

MULTI-RECALL DIGITAL TACHOMETER



TEL TAC

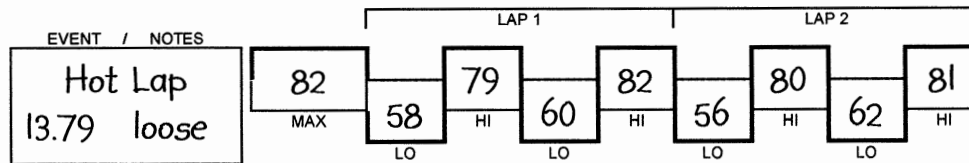
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OPERATION

Operation The TEL TAC OTP 'Multi-Recall' tachometer provides nine selected RPM readings from each racing session. Readings are in hundreds of RPM. It provides the Maximum RPM, like other memory tachs, such as the TEL TAC II. It also selects two **consecutive** laps with the highest RPM's and provides the four lowest and the four highest RPM's attained during those laps. This provides a 'snapshot' of the car's typical performance.

Display When the motor is stopped after a session on the race track, the tach will display the nine readings, repeating them in sequence for 45 minutes or until the motor is restarted. The Maximum reading (highest RPM attained during the session) is shown for 5½ seconds. The eight other readings are then shown for about 1½ seconds each. They are shown in the order they were recorded on the track starting with the lowest then the highest reading from each half lap.

Logbook To maximize the usefulness of your TEL TAC OTP, readings should be written down so they can be analyzed and compared to other readings. A logbook is provided to help organize your data. To record the readings after a session on the race track, wait until the 5 second Maximum reading, record it in the 'MAX' box, and write the the 8 readings that follow it in the 'LO' and 'HI' boxes. You now have a rough graph to help understand the numbers.



Laps Reference to 'laps' is used for easier explanation, but do not start and end at the start/finish line. OTP 'laps' begin in the slowest part of either turn, continue through the fastest part of the next straight, through the other turn, ending at the fastest part of the other straight. It may or may not be possible to determine which part of the track correlates to the data since the readings may start in either turn.

Lap Selection While on the race track, two **consecutive** laps with the four highest readings from each half lap are selected. For example, four high readings of 82, 81, 78 and 80 (average = 8025) would be selected instead of 78, 80, 84 and 76 (average = 7950). The first set had a higher average and would be selected even though the second set contained a higher reading, 84. For this reason, the Maximum RPM may not be included in the laps selected.

High Readings The four high readings give a more typical view of performance than the one Maximum RPM shown by regular telltale tachs. Readings are from both straightaways and can either back up or discredit the Maximum RPM, perhaps showing the Maximum might have come from wheelspin on a slick spot.

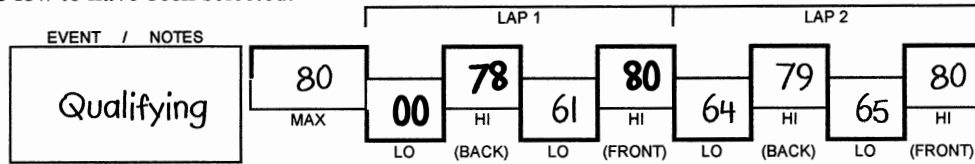
Low Readings The four low readings are those that came just before each of the four selected high readings. They show the range of engine operation, useful in engine development, and can be compared from one session to another to indicate changes in handling and turn speed. The most relevant data would come from pavement tracks and dirt tracks where the car is hooked up through the turns. Readings from smaller or slicker race tracks may reflect brake lockup.

Reset Tach is reset 1 minute after engine is stopped, after which the data will be replaced **if engine is restarted**.

Caution The TEL TAC OTP is intended for dirt or pavement **Oval Track use only**. It's special features are meant for typical oval tracks having 2 turns and 2 straights. It requires the car to speed up and slow down twice per lap and the average to change at least 600 RPM from turn to straight. It may not be as useful on irregular courses, very short or very round tracks or on cars with limited horsepower. Very erratic throttle usage may hinder it's ability to separate laps.

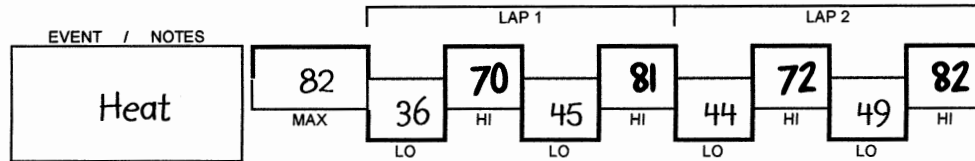
EXAMPLES

Qualifying On a two lap qualifying sequence with no warm-up lap, it is sometimes possible to correlate the data to the track by knowing where the car began its run. Since the car crosses start/finish three times (green, white, checkered) part of the run may not show in the data. If the driver backs off when getting the checkered, that half lap would not be selected because the high reading would be too low to have been selected.



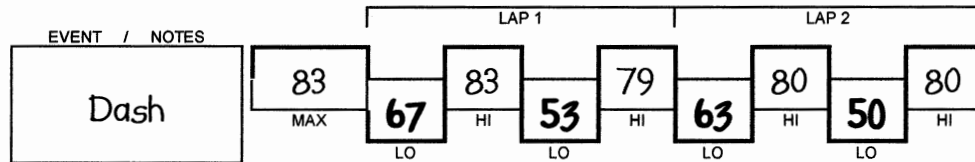
Note the 1st low reading is a '00', the result of the car being pushed off and accelerating to the next turn without slowing down to record a low reading. If the car is still accelerating through the next turn without slowing down, this turn may not be recorded in the data either (the car must slow at least 600 RPM to record a low number). In this instance the car was started in turn 4 and accelerated through 1 and 2. Therefore the 1st high reading had to have come from the backstretch.. The 2nd high reading would be on the frontstretch, and so on.

Slick Spot:



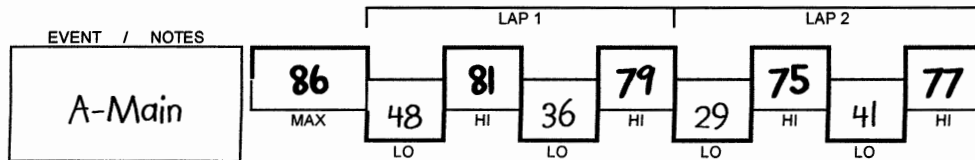
This particular track had a slick spot in the middle of the back straight where the transporters had crossed the track. The 2nd and 4th high readings are about 1000 more than the 1st and 3rd ones (every other high or low reading should come from the same straight or turn on the track). This demonstrates that the Maximum reading would not tell you what the motor was turning at the end of the straight, showing only what it turned at the slick spot.

Slow Turn If the car is having trouble with one turn, the readings could look like these:



The 1st and 3rd low readings are over 1000 RPM higher than the 2nd and 4th. If improvements in handling were made a comparison to the low readings of a later session might show the difference.

Maximum RPM Not Selected Here the Maximum reading is higher than the lap readings. If the engine was turning higher RPM more often, laps with higher readings would have been selected.



Brake Lock Here the 3rd Low reading is extremely low. The car was observed locking the wheels going into the turn.

