



GPS/IRIG-B Synchronized Time Code Generator With Internal Rechargeable Battery

Model GS-102B



Features:

- Synchronizes to GPS
- Synchronizes to IRIG-B and IEEE-1344
- IRIG-B and IEEE-1344 AM and DCLS Outputs
- USB Port: Time and Position
- Precise 1pps Output
- Optional 10MHz Output
- Programmable Pulse Output
- RS-232 I/O Port
- 2nd RS-232 I/O Port
- LED Status Indicators
- OLED Display
- Wide Range DC Power
- Internal Rechargeable Battery
- Rugged / Portable
- Optional Carrying Case with Connectors

Product Description

The Model GS-102B GPS/IRIG-B Synchronized Time Code Generator (STCG) is a low cost high performance STCG that provides many features not found on higher cost units. When operated in the GPS mode, time and rates are precisely referenced to UTC. When operated in the IRIG mode, time and rates are precisely referenced to the IRIG generating source. Time, position and status are available on the RS-232 I/O and the USB Ports. An optional 10MHz output is also available.

The Model GS-102B STCG is ideal for providing time, rates and position information in laboratory or portable situations. This unit is ideal for camera and range applications as well as computer synchronization via the available GUI. The GS-102B can provide the drive for large format wall and console time displays. In addition its small and rugged packaging is ideal for portable or dynamic applications. Rechargeable internal batteries provide more than 24 hours of operation when the unit is operated in Power Save mode.

The time is referenced to UTC when operating in the GPS mode. The RS-232 and manual control allow the user to configure the unit to provide local or daylight savings time or to configure the programmable pulse.

The GS-102B has an optional weather-resistant carrying case with external access to two rear-panel connectors. Separately, an external power switch option is also available.



GS-102B GPS/IRIG-B Synchronized Time Code Generator

Product Specifications

General Specifications

- Position Accuracy: <10 to 20 meters SEP (SA off)
- Timing Accuracy: ± 100 nanoseconds to UTC (GPS)
- GPS Input: 1.575 GHz L1 C/A Code
- GPS Receiver: 12 parallel channels
- Internal Oscillator: disciplined to GPS
- Antenna: L1 GPS with 5-meter SMA cable

Fixed Inputs

- AM Serial Time Code Input
 - Format: IRIG-B 122, IEEE-1344
 - Amplitude: 1 Vrms into 50 ohms
 - Ratio: factory set to 3:1
 - Connector: SMA labeled CODE INPUT
 - Termination: 50/10k ohms, switch selectable
- DC Level Shift (DCLS) Serial Time Code Input
 - Specification: IRIG-B 002, IEEE-1344
 - Amplitude: TTL levels
 - Connector: DB-15 multi-pin

Fixed Outputs

- AM Serial Time Code Output
 - Format: IRIG-B 122, IRIG-B 123 and IEEE-1344
 - Amplitude: 1 Vrms into 50 ohms
 - Ratio: factory set to 3:1
 - Connector: SMA labeled CODE OUTPUT
- DC Level Shift (DCLS) Serial Time Code Output
 - Specification: IRIG-B 002, IRIG-B 003 and IEEE-1344
 - Amplitude: TTL levels
 - Connector: DB-15 multi-pin
- 1PPS Output
 - Accuracy: < 100 nanoseconds
 - Logic Level: TTL into 50 ohms
 - Timing: Positive edge on time
 - Duty Cycle: 50%
 - Connector: DB-15 multi-pin
- Programmable Pulse Output
 - Logic Level: TTL
 - Timing: Positive edge on time
 - Pulse Width: 20 microseconds
 - Connector: DB-15 multi-pin
- RS-232 I/O Port
 - Baud Rate: 9600—115200
 - Output: Time, Position, Status and Current Settings
 - Input Data: Operating mode and setup parameters
 - Connector: DB-15 multi-pin

- 2nd RS-232 I/O Port
 - Outputs NMEA 0183 messages containing navigation and tracking information. This port will accept Differential GPS (DGPS) real-time pseudo-range correction data in RTCM SC-104 format.
- USB Port
 - Output Data: Time, Position and Status
- Manual Control
 - Setup Functions: Setup parameters for operating mode, time, local and daylight savings time and programmable pulse
- DC Power Input: 11.5 to 32 Vdc, 18 Watts
- AC Power via AC to DC converter module
- Internal Battery Power for >24 hour runtime in Power Save mode
- Can be powered through the USB Bus (will not charge batteries)

Environmental/Mechanical

- STCG Physical Dimensions
 - Size: 4.72" length X 4.07" width X 2.09" height
 - Weight: 1.25 pounds
 - OLED Display: Up to 4 lines, alphanumeric
 - Operating Temperature: -20 to +60 degrees C
 - Storage Temperature: 0 to +35 degrees C recommended
 - Humidity: To 95% non-condensing
- Antenna
 - Size: 1.81" length X 1.81" width X .50" high
 - Weight: < 1 pound
 - Operating Temperature: -40 to +70 degrees C
 - Storage Temperature: -40 to +85 degrees C
 - Connector: SMA
 - Cable Length: 5 meters (Longer lengths available)

Options

- 10MHz Output
- OCXO upgrade
- Weather-resistant rugged case with external connections
- External power Switch

Rear Panel



For additional information contact your ORCA Representative at 949-361-0212 or via email at sales@orcatechnologies.com www.orcatechnologies.com

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(Specifications Subject to Change—180629)