MODEL 8821 SPECIFICATIONS

Internal Oscillator Options
B9 (Standard TCXO)
Accuracy while Tracking: 5×10^{-9}

Stability when coasting: Better than $\pm 1 \times 10^{-6}$ 0° C to + 50° C

B4 (Optional OCXO)
Accuracy while Tracking: 1×10^{-9}

Stability when coasting: Better than $\pm 1 \times 10^{-9}$ per day

Synchronization
The position of the antenna is determined by measuring the pseudo-range to four satellites and computing the position of these satellites using ephemeris data. The receiver basic specifications are as follows:

Receiver Description:	L1 C/A code pseudo-ranging
Channels:	Six independent, continuous tracking channels
Frequency:	1575.42 MHz
Acquisition Time:	Typically less than two minutes

Navigation Outputs
Latitude, longitude, and height with a position accuracy of ± 30 meters, 2 drms (without SA) are available on the RS-232 ports.

Tracking Modes
In its default tracking mode, the Model 8821 automatically tracks one to six satellites, as available, on a stationary platform.

Two other modes, one for use on a moving platform and the other for use with an operator-entered fixed position, can be selected.

Timekeeping
The Model 8821 normally accumulates Universal Time (UTC). By command, this may be changed to local time. When local time is used, automatic daylight savings time adjustments are made at preprogrammed dates. Leap second and leap year adjustments are made automatically. Time is available on the RS-232 ports with a resolution of one millisecond.

IRIG B Output

Format:	Modulated IRIG B 122
Level:	3 Vpp nominal
Drive:	Will drive 50 ohms
Mod. Ratio:	Adjustable 2:1 to 6:1
Phase:	Modulated code on-time mark adjustable to within ± 10 µs of on-time reference.

Rate/DC Code Output

Frequency:	One of the following may be selected: 1 PPH, 6 PPH, 12 PPH, 1 PPM, or 1 PPS - 1 MPPS in decade steps. IRIG B DC may be outputted in place of a selected rate via internal strap.
Levels:	TTL
Drive:	50 ohms.
Coherence:	Within one microsecond of UTC
Connector:	BNC

1 PPS Output

Levels:	TTL
Drive:	50 ohms
Coherence:	Within one microsecond of UTC
Connector:	BNC

High Rate Output

Frequency:	5 or 10 MPPS by internal strap
Levels:	TTL
Drive:	50 ohms
Coherence:	Phase coherent to 1 PPS
Connector:	BNC

Option Sinewave Rate Output
5 or 10 Mhz sinewave into 50 ohms in place of TTL rate above. 1 VRms o/p

Status Output
Three contacts of a form-C relay provide tracking status output on a 9-pin connector. Contact rating is 1/2 A. Also on this connector is status at TTL logic levels.

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