

HF spectrum monitoring using a PC-based scanning receiver

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Real-time HF spectrum monitoring using scanning receivers has traditionally required expensive radio equipment with a hardware computer interface, dedicated logging equipment, and custom software. These diverse components can require considerable expertise to integrate into a working system sufficiently reliable to deploy at remote sites. This presentation describes a simple, relatively low-cost setup using one of the new PC based scanning receivers. The system consists only of a PC with installed receiver card, and an antenna. There is a freely available form of interpreted BASIC programming language for these receivers, which includes commands to control receiver functions. Commands are also available to control data logging and produce simple on-screen graphics. This small instruction-set language makes monitoring acquisition and control program development quick and easy, even for novice or non-programmers. Given a stable mains power supply, the system is sufficiently reliable to operate unattended for many months. Some HF spectrum data from scans acquired during field trials on a range of antennas are presented. A near-real-time short-wave fadeout monitoring application is also discussed and some sample field data presented.