

WJ-9040 SYS007 Signal Strength Measurement System



The SYS007 Signal Strength Measurement System was designed to collect signal strength versus latitude and longitude information in the 825 to 845 MHz and 870 to 890 MHz frequency ranges. It has an IF bandwidth of 20 kHz and can measure signal strength from -110 to -20 dBm.

Up to 99 different measurement frequencies can be programmed into the system, as well as factors such as scan time and number of signal strength readings to average. Each reading of signal strength can be made in 20 milliseconds minimum. Latitude and longitude data from the NAV112 (a Loran C receiver) is updated every 5 seconds.

The major components of the system are as follows:

- 1) WJ-8628-4-2 VHF/UHF Receiver
- 2) WJ-9040 NAV112 Navigational Receiving System Module
- 3) Compaq Portable II Computer

The Compaq computer allows the user to control the measurement parameters and gathers and stores the signal strength versus latitude-longitude data on a 5-1/4" floppy disk. Control of the WJ-8628-4-2 is via a IEEE-488 and latitude-longitude data is obtained from the NAV112 through an RS-232 interface. The system has a built-in, self-instructing calibrate routine to be run with a signal generator. It also has an internal broadband noise source for field calibration check.

The Signal Strength Measurement System could be modified to cover the 20 to 1400 MHz frequency spectrum. It also has the capability for two IF bandwidths, and software could be modified for bandwidths other than 20 kHz (10 kHz to 8 MHz).