



**UNITED STATES COAST GUARD**  
U.S. Department of Homeland Security

**MARINE SAFETY ALERT**

***Inspections and Compliance Directorate***

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Safety Alert 11-02

**TELEVISION ANTENNAE INTERFERENCE WITH GPS**

**UPDATE 12/16/02** Please note corrected Shakespeare Corporation model numbers below.

It has come to the attention of the U.S. Coast Guard and Federal Communications Commission that certain consumer electronics-grade active VHF/UHF marine television antennas are causing operational degradation in the performance of Global Positioning System (GPS) receivers. This interference may be realized as a display of inaccurate position information or a complete loss of GPS receiver acquisition and tracking ability. The interference is not limited to the GPS equipment onboard the vessel with the installed active marine television antennae. There have been reports of interference occurring on other vessels and installations operating up to 2000 feet away from vessels using such antennas.

In one particular case, the interference caused the position of the vessel as displayed on the electronic chart to move erratically and dramatically often across large expanses of land. As can be expected, various data displays indicated erroneous information such as excessive speeds. In these instances the problem would occasionally correct itself while at other times required resetting the system. To the vessel's crew these annoyances were frustrating and caused concerns that perhaps less obvious inaccuracies were occurring. Ultimately this affected their confidence in the performance of the GPS and Electronic Chart Display and Information System. If you are experiencing recurring outages or degradation of your GPS receiver operation you should perform an on-off test of your TV antenna. If turning off the power to the antenna results in improvement in the GPS receiver performance, the antenna may be the source of interference in the GPS band. In that case, you should contact the manufacturer of the antenna and identify the symptoms.

If the test is not positive and the GPS interference persists, contact the watchstander at the [Coast Guard Navigation Information Service](mailto:nisws@navcen.uscg.mil) at [nisws@navcen.uscg.mil](mailto:nisws@navcen.uscg.mil) / 703.313.5900. Antennae models identified during investigations of GPS interference:

TDP (Tandy Distribution Products) Electronics - MINI STATE Electronic Amplified UHF/VHF TV Antenna - Models 5MS740, 5MS750, 5MS921  
Radio Shack Corporation - Long Range Amplified Omni Directional TV Antenna - Model 15-1624  
Shakespeare Corporation - SeaWatch - Models 2040/Code Date 02A00, 2050/Code Date 03A00  
(Code Dates are found on the antenna power supply.)

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