# NAVSTAR Global Positioning System (GPS)

**INVESTMENT COMPONENT**

- **Modernization**
- Recapitalization
- Maintenance

## MISSION

Provides real-time position, velocity, and timing data to tactical and strategic organizations.

## DESCRIPTION

The NAVSTAR Global Positioning System (GPS) is a space-based, Joint-service navigation program led by the Air Force, which distributes position, velocity, and timing data. The GPS has three segments: a space segment (nominally 24 satellites), a ground control segment, and a user equipment segment. User equipment consists of receivers configured for handheld, ground, aircraft, and watercraft applications. Military GPS receivers use the Precise Positioning Service (PPS) signal to gain enhanced accuracy and signal protection not available to commercial equipment. GPS receivers in the Army today are: the Precision Lightweight GPS Receiver (PLGR), with more than 100,000 in handheld, installed, and integrated applications; and the Defense Advanced GPS Receiver (DAGR), with more than 183,000 as handheld receivers and 67,000 distributed for platform installations to date for a total of 250,000 DAGRs fielded. In addition, GPS user equipment includes a Ground-Based GPS Receiver Applications Module (GB-GRAM). Over 90,000 GB-GRAMs have been procured and provide embedded PPS capability to a variety of weapon systems. The Army represents more than 80 percent of the requirement for user equipment.

**DAGR**
**Size:** 6.37 x 3.4 x 1.56 inches
**Weight:** 1 pound; fits in a two-clip carrying case that attaches to load-bearing equipment
**Frequency:** Dual (L1/L2)
**Battery Life:** 19 hours (4 AA batteries)
**Security:** Selective availability anti-spoofing module
**Satellites:** All-in-view

**GB-GRAM**
**Size:** 0.6 x 2.45 x 3.4 inches
**Weight:** 3.5 ounces
**Frequency:** Dual (L1/L2)
**Security:** Selective availability anti-spoofing module
**Satellites:** All-in-view

## SYSTEM INTERDEPENDENCIES

**In this Publication**
PATRIOT Advanced Capability–Three (PAC-3), Excalibur (XM982), Paladin/Field Artillery Ammunition Support Vehicle (FAASV)

**Other Major Interdependencies**
Blue Force Tracking, mobile ballistic computers, laser rangefinders, movement tracking systems, and several unmanned aerial vehicle systems

## PROGRAM STATUS

- **1QFY05–4QFY10:** Continue DAGR fieldings; continue demilitarization and disposal of obsolete PLGR

## PROJECTED ACTIVITIES

- **1QFY11–4QFY17:** Continue DAGR fieldings; DAGR 3.7 introduction; GB-GRAM 3.7 introduction

**ACQUISITION PHASE**

Technology Development | Engineering & Manufacturing Development | **Production & Deployment** | Operations & Support

## NAVSTAR Global Positioning System (GPS)

**FOREIGN MILITARY SALES**
PPS-capable GPS receivers have been sold to 41 authorized countries

**CONTRACTORS**
**DAGR/GB-GRAM Acquisition and PLGR Support:**
Rockwell Collins (Cedar Rapids, IA)