1–1–11. NAVAID Identifier Removal During Maintenance

During periods of routine or emergency maintenance, coded identification (or code and voice, where applicable) is removed from certain FAA NAVAIDs. Removal of identification serves as a warning to pilots that the facility is officially off the air for tune–up or repair and may be unreliable even though intermittent or constant signals are received.

NOTE–
During periods of maintenance VHF ranges may radiate a T–E–S–T code (– ● ●●● –).

NOTE–
DO NOT attempt to fly a procedure that is NOTAMed out of service even if the identification is present. In certain cases, the identification may be transmitted for short periods as part of the testing.

1–1–12. NAVAIDs with Voice

a. Voice equipped en route radio navigational aids are under the operational control of either a Flight Service Station (FSS) or an approach control facility. The voice communication is available on some facilities. Hazardous Inflight Weather Advisory Service (HIWAS) broadcast capability is available on selected VOR sites throughout the conterminous U.S. and does not provide two-way voice communication. The availability of two-way voice communication and HIWAS is indicated in the Chart Supplement U.S. and aeronautical charts.

b. Unless otherwise noted on the chart, all radio navigation aids operate continuously except during shutdowns for maintenance. Hours of operation of facilities not operating continuously are annotated on charts and in the Chart Supplement U.S.

1–1–13. User Reports Requested on NAVAID or Global Navigation Satellite System (GNSS) Performance or Interference

a. Users of the National Airspace System (NAS) can render valuable assistance in the early correction of NAVAID malfunctions or GNSS problems and are encouraged to report their observations of undesirable avionics performance. Although NAVAIDs are monitored by electronic detectors, adverse effects of electronic interference, new obstructions, or changes in terrain near the NAVAID can exist without detection by the ground monitors. Some of the characteristics of malfunction or deteriorating performance which should be reported are: erratic course or bearing indications; intermittent, or full, flag alarm; garbled, missing or obviously improper coded identification; poor quality communications reception; or, in the case of frequency interference, an audible hum or tone accompanying radio communications or NAVAID identification. GNSS problems are often characterized by navigation degradation or service loss indications. For instance, pilots conducting operations in areas where there is GNSS interference may be unable to use GPS for navigation, and ADS–B may be unavailable for surveillance. Radio frequency interference may affect both navigation for the pilot and surveillance by the air traffic controller. Depending on the equipment and integration, either an advisory light or message may alert the pilot. Air traffic controllers monitoring ADS–B reports may stop receiving ADS–B position messages and associated aircraft tracks.

In addition, malfunctioning, faulty, inappropriately installed, operated, or modified GPS re–radiator systems, intended to be used for aircraft maintenance activities, have resulted in unintentional disruption of aviation GNSS receivers. This type of disruption could result in un–flagged, erroneous position information output to primary flight displays/indicators and to other aircraft and air traffic control systems. Since receiver autonomous integrity monitoring (RAIM) is only partially effective against this type of disruption (effectively a “signal spoofing”), the pilot may not be aware of any erroneous navigation indications; ATC may be the only means available for identification of these disruptions and detect unexpected aircraft position while monitoring aircraft for IFR separation.

b. Pilots reporting potential interference should identify the NAVAID (for example, VOR) malfunction or GNSS problem, location of the aircraft (that is, latitude, longitude or bearing/distance from a reference NAVAID), magnetic heading, altitude, date and time of the observation, type of aircraft (make/model/call sign), and description of the condition observed, and the type of receivers in use (that is, make/model/software revision). Reports should be made in any of the following ways:

1. Immediately, by voice radio communication to the controlling ATC facility or FSS.