Ashtech 3DF™ Dynamic Platform Attitude and Positioning...

Attitude (heading, pitch, roll & yaw angles), position, velocity and time in a single, simple to use compact instrument.

The Ashtech 3DF (Three-Dimensional Direction Finding) system determines platform attitude, position and velocity using GPS satellites. Combinations of azimuth, elevation, roll and yaw angles, or heading, pitch and roll angles are provided in real-time for static or dynamic platforms.

The 24 independent channels which are used for GPS satellite tracking are configured as four 6-channel banks with each bank receiving GPS L1 signals from a separate antenna. Small antenna size and flexible antenna array geometry permits easy installation on a variety of land, sea or air platforms.

The 3DF system displays platform attitude, position and velocity while storing these measurements internally at a one-second update rate. Two high-speed RS-232 serial ports are available to provide easy interface with other systems.

Useful as a real-time attitude and navigational aid, the Ashtech 3DF system is also ideally suited for many pointing applications. In an aerial photogrammetry application, where accurate aircraft heading and attitude are required, the 3DF system removes the need for an Inertial Navigation System (INS).

Unlike INS, the Ashtech 3DF system is not affected by magnetic fields or Schuler effects. It operates anywhere in the world, including the polar regions, with an accuracy of about one milliradian or 0.057 degrees.

The Ashtech 3DF system can be used either in a stand-alone or in an INS aiding role. In the latter, INS calibration and periodic gyro drift corrections can be performed continuously and automatically, dramatically reducing these labor-intensive tasks and effectively eliminating the associated platform down-time.

3D DIRECTION FINDING
3DF
ASHTECH XII GPS

ASHTECH

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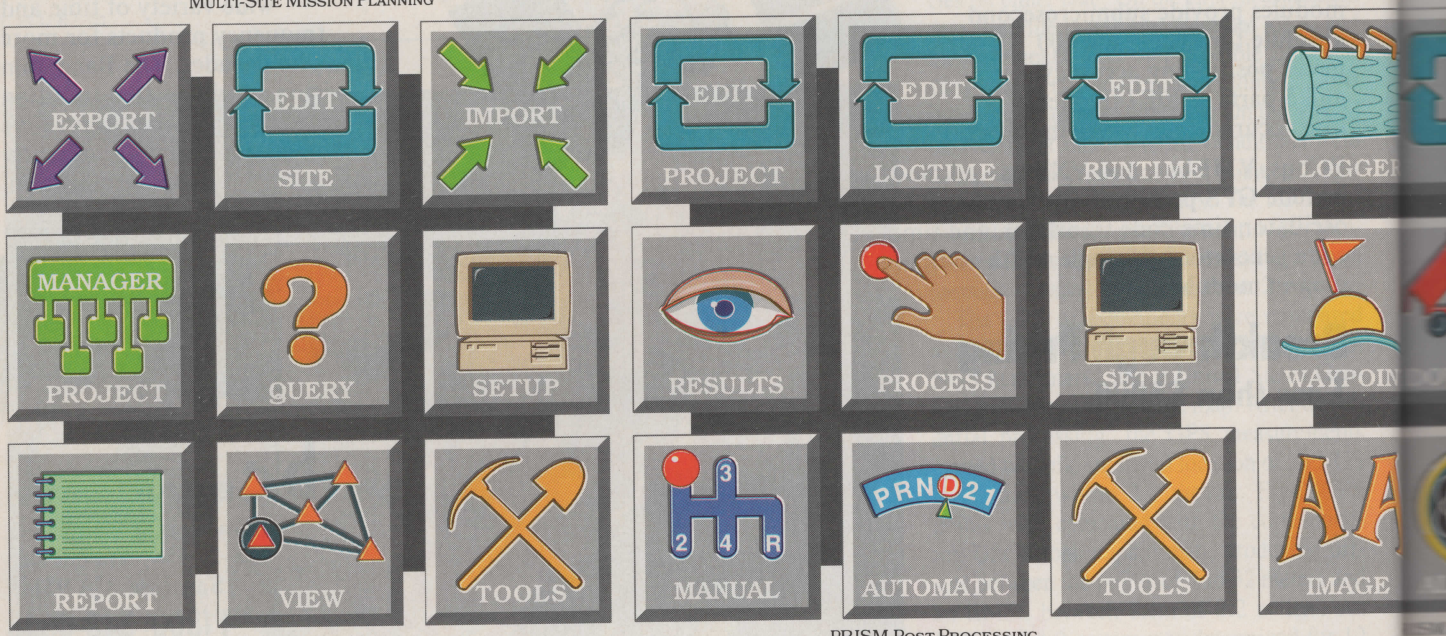
Circle 5

MULTI-SITE MISSION PLANNING

GPS/CADD



SURVEY DATABASE MANAGER

PRISM POST PROCESSING

Precision, Power and Performance

Ashtech's comprehensive suite of GPS planning, processing and presentation software offer the practicing professional the best combination of interface and performance features.

Multi-Site Mission Planning

With a keystroke or click of a mouse, users can display periods of good satellite coverage for each selected site... worldwide, along with Skyplots, satellite availability and many forms of DOP information. Advanced graphics aid interpretation and modification of individual parameters. This is the only program which automatically determines multi-site visibilities and the effects of multi-site obstructions on satellite availability.

Survey Database Manager

Geodetic control and vector information data integrity are the primary building blocks of Ashtech's Survey Database Manager. Graphic display of stations and vectors aid project planning, evaluation of network design, and selection of tagged baselines for export. Users can print out station and vector information for reconnaissance or final reports.

FILLNET Network Adjustment

Ashtech's proven FILLNET has been upgraded to improve the performance of the Least Squares network adjustment. Input files include *both* Float and Fixed Double Difference solutions for all baseline vectors.

Through the graphic interface, setup parameters can be easily accessed and modified. Adjustments can be performed on many user-selected ellipsoids and geoid separations are automatically computed for each station.

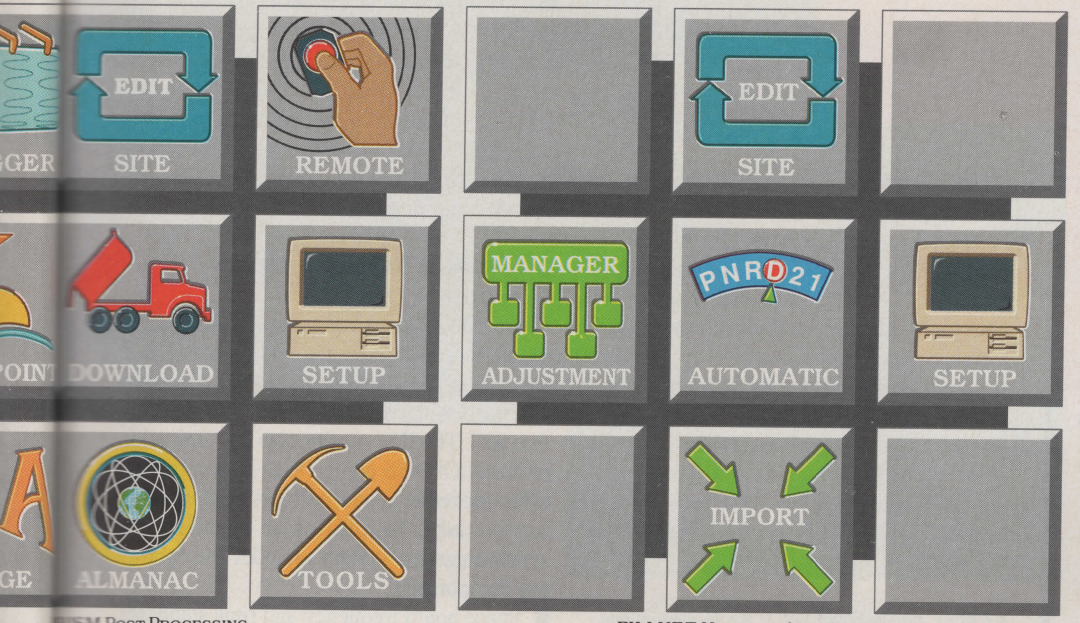
PRISM™ Post Processing

After downloading data, the user need only verify field entry information (antenna heights and meteorological data) and enter a known position prior to batch or manual processing in static, pseudo-kinematic, kinematic, or differential (DGPS) modes.

High-volume processing is assured with automatic cycle slip detection and correction algorithms. Processing parameters and observables, such as the Linear Combination (LC) and Widelaning, can be modified for flexible operator control. (Widelaning observ-

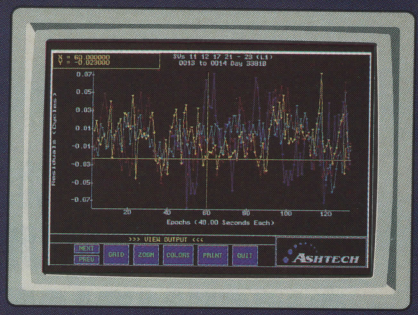
PRISM Post Processing

PRISM Utilities



PRISM Post Processing

FILLNET Network Adjustment



PRISM

From downloading data to creating a final report, Ashtech's new automated PRISM™ software package assures a successful GPS survey. At the heart of the package are the processing algorithms which consistently produce precise baseline vectors and station positions from C/A code, codeless L2 and P Code single and dual frequency data.

Through a top-level, multi-graphic interface, the auxiliary packages—Mission Planning, Fillnet, GPS/CADD, and Survey Database Manager can be accessed with a simple click of the mouse. Statistical information accompanies baseline vector and station positions. Once all data is processed, output files pass to the Database for storage and/or Fillnet for a least-squares network adjustment.

Call or write for details: Ashtech, 1170 Kifer Road, Sunnyvale, CA 94086. Phone (408) 524-1400, Fax 524-1500.

ce. from Field to Finish!

ables are especially suited for Rapid Static surveys as well as long baselines, increasing the ability to fix ambiguities with shorter observation spans).

GPS/CADD Computer Aided Drafting and Design

The newest addition to Ashtech's comprehensive suite of PRISM surveying software is GPS/CADD—a multi-level package of advanced GPS solution modules.

Through a simple-to-use graphic interface program, point and vector information is imported directly into the Basic CAD module, facilitating the generation of survey network plots for analysis and inclusion in final reports.

ASHTECH

Circle 25