The Global Positioning System (GPS) is a network of 24 satellites orbiting the earth, and represents a $13 billion investment from the U.S. Government. Each satellite carries on-board triple-redundant atomic clocks which are maintained accurate and traceable to UTC (Universal Coordinated time) by the U. S. Department of Defense and the U. S. Naval Observatory.

The GPS SYNCHRO CLOCK 17N automatically tracks up to 12 satellites simultaneously, and provides extremely accurate timing by synchronizing to the satellites' atomic clocks. Because the GPS satellite system blankets the earth, the GPS SYNCHRO CLOCK 17N can be used anywhere on our planet.

A variety of time code outputs are available to meet the requirements of numerous systems, one RS-232 serial ports.

The GPS SYNCHRO CLOCK 17N is ideally suited for delivering system-wide split-second timing information to public safety and emergency response systems of all types.

Each GPS SYNCHRO CLOCK 17N system includes a UL-approved power supply, GPS antenna and associated mounting hardware.

1. FEATURES

- 12 Channel GPS receivertracks and uses up to 12 satellites for fast and low power consumtion.
- Received frequency 1575.42MHz with display two digit hours, two digit minutes, two digits seconds.
- Display 12/24 Hours and display satellite synchronized.
- Differential DGPS capability utilizing real-time WAAS.
- Compact, rugged design ideal for application with minimal space. Receiver status information displayed direct clock board display.
- Hightly accurate one-pulse-per-second (PPS) output for precise timing measurements. Pulse width is configurable in 20 millisecond increments from 20ms to 980ms.
- Accuracy : PPS Time ± 1 microsecond at rising edge of PPS pulse (Subject to selective availability).
- Flexible input voltage levels of 90 VAC - 240 VAC 50Hz with battery backup 70 hour.

- Built-in backup battery to maintain real-time clock for up 21 days. Provision for external power to maintain the real-time clock for longer intervals.
- FLASH-based program and non-volatile memory. New software revisions upgradeable through web site download and serial interface. Non-volatile memory does not require battery backup.

2. TECHNICAL SPECIFICATIONS

Specifications are subject to change without notice.

2.1. Physical Characteristics

2.1.1. Size

- 1.400" Wide, 4.100" Hight, 15.200 " Long

2.1.2. Weight

- 2.5 Pound

2.1.3. Front panel

- Two segment seven LED 2.75" - Display hours
- Two segment seven LED 2.75" - Display minutes
- Two segment seven LED 1.5" - Display seconds
- 1 LED display 12/24 Hour
- 1 LED display satellite synchronized

2.1.4. Available connector Option

- 1 female RJ45 connect 35' Data Cable antenna GPS
- 1 male DB9 use for synchro PC and power supply 12VDC

  (Note: available in Asia or by special order)

2.2. Electriccal Charateristics

2.2.1. Input Voltage

- 90VAC-240VAC, 50 Hz

2.2.2. Input Current

- 550mA peak, 400mA nominal @ 12VDC

2.2.3. Battery backup

- 70 hours

2.3. GPS Performance

2.3.1. Receiver

- WAAS enable; 12 parallel channel GPS receiver continuously tracks and uses up to 12 satellites (up to 11 with PPS active) to compute and update your position.

2.3.2. Acquisition times

- Reacquisition : Less than 1 minute
- SkySearch : 5 minutes

2.3.3. Update Rate

- 1 second default; MNEA 0183 output interval configurable from 1 to 900 seconds in one-second increments.

2.3.4. Accuracy

- DGPS (WAAS)

  Position : < 3 meters, 95% typical

  Velocity : 0.1 knot RMS steady state
- PPS Time ± 1 microsecond at rising edge of PPS pulse (Subject to selective availability)
- Dynamic : 999 knots velocity (only limited at altitude greatre than 60,000 feet), 6g dynamics.

2.4. Interfaces

2.4.1. Electrical Characteristics

- True RS-232 output, asynchronous serial input compatible with RS-232 or TTL voltage levels, RS-232 polarity.
- User selectable NMEA 0183 baud rate (300,600,1200,2400,4800,9600,19200)

2.4.2. Environmental Characteristic

- 0°C - 50°C operating range

2.5. Software Interface

Software : GPS Synchro Clock 17N to synchronize WIN 98/2000/XP computers.

TimeSet to synchronize TimeView Display Clocks from WIN 98/2000/XP computers.