

## SUBJECT: Eurosurf Speedometer.

### OBJECT:

To determine the effectiveness of the Eurosurf Speedometer under typical sailing conditions.

**THEORY:** Every windsurfer wants to know how fast he is going and this device aims to let him find out whilst actually sailing. It should be remembered, of course, that the times officially recorded at authentic speed trials are the **average** speeds over, say, 500 or 100 metres and any speedometer attached to a board will indicate a particular velocity at a point in time only. The difference between maximum point speed and an average over 500m can be quite marked, but, nevertheless, a speedo should theoretically give a good indication of velocity and be an aid to tuning to enhance performance.

**INSTALLATION:** The speedometer comprises three basic components: a) the impeller unit, b) a receiver unit, and c) a digital readout. The impeller, which incorporates an electro magnetic transmitter, is mounted underneath the board directly in front of the fin by means of the double sided tape provided. The receiver unit, with integral batteries, is similarly mounted on top of the hull approximately over the fin box. No through the deck drilling is required.

The digital readout unit can then be located in a suitable forward position. This device is linked to the receiver by means of a simple push-fit optical fibre cable.

This presents something of a problem for a nonpermanent (i.e. glassed on) installation. Just laying the cable across the deck is obviously not satisfactory, as the sailors size 8's will be stomping about in this area. Using heavy duty tape also proved less than successful due to the inherent non-slip properties of the

deck rejecting most types of tape. In the end, a reasonable compromise was reached by locating the readout about 300mm in front of the footstraps and feeding the optical fibre cable through the various straps back to the receiver.

**IN USE:** We had expected to lose the impeller in the first few minutes, as double sided tape seemed a fairly crude attachment method. However, this was not to be the case and the time spent cleaning the area with thinners prior to installation proved to be well spent! In fact we used the device on both an F2 Sunset and the Lodey 280 slalom/race custom in chop and small waves, jumping and trying hard to dislodge the impeller without success. So far, so good.

The next thing we noticed was that the readout tended to "hunt" slightly — an occurrence very typical of digital meters of many types. The readout did not lock onto, a figure but continued to fluctuate slightly all the time. This does not matter too much, as it was a general speed we were interested in, rather than exactitude, but it was irritating, nevertheless.

A more serious problem was that of weed. Even the tiniest piece tended to trap in the impeller tunnel and necessitate a trip back to the beach. Larger pieces were easy to remove but fine weed tended to wrap around the impeller shaft and proved the very devil to remove. We also found the optic cable kept vibrating loose, removing the impulse to give a readout, but we cured this by the application of a little easily removable bathroom sealant around the join.

However, the device began to prove

even more temperamental in use, often giving silly figures for no apparent reason. Our best speeds over choppy waters were a peak of 22 knots on the Sunset in marginal winds with a 5.8m sail, and nearly 29 knots on the Lodey 280 when the wind freshened. Reluctantly, we discarded the occasional indication of 50 knots plus when cruising back to shore, and 0 knots when flat out and over powered!

Back in the workshops we thought we might cure the problem by examination of the component parts. Upon attempting to remove the battery compartment retaining screw on the receiver unit, the cover snapped in two. The batteries proved ok and we managed to effect a waterproof repair of sorts. However, the problem was found to be at the readout end.

Four brass screws hold the backplate of the readout unit, and beneath this is its flat power cell. The trouble was that very firm pressure from the backplate is necessary to keep the cell contacts operative, and this was not evident. Simple, we thought — just tighten the screws slightly. Wrong. A combination of hard metal screws with a very fine thread and holes tapped in quite soft plastic had the inevitable outcome: we stripped the thread on every single one despite being cautious. Another repair, using araldite, has proven partly successful, but the device remains tantalisingly temperamental due to inconsistent pressure on the powercell.

**CONCLUSIONS:** We really had a lot of enjoyment using the Eurosurf Speedometer when it was working well. It was particularly interesting to note otherwise unapparent contradictions in ones reaction to speed — doing 28 knots plus (peak!) over choppy water felt very fast indeed, even unnerving at times. And yet we found that on taking a fast drop down a waveface one would often be going considerably faster yet feel quite happy about carving into a high speed turn!

However, we were disappointed with the less than robust nature of the model tested. It may be that we had a rogue device, as we have heard of others operating satisfactorily in use. But one cannot overlook what is basically a poor bit of design engineering that could have been overcome by, say, the use of brass inserts to accept backplate screws which would prevent problems when replacing the powercell.

Supplier: Eurosurf Connection, Unit 37,  
26-28 Queensway, Ponders End,  
Enfield, Middlesex EN34 SA  
Price £80 plus vat.

