

MODEM INTERFACE MASTER CLOCK / TIME CODE GENERATOR

The **ES-181U** is a Master Clock that receives updated time information via an internally mounted modem. The unit supplies time information to the user in a variety of forms, including the nine-digit yellow LED display (Julian Day, Hours, Minutes and Seconds). Time codes available via rear-mounted connectors are SMPTE/EBU, ASCII (RS-232C), IRIG-B and **ESE** (TC89 or TC90). The unit also outputs two "1 PPS" signals (one "positive" and one "negative") and an "External Reference Input" is also provided that allows the clock's time base to be referenced to that of either a 10 MHz or a 5 MHz source (10 MHz is default).

Software is also supplied with the **ES-181U** permitting the user to continuously update a computer's DOS or Windows® clock to the time available on the ASCII output.

Features:

- SMPTE (or EBU), IRIG-B, ASCII & **ESE** Time Code Outputs
- Auto Update Via Modem From USNO
- Optional 10 MHz & 1 KHz Outputs
- Automatic Re-dial
- Auto Daylight Savings Time
- Easy Installation & Operation
- Rugged Rack Mount Enclosure



Specifications

Electrical: 117 VAC, 50/60 Hz
Power: 15 Watts Maximum
Mechanical: 1.75" x 19" Rack Mount, 10" Deep
Displays: Nine Digits, Yellow LED, .56" High
Accuracy: +/-50ms of UTC (after update)
Drift: One Second per Month (without Update)
Video Input: RS-170A Composite Video/Blackburst-1 Vpp, 75Ω
Reference Input: (10 MHz or 5 MHz), 500mVpp, 75Ω
Modem: Hayes® Compatible 2400bps

Outputs: 1 PPS: TTL, 50% Duty Cycle
 IRIG-B: 3 Vpp (mark amplitude), 600Ω
ESE Time Code: drives 100 Slaves @ 4000'
 SMPTE: 600Ω Balanced or Unbalanced
 RS-232C: ASCII Date & Time @ 9600 Baud,
 8 Data, No Parity, 1 Stop
Battery: 4-Hour Back-Up of CPU
 (displays are blank)
Options: HR, J, UL

"DIGITAL" TIME & DATE DISPLAY

ESE offers two different size displays of the Digital Clock/Calendar displays. The **ES-126U** is a twelve-digit Time Code Reader (**ESE**-TC90, ASCII, SMPTE or EBU) that displays six digits (Hours, Minutes & Seconds) of time and six digits (Month, Day & Year or optionally Day, Month & Year) of date. The displays are .56" high yellow LEDs and the unit is mounted in a 1 3/4" Rack Mount enclosure. The **ES-127U** is identical to the **ES-126U** except that it has 1.0" high LED displays and its Rack Mount enclosure is 3 1/2" high.

Features:

- Perfect Synchronization With Master
- Long-Life Yellow LED Displays
- Optional Time Zone Offset
- Reads **ESE**, ASCII, SMPTE Or EBU Time Code
- Rack Mount Enclosure



ES-126U



ES-127U

These units are designed to read the serial data from any Master Clock, Converter or Calendar that has a **ESE**-TC90 Time Code output (properly formatted ASCII, SMPTE or EBU can also be read by either unit). TC90 contains time and date data and is available on the ES-101, ES-102U, ES-103U, ES-160U, ES-181U, ES-185U, ES-188, ES-192U/194U, ES-195 & ES-206U. All other **ESE** Master Clocks are capable of driving either the **ES-126U** or **ES-127U** only if an ES-195 (Master Calendar) is used to convert their code (TC76 or TC89) into TC90 time code. (Masters with TC76 time code must be in 24 hour format.)

Specifications

ES-126U
Input: **ESE** TC90, ASCII, SMPTE or EBU
Electrical: 117 VAC, 50/60 Hz, 10 W
Mechanical: 1.75" x 19" Rack Mount 10" Deep
Displays: 12 digits, .56" High Yellow LED (20' Viewing Distance)
Options: Black, **ESE**, J, TZ(DIP), UL, W

ES-127U
ESE TC90, ASCII, SMPTE or EBU
 117 VAC, 50/60 Hz, 10 W
 3.5" x 19" Rack Mount 10" Deep
 12 digits, 1.0" High Yellow LED (35' Viewing Distance)
 Black, Blue, **ESE**, Green, J, Red, TZ(DIP), UL, W

