Stand-by, Ready-To-Mark

The Predicted Logging Story

By Jane Bachinski

What is predicted logging? Predicted logging can be thought of as cruising with a purpose. The special purpose is to convert un-planned, un-plotted, line-of-sight cruising into a precisely planned and executed cruise. A predicted log contest originally consisted of merely running a prescribed course. Today, the idea is to predict in advance the time required to run each leg of a course and the overall time for the entire course.

When did predicted logging gets its start? These contests originated in the early 1900's on the East Coast. Skippers compared the performance of their vessels on planned cruises with handicaps based on horsepower, hull design, and dimensions. Performance was measured by predicting the time of arrival at several points along the way, as well as the arrival time at the final destination. Wagers were made on who would come closest to his predicted time. The times were recorded in the Ship's Log. Thus, the name, predicted log. With their wives as observers, some skippers cheated a bit on their times. Hence, the rules regarding observers were changed. With the adoption of uniform rules, skippers not only compete with each other, but clubs challenge each other. Club contests are often climaxed with a presentation of trophies.

Why participate? These contests are not races. They are tests of piloting, navigation, and boat dependability rather than speed. The determining factors are careful piloting, an accurate calculation of boat speed, proper consideration of wind, currents, and sea conditions. Utilizing your knowledge and skills you are able to accurately predict the time required to negotiate a prescribed course without knowing the actual or elapsed time after the start. The skipper can sharpen his skills in plotting, speed control, and boat handling. He can learn what his boat can do under various conditions, learn more about fuel consumption, speed, time, currents, and effects of weather change on his predictions. All of this information is invaluable when operating under adverse conditions in environs subject to periods of reduced visibility, due to fog or darkness.

What should you know before beginning? The following considerations are vital for participation in predicted logging as well as for safe boating:

1. Have your compass accurately compensated or a deviation table prepared. You must be able to lay out a course and steer a straight course.

2. Select a comfortable cruising speed for the boat and crew under the existing weather conditions. A tachometer is the only equipment allowed during a predicted log contest. With twin engines use one tachometer as the primary control for RPM and synchronze the other engine with it, setting the throttles as accurately as possible.

3. Exercise the usual precautions to assure engine reliability. Check fuel supply, filters, closed cooling systems for leaks, and engines and transmission for oil leaks.

4. Have all Coast Guard required safety equipment aboard and in good condition. The crew must be familiar with the location and operation of all safety equipment.

5. Measure distances accurately on the charts. Incorrect measurements prove to be one of the most common sources of errors.

6. Estimate the time in seconds required to change from one heading to another. The easiest way to establish this time is to clock a 360-degree turn at your control speed in the tighest turn possible without losing too much speed. By dividing 360-degrees by the seconds required for the turn you have a reasonably accurate turn rate in degrees per second. If a 360-degree turn takes 72 seconds the rate is five degrees per second, or seven seconds are required for a 35-degree course change (thirty-five divided by 5 = 7). The time necessary for the course change is added to the next leg calculations.

7. Use the charts specified by the contest committee. They should be the latest charts available. The courses must be accurately drawn on these charts.

8. Use the least amount of deviation from your planed course that is necessary to maneuver.

9. Stay out of the wake of other boats. A wake can significantly alter the speed of your boat.

10. Yield right-of-way to other boats having the right-of-way. When approaching a marker or a navigation aid where a course change is prescribed the inside boat must give way. Otherwise, the wake of the outside boat could throw the inside boat into the marker. Following too closely or running too close abeam is dangerous.

11. Remember that steering is an important factor. Try to hold the prescribed course as closely as possible.

12. Keep your boat properly trimmed for its speed. Crew members, observers, and guests should remain in the same relative locations aboard the boat during a contest. Varying loads of fuel, water, and gear, bilge water, and the condition of the boat's bottom will all affect trim, speed, and stability.

13. Remember that water depths of less than 18 feet will affect boat speed. Planning hulls push up and gain speed in shallow water, while displacement hulls sink deeper and slow down. On trial runs, speed calculations over known water depths and distances will indicate corrections for speed in preparing predictions over shoal waters. A rule of thumb is that boat speed changes approximately 1/4 knot for each two-foot difference in shoal water.

14. Make an exact speed curve. Select a measured mile course. Run the boat in both directions and average the speed of the runs. Use the formula speed in knots = 3600 divided by time in seconds to determine your speed for the one-mile course at a given engine running speed.

15. Take tidal currents into account. Anyone traversing some of the narrows and rapids of the northwest is well aware of the effects of currents on course and speed depending on the direction and speed of the currents. The direction of the current is referred to as the *set* and the speed as the *drift*. If currents cannot be determined in advance, speed and course must be adjusted to compensate for them. When currents can be determined in advance current correction tables for course and speed can be used to make adjustments to the compass course for the desired destination. Even though the currents have been predicted, be prepared to adjust course and speed for unanticipated difference in the actual and predicted currents. If there are two currents (tidal and wind driven) find the resultant direction and force by triangulation and adjust the course accordingly.
To make a ripple reading of the current, note that any anchored object has a ripple on its upstream side and an eddy on its downstream side when the current is less than one-tenth of a knot. When the ripple is a U-shape and the eddy has a discernible boiling effect, the current is about 1/2 knot. At one knot the ripple tends to rise above the adjacent water levels and the eddy boils without white water. When there is white water all around and the eddy is streaming away in long feathery turbulence, the current is probably running at 1 1/2 to two knots.

16. Adjust speed and course for wind, waves, and wind-caused currents. The skipper cannot control, and often cannot predict, the direction and velocity of these. Wind driven currents are difficult to estimate without extensive local knowledge.

The contest committee and judges: In the conduct of the contest there is a committee responsible for establishing the time, place, and date of the contest, and publishing course conditions. When course conditions are distributed prior to the contest date, contestants are on their honor not to run the contest course ahead of the contest. Trained and impartial judges and observers are vital to the success of these contests. They must be capable of reading the timing devices with accuracy and have some knowledge of predicted log contests.

The contest forms: There are two parts to the contest forms. The predicted log, completed by the contestant in advance of the contest, includes the predicted time plus turn times calculated for each leg of the course. Before the start of the contest, the predicted log is sealed and given to the observer or to the contest committee. It is not supposed to be seen by the observer. The actual log, the second part, is given to the observer by the skipper immediately before the contest with only the boat information, control points, and starting time filled in by the contestant.

The start: Prior to the start the observer must inspect the boat for contest and safety requirements, assure a common understanding of contest rules, and ensure all timekeeping devices, radios, and hour meters are removed or covered. The contestant is the timekeeper until the actual start. After passing the start control point, the observer is responsible for timekeeping.

The run: The contestant prepares a running breakdown sheet ahead of time, indicating starting time, control points, compass course between points, navigational bearings or ranges, and engine speed. On the run the skipper follows the plan, maintains the calculated engine speed and compass course, and passes the control points on the side specified by the contest conditions.

The skipper calls the mark: About three or four minutes before reaching each control point, the skipper alerts the observer by saying the words "Stand-by." The observer notes the hour and minute. At 15 to 20 seconds before the control point the skipper says, "Ready-to-mark." When abeam of the control point the skipper calls out "Mark" and starts his turn, if there is a turn to be made. The observer notes the second, rechecks the minute and hour and enters the actual hour, minutes, and seconds in the actual log. Thus, the contest continues with the skipper saying to the observer, "Stand-by", "Ready-to-mark", and "Mark", at each control point until the finish marker is passed. After the last leg of the contest has been run and the finish line passed, elapsed times and errors are calculated. The difference between the predicted time and the actual time is known as the error. Errors in each leg are cumulative. Slow and fast legs do not offset each other. A minute slow on the first leg and a minute fast on the second leg would make a total error of two minutes. The winning skipper is the one with the least amount of error. The winner receives an award.

Make every boat trip a predicted log experience: The prudent boater will prepare a float plan for each of his cruises, making every cruise a predicted log contest to challenge himself.