

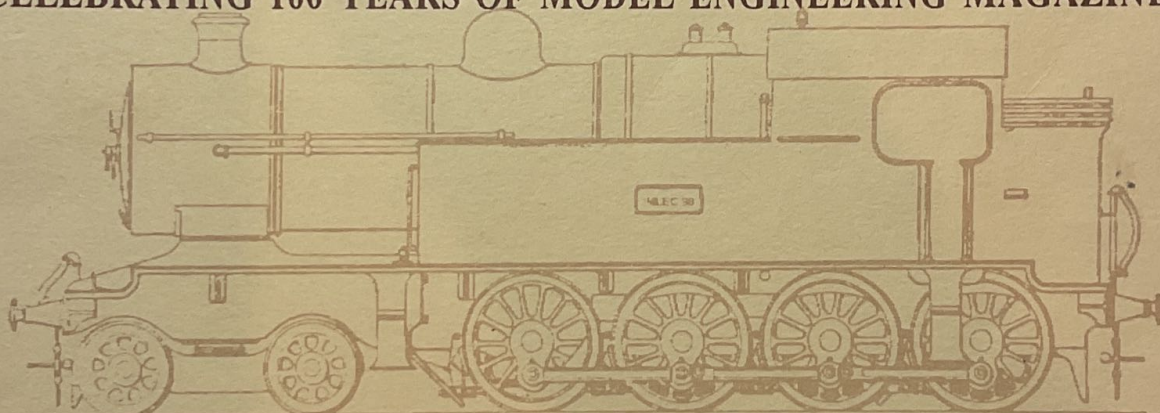
1998

IMLEC

AT THE CLUB TRACK • MARSH PLAYING FIELDS
KINVER • WEST MIDLANDS

11th & 12th July 1998

CELEBRATING 100 YEARS OF MODEL ENGINEERING MAGAZINE

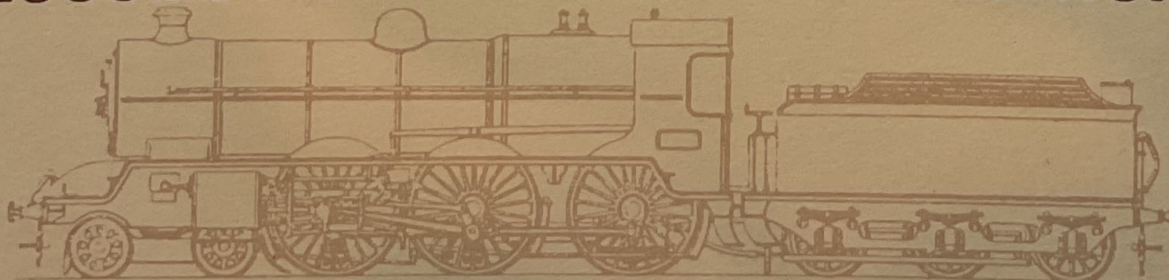


Cylinders	19 1/2" diameter, 26" stroke.	Boiler, Barrel length	11' 3"	Water Capacity	1,500 gals.
Bogie Wheels diameter	3' 0"	Boiler, diameter	4' 10 1/2"	Coal	5 1/2 tons.
Coupled Wheels	4' 6 1/2"	Firebox casing Length	7' 0"	Weights (estimated)	tons, cwt.
Tractive Force per lb. pressure	176.7 lb.	Heating Surface: Firebox	138.5 sq. ft.	Bogie	15 10
Total Tractive Force	175 lb. per sq. in.	Tube Number	280	Trailing	16 5
Working Pressure	175 lb. per sq. in.	Tube diameter	2 1/2"		16 5
Wheelbase: Bogie	15' 5"				16 5
Wheelbase: Total	29' 3"				16 5
Total length of engine	37' 3"				80 10

THE KINVER & WEST MIDLANDS
SOCIETY OF MODEL ENGINEERS Ltd

4-8-0 HEAVY SHUNTING ENGINE: NEW LOCOMOTIVE FOR THE GREAT SOUTHERN AND
present

THE 30th INTERNATIONAL MODEL LOCOMOTIVE EFFICIENCY COMPETITION



The 30th International Model Locomotive Efficiency Competition for the MARTIN EVANS CHALLENGE TROPHY

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PRESENTATION OF PRIZES

**Presentations will take place at approximately
5:30pm on Sunday 12th July
by Mr Alun Rees, General Manager
of The Severn Valley Railway
1st, 2nd, 3rd & 4th Prizes
plus Best 3½ and Solent Steam Services Prize
K.W.S.M.E. Plaques & Patterns by Mr Eric Lee**

A MESSAGE FROM THE CHAIRMAN

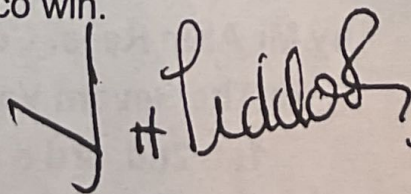
Welcome to Kinver

May I extend a warm welcome to you all at our club track at the Marsh Playing Fields Kinver for the 30 International Model Locomotive Competition.

As you may know the Kinver and West Midlands Society of Model Engineer staged the 27th IMLEC here at Kinver just three years ago. We all enjoyed the occasion very much, even though a lot of hard work was required to put our grounds into a fit state to receive our many visitors. When we were first approached to host the event again this year the feeling of the club was "We did the hard work last time this year it will be easy." Well in three years member's change, grow older, some sadly pass on, and the infra structure continues to disintegrate at an alarming rate. However here we are again raring to go. The 1998 IMLEC which is a double anniversary will be a success. The first anniversary is the 30 years of the IMLEC competition itself. The second anniversary commemorates the first publication of the Model Engineer Magazine.

To mark the 100th year of the magazine the front of our programme has been designed to look similar to an early model engineer front cover. The "Model Engineer" Magazine has had a tremendous impact on our hobby which may not have developed into the industry it is without it. It has provided the reader with designs and information on a weekly or now fortnightly basis, and has provided a forum for debate and answered many reader's questions. The magazine has been headed by a long line of editors who are now household names. Including "LBSC" Percival Marshall, Henry Greenly, Bassett-Lowke and many others. It was the editor of the model engineer in 1969 Mr Martin Evans who decided to instigate a competition for Locomotive Builder's. It was not the normal competition of aesthetics or workmanship. It would be an efficiency competition based on full size practice, Thus was born IMLEC first held by our friends at the Birmingham Society of Model Engineers. Today we hope that Mr Martin Evans will be with us as well as the present editor Mr Ted Jolliffe.

It only remains for me to wish every competitor success and every visitor an enjoyable two days. Let the best loco win.



JIM PIDDOCK
CHAIRMAN.
K & W M S M E

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5"G L.N.E.R. CL. A3 4-6-2 FLYING SCOTSMAN

5"G L.N.E.R. CL. A4 4-6-2 MALLARD/SIR NIGEL GRESLEY

5"G L.M.S. CL. 4-6-2 DUCHESS OF HAMILTON

5"G L.N.E.R. CL. A1 4-6-2 (PEPPERCORN) SEA EAGLE

5"G L.N.E.R. CL. P2 2-8-2 COCK 'O' THE NORTH

5"G L.N.E.R. CL. B17 4-6-0 SANDRINGHAM

5"G FREELANCE CL. B20 4-6-0 3CYL SHERGAR

7¹/₄"G L.N.E.R. CL. B1 4-6-0 STEMBOK

Drawings in preparation:

5"G L.N.E.R. CL. P1 2-8-2 SHAFTHOLME

5"G FREELANCE CL. R1 4-8-2 RAVENSWOOD

5"G FREELANCE CL. T2 4-8-0 ANDRE CHAPELON

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ANNIVERSARIES
"WAKES"

THE KINVER & WEST MIDLANDS SOCIETY OF MODEL ENGINEERS Ltd

IMLEC COMMITTEE

Chairman	Jim Piddock
Vice-Chairman	John Hurley
Secretary	Mike Harrison
Treasurer	Roger Bryan
Calculator	Paul Humphries
Trade Stands	Ian Priest
Exhibition	Steve Harbach
Track	Roger Bryan
Special Projects	Steve Parton, Pete Dawson
Programme	Jim Piddock

IMLEC OFFICIALS

Competition Manager	John Hurley
Chief Judge	Ray Humphries
Calculations	Paul Humphries & Adam Smith
Track Engineers	Roger Bryan & Dave Fradgley
Steam Bay Sup	Pete Dawson
Time Keepers	John Campbell, Graham Harris & John Platt
Observers	Mike Harrison, Steve Parton, Ian Priest John Cowley, Reg Berry
Public Address	Bryan Clarke & Vic Evans
Exhibition	Eric Lee & Dave Hudson

ACKNOWLEDGEMENTS

We would like to extend our thanks for assistance to:

The Competitors without whom the competition would not be able to run. To the Bristol & Guilford Clubs for the use of their Dynamometer Car. To other Clubs for their encouragement and help in organising the event. To our wives and helpers for assistance with some of the mundane jobs. The Red Cross, Scouts and ATC for being with us throughout the two days and finally, all those club members who have worked so hard leading up to the event. And finally to Andrew Hackett for fitting this onto the page.

THE KINVER & WEST MIDLANDS SOCIETY OF MODEL ENGINEERS Ltd

A BRIEF CLUB HISTORY

The Kinver & West Midlands Society Of Model Engineers has been on its present site 36 years and has gained a reputation for fine model making and even pushing out a few boundaries of model engineering.

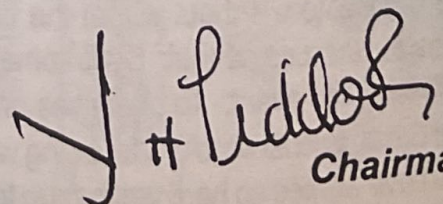
It all started back in the 1920,s a group of men interested in Boats and Steam Locomotives formed themselves into the West Midland M.E.S. whose headquarters were at Kingswinford, near Stourbridge. They built a 3" gauge track around an existing pool and activities continued there until the Second World War.

Several members lived in Wolverhampton and because of travelling difficulties formed an allied group which was kown as the West Midlands Model Engineers, Wolverhampton Branch. They held their meeting in Wolverhampton Library sometimes at members homes. At a meeting held at Wolverhampton Library in May, 1943, it was proposed and accepted that the Society became the Wolverhampton Model Engineering Society and continued to operate as such, despite poor membership, until 1951.

In 1951, under the guidance of the secretary, Mr B Princep, the Society formed itself into a Limited Company and was known as the Wolverhampton S.M.E Ltd. The Reason for this change was to obviate insurance problems, which in retrospect was unique for this period as a good many Societies today are seeking to do the same.

From 1946 up to 1961 the Society flourished at Wombourne with a 600ft Multi Gauge Track at the rear of the Mount Pleasant Inn but then had to move due to the sale of the land for building purposes. In 1962, and after many problems, management of the Society secured a 20 year lease on an acre of land here, at the Marsh Playing Fields. In 1970, as our interest now lay in Kinver, by a majority vote the Society became kown as the Kinver and West Midlands Society of Model Engineers Limited. The following year, 1971, the track was extended to 1,200 ft. Again in 1986 the track was extended to approximately half a mile.


The 7" gauge ground level track is being developed for a growing number of members. Membership is around 100 strong and the Society holds regular meeting every Friday. Models can be seen in steam on most Sundays after Easter and up to November from 2:00 to 5:00pm. We are now pleased to hold I M L E C for the third time at this track


Chairman

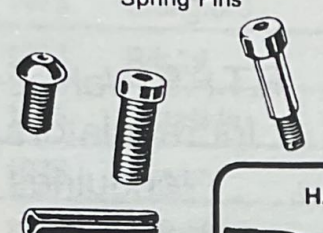
DAGAR TOOLS

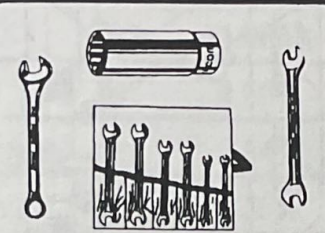
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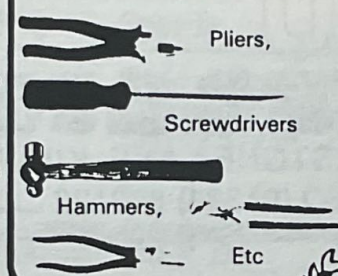


Woodscrews, Self Tapping
Screws and Machine Screws



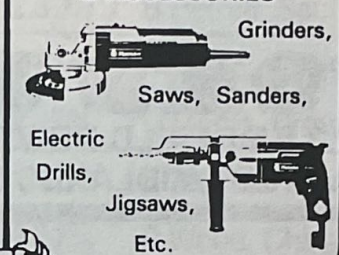
HAND TOOLS

Pliers,
Screwdrivers,
Hammers,
Etc




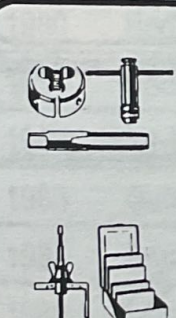
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Drills,
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Etc.



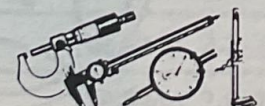
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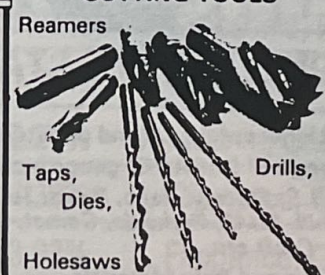
PRECISION TOOLS

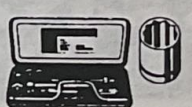
Micrometers, Vee Blocks,
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CUTTING TOOLS

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Taps,
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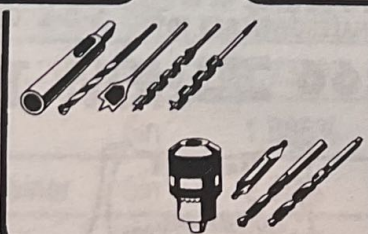


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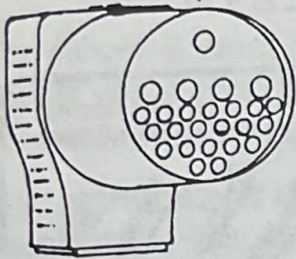


Black Hex Bolts,
Cup Sq. Hex Bolts
and Nuts
Sets, Sq. Sq. Rnd.
Hex



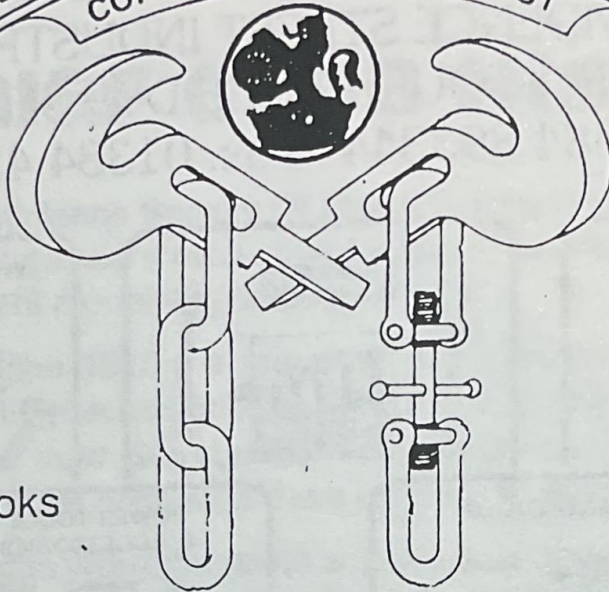
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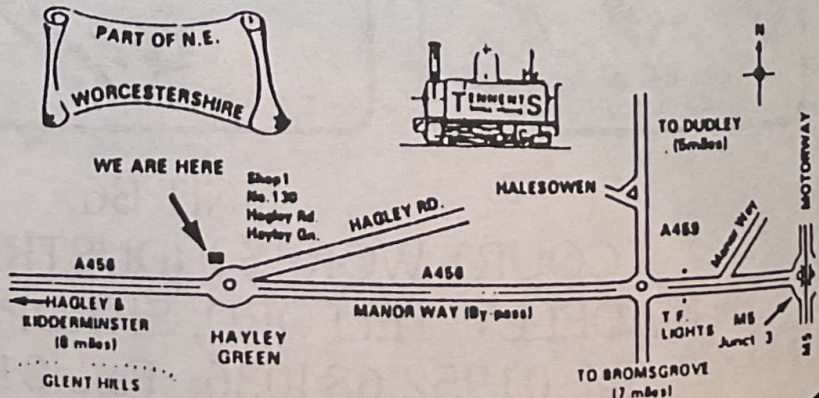
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1969 — PREVIOUS IMLEC WINNERS — 1997

Year	Host Club	Engine	Gauge	Effy	Driver/Society	
1	1969	Birmingham	Royal Scot	5in	?	J Drury/Birmingham
2	1970	Whitney	Firefly	5in	?	L Labram, Birmingham
3	1971	Southampton	Dean Single	5in	?	A Haydon, Newton Abbott
4	1972	Tyneside	GWR 57XX	5in	1.066%	N Spink, Chesterfield
5	1973	Chingford	LSWR L1 Tank	5in	1.60%	B Longstaff, S Durham
6	1974	Bristol	'Nigel Gresley'	5in	2.54%	F Winsall, Rugby
7	1975	Tyneside	GWR King	3'in	1.55%	L Joyce, Chingford
8	1976	Kinver	Speedy	5in	1.58%	B Perrett, Southampton
9	1977	Chingford	Speedy	5in	2.32%	B Perrett, Southampton
10	1978	Guildford	'Maid of Kent'	5in	1.61%	P Wood, Chingford
11	1979	Bristol	Stirling Single	5in	2.17%	D Morris, Urmston
12	1980	Bedford	BR Class 7	3'in	1.37%	P Wood, Private Entry
13	1981	Bournemouth	LSWR J39	5in	2.41%	P Wood, Chingford
14	1982	Leyland	GWR de Glen	5in	1.50%	R Amsbury, Derby Compound
15	1983	Guildford	Royal Scot	5in	1.35%	L Prichard, Harlington
16	1984	Bristol	Royal Scot	5in	3.66%	L Prichard, Harlington
17	1985	Urmston	'Nigel Gresley'	5in	1.85%	A Crossfield, Private Entry
18	1986	Bournemouth	'Nigel Gresley'	5in	1.64%	A Crossfield, Private Entry
19	1987	Birmingham	LSWR Adams	5in	2.29%	K Moonie, Chingford Tank
20	1988	Leeds	BR Prop. 2-8-2	5in	4.392%	L Flippance, Guildford
21	1989	Leyland	BR Prop. 2-8-2	5in	3.02%	L Flippance, Guildford
22	1990	Guildford	BR Prop. 2-8-2	5in	3.317%	L Flippance, Guildford
23	1991	Bristol	BR Prop. 2-8-2	5in	1.733%	K Ayling of Worthing
24	1992	Leeds	7FS&D	5in	1.886%	D Sutcliffe, Ribble Valley Dorset
25	1993	Leyland	LMS Stainer	5in	2.08%	J Heslop, Rydale
26	1994	Gravesend	LMS Stainer	5in	1.511%	J Heslop, Rydale
27	1995	Kinver	LSWR P2	5in	3.32%	J Heslop, Rydale
28	1996	Northampton	GWR Manor	5in	2.437%	A Crossfield, Leyland
29	1997	Llanelli	Britania	5in	1.882	L.Steel, Steam
30	1998	Kinver				

Kinver & West Midlands Society of Model Engineers Ltd

March Playing Fields Kinver

30th IMLEC 11th-12th July 1998

Rules and Organisation

1. The competition will commence at 8.30 on both Saturday and Sunday. Competitors will be allocated a run number and start time. This information will be given in the instruction pack issued after being accepted to the competition.
2. Competitors must arrive at the track at least one and a half hours before their run and report to the steaming bay reception. Competitors should present their boiler certificate and number of passengers required for the run.
3. One hour before the commencement of the run, the driver will be allocated an observer and asked for their preference of coal, size and amount required for the run. This will be weighed and allocated in his/her presence. Additional coal will be available on the run and excess will be returned and debited off the total in the driver's presence.
4. Drivers must use their discretion in when to commence lighting up, but must be ready to start their run at the time allotted. Any time slippage will be notified to the driver before lighting up.
5. When ready to raise steam for the run, the driver will be provided with as much paraffin, charcoal or wood, as required to raise steam. The driver may change over to the coal when he likes, but all coal used is included in the weighed amount for the run. The driver must have a good coal fire burning before going out onto the track.
6. The train will be prepared for the driver with the dynamometer car at the front and sufficient passenger cars to carry the number of passengers he/she requires. The track marshal will tell the driver when to back the locomotive down the spur leading to the running track and will assist in coupling the engine to the train.
The driver will tell the observer when he is ready and the timekeeper will then start him.
7. Sand will be available for starting from the station and at the discretion of the judges during the run. Reversing to start the train will not be possible as trains are fitted with overrun brakes.
8. The duration of the run is a 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 line side clock will be provided so that you can see the progress of your run. You will be advised when you have ten and five minutes to go and when on the last lap. The total period the train may stop during the run will be eight minutes. If this is exceeded the driver will be deemed to have retired.

9. Any re-run will be run under the same conditions as the original run (same number of passengers etc.)
 10. 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 in the station.
 11. All the unused coal will be collected and weighed in the driver's 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.
 12. A maximum speed limit of 10mph will be in operation for the competition. The dynamometer car provides a speed indication at the driver's 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.
 13. 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.
 14. The use of the handpump is not permitted except when stationary. However it may be used in emergencies when all other means of water feed have failed in which case the locomotive must be retired and the run terminated.
 15. 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.
 16. No external assistance is to be given to the train in any way whatsoever at any time during the run.
 17. 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. Additional passengers may not be added at any time.
 18. 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.
 19. For practical reasons it may be necessary to limit the load or number of carriages pulled in the contest.
 20. The decision of the Judges is final in all matters relating to the competition. The Judges are appointed by the Kinver Society of Model Engineers.
-

The 1998 IMLEC Competitors

Robert Willis is representing the Rydale SME with his 5" G.W.R. 55xx Class Tank Engine. This engine was completed in 1983 and has been a regular performer at the track ever since. This engine has piston valves, radiant superheater, hydro-static lubricator and no water pump.

Dave Tompkins is a private entry from Guilford with his 3' Princess marina. This slightly modified loco is driven by Paul Tompkins who had his first IMLEC experience at Kinver in 1995.

Frank Johansen represents the Wirral MES with his 5" LNER A3 Pacific. This engine was built to works drawings and was a Bronze Medal winner at Alexandra Palace in 1991. The driver is Denis Postlewaite who has many years of previous experience and is also President of the Wirral Society.

Ken Morris represents the Bracknell Society with his 1996 completed 5" gauge Cookham Manor. The loco is to be driven by the long-serving Bracknell Society member David Mayall.

Terry Booth represents Chesterfield Club with his 5" gauge Southern Maunsell H15. This locomotive has been built from a mixture of Martin Evans 3' S15 and works drawings. Terry will be driving the loco himself, having driven it for the last five years since completion.

David Alexander represents the High Wycombe Model Engineering Club with his 5" gauge Claude Hamilton GER D14. The driver, Peter Dickson, is also a member of the High Wycombe Society.

George Meldon represents the Urmston and District MES with his 5" gauge LNER B1. This locomotive was a first attempt, taking only four years to complete. He will be driving the loco himself.

Terence Tipping represents the Brighouse and Halifax Club. The loco is a 5" gauge Claude Hamilton 4-4-0. The loco is driven by David Wainwright who is the Chairman of the Brighouse Society, a prolific model engineer on his fourth IMLEC drive.

Kevan Ayling is representing the Worthing SME with his 5" gauge BR Proposed 282 loco. This loco took 2nd place at the 1990 Guilfor IMLEC and 2nd place at the 1991 Bristol IMLEC. This year Kevan hopes to defend his 1991 win.

Steve Eaton is a private entry from Mansfield who built this loco based upon the Martin Evans Stirling Single. This is his first 5" gauge loco but he has built 9 locos and entered IMLEC four times with good results of best 3' twice. He drives his loco himself again today.

John Ellis is an experienced driver, this being his fourth IMLEC. This year he drives his 5" gauge 4-4-0 Glen Class loco which he drove last year at Pembry Park 97 IMLEC and came fifth. He has been experimenting with coals and hopes to do even better this year.

Jeff Rodway represents Newport MES with his 5" gauge Claude Hamilton to martin Evans drawings. This engine is 15 years old and has been entered into IMLEC before in 1994. The driver will again be Barry Sumsion who drives all types of models and full-size locos.

John Coleman represents the Bristol Club with his 5" gauge King Arthur class loco "Sir Valence". This loco was built to John's own design from general arrangement drawings and photographs. John is a "non-engineer" but has built eight locos and entered IMLEC three times before.

The 1998 IMLEC Competitors




Norman Rossiters 2-6-4 tank engine was built from a general arrangement drawing in 1994. The driver is Barbara Milton who has entered man IMLECs and won the very first Welsh IMLEC.

Ronald Straccwaw built his NE Wordsdell class class 'E' tank between 1981 and 1986 from works drawings. The engine has recently been overhauled and will be driven by his 21 year old son Adrian who has driven model locos since the age of four and also drives on the Festiniog Railway.

Geoffrey Moore's loco was commenced in 1949 by Ernest Powell and completed by Geoffrey in 1983. Geoff will be driving the loco today and has also entered the super IMLEC next month.

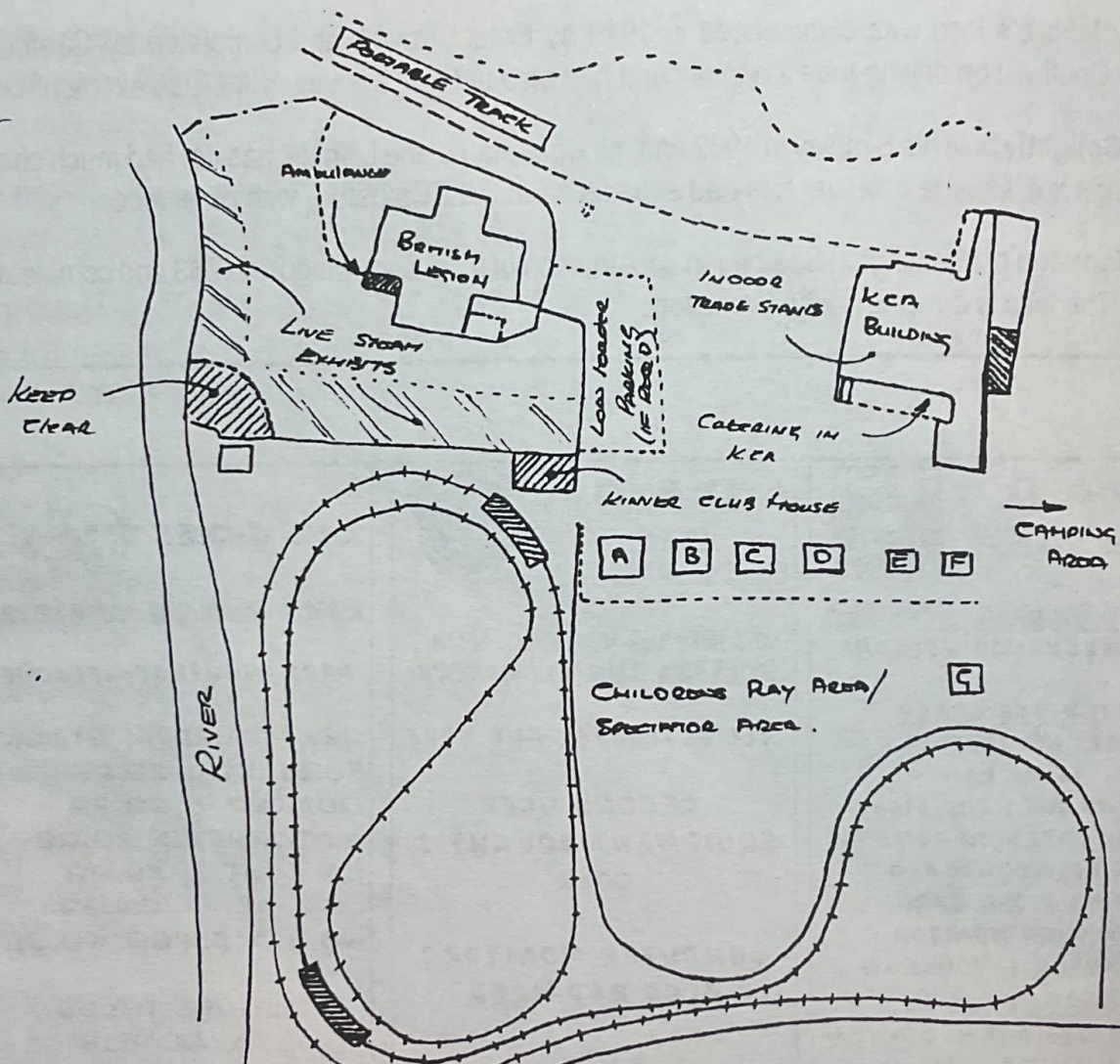
George Golightly built his Simpley in 1982 and, as Chairman of the Llanelli, has not had much chance to wear it out. George however has had experience at IMLECs before with other locos.

Bryan Woolston of Leamington Spa began construction of his Balwin Mogul in 1963 and completed in 1995. The loco is driven by John Woolston.

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I.M.L.E.C. 98

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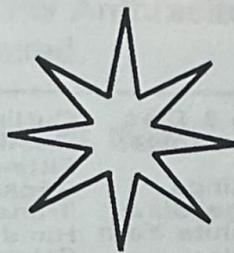


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CALCULATION OF RESULTS

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

From these parameters the following calculations can be made.

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

Competitors have a choice of either **Anthracite** or **Welsh Steam** coal, the calorific yields of which have been measured.

The number of ft/lbs per B.T.U. is 778. thus:

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

The locomotive that returns the highest efficiency is the winner.

Some interesting subsidiary calculations are:

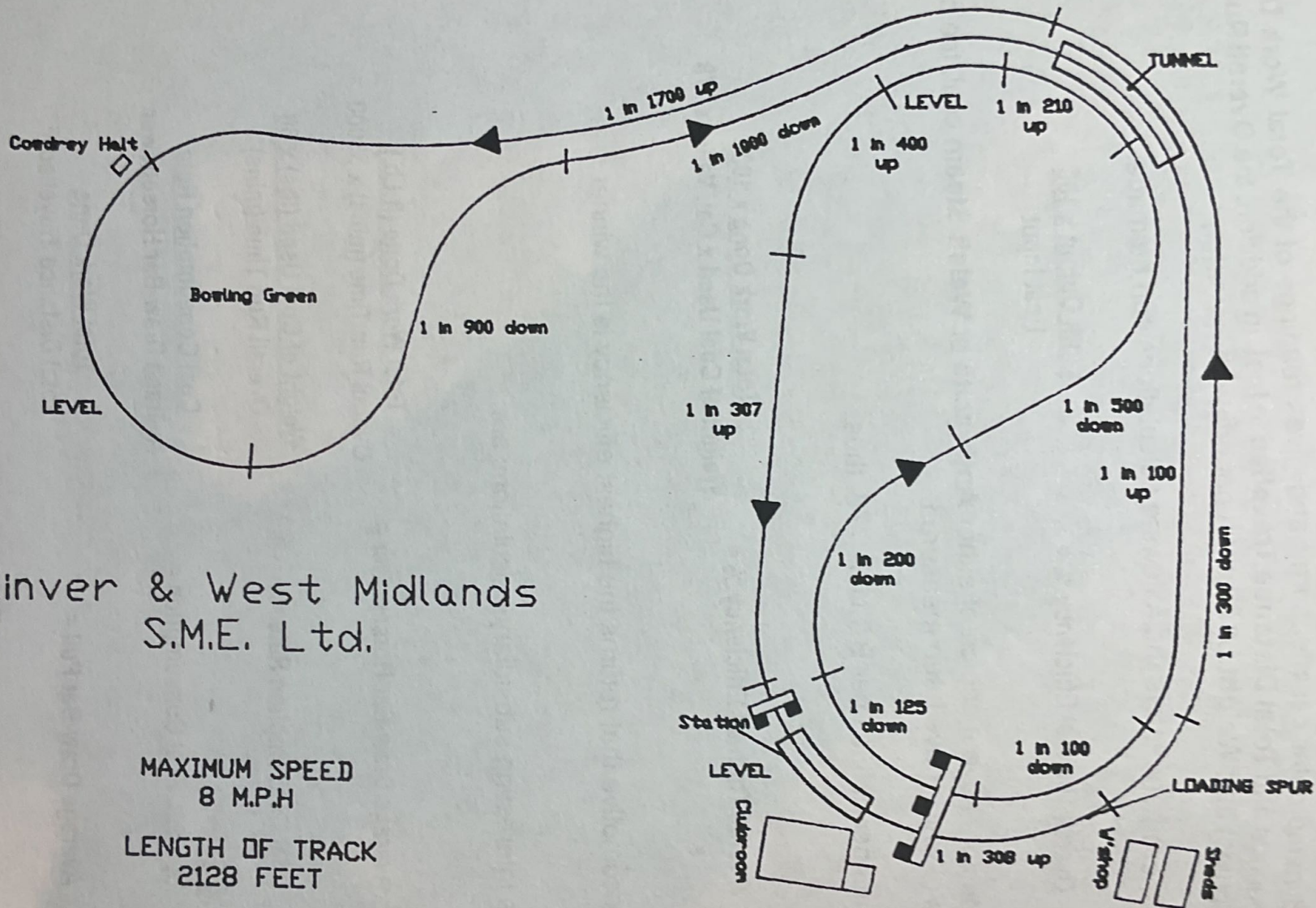
$$\text{Average Draw-Bar Horsepower} = \frac{\text{Total Work Done (ft.Lb.)}}{\text{Overall Run Time (mins)} \times 33000}$$

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

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

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

Exact figures of calorific values are displayed on the results board.



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THE 1998 KINVER IMLEC

VIDEO

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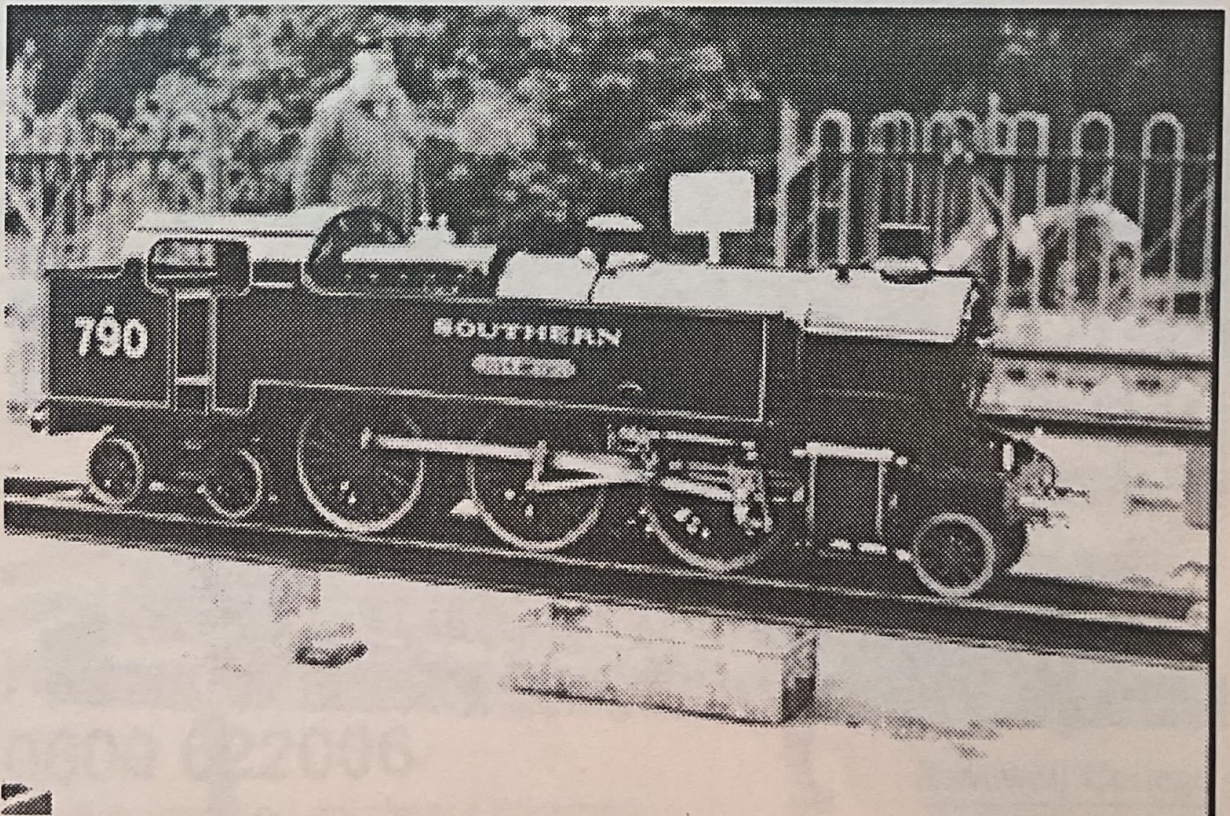
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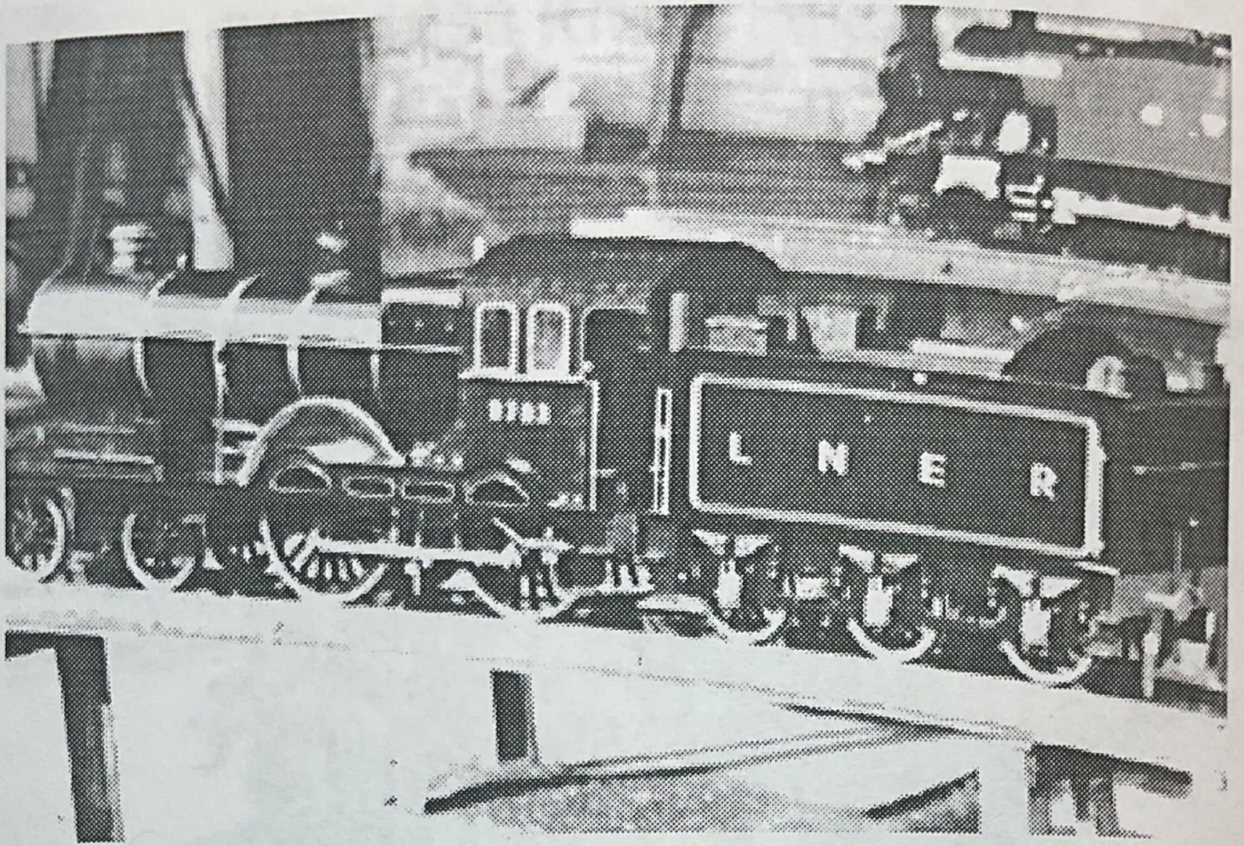
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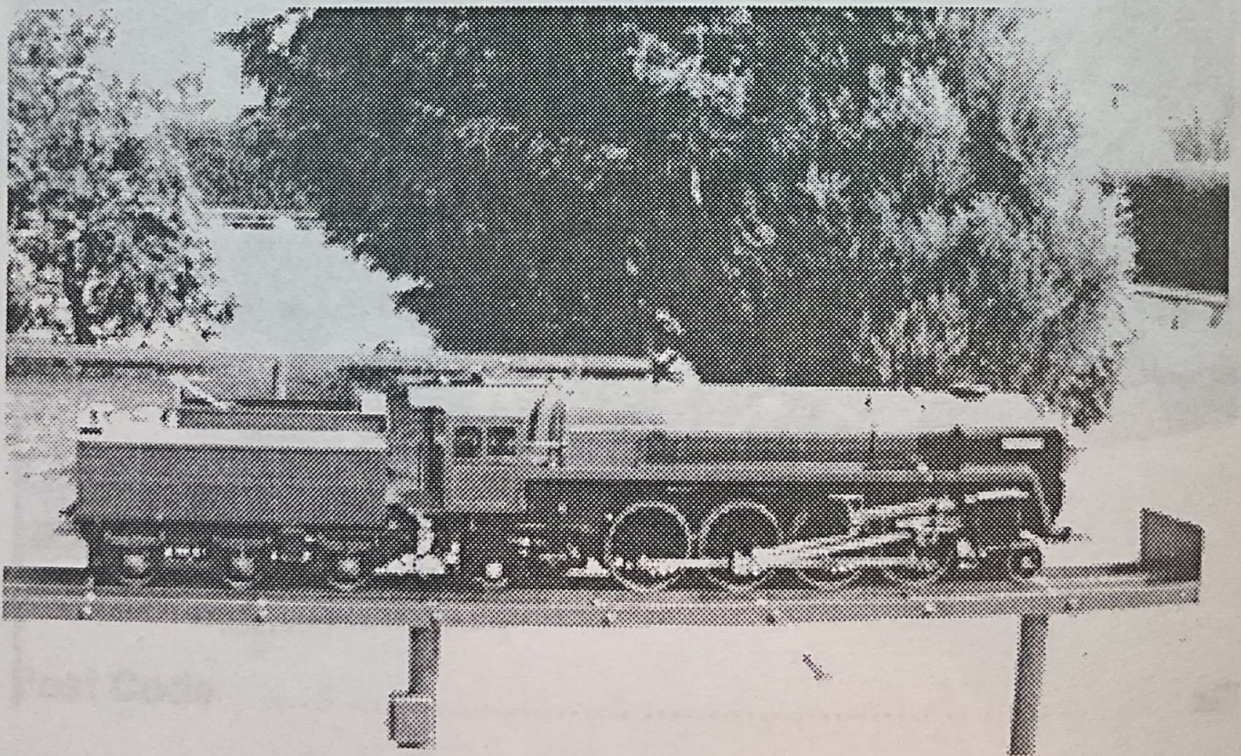
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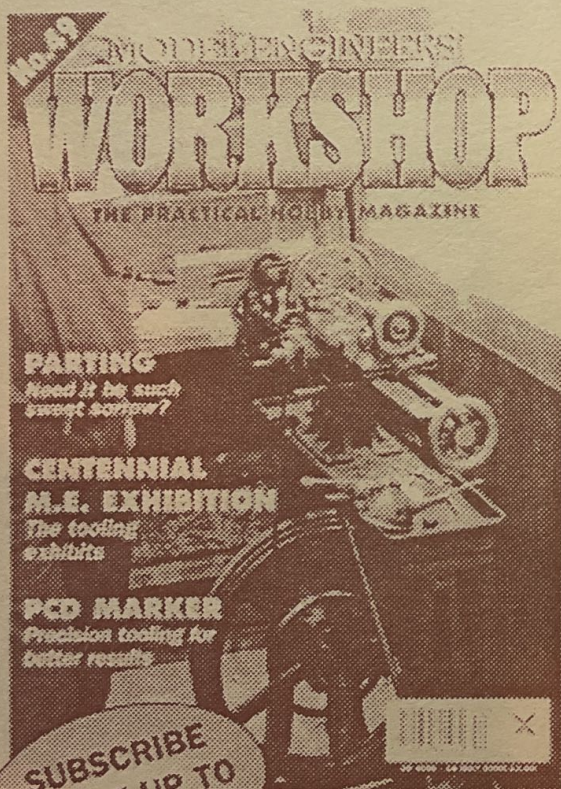


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