# GPS Receiver and Antenna Testing Report for SuomiNet (2000)

51 Victoria Andreatta March 24, 2010 GNSS Receiver Test Reports, SuomiNet, Testing and Specifications 4918

# GPS Receiver and Antenna Testing Report for SuomiNet

Mike Jackson, Chuck Meertens, Victoria Andreatta, Teresa Van Hove

University NAVSTAR Consortium, Boulder, Colorado

## 1.0 Introduction

SuomiNet is a university-based, real-time, national Global Positioning System (GPS) network being developed for atmospheric research and education. Funding for the network comes from the National Science Foundation (NSF) and with cost share from collaborating universities. The network is based on a dense network of GPS Receivers located at member universities that will measure phase delays induced in GPS signals by the ionosphere and neutral atmosphere. These delays can be converted into integrated water vapor (if surface pressure data are available) and total electron content (TEC), along each GPS ray path [Ware et al., 2000] and used as input into numerical atmospheric models. The University NAVSTAR Consortium (UNAVCO) in Boulder was tasked with developing a receiver bid specification, evaluation of receivers submitted by manufactures responding to the bid, and providing a receiver technical evaluation to the SuomiNet Steering Committee for the GPS portion of the procurement. This document represents the culmination of the receiver bid specification and evaluation process. Manufacturers who responded to the bid specification and provided systems are listed in Table 1-1.

**Table 1-1: Receiver and antenna pairs tested.**

| Manufacturer | Receiver | Antenna |
|---|---|---|
| Magellan-Ashtech | Ashtech u-Z | ASH701945.02B (Ashtech Cho Ring) |
| Javad Positioning Systems | JPS Legacy | ASH701945.02B (Ashtech Cho Ring) |
| Javad Positioning Systems | JPS Legacy | JPS Regant DD E (dual-depth C Ring) |
| Javad Positioning Systems | JPS Legacy | JPS Regant SD E (single-depth Ring) |
| Trimble Navigation Ltd. | Trimble 4700 | TRM33429.00+GP (Microcente |

| | | |
|---|---|---|
| Trimble Navigation Ltd. | Trimble 4700 | TRM29659.00 (Choke Ring) |

[See attached .pdf file for more.]

Online URL:
https://kb.unavco.org/article/gps-receiver-and-antenna-testing-report-for-suominet-2000-51.html