



TNL-1000™

Airborne GPS Receiver Navigation System

A low-cost panel mount GPS for general aviation users

Trimble has taken many of the outstanding features found in its proven GPS Navigator series and packaged them into a very capable and competitively priced GPS navigation system for general aviation operators.

The TNL-1000 provides users with an advanced six-channel continuous parallel tracking receiver which can track up to nine satellites and provide 15 meter RMS position accuracy anywhere in the world. It rapidly calculates a new position and measures speed to a tenth of a knot in all weather conditions.

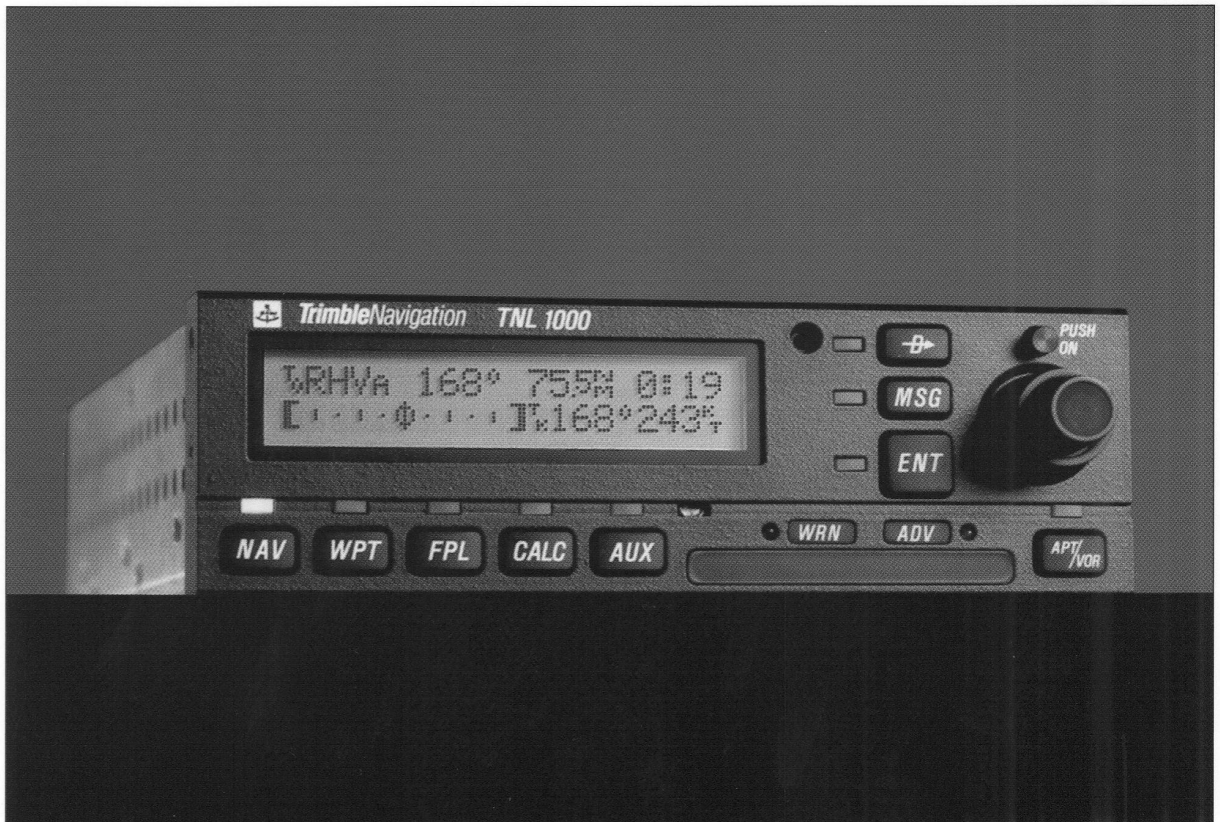
All the desired navigation features and functions are included in a light weight low-power consumption design. On initial-

ization the TNL-1000 automatically determines your position anywhere on the globe. Navigation information is then instantaneously calculated and displayed on a high contrast super-twist LCD. A destination can be selected from either an internal Jeppesen worldwide data base of airports, VORs, or NDBs, or from one of 250 user-defined waypoints. A front-loading Jeppesen Nav Data card capability is a future upgrade option.

Navigation could not be easier. Just one push of the "Direct-To" button and the TNL-1000 displays your position and shows destination, bearing, distance, ETE, ETA, and cross track error to any way point in the data base and also provides a ground speed and flight track reference on an electronic CDI. You can also create

and automatically sequence through 20 flight plans, of 20 waypoints each. Flight plans are easily edited and desired flight routes may be reversed as well. A search feature displays the 20 nearest airports, VORs, NDBs, or user defined waypoints. A calculator mode makes fuel computations easy, determines winds aloft, TAS, and will calculate pressure and density altitude, and much more.

The TNL-1000 is an extremely capable GPS receiver and navigation system that meets or exceeds all applicable industry and Federal Aviation Administration technical, environmental and operational requirements while providing an outstanding value to aviation users.



GPS Navigator™ Model 1000

Airborne GPS Navigation System

Features

Worldwide accuracy to 15 meters;* Bright high-contrast backlit LCD 2 x 20 character display; Full three-dimensional positioning; Internal worldwide airport, VOR and NDB aeronautical database; Waypoint library holds up to 250 user-created waypoints; Store up to 20 flight plans of 20 waypoints each; Instantaneous bearing and range to and from any waypoint; Vertical navigation; Interfaces to moving maps, autopilots, CDI, and flags; RS-422 serial output; and 1-year warranty.

System Specifications

Type:	L1 frequency, C/A code, Six-channel receiver, continuous parallel tracking
Acquisition time:	0.5 to 3.5 minutes
Dynamics:	800 knots, (4g tracking)
Accuracy:*	Position: 15 meters RMS Velocity: 0.1 knots steady state Altitude: 35 meters RMS (msl) Time: UTC to nearest microsecond
Computation range:	Great Circle: 0 to 9999 nm
Distance resolution:	0 to 9.99 nm: in 0.01 nm increments 10 to 99.9 nm: in 0.1 nm increments 100 nm +: 1.0 nm increments
Lat/lon resolution:	0.001 minutes
Database:	Internal worldwide Includes airports, VORs and NDB's identifier, Latitude and Longitude
Interfaces:	EIA standards, two RS-422s CDI, flags and ext. annunciators
GPS Antenna:	Omnidirectional flat microstrip with internal preamp.
Display:	High contrast, super-twist LCD backlit, wide temperature range 2 lines of 20 characters each
Environmental:	RTCA DO-160C
Software:	RTCA DO-178A

Physical Characteristics

Receiver Size:	6.3"W x 10.8"D x 2.0"H max.
Antenna:	3.75"W x 4.00"D x 0.75"H
Receiver Weight:	2.4 lbs. (1.1 kg) with mounting tray
Antenna:	0.4 lbs. (0.2 kg)
Power:	10-36 VDC, negative ground 0.35 amps @ 14 VDC 5 watts, 0.21 amps @ 28 VDC 6 watts
Operating temp:	Receiver: -20° to +55°C Antenna: -55° to +70°C
Storage temp:	Receiver: -55° to +70°C
Operating humidity:	95% @ 50°C
Operating Altitude:	Receiver: up to 50,000 feet (cabin pressure) Antenna: up to 50,000 feet

**Note. When Selective Availability (S/A) not implemented. All GPS receivers subject to position and velocity degradations when Department of Defense S/A imposed. GPS Unit complies with U.S. Department of Commerce/U.S. GPS Industry Council Export Control Provisions. Specifications subject to change without notice. One Year Warranty. Made in the USA.*



TrimbleNavigation

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