch gauge. Lou belonged to the West Huntspill and Bristol clubs in about 1971 and the loco was built in time for the opening of the Ashton Court track.

ENTRANTS—Continued

IN 5-INCH GAUGE

Paul Pavier Southport 5 in gauge LMS Jubilee 4-6-0

Built to Tony Alcock drawings using Norman Spink castings. Finished in wartime all black livery with no lining. Father and son Ben enter from Southport MEC.

Dave Tomkins Guildford MES 5 in gauge LNER B1 4-6-0

Martin Evans Springbok chassis, Dave's design of boiler and platework and fitted with a Green Arrow tender. First run in April 2008. Won Welsh I.M.L.E.C. in June 2008 with an efficiency of 2.3%.

Loco to be driven by **Paul Tomkins**

David Gregson Private entry 5 inch gauge SR Maunsell S15 4-6-0

Loco built by late Bob Houghton in 1971. Restored by David in 2005. He ran a model of the same prototype in 3½ inch gauge in I.M.L.E.C. at Bristol in 1991.

Roy Gregson Prescott DMES 5 inch gauge BR Princess Coronation class 4-6-2

Unstreamlined "Princess Alice" No 46223 represents the loco in the period 1950-52. and is painted in BR blue before the green livery of September 1952. The model displays the smokebox as used previously when the loco was streamlined. Like the prototype, the loco has four cylinders. The model weighs 280lbs, has grate area of 50 sq.ins and is 6ft4ins long over the buffers.

Ian Grinter Taunton Model Engineers 5inch gauge LMS Rebuilt Royal Scot 46107

Named "Argyll and Sutherland Highlander, the loco was built by Ian to the Martin Evans design and finished in 1990. The steam inlet and exhaust arrangement to the cylinders, the lubrication system and the double blastpipe are all to his own design.

Alan Crossfield Leyland SME 5inch gauge GWR large prairie tank No 4156
Alan built this loco over nine years and finished it in 2005. It won the award for the Best Exhibit in Show at Harrogate in 2005. Alan is a previous winner of the Martin Evans Trophy in 1985, 1986 and 1996 with two previous locos.

Geoffrey Symes Worthing and Dist MES 5inch gauge Dholpur 2-8-4T
The loco's previous best performance was to come 5th in 2006. Built to a scale of 1½ inches to one foot, the loco is named Bolivia and has a mountain railway outline. The boiler is fed by two injectors, an axle pump and a cab-mounted Weir pump.

John Cottam Chesterfield MES 5inch gauge SR Un-rebuilt Merchant Navy 4-6-2

The model was built between 1997 and 2004. It is fitted with chain-driven valve gear. The boiler has 32 tubes and 3 superheater flues. The superheater elements are radiant type and an arch is fitted in the firebox. Hydrostatic lubrication feeds all three cylinders. The loco is finished in experimental blue as in 1948/9.

Keith Tilbury Urmston and Dist MES 5inch gauge 2-6-0T Polly V
Kit-built loco

Built two years ago, the loco is fitted with modified superheaters and grate. Finished 17th at Southport last year. Driven by Keith's son **James Tilbury**.

A Britton Worthing DSME 5inch gauge Freelance 2-4-2 tender loco
"The Columbian"

Construction started in Canada in 1961 and came to the UK in 1969. First run in 1980 and re-boilered in 1992. Was acquired from Mr Gettings in 1997. To be driven at Bristol by **C S Weatherly**

Fred Matthews Harrow and Wembley SME 5inch gauge Caledonian
Railway shunter 0-6-0T.

Martin Evans said to Fred that Rob Roy would make a nice 5 inch loco to which Fred replied "I've already done it". Built by Fred in 1978 the loco was used on the SMEE track at Alexander Palace and Olympia and is still in regular use. Illness prevents Fred being with us and his loco will be driven by **Matthew Byatt**

Neil Mortimer Ickenham and District SME 5inch gauge 0-6-0T Polly III
Kit-built loco

A version of the Polly III loco, completed in 1994. Since modified. To include a new cab, steam water pump and balanced slide valves. A regular runner at its home club.

ENTRANTS - Continued

Ken Parker North Wilts MES 5inch gauge GWR Small Prairie 2-6-2T No.4588

Built by Peter Larkin to Martin Evans design and first run in 1979. Boiler leak in 2002 remedied by fitting a Speedy boiler in which form it ran for two seasons. A new boiler fitted in 2007. Five previous attempts at I.M.L.E.C., best placing 2nd at Bristol in 1991.

Stuart Duncan Bristol SMEE 5inch gauge LNER D49 Hunt Class 4-4-0
Designed and built by Percy Wood, a well-known I.M.L.E.C. competitor. The loco was named "The Percy". It has two cylinders rather than the three of the prototype. Stuart has fitted steel tyres to the drivers so that the loco can "keep its feet" more readily. The tender remains unpainted despite many attempts to get Stuart to do something about it! The loco will be driven by **Sam Maisey**

John Hurley Kinver and W Midlands MES 5inch gauge LMS Rebuilt Royal Scot 4-6-0 No.6141 "The North Staffordshire Regiment"

Built by John from measurements made on "Scots Guardsman" when at Dinting Museum. The model has 3 double pass radial superheaters, a double chimney and is painted in post-war LMS livery. The loco has been running for about four years and was placed 4th in I.M.L.E.C. in 2007 at Fareham.

Ben Healey Gravesend MMES 5inch gauge 4-6-4 freelance tank loco
Designed and built by Ben and based on a Baltic tank with boiler, cylinders and valve gear from the Martin Evans LMS "Jubilee" class design. Named "Tomking" after Ben's father-in-law. The loco will be driven by Ben's grandson **Karl Midgeley** in this event.

Andy Siddall Harlington Locomotive Society 5inch gauge LNER Class B1 4-6-0. Built to Martin Evans classic "Springbok" design. Previously owned by Les Pritchard and acquired from him in 2007. Rebuilt during this winter and re-painted in LNER green. Finished 2nd in Northampton in 1999 and 3rd in I.M.L.E.C. at Southport in 2008.

Tony Guerrier North London MES 5inch gauge GWR "Torquay Manor" 4-6-0

Built to Martin Evans classic design. Water fed by 2 injectors, crosshead pump and hand pump. Hydrostatic lubrication fitted. The loco had a full rebuild this winter and a repaint in GWR colours to exhibition standard.

IN THE PREVIOUS WINNERS COMPETITION

Les Pritchard Harlington Locomotive Society LMS Rebuilt Royal Scot 4-6-0 No.6103 "Royal Scots Fusilier".

Finished in 1980 as a much-modified version of Martin Evans "Royal Scot" design. It has been re-painted in LMS 1948 black livery and fitted with steel tyres to the main driving wheels. Les is running in the Previous Winners competition since he won I.M.L.E.C. at Guildford in 1983 and Bristol in 1984 with the loco. Not only that, he won at Fareham in 2006 with his LYR 0-6-0.

Len Steel Guildford MES 5 inch gauge BR Britannia 4-6-2

Built by Lionel Flippance in the 80's and bought by Len in 1987. Won I.M.L.E.C. at Llanelli in 1997. A regular runner in the Previous Winners competition.

Jim Elliott High Wycombe MES 5 inch gauge LBSC "Speedy" 0-6-0T

Having won the Martin Evans Trophy at Northampton in 1999, this year is the loco's sixth outing in I.M.L.E.C. and Jim runs in the Previous Winners competition. The loco was built to Curly's drawing but now includes a 100psi boiler, radiant superheaters, modified drafting and a stainless arch in the fire-box. Also fitted with a modified version of Don Young's modified valve gear!

Brian J Remnant Romney Marsh MES 5inch gauge "Sweet Pea"

Last year's winner in Southport and has previously finished second twice and third once. In addition to this auspicious record, Brian reports a number of "cock-ups" as well. This year he runs in the Previous Winners competition. This is a modified version of this popular loco with a larger firebox (32sq.ins), steel boiler with copper tubes, outside Bremme valve gear and he relies entirely on injectors for boiler feed.

I.M.L.E.C. 2010

Your host for this event will be

**Bournemouth & District
Society of Model Engineers**

On 3rd. & 4th. July

Web Site: www.littledownrailway.co.uk

Saturday 4th. July

** Previous Winner

Run	Start Time	Owner	Club/ Society	Driver	Locomotive
1	08:30	Neil Mortimer	Ickenham & Dist.		Freelance Polly III
2	09:10	Stuart Duncan	Bristol SMEE	Sam Maisey	LNER D49 Hunt Class
3	09:50	Jim Elliott	High Wycombe		LBSC Speedy**
4	10:30	Dave Tompkins	Guildford	Paul Tompkins	LNER B1
5	11:10	David Gregson	Private Entry		Maunsell S15 Mixed Traffic loco
6	11:50	Ben Healey	Gravesend MMES	Karl Midgeley	Freelance
7	12:30	Keith B. Tilbury	Urmston & Dist.	James Tilbury	Freelance Polly V
8	13:10	Paul Pavier	Southport		LMS Jubilee
9	13:50	Ian Grinter	Taunton		Rebuilt Royal Scot No.46107
10	14:30	Geoffrey Symes	Worthing & Dist.		Dholpur
11	15:10	Les Pritchard	Harlington		LMS Rebuilt Royal Scot No.6103**
12	15:50	John Cottam	Chesterfield		Un-rebuilt Merchant Navy Pacific
13	16:30	George Winsall	Rugby MES		GWR 45XX Firefly
14	17:10	Andrew Giffen	Reading SME		South African Railways Class 15F
15	17:50	Marcus Peel	Wigan		LNER B2 'Royal Sovereign'

Wheel Arrangement	Gauge	Load (adults)	Running time (mins)	Distance (feet)	Total Work (ft/lbs)	Average Drawbar HP	Coal used (lbs)	Efficiency (%)	Position
0-6-0	5								
4-4-0	5								
0-6-0	5								
4-6-0	5								
4-6-0	5								
4-6-4	5								
2-6-0	5								
4-6-0	5								
4-6-0	5								
2-8-4	5								
4-6-0	5								
4-6-2	5								
2-6-2	3½								
4-8-2	3½								
4-6-0	3½								

Sunday 5th. July

** Previous Winner

Run	Start Time	Owner	Club/ Society	Driver	Locomotive
16	08:30	James Duncan	N. Wilts MES		"Upsey" American Switcher
17	09:10	Ben Pavier	Southport		LBSC's Maisie 'John C. Bailey'
18	09:50	Ken Parker	N. Wilts MES		GWR Small Prairie Tank No.4588
19	10:30	Fred Matthews	Harrow & Wembley	Matthew Byatt	Caledonian Railway shunting loco
20	11:10	Len Steel	Private Entry		BR Britannia**
21	11:50	A. Britton	Worthing & Dist.	CS Weatherley	The Colombian
22	12:30	Tony Guerrier	North London		GWR "Torquay Manor"
23	13:10	Roy Gregson	Prescott DMES		Duchess "Princess Alice" BR 46223
24	13:50	Andy Siddall	Harlington		LNER Class B1
25	14:30	Alan Crossfield	Leyland SME		GWR Large Prairie Tank No.4156
26	15:10	John Hurley	Kinver & WMidlands		LMS Rebuilt Royal Scot No.6141
27	15:50	Brian J. Remnant	Romney Marsh		Sweet Pea**

Wheel Arrangement	Gauge	Load (adults)	Running time (mins)	Distance (feet)	Total Work (ft/lbs)	Average Drawbar HP	Coal used (lbs)	Efficiency (%)	Position
0-4-0	3½								
4-4-2	3½								
2-6-2	5								
0-6-0	5								
4-6-2	5								
2-4-2	5								
4-6-0	5								
4-6-2	5								
4-6-0	5								
2-6-2	5								
4-6-0	5								
0-4-0	5N								

Previous I.M.L.E.C. Winners

Year	Host Club	Engine	Gauge	Effic'y	Driver/Society
1969	Birmingham	Royal Scot	5	?	J.Drury, Birmingham
1970	Whitney	Firefly	5	?	L.Labram, Birminham
1971	Southampton	Dean Single	5	?	A.Haydon, Newton Abbot
1972	Tyneside	GWR 57XX	5	1.06	N.Spink, Chesterfield
1973	Chingford	LNER L1 Tank	5	1.60	B.Longstaff, S.Durham
1974	Bristol	Nigel Gresley	5	2.54	F.Winsall, Rugby
1975	Tyneside	GWR King	3½	1.55	L.Joyce, Chingford
1976	Kinver	Speedy	5	1.58	B.Perret, Southampton
1977	Chingford	Speedy	5	2.32	B.Perret, Southampton
1978	Guildford	Maid of Kent	5	1.61	P.Wood, Chingford
1979	Bristol	Stirling Single	5	2.17	D.Morris, Urmston
1980	Bedford	BR Class 7	3½	1.37	P.Wood, Private
1981	Bournemouth	LNER J39	5	2.41	P.Wood, Private
1982	Leyland	GWR De Glehn	5	1.50	R.Amsbury, Derby
1983	Guildford	Royal Scot	5	1.35	L.Pritchard, Harlington
1984	Bristol	Royal Scot	5	3.66	L.Pritchard, Harlington
1985	Urmston	Nigel Gresley	5	1.85	A.Crossfield, Private
1986	Bournemouth	Nigel Gresley	5	1.64	A.Crossfield, Private
1987	Birmingham	LSWR Adams	5	2.29	K.Moonie, Chingford
1988	Leeds	BR Prop. 2-8-2	5	4.39	L.Flippance, Guildford
1989	Leyland	BR Prop. 2-8-2	5	3.01	L.Flippance, Guildford
1990	Guildford	BR Prop. 2-8-2	5	3.31	L.Flippance, Guildford
1991	Bristol	BR Prop. 2-8-2	5	1.73	K.Ayling, Worthing
1992	Leeds	S & D 7F	5	1.88	D.Sutcliff, Ribble Valley
1993	Leyland	LMS Stanier	5	2.08	J.Hessop, Ryedale
1994	Gravesend	LMS Stanier	5	1.51	J.Hessop, Ryedale
1995	Kinver	LNER P2 2-8-2	5	3.32	J.Hessop, Ryedale
1996	Northampton	GWR Manor	5	2.43	A.Crossfield, Leyland
1997	Llanelli	Britannia	5	1.88	L.Steel, S.T.E.A.M.
1998	Kinver	BR Prop. 2-8-2	5	2.27	K.Ayling, Worthing
1999	Northampton	Speedy	5	1.78	J.Elliot, Staines
2000	Leyland	BR Prop. 2-8-2	5	3.13	L.Flippance, SMEE
2001	Competition not held	Foot & Mouth epidemic			
2002	Leeds	LNER B1 4-6-0	5	1.82	G.Moore, Guildford
2003	Bristol	Minx 0-6-0	5	2.46	J.Ellis, Guildford
2004	Kinver	LNER Thompson 01	5	3.26	G.Winsall, Rugby
2005	Northampton	LNER K1/1	5	2.01	B.Baker, Lindsey
2006	Fareham	LYR Aspinall 0-6-0	5	1.64	L.Pritchard, Harlington
2007	Llanelli	BR Britannia 4-6-2	5	2.26	S.Eaton, Chesterfield
2008	Southport	Sweet Pea 0-4-2	5	1.63	B.Remnant, Romney Marsh

CALCULATION OF RESULTS

The dynamometer car measures and gives readings of Total Work Done in foot-pounds and Total Distance travelled in feet. In addition, the Overall Run Time (minutes) and Weight of Coal (pounds) are recorded.

From these parameters the following calculations can be made:

$$\text{Overall Thermal Efficiency \%} = \frac{\text{Work Output} \times 100}{\text{Heat Input}}$$

The calorific value of the coal provided is assumed to be 14500 BTU/lb.

The number of ft/lbs per BTU is 778, thus:

$$\text{Overall Thermal Efficiency \%} = \frac{\text{Total Work Done} \times 100}{\text{Weight of Coal Used} \times \text{Cal. Val} \times 778}$$

The locomotive returning the highest efficiency is the winner.

Some other interesting calculations can be made also:

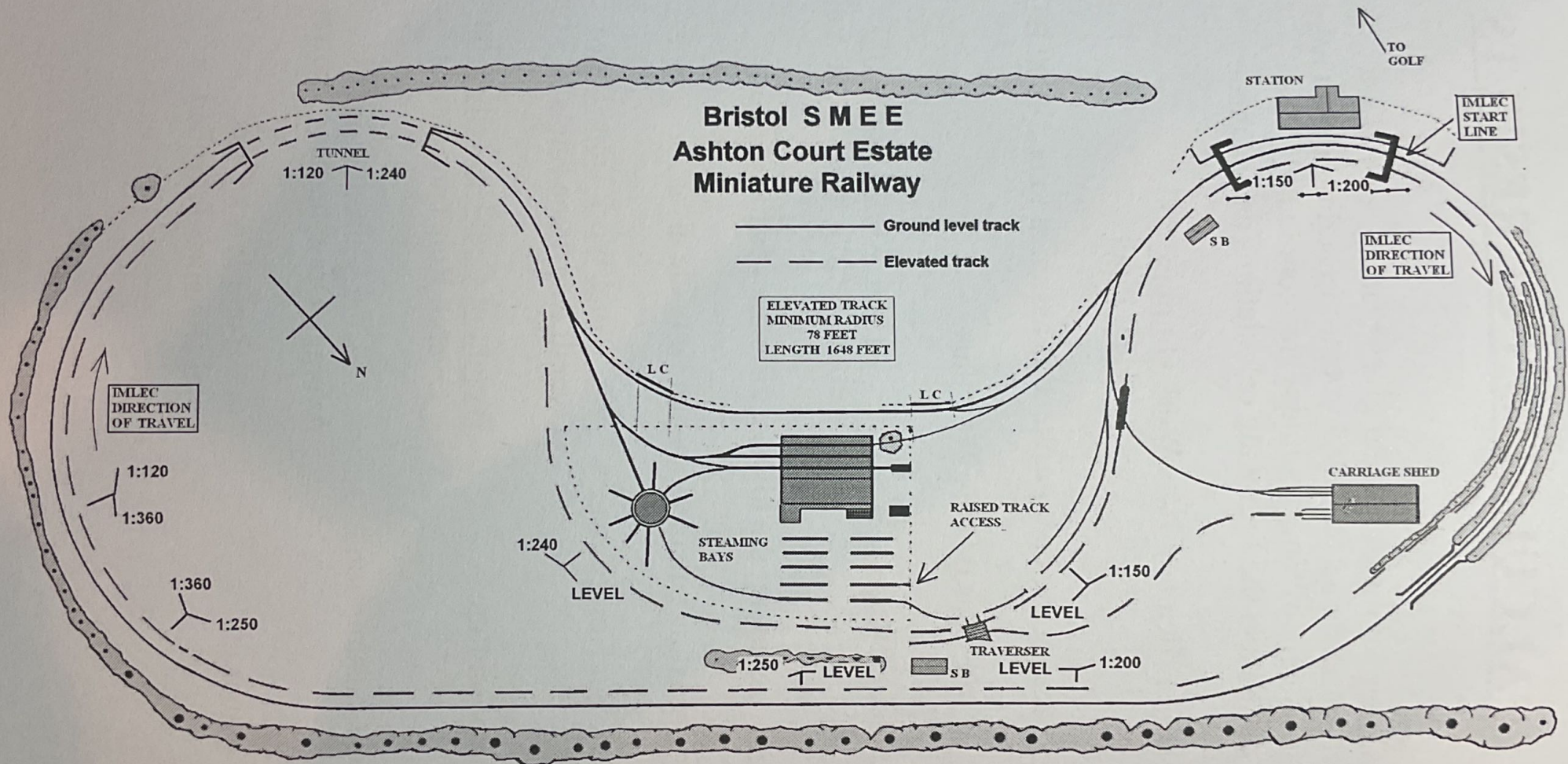
$$\text{Average Draw-bar Horsepower} = \frac{\text{Total Work Done (ft.lb)}}{\text{Overall Run Time (mins)} \times 33000}$$

$$\text{Coal Consumption Rate} = \frac{\text{Weight of Coal Used (lb)} \times 60}{\text{Overall Run Time (mins)}}$$

$$\text{Specific Fuel Consumption} = \frac{\text{Coal Consumption Rate}}{\text{Average Draw-bar Horsepower}}$$

$$\text{Average Draw-bar Pull} = \frac{\text{Total Work Done}}{\text{Total Distance Travelled}}$$

Bristol S M E E Ashton Court Estate Miniature Railway



INSURANCE FOR CLUBS SOCIETIES & INDIVIDUALS

Club & Society Public Liability automatically includes all
members

anywhere in 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

Please contact us for full details



Insurance for Modellers and Model Engineers

Yorkshire Bank Chambers, Fargate, Sheffield S1 2HD

Tel: 0114 250 2770 www.walkermidgley.co.uk

Arranged by Walker Midgley Insurance Brokers Ltd & Underwritten by Royal & Sun Alliance Insurance plc

Authorised and regulated by the Financial Services Authority

NEAR M4/M5
INTERCHANGE
5 MILES FROM M5
JUNCTIONS 14 OR 16

THE LEISURE CENTRE
THORNBURY
NEAR BRISTOL
BS35 3JB

FREE
PARKING

AUGUST 21ST, 22ND & 23RD 2009

FRI 10AM - 6PM SAT 10AM - 5PM SUN 10AM - 4PM

BRISTOL MODEL ENGINEERING AND HOBBIES EXHIBITION



CENTENARY CELEBRATION SHOW

ADULT £8.00 SENIOR £7.50 JUNIOR £3.50 FAMILY £18.50 (2+3)

3 DAY AND ADVANCE TICKETS ALSO AVAILABLE—SEE BELOW

ORGANISED BY THE BRISTOL SOCIETY OF MODEL & EXPERIMENTAL ENGINEERS
REGISTERED CHARITY NO. 1094274



FOR FURTHER INFORMATION PLEASE VISIT OUR WEBSITE:
www.bristolmodelengineers.co.uk OR CALL 0117 967 5878
ALL ATTRACTIONS CORRECT AT TIME OF GOING TO PRESS, BUT MAY BE SUBJECT TO CHANGE OR CANCELLATION

