

# GPS BASED MASTER CLOCK / NTP SERVER

The **ES-911/GPS/NTP** is a GPS (Global Positioning System) Master Clock and NTP (Network Time Protocol) Server. The unit displays six digits of legally traceable time as received via the internal 12-channel GPS receiver (Date information is also available on most time code outputs). Simultaneously, the **ES-911/GPS/NTP** generates several types of time code (IRIG-B, IRIG-E, NTP, **ESE**, RS-485: "Broadcast", RS-232C: "Broadcast" and RS-232C: "Query") and two (2) 1PPS signals.

The unit is specifically designed to meet the NENA (National Emergency Number Association) Standard NENA-04-002 for a PSAP (Public Safety Answering Point) Master Clock and is capable of "Time Synchronizing" all components of a PSAP. This assures that all equipment such as CAD, ANI/ALI Controllers, Voice Recorders, Radio Consoles, and digital/analog clock systems can easily interface with and be synchronized to the **ES-911/GPS/NTP**.

## Features:

- IRIG-B, IRIG-E, RS-232C (Broadcast & Query) And **ESE** Time Code Outputs
- UL Approved Power Supply
- NTP output on a 10Base-T Ethernet connector (RJ-45)
- Automatic Daylight Savings Time Correction
- IRIG Codes Are Switchable Between Modulated And TTL
- Internal 60 Minute Battery Back-Up
- Rugged Rack Mount Enclosure
- +/- 10 Nanosecond Accuracy
- 6-Digit, .56" LED Display
- "Time Sync" Indicator
- GPS "Lock" Indicator
- Legally Traceable to UTC (Universal Coordinated Time)
- Switchable Between 12 & 24 Hr
- Meets or Exceeds NENA-04-002 Master Clock Specifications
- Time Zone Offset
- 1 PPS Output
- Digital, Video & Analog Slave Clocks Available
- Loss of Power & Loss of Time Sync Relay Outputs
- Loss of GPS Signal Output
- Indoor/Outdoor Antenna with 16' Cable
- Signature Control ("ON/OFF")



Included with the **ES-911/GPS/NTP** is an indoor/outdoor antenna that is connected to the unit via the provided 16' cable. If additional cable is required, "low-loss" cable, an "in-line" amplifier (LA-12F or LA-12FN for low-loss cable) or, for extra long cable runs where more than one in-line amplifier is used, an "Antenna Power Supply" (ES-AB1) may be required. Consult the ESE factory for more information.

Computer synchronization is effortlessly maintained by using NTP client software such as Dimension 4 or Tardis which are available on the Internet at no charge. Software is also supplied with the **ES-911/GPS/NTP** permitting the user to continuously update a computer's DOS or Windows clock to the GPS time available on the ASCII output.



## SPECIFICATIONS

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| <p><b>Accuracy:</b> +/- 10 ns Of UTC When Locked To GPS</p> <p><b>Drift:</b> 33 mS/Day (if no GPS signal)</p> <p><b>Displays:</b> Six Digits, Yellow LED, .56" High</p> <p><b>Power:</b> 15 Watts Maximum</p> <p><b>Electrical:</b> 117 VAC, 50/60 Hz Via UL/CSA/CE Approved, External Power Transformer</p> <p><b>Mechanical:</b> 1.75" x 19" Rack Mount, 10" Deep</p> <p><b>GPS Receiver:</b> Internal 12-Channel</p> <p><b>Antenna:</b> Indoor/Outdoor With 16' Cable</p> <p><b>Battery:</b> 60 Minute Back-Up (all outputs and displays)</p> | <p><b>Outputs:</b> 1 PPS - TTL, 20% Duty Cycle</p> <p>1 PPS - TTL, 50% Duty Cycle (regenerated)</p> <p>IRIG-B - 3 VPP (mark amplitude) (AM or TTL)</p> <p>IRIG-E - 3 VPP (mark amplitude) (AM or TTL)</p> <p><b>ESE</b> Time Code - Drives 100 Slaves @ 4000'</p> <p>RS-232C - ASCII Date &amp; Time @ 1200-9600 Baud, 8 Data, No Parity, 1 Stop; Broadcast &amp; Query</p> <p>RS-485 - (same as RS-232C; no Query)</p> <p><b>Options:</b> HR, J</p> |
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