

R.O.R.C.



MEDIA CENTRE



R.Y.S.

## CHAMPAGNE MUMM ADMIRAL'S CUP 1989

### FASTNET RACE POSITION ANALYSIS

### HOW IT WORKS.

To assist media coverage of the Fastnet race for the Champagne Mumm Admiral's Cup, three radio reporting schedules ('scheds') have been established involving all CMAC competitors. These reported positions are then analysed by the AFTER/Olivetti results computer to give the interim corrected time positions.

### HOW THE RADIO REPORTS ARE RECEIVED.

The scheds take place at 0600, 1400 and 2100 daily. They are carried out through Land's End Radio, which is a normal British Telecom coast radio station handling all sorts of radio traffic for shipping in the English Channel and Western Approaches. The radio scheds for CMAC are a small part of Land's End's daily working schedules.

CMAC competitors set watch on the appropriate frequency in time for the scheds. At sched time Land's End begins calling each yacht in turn using a specific CMAC callsign. The yachts reply to Land's End as they are called, giving their positions at the specified sched time (ie at 0600, 1400 or 2100, not the time of the conversation). The sched takes about 25 minutes to complete.

If a yacht does not reply when called, the Land's End operator goes on to the next on the list. At the end of the sched, missed yachts are called again. If no reply, they may be tried on another frequency.

As failure to report is an infringement of the Sailing Instructions, the race committee note such failures. It is unlikely action would be taken over one missed sched. Repeated failure to report would be reported by the race committee to the International Jury. Depending on the reasons given for the failure to communicate, the International Jury might decide to penalise the yacht.

The scheds are listened to by telephone link in the RORC Race Control at Queen Anne's Battery. Race Control may participate in the conversation and can speak directly with the yachts.

Only position information is normally given - no other information is asked for either in the SIs or by the Land's End operator. If a yacht volunteered information (such as weather, whom else could be seen etc) it would be noted by Race Control and passed to the Press Office. As it is RORC policy to distract the yachts as little as possible while racing the link will be used only for safety or emergency reasons.

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position analysis continued



MEDIA CENTRE

page 2 of 3

#### THE INTERIM POSITIONS AND CORRECTED TIMES.

The position reports are passed as they are received to the AFTER/Olivetti computer desk, where they are keyed into the computer. The computer then plots the positions, and the AFTER Software program produces the interim report.

Normally, corrected times can only be calculated at marks, or at the finish. As there is only one mark in the Fastnet, and the yachts are often spread out, another method is used to calculate interim corrected times for this race.

The computer program contains a number of way-points (eg Lizard Point, Land's End, Fastnet Rock). The program notes all the lat/long positions and from these calculates which yacht is nearest the next way point (shown near the top right of each Position Analysis). This is shown on the Position Analysis as Range and Bearing (columns 1 & 2). It then assumes whichever yacht is nearest the way point to be at the leading yacht on the water.

The program then calculates how long it will take every other yacht to reach a point the same distance from that way-point. The calculation uses either each yacht's actual average speed since the race start (shown in column 3) or an estimated average (shown in column 6) which can be adjusted to take account of forecast or actual changes in windstrength, or changes in speed because of changes in course direction (if the yachts beat down Channel, they will increase speed as they alter course for the Rock).

From the theoretical elapsed times so calculated the program calculates corrected times, and compares these with the actual corrected time of the lead yacht at the time of the radio sched. The Position Analysis lists yachts in this theoretical corrected time order, and the yacht with the lowest is assumed to be leading the race on corrected time at the time of the radio sched.

#### POINTS TO BEAR IN MIND WHEN USING THE POSITION ANALYSIS.

Not all yachts may have reported at that particular sched. Look at the bottom of the list for those yachts - they are not included in that calculation. Judgement and previous position analyses should be used to insert them into their probable position in the fleet.

The accuracy of the position analysis depends on the accuracy of the reported positions. These may not always be accurate, either by accident or by design. One yacht (Corum) has already reported itself in a position inland of Start Point - presumably in error.

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MEDIA CENTRE

Navigators are notoriously cagey of giving away their exact position to their competitors. Many may fudge the position by anything from half-a-mile to several miles, either way, depending on whether they want to depress the opposition or lull them into a false sense of security. While this would not be a serious safety worry, it would have a significant effect on the corrected time position analysis.

The positions are checked for probability before the analysis is run and any which are obviously in error weeded out. It pays to check the positions - either by range and bearing or on the Lat/Long reports issued which each Position Analysis, before going too firm on who is leading whom.

The Position Analysis is a *theoretical* comparison, taken at one moment during the race. The estimated average speeds have to assume that all competitors are experiencing, or will experience, similar conditions of wind and tidal stream. This may not be true. The wind can blow in some parts of the fleet and not in others. Many of the way-points are at potential tidal gates which, depending on timing, might serve either to bunch or spread the fleet.

The following let-out phrase is respectfully offered:  
'According to the latest computer analysis at ...'