ORCA TECHNOLOGIES
TIME AND FREQUENCY PRODUCTS

## IRIG-B Synchronized Time Code Generator

# Model SG-101


**Features:**

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

## General Product Specifications

The Model SG-101 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 IRIG mode time and rates are precisely referenced to the IRIG generating source. Time and status are available on the RS-232 I/O and the USB Ports.

The Model SG-101 STCG is ideal for providing time and rates to camera applications, power utility applications and computer applications. The SG-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 IRIG-B when operating in the Synchronized Generator 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@orcatechnologies.com www.orcatechnologies.com

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## General Product Specifications

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- Internal Oscillator: TCXO <0.5X10$^{-6}$ (free running). The oscillator will discipline to the synchronizing source
- 1PPS output is within 100 ns (typical) of the DC Level Shift (DCLS) sync source (error can be adjusted out)
- 1PPS output is within 500 ns (typical) of the Amplitude Modulated (AM) sync source (error can be adjusted out)

## Fixed Inputs

- IRIG-B AM serial Time Code Input
  - Format: IRIG-B 122
  - Amplitude: 3 Vpp into 50 ohms
  - Ratio: factory set to 3:1
  - Connector: SMA labeled CODE INPUT
  - Termination: 50/10k ohms, switch selectable

- IRIG-B DC Level Shift (DCLS) serial Time Code Input
  - Specification: IRIG-B 002
  - Amplitude: TTL levels
  - Connector: DB-15 multi-pin

## Fixed Outputs

- IRIG-B AM serial Time Code Output
  - Format: IRIG-B 122 and IEEE-1344
  - Amplitude: 3 Vpp into 50 ohms
  - Ratio: factory set to 3:1
  - Connector: SMA labeled CODE OUTPUT

- IRIG-B DC Level Shift (DCLS) serial Time Code Output
  - Specification: IRIG-B 002 and IEEE-1344
  - Amplitude: TTL levels
  - Connector: DB-15 multi-pin

- 1PPS Output
  - Accuracy: Dependent on IRIG source
  - 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
  - Duty Cycle: 50 / 50
  - Connector: DB-15 multi-pin

- RS-232 I/O Port
  - Baud Rate: 9600—115200
  - Output Data: Time, Status and Current Settings
  - Input Data: Operating mode and setup parameters
  - Connector: DB-15 multi-pin

- USB Port
  - Output Data: Time 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: 5 to 40 Vdc < 500 milliwatts

- AC Power
  - AC to DC converter module

- Can be powered through the USB Bus

## Environmental/Mechanical

- STCG Physical Dimensions
  - Size: 4.72” length X 4.07” width X 1.20” 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

Certifications: FCC, IEEE C37.90 and IEC 60255

Rear Panel

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**(Specifications Subject to Change—161101)**