v.  990 NAVIGATION SYSTEM Cont.


The operator defines the primary and secondary navigation sources from the previously defined systems by selecting a source for fixes, velocity and azimuth. Additionally, the operator may select GPS or Transit Satellite for a fix source, Sonar for velocity and Gyro for azimuth information. The primary and secondary navigation may use any combination of available sources.

The integration routines put the several separate routines together by integrating the available fixing sources and dead reckoning data. The integration software applies dead reckoning updates each second, to the last known position for the primary and secondary systems. At operator defined intervals, the dead reckoned position is updated by the selected fix source. Fix intervals may be as frequent as every few seconds, as is the case with RPS systems, or as infrequent as every few hours in the case of Transit Satellite fixing.

Quality control data from the 990 NAV system includes range variances, missed ranges, range spikes, fix circular error probability and fix residuals. Additionally, the 990 NAV computes the range C-O values from the primary position to all initialised base stations.