

## APPENDIX A

The following procedures were used for the radiated tests with the test set-up shown in Figure A-1.

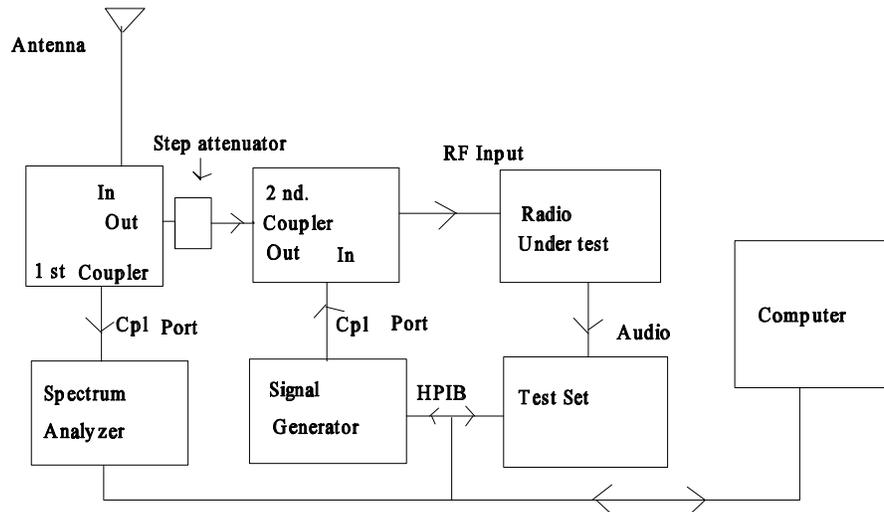


Figure A-1  
Test Set-Up

1. The test equipment was placed on a workbench located on the maindeck or in the wheelhouse of the ships and test personnel traveled to locations on the Mississippi and Savannah Rivers where the performance of marine radios was reported to be degraded.
2. An RF termination was connected to the input of the first coupler.
3. The signal generator and the radio under test were tuned to the frequency of the channel being tested. The signal generator functioned as the desired signal transmitter in all tests.
4. The RF power of the signal generator was adjusted till the SINAD of the radio under test was approximately 20 dB.
5. The input of the first coupler was connected to a 10 foot long VHF whip antenna mounted on the bridge of the ship, which was about twenty feet above the water. The whip antenna was used to introduce emitters from the EM environment into the circuit. The emitters caused a degradation in the receiver's SINAD measurement.
6. The computer monitored the SINAD of the radio under test and instructed the spectrum analyzer (which is connected to the antenna through the coupled port of the first coupler) to take a "snapshot" of the 150-174 MHz band when the SINAD fell below 14 dB. The spectrum snapshot was then stored in the computer.