

ELECTRIC BOAT *News*

The Journal of the Electric Boat Association

Volume 12 Number 3 Autumn 1999




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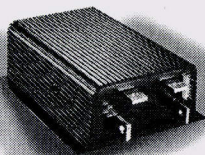
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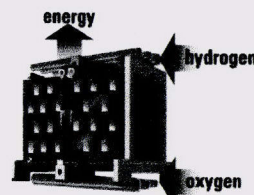
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EBA CALENDAR 1999/2000

Date	EBA events	Events at which the EBA will have a presence	Events of interest to EBA members
1999			
August			
27th–30th		IWA National Waterways Festival Worcester	
September			
10th–19th			Southampton Boat Show
10th–12th			Electric Boat Event, Dillingen
11th		Cookham Regatta	
15th–20th			Grand Pavois La Rochelle
19th	Silent Sensations, South Walsham Broad Norfolk		
October			
1st–3rd			EBA of Americas St Michaels, Maryland
25th	Laying-Up Supper		
2000			
January			
6th–16th		London International Boat Show	
February			
tba			Birmingham Boat Show
May			
18th–21st		Boats 2000 Beale Park Pangbourne	

The Electric Boat Association is on the Internet.
The World Wide Web address is:

<http://www.geocities.com/yosemite/6173/>

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Electric Boat News welcomes contributions from readers and members. If you have anything you think might be of interest, please send it in. Bear in mind however that due to circumstances sometimes beyond our control, we cannot be held responsible for any damage or loss which may occur to this material.

Items of interest include letters, reports on rallies or events, reports of particular cruises or trips, articles or advice on building or running electric boats, and reports on items of equipment. We also welcome manufacturers' reports on new items of equipment or boats.

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Cover picture:
'Switched Off' negotiating
Shillingford Bridge on the
River Thames

The Journal of the Electric Boat Association

Volume 12 No. 3 Autumn 1999

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Editorial

Mayday, Mayday, Mayday!

There we were, at the BGM, when we came to the bit when eyes are cast down, gazes are avoided and everyone keeps very still and quiet. No, not the prayers or blessing, but 'the appeal for help'.

The association exists to support its members. It is a professional, adequately funded organisation. As with all organisations of this type, it relies on the efforts of a relatively few stalwarts. The burden would be easier shared between more people.

But as I sat and listened to the appeal, I felt that there was too little information for people sitting in the audience to make an informed decision, the request was too open ended. I could almost hear people thinking, 'I don't want to spend my time attending committees'. So I thought it would be useful to be more specific. One of the things that the EBA does is to have a presence at a number of events, such as Boats '99, Windermere, Silent Sensations and so on, both to support current members and to attract new members. These events are good fun and many of you go to them anyway. But they can be a drag if you are on your own and tied to a stand, and this is the situation our secretary, Barbara Penniall finds her self in on many occasions. Members sharing this duty with her would help the Association, make life more fun for her and (probably) get free admittance to the event. So the sort of commitment that is being sought is the odd half day and an occasional hand with a mailing and so on; no long term commitment. Not too much to ask for, so how about it? Volunteers please contact Barbara on 01491 681449. Dates for events are in the calendar.

In the last edition I asked for members' experiences of the Boat Safety Scheme, with a view to seeing if there have been any particular issues or sticking points and writing them up for the benefit of all. I received one response (which is published on the letters page). So here is my appeal. Please let me have a response to such requests together with your general contributions for the magazine. I am sure such contributions can only improve the magazine.

It is with regret that I read that Alan Meale, MP returns to the back benches. As Waterways Minister he was a good friend to the EBA and we are sorry to see him go.



Bruce James

Editor

Copy deadlines:

Material to be considered for inclusion in Electric Boat News should be sent to the Editor by the following dates:

Spring	1st February	Summer	1st May
Autumn	1st August	Winter	1st November

Biennial General Meeting-10th July 1999

Beautiful English Summer's day, splendid riverside location, nineteen electric boats — it must be the EBA Biennial General Meeting and Electric Boat Rally.

The meeting and rally took place at Upper Thames Sailing Club at Bourne End, Bucks on Saturday 10th July. The morning meeting was the business part of the day, but from the end of the BGM, about 12.30pm, the day was dedicated to two things, our members enjoying themselves and an opportunity to attract and talk to members of the public.

The meeting started a little late. Treasurer Peter Cook had mistaken the start time, thinking that it was 11.30am not 11am. After the inevitable jokes about the treasurer having left the country, the meeting started at about 11.20.

At the 'top table' were Hon. President Rear Admiral P D Gick, CB, OBE, DSC, Chairman Jim Keating, and Secretary Barbara Penniall (joined by Treasurer Peter Cook on his arrival). Jim Keating opened the meeting with his report.

Chairman's Report

The Management Committee under the chairmanship of Phil Horsley, have directed their efforts at raising the profile of the Association and in this have achieved some success. The main thrust of activity has been lobbying key groups such as British Waterways (BW), the Environment Agency, UK Heritage Groups, the British Marine Industries Federation and, in particular, the Parliamentary Waterways Meetings. This last group has brought us into contact with Angela Eagle, the Waterways Minister and her successor, Alan Meale, both of whom have been very supportive.



Peter Allen (on the right), Chairman of the National Motor Boat Museum, receiving one of the original Lynch outboards from Fraser Brown. This is one of two motors used to power 'Silver Sail', an early electric boat once owned by Lord St Davids. Fraser is the current owner. The other motor was presented to (and can now be seen at) the River & Rowing Museum, Mill Meadows, Henley-on-Thames.



The Emsworth Trophy is awarded each year for the longest cruise in an electric boat. This year it was won by Richard Leeson and family. The photo shows daughters Alice and Rose receiving the Trophy from Rear Admiral Gick.

In addition, we have attended many exhibitions throughout the period, supporting existing members, attracting new members and putting the EBA message to the general public.

In all these activities the Association journal, *Electric Boat News*, has been circulated.

A lot of this activity is directed at building a profile for the future, but in one particular area we feel specific progress has been made. That is in the establishment of a network, albeit at present a rather thin network, of charging points, on the River Thames and the BW Canals.

For the future, our next major PR activity will be the Schools/Colleges Challenge. This will take the form of a national competition for schools and colleges to design an electric boat. The school or college producing one of the 10 best designs selected by the judging panel will be invited to build their boat, and given financial help to do so. The 10 boats will then compete against each other in a two stage competition. The first stage will be race with the winners going



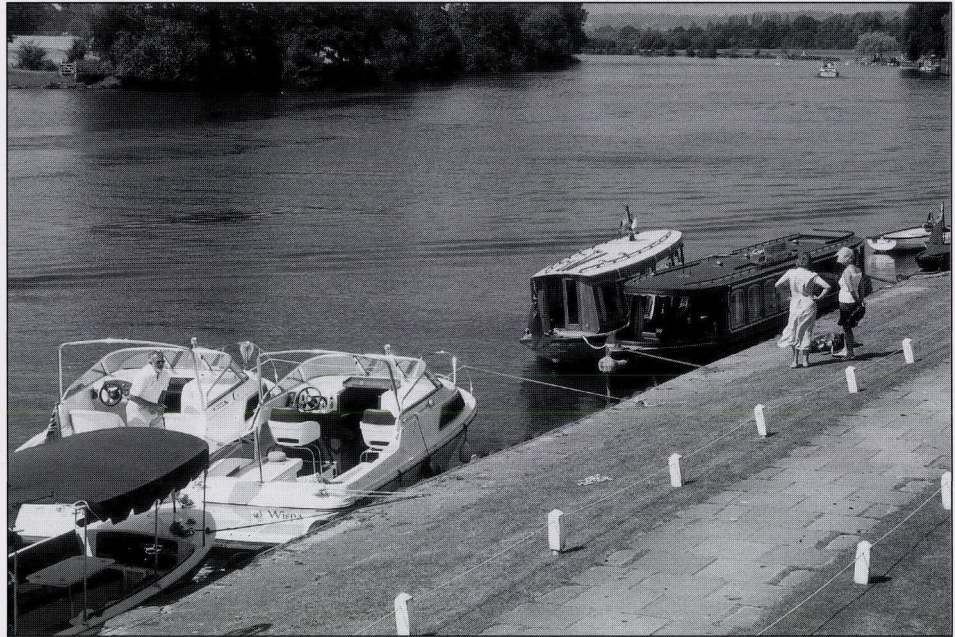
through to an endurance test. As both elements of the competition must be completed on one full charge, the designs have to be viable ones, achieving both good speed and long running.

The Association has opted for a schools Challenge for a variety of reasons. It involves young people, thereby building awareness of electric boating and environmental issues in a future generation. Properly managed, these elements should gain the attention of the media, creating good publicity. With the potential to gain publicity, the Challenge should be attractive to sponsors, and we need sponsors to finance the Challenge.

Our partners in the Challenge are two very influential groups, the Young Engineers and the Association for Schools Science, Engineering & Technology. We have also appointed a firm of public relation consultants, Oldham and Co., to advise us.

The next step is to approach potential sponsors, using, in the main, contacts identified by the Young Engineers, who have already run a similar, successful competition for electric cars. For these approaches to sponsors, it has been agreed that the Association will publish at its expense, a professionally written and produced document spelling out to potential sponsors what they can expect to receive for their organisations in return for their sponsorship. The estimated cost of this will be up to a maximum of £3,000.

For the future the Association will be looking for other ways to maintain a high public profile for the EBA.



Some of the early arrivals at UTSC

The Chairman continued his report with an appeal for help in a variety of ways. He pointed out that as with all organisations, the work load could be a heavy one for a few, or shared out and lighter for the many. There are many ways in which members could help to make their Association be more effective. He hoped that this appeal would not fall on deaf ears, as had happened in the past.

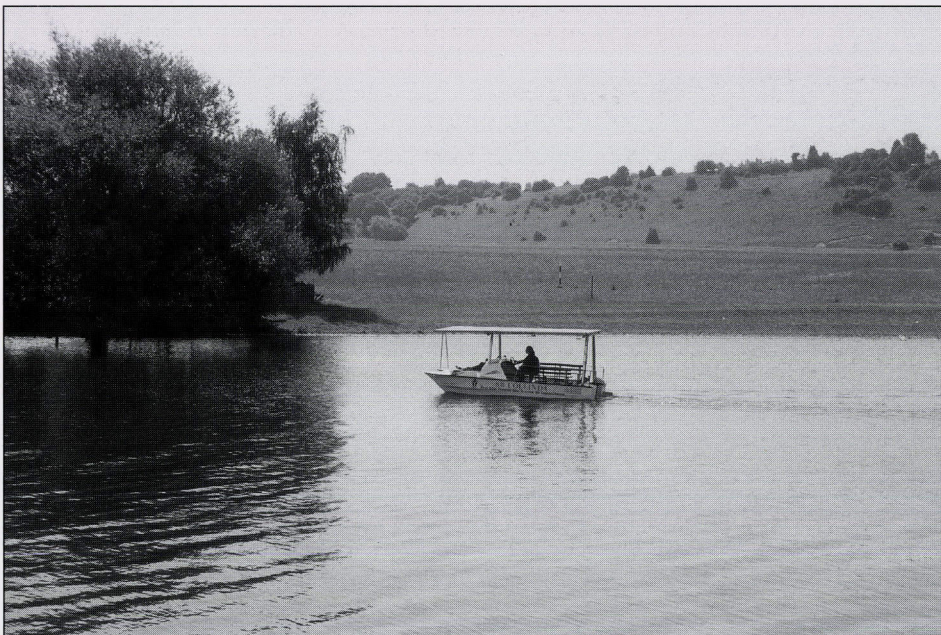
Treasurers Report

It was reported that the key activities of the Association have been set operating budgets within which to work. This will facilitate better financial control. At present there is £4,356.00 in the current account and £6,424.00 on deposit. Our major liability is the maximum expenditure on the Challenge, outlined above.

Other Business

After some discussion and minor amendments the changes to the Articles of Association were agreed. The definitions of membership categories, particularly whether or not we should have a joint membership to cover partners, thereby clarifying the number of votes a couple have was referred to the Executive Committee to resolve.

(At this point the Editor noticed S B 'Collinda' sneak down the river and thought that while we were all in the meeting, they had passed the intelligence test and were enjoying electric boating, while the rest of us were just talking about it! It should be noted, however, that Malcolm Moss, Collinda's owner, was not on board, but dutifully in the meeting)



S B Collinda 'getting it right' while the rest of us sat in the BGM!



Saying it with flowers. Association Secretary, Barbara Penniall, being thanked for her contribution to the EBA, with flowers from Jim Keating

*Lakes and North-West -
Peter Morgan*

*North-East -
Fraser Brown*

*Scotland -
vacant*

*Technical Officer -
John Hustwick*

*Membership Secretary -
Richard Leeson*

*2 - Trade non-exec members -
Pat Davis (Rivertime) & Vic Sayer
(CMP)*

*2 - Users' non-exec members -
Derek Chamberlain & Brian Pickess*

The meeting ended just after midday.

Appointments

The appointment of the following members of the National Council of the EBA were confirmed.

*Hon. President -
Rear-Admiral P D Gick*

*Hon. Vice Presidents -
Fiona, Dowager Countess of Arran,
Edward Hawthorne*

*Chairman of Association -
Jim Keating*

*Vice-Chairman - Trade Members -
vacant*

*Vice-Chairman - User's group -
Ian Rutter*

*Secretary -
Barbara Penniall*

*Treasurer -
Peter Cook*

*Editor E B News -
Bruce James*

*P R Officer -
vacant*

Regional Directors

*Thames & South-East -
Steven Schrier*

*East Anglia -
John Williams*

*Midlands, South-West and Wales -
David Higgins*



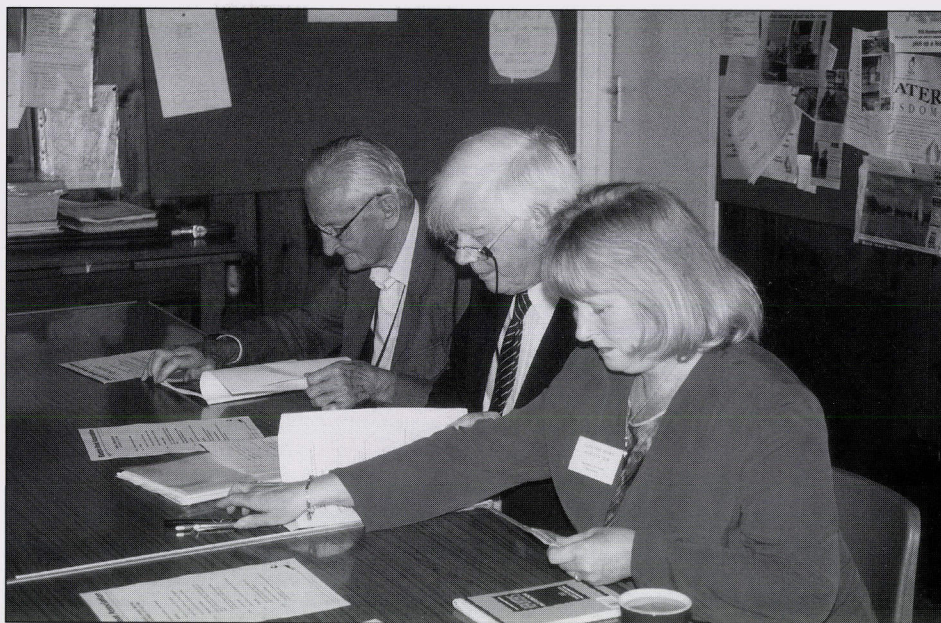
Recipients of the St Davids Trophy receiving their award from Marjorie, Viscountess St Davids. The trophy is awarded every two years for 'a significant contribution to electric boating'. This year the award is shared between. Phil Horsley and Linda and Emrhys Barrell.

Electric Boat Rally 10th July

After a pleasant lunch put on for us by the catering staff at UTSC, there was a parade of electric boats. Trade members present were able to discuss their products and services with members of the EBA and the general public and at least one sale was made. The event was well attended having been extensively advertised locally. A bouncy castle and free face painting amused the children - and kept them out of the river! Presentations of the Emsworth Trophy and an early Lynch outboard were made.



One of the trade boats displayed, and sold, at the Electric Boat Rally is Jim Sawyer's Water Roo craft. Those who attended Windermere may already have seen this craft. Jim's company have been building outboard and jet powered versions of these runabouts for 8 years in his Devon based factory, but two years ago felt that the writing may be on the wall for fast noisy internal combustion powered craft operating in crowded waterways and near beaches. Electric power appealed to him as the power of the future, hence his current new range.



Association President, Chairman and Secretary (Rear Admiral Gick, Jim Keating and Barbara Pennill respectively) at the BGM.

With hire craft operators very much in mind, the target was to achieve 5 knots for more than one hour from a single 12 volt battery using a jet drive system. After much research and help from Cedric Lynch, this has been achieved and Jim now offers a range of electric powered craft alongside his infernal combustion ones!

Jim Keating said, 'It has been a great afternoon - even better than I had anticipated. We have had a good turnout, and I am particularly pleased with the number of general public who have joined us. I think that today could well form the model for an annual rally'

List of boats at the Electric Boat Rally

Edward Bear	Voltaire 16	Peter Cavendish	Stima	Deltic	Brian & Margaret Pickess
Wagtail v		Wagstaffes	Clivella	Frolic	Ron & Margaret Callard
Collinda	Solar	Malcolm Moss	Tante Janine	Frolic	Dominic Grieve
Amble & Mystere		Edward & Dinnie Hawthorne	Summer Wine		Steven Schrier
Irene	Voltaire 18	Ian & Sylvia Rutter	Hebe		Prof Hugh Bentall
Montmorency	Voltaire 18	Pam & Terry Gilbert	Libellula		John & Rhoda Church
Shiel Water		Anne & Terence Casey	Catspaw	Narrowboat	Emrhys Barrell
Pike		Richard & Ann Leeson	Jeaneta		Jim Keating
Wispa	Deltic	Paul & Pauline Jackson	Victoria		

Committee Meeting Highlights

The old Management Committee met for the last time at the offices of Triangle Management, Beaconsfield on 7th July 1999. This was the first meeting under the chairmanship of Jim Keating.

The meeting agreed after a long discussion to instruct Olden and Co to proceed with the publication of a sponsorship document in connection with the schools and colleges challenge.

Peter Cook presented the finance report that would also be presented at the BGM. It was approved.

The rest of the meeting was taken up, in the main with the arrangements for the BGM and Electric Boat Rally and with the administrative details for the EBA's attendance at the IWA Festival.

At the end of the meeting, Jim thanked Paul Jackson for

the use of the facilities at Triangle Management. Future meetings will take place at another location, probably Upper Thames Sailing Club (UTSC) at Bourne End, as Paul was standing down from the committee.

The new National Council and Executive Committee met at UTSC on 4th August. The key purpose was to get the new group together as soon as possible after the BGM, thereby ensuring a smooth handover from the old to the new committees.

Some time was spent discussing the progress of the schools and colleges challenge and the new committee expressed their majority satisfaction with that progress.

The resignation of Peter Cook as Treasurer was accepted with regret, and Brian Pickess appointed in his place.

Windermere — wet and windy



Audrey and David Smith talking to Bob McNair of Chloride Motive Power.

Our second Electric Boat Event on Lake Windermere took place over the weekend 19th-20th June and was again hosted by the Windermere Steamboat Museum. The venue is ideal for this annual event and lots of electric boat enthusiasts came especially to try the selection of boats on the water or talk to the trade members on hand.

Trade members who attended over the weekend were Chloride Motive Power, L.E.M.C.O., the Lakeland Electric Boat Centre and Water Roo Craft. The IWA provided their own stand, manned on the Sunday by Audrey Smith and husband David. Audrey was Chairman of the IWA until very recently and had been awarded the OBE just before the Windermere weekend.



Judy and Jim Andrews Frolic 'Humming Bird'.

Our private members in the area were very supportive. Tony Dunning came a long way both days by public transport in order to offer help and Judy and Jim Andrews came with their Frolic 'Humming Bird' as our token private boat. The weather was so bad on the Saturday afternoon, that sadly as Jim cruised home, he hit a particularly big wave rounding Ferry Nab and put his back out, so was unable to attend Sunday. Barry Croft although unable to attend the event this year as he was on holiday, had very kindly offered the use of 'Daffodil', another Frolic, and Norman Stoller, owner of 'Orchard Belle' the star of the event last year, did not bring his boat because of the very poor weather forecast, but came armed with a very welcome battle of champagne to offer moral support to the EBA representatives.

The Canadian Electric Launch Company attractive day boat displayed on its trailer in the forecourt of the museum, drew the crowds towards the jetties where visitors were offered cruises from the selection of electric boats on the water. These craft included a 16ft Orkney with modified twin outboards. Coniston Boating Centre provided a Mystic and there was even an electrically powered rowing boat to try. An unusual option was offered by Lakeland Electric Boat Centre. A 16ft open boat had been equipped with a bow mounted electric outboard which had proved particularly popular with fishermen and avoided any disturbance or entanglement of lines.

The electrically propelled leisure craft from Water Roo



The Canadian Electric Launch Company's display.

proved to be extremely popular with everyone over the weekend, and was in constant demand for rides. Even on the choppy surface of Lake Windermere, it felt very stable on the water and easy to handle.

All the boats were swamped when we arrived on Sunday morning and had to be baled out, and the winds were so strong that no steamboats went out for trips and the dock doors were kept shut. However, we were there, the sun tried to shine and our little electric boats bravely took people out in some lively waves.

Once again, our thanks to all those who made the event possible by their support and to the Windermere Steamboat Museum for their warm hospitality.



The bow mounted electric outboard from the Lakeland Electric Boat Centre.



Wargrave Rally



The Wargrave Rally did not take place at Wargrave! This is the name given to an annual event that occurs somewhere on the upper reaches of the Thames, and is called the Wargrave Rally for historical reasons.

It took place on a very sunny day in June and was hosted in truly splendid fashion by Robin and Eve Bentham in their beautiful Caversham river side garden. There was adequate mooring, and a very civilised picnic was enjoyed by all who attended.

It was a glorious afternoon, and Robin and Eve made everyone extremely welcome, providing for all our needs - even garden toys to keep the children amused. Past supporters of the rally will know the Benthams as owners of 'Bluebottle', so often a winner of the Wargrave Trophy, but this year the decanter for the best decorated boat was won by Chris and Celia Tassell with their magnificent 24ft slipper launch, 'Sunpenny'.



Take three narrow boats

Is electric power a viable power source for narrowboats? Some argue that it does not deliver enough power to safely navigate the rivers that connect the canals. Some say it cannot be viable until there is a practical network of charging points. Some say that with the new generation of quieter diesels it is not even worth considering.

In this article we describe three narrow boats that use electric power. They have been conceived to offer quiet, vibration and pollution free running, advantages that are seen by their supporters to outweigh the disadvantages of higher installation costs and the other disadvantages, real or perceived.



Tony & Jill Sauer's electric powered narrow boat, 'Switched Off'

'Switched Off'

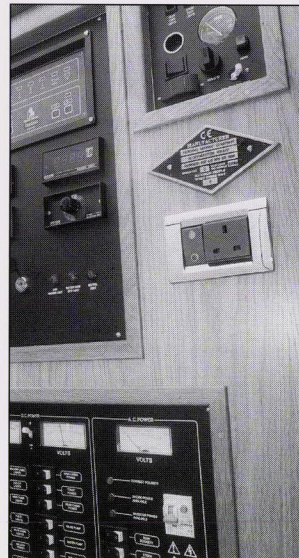
The driving force behind Tony and Jill Sauer's decision to purchase an electric narrow boat was their search for silence. Things came to a head on their previous boat, a diesel powered Wilderness 23 when the only way they could make their dog hear them was to lift his ear and speak directly into it!

Tony, a marine engineer working for P & O, chose Reading Marine Company to fit out his 62' G R Reeves hull. Together they opted for a hybrid system, with the driving power being electric and an on board diesel generator being used to recharge the batteries. In addition there is the facility to recharge from the mains when mains power is available.

Tony had very clear ideas about what he wanted the system to deliver. In addition to silent running, he wanted to be able to cruise all day on one charge, be able to recharge, from either his on board charger or from the mains, overnight and have domestic hot water throughout the day.

This was Reading Marine's first electric installation. Their first reaction was basically, why bother? They were confident that the new range of Beta diesels would provide the quality of cruising that Tony, Jill and the dog were looking for. Initial research suggested that there was then no really suitable propulsion system available. But as Tony was (a) serious and (b) the customer they decided that slipping in an electric motor and battery pack into the hull wasn't that difficult anyway!

Early research showed there was a bit more to it than that. The availability of the Lynch Double 21 kW motor

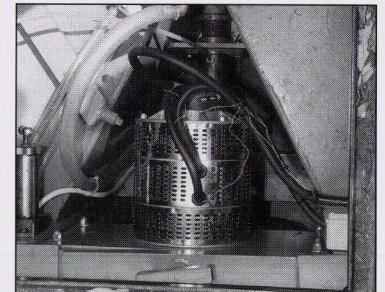


'Switched Off's control panel.



'Lifting the dog's ear!'

Lynch double electric motor



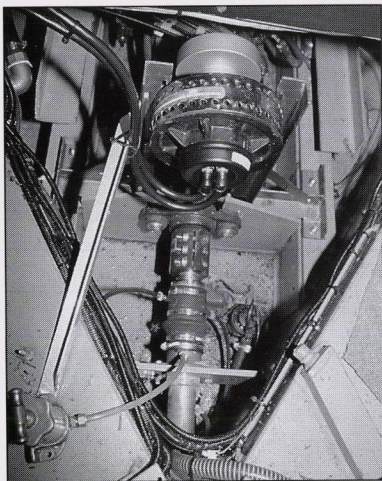
from London Innovations and the advice from consultant Bill Reed ensured a practical solution.

So what are the reactions to the finished system? Reading Marine are pleased with the finished job and see this type of installation so one can offer to other clients. As with other innovative projects, 'Switched Off' was probably over engineered to be on the safe side, but with the experience gained they could see ways to achieve savings in the future. But electric narrow boats probably occupy a niche in the market similar in size and cost to the vintage narrow boats.

Tony and Jill are delighted. 'Switched Off' is everything they wanted, and Tony says the system is better than his specification.

Switched On' system - Technical details

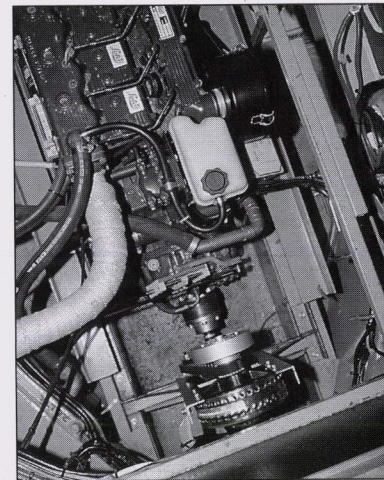
- Lynch Double 21kw motor running at 96 volts**
- 48 chloride 2-volt batteries, 500 amps with auto fill system**
- Generator, Panda Fischer 12kw, 96 volt, rated at 100 amps, with voltage sensed auto stop, start**
- Shore power charger, chloride 48 volt, 30 amps**
- Control and management system designed by Reading Marine**
- Approx 7 hours constant cruising at 4.5 m.P.H., 2 1/2 hours cruising at full power, 6 knots plus**
- Recharge time, generator 6-8 hours from flat, shore power charge 12 hours, system requires shore power**
- Recharge every 2-3 weeks**



Left: The 8kW electric motor mounts neatly above the existing propeller shaft, and drives through a toothed rubber belt.

Above: For river use, the Selectric gives 4-5mph. For higher speeds than this you use the diesel.

Right: This picture shows the Selectric motor and diesel engine.



'Catspaw'

Catspaw is 48ft narrow beam river cruiser designed for use either on rivers or canals and has a conventional narrowboat underwater form, and an all-up weight of 10 tonnes. Owned by The Thames Electric Launch Company (TELCO) it uses their Selectric system. This system retains the existing diesel engine, driving a conventional gearbox, prop shaft and propeller. Mounted above the prop-shaft is an electric motor. This drives the propeller independently of the diesel, through a system of clutches. The electric motor is powered by a battery pack, which can either be recharged from mains shore supply, or from an alternator driven by the main engine.

The Selectric system has two main advantages for narrowboats. Firstly it can either be fitted from new, or can be retro-fitted to existing boats. It can also be easily be taken off one boat and moved to another if you should want to sell your boat.

Secondly, it retains the diesel engine for times when extra power or range is required. This means that you do not need such a large electric motor, with its correspondingly expensive and complicated control system. The electric motor is just used for low speed canal work, giving a comfortable 4mph. It can also be used on rivers at 4-5 mph, but for serious river use, you revert to the diesel.

For the same reason, you do not need such a large battery pack and charger, which keeps the initial costs low. If you should run out of range on the canal, you just start up the diesel to get you to your destination, or the next charging point.

If you want extra range or capacity at a later date, or when funds allow, you can just add extra batteries.

The heart of the Selectric system is the LEMCO motor. This motor has improved brushes and armature design, to overcome the overheating problems that occurred with the earlier versions and it gives greater continuous power output for narrowboat use.

The secret the LEMCO motor is its compact size and weight, and high reserve power and torque. This means it can run at 4-6kW continuously, but has 8kW in reserve to give the necessary stopping power for bringing a heavy narrowboat to a stop, and for manoeuvring.

In operation, nothing could be simpler. Turn a key and the electric system is energised. A simple throttle lever gives forward and reverse control. Into 'gear', and you hear a click as the forward contactor engages. Then the power comes in smoothly as you open the throttle. The high static torque of the motor gives a significant kick as it cuts in, enough to get the boat underway immediately.

Running at 4mph, you realise the main noise is coming from the propeller underneath the boat, and from the prop-wash at the stern. All you hear from the motor is a slight whine from the brushes.

Stopping is equally straightforward. Just pull the lever back through neutral into reverse, and the motor bites immediately, bringing the vessel to rest in less than a boat's length.

If you want to turn over to diesel power, you simply stop the electric motor, switch off, then start the main engine.

The Selectric starter pack on this boat has a 400Ah battery bank, which will give around 6-8 hours running time at canal speeds of 3-5mph. On Catspaw battery charging is provided by a mains charger, the simplest and cheapest option. However an engine-driven alternator can be fitted, allowing you to run on electric power for one or two days, then charge up the batteries on the third. For many people the majority of trips are days or weekends, in which case you can recharge back at your mooring. Instruments are kept simple, with a Sterling battery monitoring meter allowing you to keep a watch on the existing 12V circuits, domestic and main engine start, or switch over to read amps and volts of the Selectric system.

The basic Selectric system, including motor, pulleys, clutch, mounting frame and controller starts at £1,925 plus VAT for the 2kW version, suitable for boats up to 30ft. For 48ft you will need the 4kw version, at £2,750 plus VAT, while for 60ft you will need the 6kW system, at £4,250 plus VAT.

Battery packs start at £1,680 plus VAT for 400Ah, and increase pro rata. A mains charger for the starter pack will cost £720 plus VAT.

Fitting costs will depend on the layout and details of your engine and gearbox, and whether you do the work yourself. Alternatively TELCO can offer a fitting service.

Ratty

Our third boat is a very different concept and whereas the first two boats are all up and running successfully, Ratty has a lot more of the prototype about her.

The starting point is based on serendipity. Tony and Barbara Moss operate Wind in the Willows, a 72ft purpose built, passenger carrying narrow boat that they operate from Willow Tree Marine. They recently came across a 20ft narrow boat hull that they acquired cheaply, with a view of operating as a well fitted out dayboat. They chose twin electric outboards as the power source, mainly because the hull had been built to accommodate these, but they were also attracted by the advantages of electric power for their users.

I am not attracted to these ultra short narrow boats and when I first saw Ratty, externally she held all the attraction of a sawn-off shotgun. However, once on board, I quickly became a fan. The cabin is extremely light and airy. This has been achieved by removing the front and sides of the superstructure completely.

Weather protection, when needed, is provided by roll down screens.

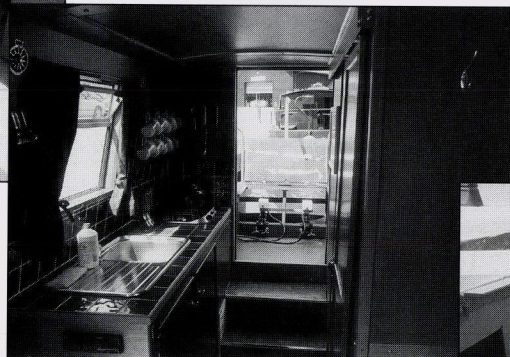
The cabin provides comfortable day accommodation for 6 and adequate accommodation for 8. A hob and sink enable some basic cooking to be undertaken and a portable toilet in its own compartment provides for other necessary comforts.

The twin electric outboards provided adequate power for driving Ratty along the Paddington Arm of the Grand Union Canal. But all is not sweetness and light for the project. There are some unresolved issues with the recharging system, and it may be that the twin outboards, designed for private use, are not up to the rigors of hire use, particularly in an area where there are shoals of marauding shopping trollies, lurking just below the surface. Plastic propellers and brass shear pins need gentling along.

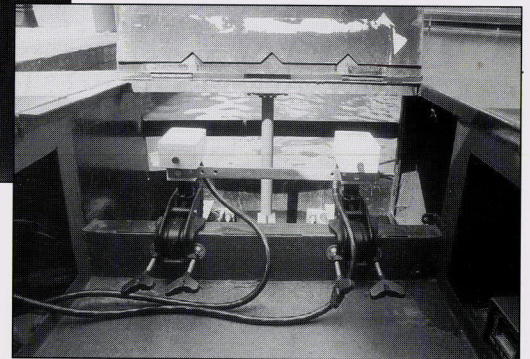
When I saw Ratty I was attracted by a quiet and comfortable dayboat, and I hope that the problems are resolved and that she goes into service as an electric powered boat.



Cabin facing for'ard.



Cabin facing aft.



Ratty's twin electric outboards.

Summary

What we have seen and described are three different but practical solutions to operating electric powered narrow boats for either private or commercial use. I believe that electric power comes second only to the horse for providing smooth, vibration free, quiet cruising. Installation costs will remain comparatively high whilst electric power is used as a second drive system as in 'Catspaw', or when it is backed by a diesel generator, as with 'Switched Off'. One is in effect carrying the cost of two installations. This situation is likely to remain until there is a practical network of mains charging points, which is happening, albeit slowly.

Regarding costs indicated in the article these are not on a like for like basis so please exercise care in making comparisons.

I would like to thank those who contributed to this article, particularly Andrew Edwards at Reading Marine, Emrhys Barrell at TELCO and Tony Moss at Willow Tree Marine. It is worth stressing that both Reading Marine and TELCO offer a range of installations and are not restricted to the particular system or craft described in the article.

For further information contact: Reading Marine (0118 971 3666) and Thames Electric Launch Company (01491 873126). Email: thameselectric@goring.co.uk



Letters

Kenmure

I was fascinated to read the article in the Summer EB News about the first electric yacht on the Broads. Up until now we had thought that OUR two yachts (converted in 1993 and 1994) were the first and we had not heard of Kenmure. I would be most interested to read the full text of the article and also to be able to contact Brian and Joy Eady with a view to looking over Kenmure.

Would you be kind enough to pass my name on to them to ask them to contact me when they are next in Norfolk?

Congratulations on your first edition which was up to the usual high standard with many interesting articles.

Peter Howe—
Proprietor and Principal
The Norfolk Broads School of Sailing
& Camelot Craft

Where are the trade members?

As you know, I have recently completed a two-year term as the Users' Group Chairman which I found extremely frustrating. This was summed up for me by the very poor attendance of trade members at the boat rally - an event which was designed to promote electric boating to the interested general public. I believe I sold at least one Deltec (Adrian, commission please)!

To be serious, it seems to me that the EBA does not have a future unless the trade members show more active support. It has even been difficult to find a representative chairman among the trade members' group.

In the last few years under the able chairmanship of Phil Horsley, the EBA has moved up a gear. It has achieved much wider acceptance in

Government and is now taken seriously by more river and water authorities. The recent re-organisation reduces the committee to a much smaller, active executive with a national coverage of support, but it will not work unless the trade members appoint themselves a chairman and give more support to the Association.

I know it is a "chicken and egg situation", i.e. the trade members believe that there is no demand, but that is what the shoe salesman said when he went to Africa!

Paul Jackson—
Temple, Marlow, Bucks

Boat Safety Scheme - 'Summer Wine'

In answer to your request for info on the boat safety scheme, here is my little report.

My boat was built in May 1993, and I invited the surveyor, Peter Clements of Hayling Island to check it in August.

I read the booklets from the agency fairly carefully and discussed battery and motor ventilation with the builder. Designeta Ltd also gave me advice on this point.

I discussed length of anchor line with Thames Conservancy who said 15' depth of water should be catered for. Everything else was self explanatory.

On the first inspection, all was well except

1 No nameplate stating that the big red switches were for the batteries!

My local Trophy engraver supplied one in 24 hours.

2. The smart looking extinguisher which stated it was suitable for ABCE fires, did not have the correct approval symbols on it.

I had to buy one from a marine chandlery distributor for twice the price of the other one. They look

identical in all other aspects!

There was no charge for the second visit of the surveyor as he lives close by. Be warned that a second visit could be expensive.

Steven Schrier—
Hayling Island

I thank Steven for his response to my editorial, asking for your experiences with the new scheme. I had thought that there would be enough feedback to see how things are going. As it is, I have published Stevens's letter to see if it generates any reaction. If it doesn't, I can only assume that we are all very happy and this is a dead topic. Editor

BGM & E Boat Rally

We would like to convey our company's congratulations to yourself and fellow committee members for such a well organised and entertaining outing yesterday. Thank you for the opportunity to participate.

In our early stage of marketing our new addition of the electric range it had been of great value to have had the opportunity to learn from a vast array of experience and knowledge available in discussions with fellow members.

One such notable item which caught my attention, was in the vulnerability small craft have in such busy waterways, especially amongst large high performance sports cruisers with large bow and fore deck areas restricting their visibility. This may be stating the obvious to the experienced however, in future, we have decided to fit out all our river models with multicoloured sun covers as a recommended option at a specific height above the seats and making them more easily noticed. In this alone we have noticed what great value our membership to the EBA is and eventually, would be in a position to offer just as much, if not more in return.

If it may be of interest to EBA members our company would be pleased to offer up to 25% trade discount off the retail prices on any of our solely produced products.

We look forward to attending as many future meetings as possible.

Jim Sawers—
Director, Waterloo Craft Ltd



Home News

New Waterways Minister

The Government reshuffle a few weeks ago saw Waterways Minister, Alan Meale MP replaced by Beverly Hughes. Alan Meale, who took over the portfolio from Angela Eagle only year ago, had been a good contact for the EBA, appearing genuinely interested in the development of electric boats on the inland waterways.

Lee and Stort Branch

IWA announces the opening of a new branch, the Lee and Stort Branch. This is the IWA's 37th Branch and covers the catchment area for the Rivers Stort and Lee above the M25. The chairman of the branch is Bob Dunkley, who can be contacted on 01992 414185 for further information.

M V Mayflower relaunch

The official relaunch of 'Mayflower', featured in our last edition, took place at the premises of G F Rose & Son, Stratford Upon Avon on Monday 26th July 1999. The gathering included the local Mayor, representatives of the Environment Agency, the local Tourist Agency and other local dignitaries. The EBA were represented by Derek and Hilary Chamberlain, Barbara Penniall and David and Mrs Higgins.

Proprietor Edward Rose, took the opportunity to thank all those who had helped with the project including, the Upper Avon Navigation Trust who had granted a 50% discount on licence fees for electric powered boats.

Electric Boat — or not?

According to The Harnser, the magazine of the Norfolk Broads Society, the Navigation Committee recently

challenged an application for their 25% discount offered to electric powered boats on their tolls, when it was applied for by the owner of a prototype diesel-electric motor cruiser. Their concern was that the vessel did not completely fit their definition of an electrically-propelled vessel. However, in recognition of the research undertaken, they decided to grant the application for one year only.

The quicker the authorities establish a viable network of charging points, the quicker such dilemmas will disappear.

Student Success

Brimbelow Engineering employee, 19 year old Jonathan Hambrook, was this year's Yarmouth Engineering Society's student of the year. Chosen from among 150 other engineering students Jonathan is a trainee precision engineer and spends one day a week at Great Yarmouth college.

Hennerton Backwater Association

A group of owners of homes or land adjacent to the Backwater, which runs as a two mile loop of the River Thames at Wargrave, recently formed the Hennerton Backwater Association. The association aims to work for the upkeep of Hennerton Backwater and improve communication between the residents and the Environment Agency. Chairman Tom Berman said, 'The Environment Agency is listening to more seriously now. We now have an effective formal communication channel'. Three members of the EBA, Ken Barge, Tony Mays and Philip Meadowcroft are also members of the Hennerton Backwater Association.

For further information contact Philip Meadowcroft on 0118 940 3208.



International news

Electric Boat Association of the Americas

The annual meeting of the Electric Boat Association of the Americas will take place on 1st-3rd October, 1999, as part of the Small Craft Festival at the Chesapeake Bay Maritime Museum.

Advanced Technology Boat Race

May 1st was a perfect day for the 1999 Advanced Technology Boat Race on Canberra's Lake Burley Griffin.

All of the 42 entrants were electric powered and most used solar panels to provide some part of their motive power.

This event is basically an endurance test.

Boats circulate a four kilometre course for five hours, from 10am to 3pm.

Performances this year showed a significant improvement. The Competition Class was won by 'Green Choice - Spirit of Canberra', a catamaran with a large tilttable solar panel, which completed 13 laps at an average speed of 6.34 knots. The best result in previous years was 10 laps.

The fastest lap at 11.95 knots was achieved by 'Sea Flyer', a racing rowing shell with outrigger.

(This report was received from Bob Slatyer of Mosman, NSW, Australia.)

MW-Line New Projects

The MW-Line at Yverdeon Les Bains in Switzerland continue to innovate. They have built a 7m pedalelectric-catamaran for Lake Morat in Switzerland which ingeniously combines human, electric and solar power. A So1-Z electric engine receives its energy either from the on-board pedaling of its twelve passengers or from solar panels.

Their team are also preparing a 24 passenger Aquabus 1050 for use on the Milan Canals in Italy, for regular service in the year 2000.

Finally, the MW boys have built a live-aboard solar-electric Aquabus 850 boat for a local firm, Aquabus SA, who will be renting it out at Switzerland's 'Expo 01' exhibition. This boat uses MW-Line's latest inboard motor, the 8kW EEI, based on the British LEMCO unit.

We are grateful to IEB for some of the news items on this page. IEB continues to search for stories about innovative electric boats anywhere in the world. Please send any details to 54, Route de Latresne, 33-360 CARIGNAN, FRANCE. (e-mail: desmond.writer@wanadoo.fr)

Aquawatt of Austria

In Austria, Aquawatt is the trade name for a electric drives, electric boats and yachts produced by the company of Dieter Seebacher of Moosburg. In 1989, Seebacher, 33 years old, decided to build an upmarket, high performance electric motorboat. The first Aquawatt was launched on Austria's Worthsee in December 1992 and immediately impressed people by its speed and elegance. The first boat was bought in the summer of 1993.

Four models are currently in production.

• The four-seater Aquawatt 550

This craft is 5.5 metres long with a 500 -1,000 watt motor and is ideal for hire boating from lakeside hotels. Its hull construction is subcontracted to Bavaria Boats in Germany.

• The Hi-Power L-Drive version of the 550 with a 1-3 kW motor

• The Aquawatt 650 motor yacht

This yacht has 2-3 bunks, U-shaped sofa, table, big cockpit and is capable of 65 km at 5 knots. Whilst re-charging from fully discharged batteries takes 9 hours, ordinary recharging takes 5-6 hours. 650 hulls were acquired from Skibplast in Norway.

• The Aquawatt 715-12,000 (Model 97)

This is the flagship of the Aquawatt fleet. A sundeck yacht, it has been described as the fastest production electric boat in the world. It costs some 100,000 DM (equivalent to seven Mercedes "Caprio" cars) or US\$1 million. With its 20kW, three phase AC motor, the '715' is capable of a speed of 15 knots, but can also tow a waterskiier with normal skis from a water start for a short time. There are seats for seven people as well as a sunbathing platform on the forward deck. At 85,700.00 DM it is a less expensive version of the 715 and is powered by a 4kW inboard motor, giving it a top speed of 8 knots, but with similar long distance cruising abilities. Each model is powered by 8-12 "Trac Bull" lead acid batteries.

Whilst both versions of the Aquawatt 715 are elegantly decked out in teak and mahogany, additional options may include a refrigerator, a cockpit table, a CD player with four speakers and a convertible sun-roof.

In Austria, electric boat owners do not need to pay for a licence.

The company builds about 10 luxury electric boats per year, 70-80% of which are delivered to Germany for an exclusive clientele. They have also delivered the drive-system for a passenger vessel on the Mattsee at Salzburg - two Aquawatt drives at 20 kW each. Aquawatt drives can go up to 50kW in power.

For further information contact Aquawatt on <http://www.aquawatt.at>.

Boats 99

Boats 99 - New format, new location. Jolly good show

Boats 99 took place from 20th to 23rd May, 1999 at Beale Park near Pangbourne, Reading. Replacing the Greenwich Wooden Boat Show, it set out to retain the friendly atmosphere of that show, but to open up the range of exhibitors by including boats constructed in materials other than wood. Over 120 exhibitors and 200 boats were on display.

The site, with the riverside boating lake at its centre, enabled exhibitors to demonstrate and visitors to experience a range of craft, making this a participative event.

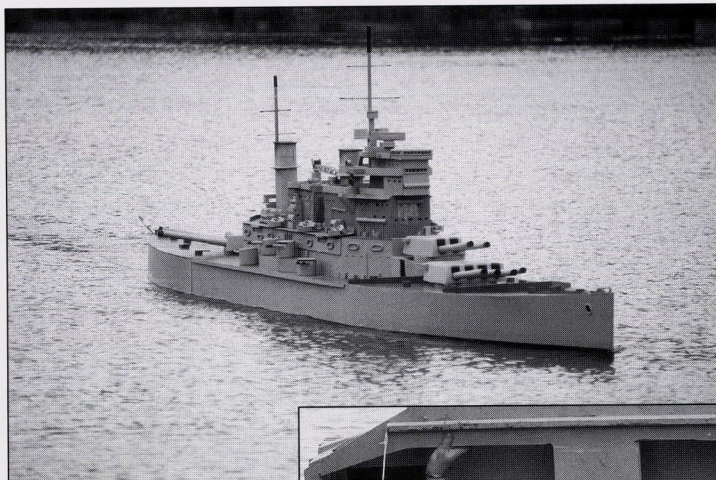
All the people that I spoke to, exhibitors and visitors, enjoyed the show which was by common consent a better event than its predecessor at Greenwich. The site worked well and the increased range of exhibitors added interest and variety when compared to the Wooded Boat Show. The only adverse comments that I picked up were to do with the comparative lack of pre-show publicity and signage to the show site. All in all, a jolly good show!

The Electric Boat Association and following members had stands at the show.

Bossoms Boatyard Ltd.
Canadian Electric Boat Company.
Creative Marine.



The EBA Stand.



Left: Alternative Electric Boats. This model battleship, powered by an electric motor, carries a crew of two.



Below: The aforementioned crew of two immediately after coming alongside, and the superstructure, raised to enable them to disembark, had fallen on their heads!

Henwood & Dean.
Peter Freebody & Co.
Phoenix Fleet Ltd.
Thames Electric Launch Company.
Pb Batteries(South East) Ltd



The Riverside Lake at Beale Park.



Barbara's Bazaar

Are you a member of the Electric Boat Association...and proud of it?

So why haven't you got a tie or a pennant? If you have - well done. If not, read on!

Ties and pennants are available from the Association Secretary, Barbara Penniall, for £10 and £9.50 respectively. Both feature our grebe, so you can easily be mistaken for a twitcher. These quality items are a must for any serious member of the Association.

If the prices for these items are too steep, why not buy one of our posters? These also feature our grebe and our encapsulated colour copies. The poster can be personalised with your boat name, motto or coat of arms. A snip (not to be confused with a snipe) at £1.50 for A5 and £2.50 for A4.

To purchase, please send your order to Barbara Penniall, 150, Wayside Green, Woodcote, Reading Berks. RG8 0QJ, together with your cheque for the appropriate amount made payable to the Electric Boat Association.

Electric Boat Association Insurance Scheme



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In addition to the normal reasons for arranging insurance, the scheme provides the following additional benefits for members.

- A 10% reduction on current rates
- Cover for batteries without deductions for age and wear and tear (see policy extension for details)
- The power of the collective voice through the EBA
- A contribution from Navigators & General to Association funds

The more members who make use of the scheme, the better able the Association will be to negotiate for improved terms in the future.

For a quotation, please contact Barbara Penniall for a quotation form or contact the company direct:

PO Box 848, Brighton, BN1 4PR

Phone: 01273 863420

E-mail: www.navigatorsandgeneral.com

Coming Attractions

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Saturday 11th September, 1999

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For details contact

Edward Hawthorne on 01628 521606

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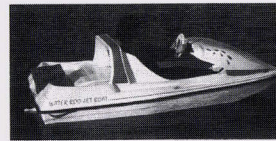
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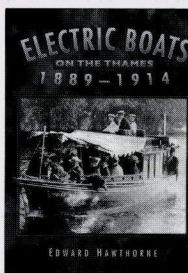
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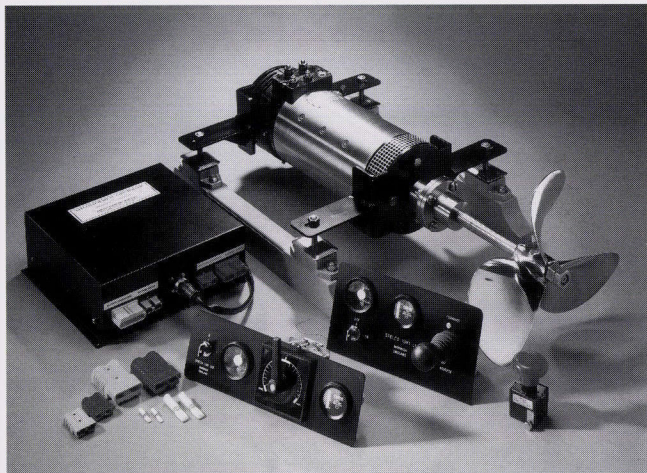
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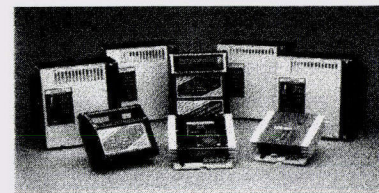
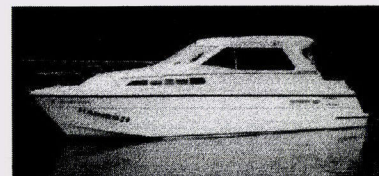
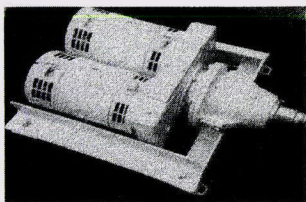
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