

# QUEENSLAND

RALLY 90  
LAKE CARGELLIGO

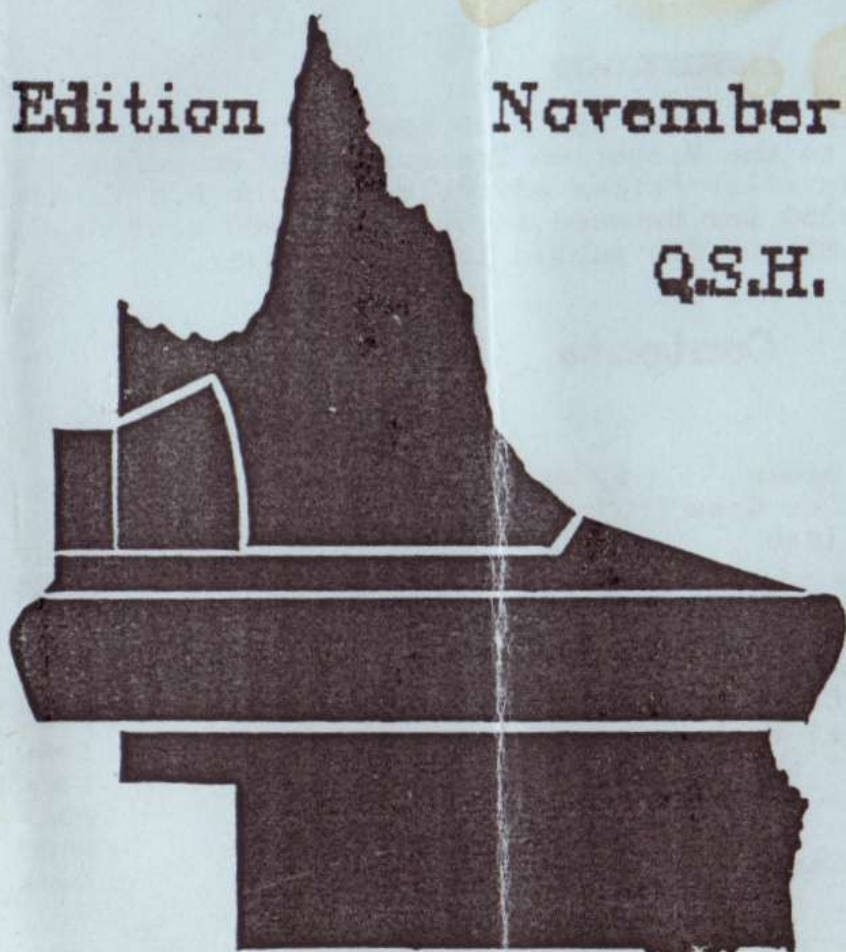


# SPORTING HOVERCRAFT

29th Edition

November 1989

Q.S.H. Inc.



Q.S.H.

QUEENSLAND SPORTING HOVERCRAFT Inc.

c/o 52 Utrecht Street,  
Loganholme, Qld. 4129

## Committee of Management

President : Mark Dobson 15 Daisy Hill Rd., Daisy Hill 4128  
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Vice President : Des Goss 43 Luprena St., Mansfield 4122  
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Secretary : Steven Odgaard 52 Utrecht St., Loganholme 4129  
ph 2098498  
Treasurer : John Russell 15 Camlet St., Mt.Gravatt East 4300

Chief Race Marshal : Kyle Kerr ph 2072653

Craft Scrutineer : Phillip Audsley ph 071 459268

Annual membership \$30-00 Associate Member \$15-00

Queensland Emblem on front cover designed by John Rapley.

## Insurance

Private insurance is available for club members through the Victorian Association. Apply to the Victorian Treasurer; Brian Watts  
Ph 03 7231964 for details. Prices advertised in the H.A.V. newsletter vary between \$107-\$250 for between \$4,000 - \$10,000 craft and trailer coverage including \$1,000,000 public liability cover.

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# Queensland Sporting Hovercraft

Dear Air Cushion Vehicle enthusiast,

The end of the year is drawing near and already we have a good contingent of hovercrafts ready to represent Queensland at the Australian Hovercraft Federation rally - Oz Hover 90.

The first four such rallies were always held in Victoria where the largest club was formed 15 years ago. As the South Australian club began to grow, the site was moved further northwest to Lake Kangaroo near Kerang.

Queensland was represented at the Oz-Hover 86 by Peter and Daniel Venn and then in 1987 we were represented by Daniel Venn, Angus Kerr, Brad Podlich, Murray and John Russell and Steven Odgaard.

1988 was the year of distinction for Queensland for our club was now incorporated and membership grew from 12 to over 30.

Hover 88 saw a contingent of 9 Queensland hovercraft belonging to Mark Coson, John Russell, Des Goss, Peter Venn, Daniel Venn, Angus Kerr, Brad Podlich, Steven Odgaard and one under the care of Bernie Reid.

Oz hover 89 was held at Lake Cargelligo in central NSW and 37 Queensland visitors associated with our club settled in the Royal Mail Hotel and in tents along the shoreline for a great long weekend rally.

Earlier this month the QSH received a letter from Mark Curtis of Sydney who has helped form the NEW SOUTH WALES SPORTING HOVERCRAFT CLUB and in his correspondence he has invited any interested members to participate in a Mardi Gras on the 2nd & 3rd of December. This is quite short notice but hopefully many of us will have the opportunity to meet Mark and his friends at Lake Cargelligo in 9 weeks time.

Julie Semple who with very good intentions, was elected as club treasurer last August has realised that her move was a little too ambitious and has handed in her resignation. Julie and Stuart have had a sudden increase in the size of their family and looking after the affairs of the Hover Heros has had to take second place. With a little disappointment, John Russell has despairingly accepted reelection to the vacant position.

At our last meeting, Peter and Daniel Venn and Geoff Innes brought along their video tape of the World championship racing at Troy in the United States of America. It was very exciting to watch Owen Ellis perform so well in the formula 2 events and I thank Peter, Daniel and Geoff for sharing with us, their overseas experience.

This month's newsletter from New Zealand has an interesting write up by Steve Priest of Christchurch on his experiences at Troy and this will be on display at Wednesday's meeting.

The next world championship event will be held in the UK in 1991 and some of us are saving up for this trip already.

In 1993, the event is proposed for Australia and the Australian Hovercraft Federation will be responsible for finding a suitable venue.

Some of the sites around Brisbane and the Gold Coast under review are: Carbrook, Paradise Waters Cable Skiing Lakes, Lake at Cararra near Helipad, Bond University Lake, Hinze Dam, Maroon Dam, Moogerah Dam, Atkins Dam and Colleges Crossing. The most suitable venue so far seems to be Bob Neilsen's suggestion: Bond University. This is a salt water lake but the facilities and nearby tourist attractions make this site very suitable for guests from interstate and overseas.

# Queensland Sporting Hovercraft

November 1989

## Driver Profile - Des Goss

The decision to build a hovercraft was made primarily to give me something to do on the weekends in the form of a hobby and secondly to build something with my son that we could find useful and relatively safe.

After acquiring the plans from the Queensland agent we commenced construction with nine sheets of plywood, plenty of fibreglass resin, matting, tape and lots of enthusiasm.

From the outset, the quality of the plan drawings and instructions were very good and it went together like a large jigsaw. At various times we went a bit overboard with the matting and little extra strengthening pieces which in the end gave a good strong hull but heavy and the main ingredient in the hovercraft is the power to weight ratio.

It was good to see the craft taking shape and at all stages I took photos and they are good to look back on when you have been on some good cruises and ploughing through the waves you know it will stand up to the harsh treatment of the sea water and sand etc..

The skirt construction was quite an experience, I did all my own sewing on a domestic machine. The whole project of construction took ten months and it was great to fly it after working all that time. We had a few teething problems but have made slight modifications here and there to try to improve the basic machine.

In the initial testing period after completion I found the advice from the more experienced flyers very valuable especially on flying techniques and handy hints from John Russell who had a similar machine to mine.

In our small club we have some quite clever people who have had years of experience with ACVs and many of them are willing to share their ideas, experiences and any information with you just for the asking.

We should promote the ACV whenever we have the opportunity, this includes taking part in any promotions and presentations that we organise.

Looking back on my three years with hovercraft there's been plenty of good times and a few disappointments with engine failures and various small breakdowns, but looking back it's been worth the time and money invested. For the future I hope we can promote some interesting cruises and encourage more members to attend the club functions and the racing could also do with some more supporters.

## Sunshine



Congratulations to Gavin and Helen Dehne on the arrival of their first born which was a boy on the 4 / 11 / 89.

We have found a bookmaker that will take bets on whether or not BB will get his craft to the next race meeting, we won't tell you the odds

The Believe it or not file has a candidate this month - the Federation now has a logo.

On a more serious note, anyone wishing to make their craft available for promotional work please let the club delegates know. You could earn some money on the side to buy a new skirt or whatever.

# Queensland Sporting Hovercraft

November 1989

## Racing News

### NATIONAL RACING RESULTS TO DATE \*\*\*\*\*

#### FORMULA ONE

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NAME	POINTS
TONY THATCHER	171

OLIVE ODGAARD	111
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MARK DOBSON	80
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#### FORMULA TWO

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NAME	POINTS
ANGUS KERR	294

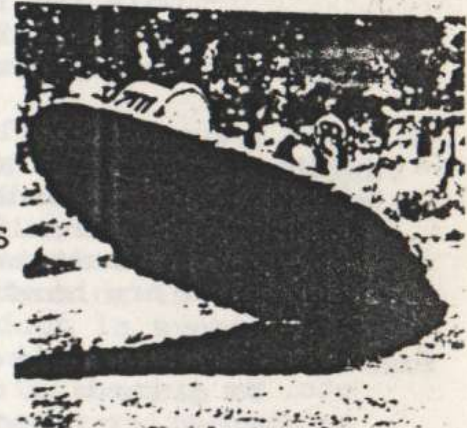
OWEN ELLIS	160
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MURRAY RUSSELL	54
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#### FORMULA THREE

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NAME	POINTS
GEOFF LANGFORD	60



POINTS  
171

111

80

POINTS

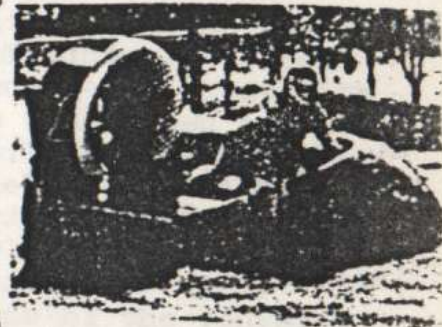
294

160

54

POINTS

60



\*\*\*\*\*  
\*\*\*\*\*

### STOP - READ THIS

ATTENTION TO ANYONE CONTEMPLATING THE TRIP TO LAKE CARGELLIGO  
ON FRI-SUN 26-28th JANUARY 1990

IF YOU INTEND TO GO AND STAY AT THE ROYAL MAIL HOTEL AS LAST  
TIME, YOU WILL HAVE TO LET ME KNOW BY AND NO LATER THAN OUR  
NEXT MEETING AT ARCHERFIELD ON WEDNESDAY 22nd NOVEMBER  
REQUIRED IS THE NUMBER OF PEOPLE AND THE TIME OF ARRIVAL

AS YOU CAN APPRECIATE THE PUBLICAN REQUIRES CONFIRMATION OF  
BOOKINGS BECAUSE OF THE BOWLS TOURNAMENT BEING HELD ON THE  
SAME WEEKEND

THE BOTTOM LINE IS IF YOU DON'T LET ME KNOW YOU WILL HAVE TO  
FIND YOUR OWN ACCOMMODATION

MARK

# Queensland Sporting Hovercraft

November 1989

## Helpful Hints by John Russell

- Guidelines - Technical or operating hints etc.  
- Only two hints to be put in each newsletter edition  
- Hint can be only one line or up to a maximum of 2 paragraphs  
- To have your hints included in this column, write to the Sec.

1. Your go anywhere hovercraft generally has a very expensive skirt. After you have made a few skirt repairs or replaced it entirely, one begins to realise that running for long distances on anything but water means more hours spent behind a sewing machine. The worst offenders are hard wet sand, shell or rocky shores.
2. When patching or sewing skirts, always make sure that the overlap seam etc. is turned in on the inside. It is surprising how much extra drag a patched skirt creates when the patch is just simply sewn or glued on the outside.

Note from the Q.S.H. committee.

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It is good to here from New South Wales on the formation of their new club and we are looking forward to seeing a club from this state joining the Australian Hovercraft Federation and participating in events on a national basis. Even NSW and QLD participating in an annual event would be of great interest to both parties.

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### WANTED CLUB MEMBERS

Time : 9am

Date : Saturday 25th and Sunday 26th November 1989

Place : Carbrook Sports and Recreation Reserve

What to bring : Your craft ( if you have one ).  
Your friends ( if you have one ).  
Your family ( if you are on speaking terms ).

and Yourself

This is our 'end of the year' breakup so turn up and help make it a success.

# Queensland Sporting Hovercraft

## Tech-Talk

November 1989

Flight Test of a Scat Hovercraft by Bob Bumstead.

The Scat tested was an Expo 88 craft and is approximately 18 months old. Its history at Expo is somewhat sketchy but it is believed to have been used for demonstrations by the USA exhibitors.

It is a very stylish looking craft with integrated lift and thrust, the hull is 2900 long, 1830 wide, has an unladen mass of 150 kg and the hoverheight is 180. The craft was built in Miami, USA and is constructed of 2 moulded ABS plastic skins with foam fill between the two for buoyancy and strength. Three skids built into the lower skin, run the full length of the hull and have aluminium rubbing strips rivetted to them. The decking is of one piece GFR with a moulded commander's seat, half of the fan duct is swept into the deck and the top half of the duct is rivetted to it. The hull and deck are joined by means of flanges rivetted and covered with a strip of aluminium which also serves to secure the top of the neoprene segmented fingers and the cosmetic appearance of the craft is finished off well with a low profile windshield.

The 277 engine comes from the Rotax stables complete with reduction gearbox coupled directly to an 800 dia 6 bladed Multiwing fan of 31 degree pitch. The engine is mounted on top of a frame which is secured to the floor with what looks like four switch board anti-vibration mounts and braced with one anti-vibration mount to each side.

The test run started off from a ramp on the Logan River. The controls are basic with handle bar steering controlling four rudders set on the outer edge of the duct via a push/pull cable.

There are no instruments, the ignition on/off is by means of the lanyard switch and engine starting is by recoil rope and handle.

The engine started after the second pull and the navigation lights immediately lit up. Within a minute the engine began to run smoothly, and after it had come up to operating temperature, the trailer was tilted and by increasing the engine speed via the twist grip throttle, the craft rose and slid off while being guided from alongside.

The step into the craft is over the side as the deck is not strong enough to support a persons weight and the words " NO STEP " are clearly visible on each side. The passenger seat is behind the commander seat and both are motor cycle style were knees rest on the floor. A plate affixed to the cockpit indicates 2 person capacity or 550 lbs.

The passenger seat is made of GRP and is detachable to expose a 23 litre lift out plastic fuel tank.

Opening the throttle to about half, the craft rose onto its cushion and with a little more, began to move forward over the grass. Increasing the throttle to full at times, balance was good and turns were easy however power had to be kept well up in order not to drop off the cushion. By this stage I had attracted a growing audience and I felt sure that should I lose power drifting sideways, the longitudinal skids would dig in and I'd end up out of the craft taking a very low bow. The transition to and from the water was very smooth and free of spray and I experimented with this at various speeds. On a straight run, full power seemed to be required to maintain a reasonably fast speed and when heading into a wind of 10 knots, gusting to 15, a descent speed was very hard to maintain. Cross wind was good over the starboard side but port side was hard to keep straight in gusty conditions.

# Queensland Sporting Hovercraft

November 1989

The rudders are not balanced and seemed to straighten up against the rotation of the fan on full power. Downwind is smooth and the skirt maintains good lift however the tendency to operate on full power is always there. Once again, turning to port needs some encouragement. Dead water starts produce only minimal spray and 360 degree turns while staying above hump speed are easier in the clockwise direction.

When turning with two on board under full power and with a stiff wind, slight to moderate spray is experienced mainly by the passenger. Even though the skirts are well inflated, I feel this excessive spray is due to the craft slowing down to almost hump speed on turns with the extra load. With two on board, dead water starts produce a lot of spray and both commander and passenger will always get soaked and running downwind with one extra load causes the craft to pitch and the skirt can drag causing an uncomfortable ride and increases the tendency for plough-in.

As a basic type of craft without a lot of power, it's quite a fun machine to play with.

The price of this imported hovercraft is around \$15,500.



# Queensland Sporting Hovercraft

November 1989

## SERIES ON HOVERCRAFT SKIRTS No 12.

To construct an extended finger skirt.

Extended fingers are best used at the side and rear of the craft although it is common practise to use them as bow fingers also, in lieu of the straight finger which has a set back ground contact point.

A skirt development for making an extended finger is shown below in fig 2. To draw such a development, you must draw the cross section of the skirt under the bow and make a paper template to this shape. Next draw a rectangle of height equal to the straight fore edge of the cross section and of width equal to half the hoverheight. Transpose the cross-section shape along both sides of this rectangle as shown in figure 2 and then draw in two smooth curves from the centre of the top of the rectangle out to the outer hull contact points of the two adjoining skirt cross-sections.

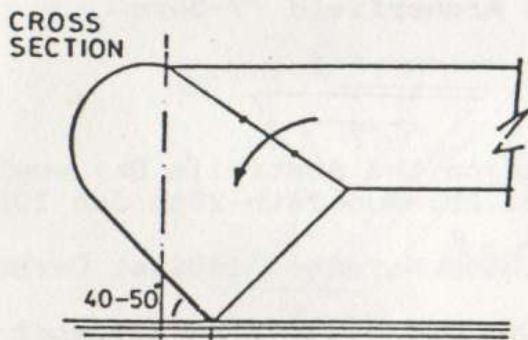


Figure 1.

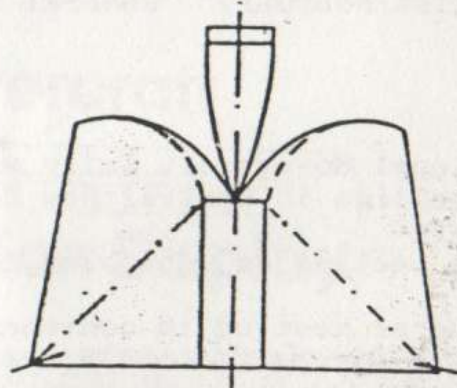


Figure 2.

The extended skirt knuckle is developed by extending two curved lines upward from the centre of the top of the rectangle to intersect with a horizontal line equal in width to half the hoverheight and at such a height that the distance along the outward radiating curves is exactly equal to the upward radiating curves. The lengths of these curves must be equal as they represent the common stitch lines on the finished finger and the hull contact point on the cross-section shape and the top of the knuckle must come together at the same point. Allow for a seam at the top of the knuckle and then using this completed shape, make a full template out of plywood. The knuckle template will naturally be separate from the lower part, but when making the skirt, it may be an advantage to leave a web of material between the two curve lines on each side to facilitate stitching.

If you use straight fingers on the bow, you will need to make approximately three fingers on each side with progressively more knuckle bellow to accommodate the transition between the straight fingers and the extended fingers.

# Queensland Sporting Hovercraft

November 1989

This month we welcome Geoff Smith of Shailer Park and Geoff Innes of Birkdale as new members to our club.

Geoff Smith has a Fun-air craft powered by a Robin EC44 and 5hp Briggs and Stratton and he is very talented with fibreglass construction.

Geoff Innes was recently in America with Peter and Daniel Venn to help Owen Ellis at the World Championship hovercraft event.

## Club Calendar

Proposed events and meetings for the coming months:

Wednesday 22nd November General meeting at Archerfield 7-30pm

Sat-Sun 25-26th November Camp at Carbrook ( Sat: Qld championship, )  
( Sun: River cruise and BBQ )

Fri-Sun 26-28th January Lake Cargelligo Central NSW ( Oz hover 90 )

Wednesday 21st February General meeting at Archerfield 7-30pm

The 6th National Hovercraft Rally will be held on the Australia Day weekend at Lake Cargelligo in Central New South Wales: Fri-Sun 26th-28th Jan 1990.

The 9th race meeting is scheduled for Sunday 26th November 1989 at Carbrook

The 28th general meeting is convened for 7-30pm Wednesday 22nd November 1989 at Archerfield Airport in the S.A.A.A. building.

Steven Odgaard  
sec.

## Advertisement

FOR SALE

### HOVERCRAFT ENGINE

Yamaha PE485 2 cylinder 2 stroke air cooled engine  
485 cc with C.D.I. ignition  
45 - 50 hp at 6,500 rpm  
Fuel to oil mix 32:1  
Weight : 33 kg ( about half the weight of a skinny passenger )  
Electric and recoil rope start.  
Condition : Fully reconditioned  
Ideal power plant for a Turbo 225, 235 or 240 hovercraft

Price : \$ 1,500

Phone 369 0676 (between 12pm & 4pm)



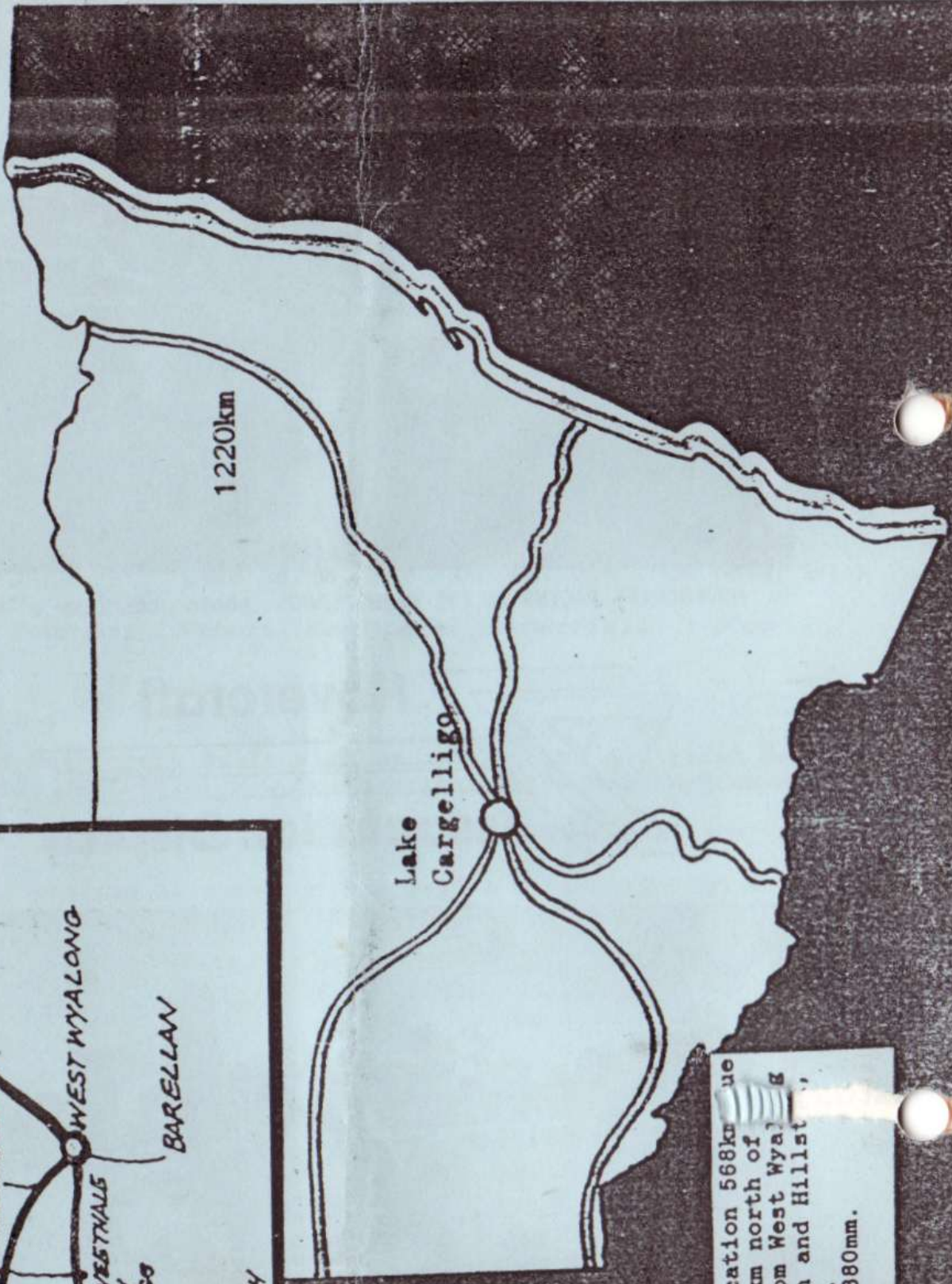
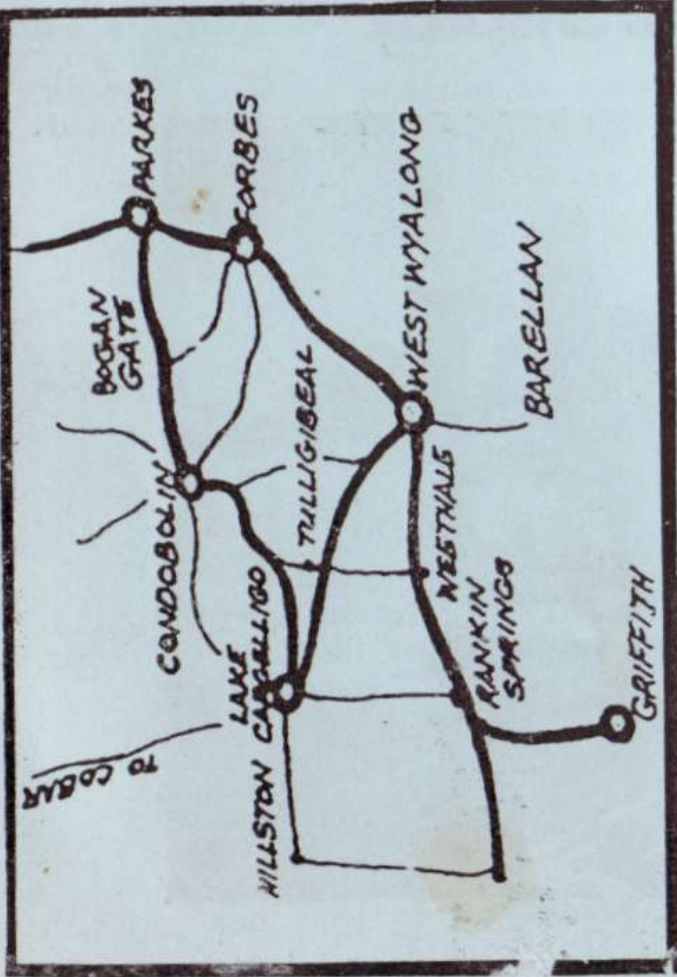
HOVERCRAFT RACING IN THE NETHERLANDS photo courtesy of Hans Peerenboom



**Hovercraft**  
**Association Display**



DES GOSS displaying his TURBO 225 at the Brisbane River Regatta



STATISTICS...  
 Population 1300, Location 568km west of Sydney, 675km north of Melbourne, 120km from West Wyalong, 96km from Condobolin and Hillston, 128km from Griffith.  
 Average rainfall = 380mm.