

ELECTRIC BOAT *News*

The Journal of the Electric Boat Association

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With Colour Supplement

E.B.A's B.G.M.

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WARGRAVE RALLY

PAKISTAN PIONEER




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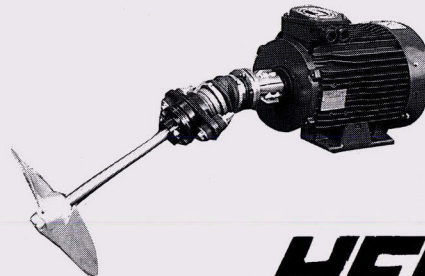
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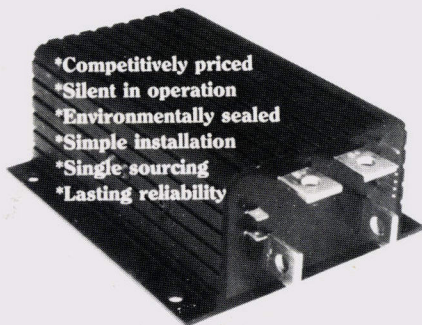


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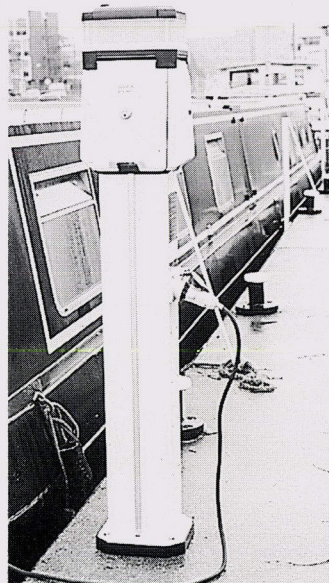
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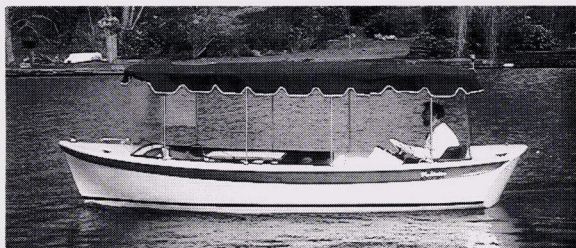
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EBA CALENDAR 1997

Some of the events which may be of interest to EBA members. The EBA may be present at some of the events, perhaps with its own stand.

1997

AUG 22-25 National Waterways Festival & Inland Boat Show, Henley-on-Thames.

AUG 30 Cookham Regatta.

SEPT 5-7 Boating for the Future, Conference & Exhibition, Wroxham.

SEPT 13-21 Southampton Boat Show.

OCT Laying-Up Supper (for details, contact EBA Secretary).

1998

JAN 8-18 London Boat Show.

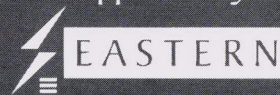
FEB 14-22 National Boat, Caravan & Leisure Show, Birmingham.

For further details of any of the above, or notice of other events, please contact the Secretary.

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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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The Journal of the Electric Boat Association

Volume 10 No. 3 Autumn 1997

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Founder editor: Kevin Desmond

Cover pictures: *Main picture: "Moth 18" from Creative Marine, seen at Val Wyatt's Open Day (Picture: Barbara Penniall).*

Smaller picture: Electric canoe "Silent Explorer II" going home after the Wargrave Rally. (She is powered by a Minn Kota, cut in two: the motor and controls are at the right hand of the skipper, in the rear seat, and the drive leg and prop are at the stern of the boat, controlled by an ingenious system of wires, levers and pulleys).

The Chairman writes ...

Welcome to this year's third issue which is coming out a little early to coincide with various forthcoming events.

Firstly, we hope to meet you at the National Waterways Festival at Henley over the August Bank Holiday weekend. The EBA will be there with its own stand and will be at the "Try-a-Boat" event. Please come and make yourself known and catch up on the latest news.

Then in September, we have *EcoBoat '97* ("Boating for the Future") in Norfolk. Again, the EBA will be flying the flag and adjudicating at an e-boat endurance competition. The organisers are looking for competitors. Are YOU interested? If so, give us a call.

We are also negotiating with a company who plans to offer a battery/charger rental scheme. What do YOU think would be a fair monthly cost for hiring? Write and let us know.

The EBA committee is being kept very busy with these events but is still finding time to consider what the future could hold. After the very successful Biennial General Meeting - where it was good to see so many members - we now plan to concentrate on putting together a three-year plan of action to promote our common cause. Please make your views known.

Back in June there was another successful Wargrave Rally - always a great day out for electric boaters. It has been suggested that the EBA should take on the organisation of this annual event, and at its last meeting the committee agreed to do so. The format will remain unchanged and we look forward to seeing many of you at next year's event.

I hope to see you at some or all of these events.

Happy boating to you all!

Phil Horsley

STOP PRESS!

Solar Cross-Channel Challenge

We literally had to stop the presses at Headley Brothers Ltd in order to announce the news that - at very short notice - on 22nd July, Malcolm Moss made a successful crossing of the English Channel from Dover to Calais in his solar-powered boat *S. B. Collinda*. The crossing, entirely under solar power, took 6¼ hours.

This is the first shot in the EBA's Solar Cross-Channel Challenge.

Having made a crossing to the Isle of Wight a day or two earlier to try out the boat's sea-worthiness across the ferry wakes, Malcolm set off at literally one day's notice to maximise the chance of sun and secure the services of a support boat. The weather was cloudy at first with hazy sunshine later. In the best conditions of the day, the 1.4kW display of solar panels produced 945 watts, giving an average speed of 3.4 knots.

Malcolm reports they never achieved maximum power. "The time is very beatable", he says. The *S. B. Collinda* was later towed back by the support boat.

E. B. News sends hearty congratulations. Look for the full story and pictures in our next edition.

... and from the editor.

With this issue of *Electric Boat News*, we achieve a long-standing ambition - to introduce colour into the magazine. For the first time since the very beginning of the Association's newsletter in 1983, we have some pages in full colour - produced especially to brighten the EBA stand at the Waterways Festival at Henley-on-Thames.

Sadly, this will be my last issue of *Electric Boat News*. I have been editing the magazine for nearly four years and I feel that the time has come to hand over. The job has been a great pleasure. Thank you to everyone who helped and encouraged me along the way.

Roy Devereux

THE 1997 BIENNIAL GENERAL MEETING OF THE ELECTRIC BOAT ASSOCIATION

The EBA's Summer Meeting - incorporating the formal Biennial General Meeting - was held at the Upper Thames Sailing Club in Bourne End on Saturday 7th June 1997. A substantial number of members turned up to hear addresses by the officers of the Association and to ask questions.

Our Chairman, **Phil Horsley**, welcomed everyone and reported that over the last two years membership figures had been very healthy. In 1996/97 we had 119 private members and 18 trade members. He thanked the Membership Secretary, **Pat Davis**, for a good year's work.

Financially, too, it had been a successful year due to an increase in subscription income and a reduction in the production costs of *E. B. News*. From a "break-even" position in the previous year, we had a surplus of £1,500 in 96/97. The accumulated surplus stands at £6,300. This now enables the Association to consider new forms of sponsorship or donations to promote electric boating. Warm thanks was given to **Peter Cook** for looking after the books.

In the absence of any nominees, the current committee members were re-elected. The Chairman thanked them all for their work over the last two years. New committee members or helpers would always be welcome. The goal of the committee is to continue to develop the EBA and to make it more active and authoritative.

A project is underway to improve the EBA's contact with its members on

all the inland waterways. The Association is introducing regional groups which will give each part of the country more local contact. **John Williams** reported on the first local gathering in the Eastern Region, held on Sunday 1st June. The group of members there resolved to meet

will be playing an important part in *EcoBoat '97* on the Broads in September, responses are coming in to the Cross-Channel Challenge. Paul is working on a three-year strategy which will include an opportunity for input from members.

Paul said that he proposed to involve a PR company in trying to introduce electric boating into schools. He introduced **Peter Acton**.

Peter Acton Associates has been asked to put a proposal together to develop, manage and run a national schools design competition for the EBA. The company has had experience with similar projects. They would first research the aims and objectives of the project, cost it and identify potential sponsorship opportunities. They would give the project a

good marketing name and decide upon a timescale. They would monitor the progress of the competition and its impact on schools. The company's fees would come out of the sponsorship - no cost would be borne by the EBA. These proposals are to be considered by the committee.

An "electric workshop" followed with tips from trade members, particularly about battery charging. General discussion ensued, with many views being expressed from the floor. All of these will, where appropriate, be considered by the committee.

After the formal proceedings, members visited the trade stands and enjoyed a splendid buffet lunch. Later, the many electric boats were kept busy with "Try-a-Boat" trips between **Cookham** and **Marlow** locks.



The assembled company pays rapt attention

quarterly at various waterside locations for social and technical events and to organise cruises.

The Chairman concluded by asking all members to encourage their fellow e-boaters to join the Association. Exciting new things are happening.

The **User Group Chairman, Paul Jackson**, in his address said that in his view a bigger role should be played by the trade members. He suggested that the Association should appoint a Trade

More BGM pictures on pages 6 and 7

Group Chairman. He sees the Users' Group role as social and educational.

Several new initiatives are going forward: the new regional co-ordinators are breaking the mould of the EBA being a River Thames club, the EBA

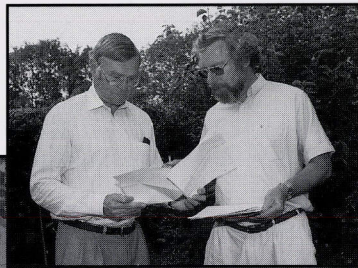


The Management Committee

was re-elected at the Biennial General Meeting and met again on 9th July.

Pictured (l to r) are Paul Jackson (Users' Group Chairman), Phil Horsley (Chairman), Edward Hawthorne (former Users' Group Chairman), Barbara Penniall (Secretary), Jim Keating (Technical Officer), Derek Chamberlain (Middle Thames local co-ordinator), Pat Davis (Membership Secretary), Peter Cook (Treasurer), Simon Davis ("Rivertime") and, *inset*, Paul Wagstaffe (B.M.I.F.) and Emrhys Barrell (Thames Electric Launch Co.). [Not pictured: John Williams (J. W. Boats), Roy Devereux (Magazine editor)].

The meeting took place on the patio of Pat and Simon Davis' delightful house at Cookham.



In accordance with established practice to facilitate progress through the long agenda, the principal officers had circulated written reports. These then only needed brief discussion and 'clarification-only' questions on the day. The main conclusions of the meetings are published in *E. B. News*.

On 8th September the committee will reassemble for the important "Directional Meeting" when the long-term strategy of the Association will be discussed.

The next 'regular' meeting will be at 5 pm on 16th October 1997 at Nauticalia Ltd, The Ferry Point, Shepperton, Middlesex. The meeting will be followed by a social gathering and meal at 8 pm at a riverside pub nearby, to which all EBA members - User and Trade - are invited. For further details, ring the Secretary.

BROADS BID FAILS

An ambitious and much publicised bid for £1m to encourage electric boating on the Broads has failed.

The Broads Authority, together with a group of local authorities and tourist bodies, bid for public funding under the government's "Rural Challenge" scheme to help day-boat operators convert from diesel to electric propulsion and to pay for new recharging points.

Sadly, the bid was not successful this year.

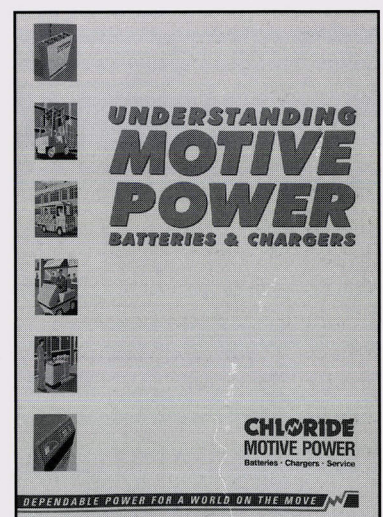
Alan Boswell of the Broads Authority told *E. B. News* that one of the reasons for the failure was that there was not enough money already in place. Nevertheless, the partners* intend to fight on. They propose to split their plans into three separate projects: (i) to obtain grant aid for the conversion of diesel and petrol boats to electric (especially dayboats), (ii) to obtain funding to install new charging points around the whole of the Broads - thus encouraging both private owners and weekly hire companies to turn electric, and (iii) to seek funds to promote research and development into environmentally friendly boats - e.g. low wash hulls and new electric boat designs.

As a first step they will look to members of the partnership to commit themselves to putting up some 'seed money' and then will seek funds from outside - including a possible approach to the Rural Challenge again next year.

*The partners are: The Broads Authority, the North Norfolk District Council, the Broadland District Council, Great Yarmouth District Council, the East of England Tourist Board and the Norfolk & Waveney Training and Enterprise Council.

CHLORIDE MOTIVE POWER has published a new handbook: "Understanding Motive Power Batteries and Chargers". Naturally, it concentrates on the company's own products but while so doing it answers a lot of laymen's questions. In 36 pages of clearly written text and lavish illustrations, it covers both batteries and chargers - what they are and how they work - and a valuable section on their care and maintenance.

A leading trade member of the EBA (no connection with the firm who publishes it!) offered the unsolicited opinion that this book would be a boon to any e-boater who was a little hazy about the technicalities.



OUR BOYS IN OZ DO IT AGAIN!

In our Autumn issue last year we reported on the Advanced Technology Boat Race held in Canberra, Australia, when our reporter, Bob Slatyer, won a prize in his class with veteran e-boater Alan Colbeck. The event was held again in April this year and Bob has again come up with words and pictures.

The 1997 Advanced Technology Boat race was held on 12th April on Lake Burley Griffin at Canberra.

There was a great diversity of boats and entrants among the 37 starters. The regulations provided for five classes, all requiring a non-polluting power source to propel the boat. Some input of human or wind power was allowed in some classes. Consequently, all boats were electrically driven with variations in the proportion of stored (i.e. battery) power and solar or other power depending on the requirements of the particular class in which a boat was entered.

Boats raced from 10 a.m. to 3 p.m. around a 2.39 nautical mile course.

The day turned out fine and clear which was ideal for both the solar boats and the 3,000 spectators.

Team AMSA won the most important category, the Competition Class. This was a boat built by staff of the Australian Maritime Safety Authority, the organisation responsible

for lighthouses and other navigation aids. Their 6-metre trimaran was constructed of polystyrene, fibreglass and carbon fibre and carried lots of hi-tech equipment. They completed 11 laps, at an average speed of 5.4 knots, winning both the endurance prize and the fastest lap (6.21 knots).

Second in the Competition Class was **Solecist 11**, a low-budget entry put together by a couple of old fellows. [Slatyer and Colbeck!: Ed] Their boat was based on a 17ft plywood sailing catamaran with an electric motor mounted between the hulls and the shaft and propeller in the open to avoid the frictional losses associated with a stern gland. Solar panels were mounted on the hulls. They completed 9 laps at an average speed of 4.7 knots.

The award for the most innovative vessel was won by **Marjorie K**, a twin-hulled design with a large area of solar panels which were mounted so that they could also be used as sails. She completed 13 laps, achieving an average speed of 6.3 knots, but was penalised one lap for running into another boat, leaving **Zap** the winner of the Open Class. Zap was a 6-metre canoe with a hull design adapted from a windsurfer that had been developed for the Barcelona Olympics.



Alan Colbeck in Solecist 11

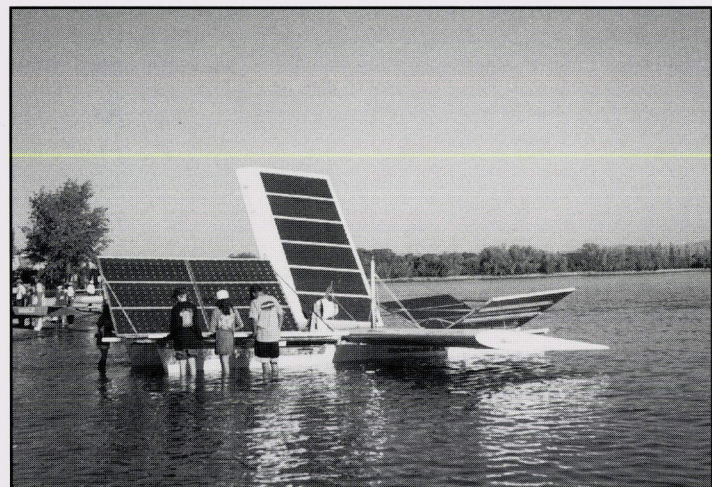
obvious at first glance were its twin low-resistance hulls and the solar panels mounted wherever there was a reasonably flat surface.

Winner of the International Class was **Solar Japonica**, entered by Kiyoshi Numata who is very much involved in solar boat racing in Japan. He competed in a borrowed boat which was assembled with the assistance of Chris Howe and Alex Revel from the University of Technology, Sydney. They completed 8 laps at an average speed of 4.11 knots.

Schools were represented by four High Schools and the Canberra Institute of Technology. They all continued to circulate for the full duration of the race - although mostly at rather modest speeds.

Price Alfred College's **Sunboat 11** [see EBN Autumn 1995] was brought over from Adelaide. This very impressive solar boat did not compete but was used as the race hospitality vessel, spending the day taking spectators around the course. Their cruise was so popular that they had to shorten the rides to ensure that everyone got a turn.

The Commercial Class included a fleet of electric dinghies from Orbost, the town at the mouth of the Snowy River, where they are normally based as hire boats. Their presence brightened up the scene and added interest by increasing the number of boats on view at any time.



Marjorie K - using solar panels as sails!

Also in the Open Class was the not-quite-completed **Sun Pirate 11**, a somewhat conventional-looking vessel - a 9-metre long, 3-metre beam cruiser built of aluminium. Not

ELECTRIC BOAT
News

Colour Supplement

Four pages of full colour for the first time in Electric Boat News.

Hooray Henley!



Come and join *Electric Boat News* on Stand 122 of the 1997 National Waterways Festival & Inland Boat Show at Henley-on-Thames from Friday 22nd to Monday 25th August.

The old BMIF Nottingham Boat Show and the IWA's National Waterways Festival and Inland Boat Show have been combined to form this major new event. The new venue will be at Remenham Farm, on the Berkshire bank of the Thames, opposite Henley town. It will be open on each of the four days from 10am to 6pm. Admission will be £6 for adults (£3 for members of the Inland Waterways Association). Car parking will be free.

The EBA will have its own stand - No.122, down near the water - where there will be a number of trade exhibits, including electric boats. We hope to arrange for some electric craft to take part in the "Try-a-Boat" event.

COME AND SEE US ON STAND 122



A fine array of electric boats gathered at the moorings of the Upper Thames Sailing Club.

*More pictures
from the
B.G.M.*



User Group Chairman Paul Jackson addresses the meeting, flanked by Secretary Barbara Pennill and Chairman Phil Horsley.



Both private and trade members brought their boats

Two presentations were made at the meeting ...



A complete set of Electric Boat News, especially bound and indexed, was presented to the library of the new River and Rowing Museum at Henley-on-Thames. The presentation was made by Phil Horsley to Jane Bowen, Head of the Curatorial Department, who made a gracious acceptance speech.

The St. Davids Cup was presented to the retiring Users' Group Chairman, Edward Hawthorne. This silver cup, donated by the Countess of Arran in memory of the Rt. Hon. The Viscount St. Davids, co-founder of the EBA, is awarded annually for "a significant advance in the field of electric boating". It was awarded to Edward in recognition of his long service to the EBA and especially to mark the publication of his book "Electric Boats on the Thames 1889-1914". The presentation was made by the Viscountess St. Davids (who is also pictured in the background panel with her late husband, the Viscount).



This picture and story appeared later in the local newspaper, but pictures of Edward's champagne celebration were not released to the Press!



Another Wonderful "Wargrave"



Brook End, the delightful Thames-side home of Gordon and Bunty Claisse.



The best-decorated boat ...

The 10th Wargrave Rally for electric boats was held on Sunday, 8th June - thanks again to Gordon and Bunty Claisse and their son, Peter.

For the second successive year, Gordon and Bunty threw open the lawns of their lovely house at Lower Shiplake on the Thames and played host to some 15 electric boats. The weather was reasonably kind and the familiar programme of picnic, raffle, best-boat judging and general socialising was only briefly interrupted by showers. Many of the boats ended the afternoon with a gentle cruise between Marsh and Shiplake locks.

Following the traditional democratic procedure, all the boat-owners voted for the best-decorated boat. The decanter prize this year went to *Margot* - specially festooned with balloons and bunting to mark the the birthday of owner Mr G. Richardson's daughter.

The raffle for the Worldwide Fund for Nature - vigorously marketed by Peter Claisse - raised £142.

Because it is a bring-your-own picnic event, the Claisses say they find no reason to make any charge for attending the Rally. But they have to keep the records of owners' names and addresses and they send out all the invitations at their own expense. Couldn't the EBA help by taking over that chore?



... and the prizewinning owner (left) with Gordon and Bunty



Pakistan Pioneer

Last year, Phil Horsley received some details concerning Captain Najeeb Ullah Khan, an ex Pakistan International Airlines pilot who, it appeared, had assembled a motor with an output of 5 lbs. of thrust but consuming only 18 watts of DC current (1.5 amp/12 volts) per hour and projecting a theoretical speed of 3 km/h.

Phil Horsley sent the details to Kevin Desmond in France who maintains a database of speed and endurance records for electric vehicles. Kevin wrote to Captain Khan saying he was "certainly impressed by the performance figures you have quoted. Whilst your idea of a Minimum Consumption Speed Record seems to be promising, such a record attempt would need to be done on a non-tidal waterway and with a zero-measurement of wind."

Captain Khan announced his plans for an attempt sometime in March and said that the event was to be sponsored by his employers, Pakistan International Airlines. Kevin was invited to attend the event at Rawal Lake, in the city of Islamabad. "After all," Captain Khan wrote, "there should be some authority present here to witness and 'declare the record' on the spot, in case I achieve it."

Following discussions with the Electric Boat Associations in England, France and the USA, Kevin agreed to act as official witness for the international electric boating fraternity on certain conditions: (i) that officials and measuring equipment should be organised in Pakistan; (ii) that a report on the engine be prepared; (iii) that copies of this should be submitted to technical experts chosen by the three Associations, who in turn would return their assessments to Captain Khan and his associates.

Pakistan's 4km long Lake Rawal is an artificial reservoir on the outskirts of Islamabad. The watershed of the Margalla Hills to the north provides freshwater to the lake. There are 3 small boating clubs on the lake, but it was the Canoe Club, established in 1994 by the Pakistan Navy, which was chosen as operations base for the demonstration. The record attempt had been fixed for 3 o'clock in the afternoon of 29th May. A brightly decorated marquee had been erected at the lakeside for 52 spectators, VIPs from the airline and members of the media. But as may happen on any lake surrounded by hills, just before the timed runs a strong wind blew up and the minimum power demonstration was postponed. The following afternoon, at around 3 o'clock, on a much kinder Lake Rawal, Captain Khan, with Kevin acting as on-board timekeeper and flagman, made two runs over a 500-metre distance. Commander Mushtaq, Director of the Lake Rawal Sailing Club, took separate timings from an accompanying boat.

Such is the minimum thrust of this home-made motor, made using a milk-tin, that the Captain had to keep its tiller arm right over to compensate for the gentle wavelets which tended to push the 15ft flat-bottomed Colman Ram-X canoe off course. The two-way average worked out at a modest 2.26 km/h.

Whatever criticisms may be launched about the Lake Rawal event, it was the first time a Pakistan-designed and built electric outboard motor had created an internationally observed

record in its own country. As Captain Najeeb commented during the run "This must be the crudest electric outboard in the world, but I will now improve it and fit it to a sleeker hull."

Kevin Desmond's report was accompanied by details of the boat and its propulsion system.

Name: PIA

Dimensions: 457cm x 91cm; weight 35Kg

Batteries: One Exide 12 volt, 35 amp/hr

Motor: "ARTI" (Ampere Reducer/Thrust Increaser), made of tin and chrome; Weight 1.5Kg; Consumption with load (moving) 2.8 amps; Thrust with one person on board 3.4Kg; Propeller: two-blade, fixed pitch.

In an accompanying certificate, Lt. Col. Abdul Khaliq, a member of the Institute of Engineers, Pakistan, says that he has seen and checked Captain Khan's electric outboard motor. Since the Captain has not so far applied for a patent, the design detail has not been revealed.

Electrical engineers in the Electric Boat Associations are invited to make a technical assessment of the motor.

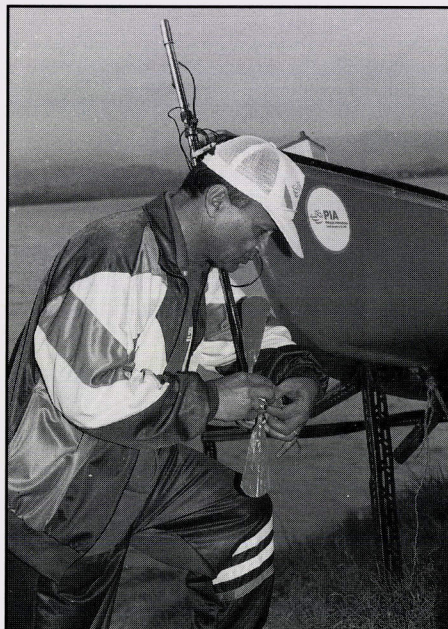


Photo © Kevin Desmond

BOAT FOR SALE



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Can deliver.

Galvanised trailer (in the picture) a negotiable extra.

Stuart Culling

01428 713589 (Headley, Hants)

Dear Editor,

I was asked recently to look at a small electric boat with a 800 watt 24 volt pod motor on the back. The boat had a history over several years of not charging properly and under-performing in terms of speed and duration.

The first problem of not charging was easily solved. The charger had been mounted in a beautiful varnished mahogany cabinet with only a tiny air vent at one side. It was of the type where it would give a full charge then switch



off. Unfortunately the lack of sufficient ventilation caused the charger to overheat and the thermal safety switch would shut off the charger before the batteries were charged. Easy solution was to leave the lid of the cabinet off during charging. Have you checked your charger installation for ventilation.?

The second problem was much more dangerous. The motor could be switched between 12 or 24 volts with maximum current being 33 amps for the 800 watt motor. The wires used on the batteries were of a size used to wire motor cars, totally inadequate for high power marine use. Some of these wires on the battery were not only partly severed but showed signs of overheating, with some insulation bubbling up and leaving exposed wires. "So what" some might say, "it is only 24 volts."

ANY SPARKS OR BURNOUTS WITHIN THE BATTERY COMPARTMENT CAN IGNITE EXPLOSIVE BATTERY GASSES OF HYDROGEN AND OXYGEN. TERRIBLE INJURIES COULD RESULT INCLUDING BEING COVERED WITH VERY CORROSIVE ACID.

Luckily the owner, though being non technical, thoroughly understood the dangers and will not relaunch until the boat has been rewired.

On another note, I have some comments on the Open Day at Val Wyatt's. I was very disappointed at the boats on show. The quality and range of boats displayed was good but without exception the noise levels of the electric motors was appalling. We seemed to have taken a step backwards. One salesman assured me that their major market was in Germany and that the Germans liked to hear their motors! He also stated that modern high power pancake motors could not be silenced. Rubbish! Take a trip on "Victoria", a 1906 Saunders 30ft launch in which I installed a Cedric Lynch motor. There is virtually no noise. I heard more than one potential customer asking if there was a problem with the boats on display as he understood that electric boats were silent.

Just as the electric boat scene is turning more professional with general standards rising, it would be stupid to ruin it with unnecessarily noisy installations. I have been in boats with Honda outboard engines which were quieter than the modern electric ones at Val Wyatt's.

Don't let us kill the revival in electric boats. Silence is a very, very highly prized feature.

Jan Rutter.

RIVER USERS GROUP

"To act as a forum of communication and to promote understanding between all users; to safeguard the interests of all river users; to promote safety and goodwill": Environment Agency.

EBA Committee member Derek Chamberlain reports that he has been appointed a member of the River Thames Users Group, Area 6 (Marsh to Boulters), to represent the Electric Boat Association.

Many interests are represented, including walkers, rowers, sailors, power boaters and fishermen as well as the Environment Agency. In future, the EBA's activities will be included in the River Users Group Calendar. We have asked for a list of the secretaries of the other RUG areas (nine in total) and Paul Jackson and Derek will try to look for EBA volunteers to serve on all the areas.

At Derek's first meeting, Mr. Roy May of Bisham Abbey Sailing & Navigation School, based at the National Sports Centre, offered to carry out Boat Safety Scheme inspection and certification on electric boats. He can be contacted on 01628 474960. [*This, of course, is not an official EBA recommendation : Ed*].

RIVER THAMES SOCIETY

The programme for the RTS's Winter Season of Talks has just been published.

On Friday, 17th October 1997, Edward Hawthorne will be giving an illustrated talk on "Electric Boating, Ancient and Modern: A century of electric boating".

The venue will be Liston Hall, Marlow, and tickets are £2.50 for RTS members, £3.00 for non-members.

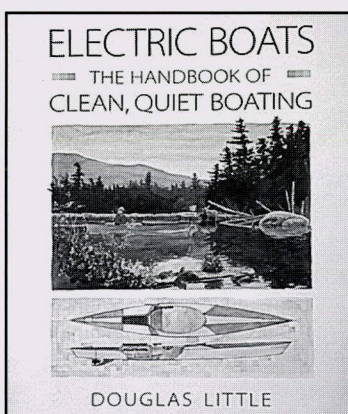
To book, ring 01628 483268.



We have been very interested to see a copy of "Electric Boats: The Handbook of Clean, Quiet Boating" by Douglas Little. This is published in the USA by International Marine of Camden, Maine @ \$17.95. Doug Little is a boatbuilder in North Carolina and is a member of the Advisory Board of the EBAA. We are used to seeing his book advertised in their *Journal* but this is the first time we have got our hands on a copy (courtesy of 'our man in the USA', Derek Chamberlain).

In an effortless, entertaining style Doug covers the the whole field - batteries, chargers, motors, controllers, propellers - and even includes plans and complete building instructions for 14½ ft electric-powered car-toppable boat.

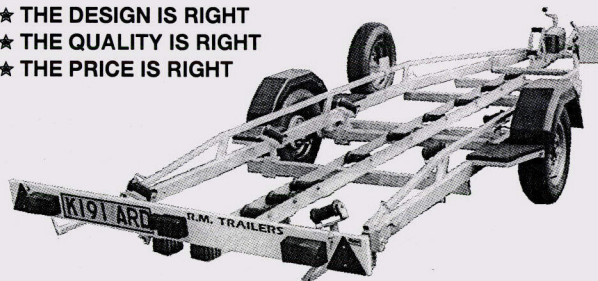
I'll stick my neck out and say that Doug would be delighted to hear from EBA members - contact him via the EBAA at P.O. Box 4151, Deerfield Beach, Fl 33442, U.S.A. [Ed]



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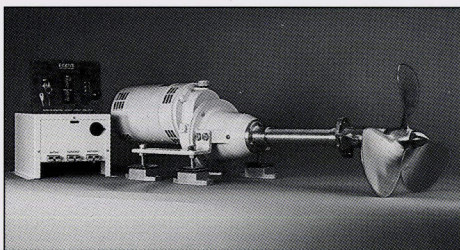
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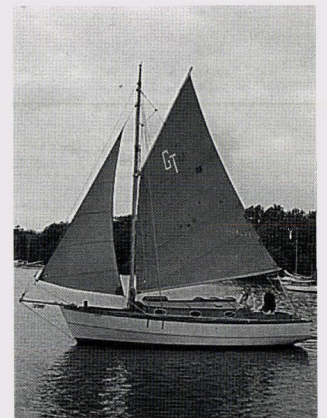
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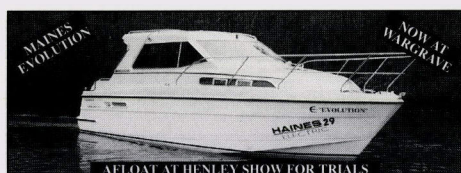
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