

II. EXTENDED RANGE (XR) SHORAN (continued)

System can be effectively used. Briefly, the system additions consist of a new receiver, preamplifier, pulse modulation and demodulation circuitry, receiver modifications and improved antenna hardware and transmission lines.

In most cases, these additions and modifications can be added to existing systems in the field. However, experience has indicated that the best results are obtained when the complete system with XR hardware is mobilized as a unit.

Field tests conducted in the Gulf of Mexico indicated that ranges of 150 miles or more could be reasonably expected 24 hours per day. At night, ranges in excess of 200 miles were obtained. Where accuracy checks could be made, no appreciable decrease in system accuracy was observed. The Gulf of Mexico tests were conducted with base station antenna heights of 50 to 100 feet and with the vessel antenna height of 50 to 60 feet above the water. No experimental tests have been conducted from elevated base station sites.