

GPS/IRIG-B Synchronized Time Code Generator

Model GS-101



Features:

- Synchronizes to GPS
- Synchronizes to IRIG-B
- IRIG-B AM and DCLS Output
- USB Port: Time and Position
- Precise 1pps Output
- Programmable Pulse Output
- RS-232 I/O Port
- 2nd RS-232 I/O Port
- LED Status Indicators
- LCD Display
- Wide Range DC Power

General Product Specifications

The Model GS-101 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 or 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.

The Model GS-101 STCG is ideal for providing time, rates and position information to camera applications, traffic light applications, 911 applications, power utility applications and computer applications. The GS-101 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.

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.

For additional information contact your ORCA Representative at 949-361-0212 or via email at sales@qmainc.cc

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General Product Specifications

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- 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: TCXO $< 5 \times 10^{-9}$ when disciplined to GPS
- Antenna: L1 GPS with 15' coax cable SMA/SMA

Fixed Inputs/Outputs

- IRIG-B Amplitude Modulated (AM) serial time Code
- Specification: Meets IRIG-B 122 and IEEE-1344
Amplitude: 3 Vpp into 50 ohms
Ratio: factory set to 3:1
Connector: SMA
- IRIG-B DC Level Shift (DCLS) serial time code
Specification: Meets IRIG-B 000 and IEEE-1344
Amplitude: TTL levels
Connector: DB-15 multi-pin
- 1PPS
Accuracy: < 100 nanoseconds
Logic Level: TTL
Output Impedance: 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
Duty Cycle: 50 / 50
Connector: DB-15 multi-pin
- RS-232 I/O Port
Baud Rate: 9600—115200
Output Data: Time, Position, Status and Current Settings
Input Data: Operating mode and setup parameters
Connector: DB-15 multi-pin

- 2nd RS232 I/O Port
Outputs NEMA 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 setup of programmable pulse
- DC Power
Level: 9 to 40 Vdc
- AC Power
AC to DC converter module optional
- Can be powered through the USB Bus

Environmental/Mechanical

- STCG Physical Dimensions
Size: 4.72" length X 3.07" width X 1.06" height
Weight: 1 pound
LCD Display: 2 line X 20 character - backlit
Operating Temperature: 0 to 50 degrees C
Storage Temperature: -40 to +80 degrees C
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 optionally available)

Certifications: FCC, IEEE C37.90 and IEC 60255



Rear Panel

For additional information contact your ORCA Representative at 949-361-0212 or via email at sales@omainc.cc

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(Specifications Subject to Change—071213)