

# MODEL 6155D GPS SYNCHRONIZED IRIG B TIME CODE GENERATOR

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## FEATURES

- Twelve channel GPS receiver
- IRIG B time code generator.
- UTC time mark output.
- Serial RS-232 port outputs UTC Time, Latitude and Longitude.
- Battery powered
- Built in “smart” battery charger
- Built in active GPS antenna, also provisions for ext. antenna.
- LCD Display



## DESCRIPTION

The Model 6155D is a battery powered, hand-held unit which provides an IRIG B timecode output synchronized with UTC time, derived from GPS, and a serial data output which includes UTC Time, Latitude and Longitude. It includes a twelve channel GPS receiver which automatically acquires all in-view satellites upon power up and locks an internal IRIG B time code generator to the GPS time reference. If the GPS lock is lost the 6155D will automatically switch to an internal clock and continue generating the output IRIG B signal. No discernible change in the IRIG B output will occur due to this transition.

The UTC Time, Latitude and Longitude serial output is provided as an asynchronous 19.2K baud RS-232C signal. In the absence of GPS lock the serial data will continue with the time derived from the internal clock. The latitude and longitude, however, will be forced to zeros and the signs will be forced to positive.

The 6155D is housed in an aluminum enclosure, 8 inches long, 3.8 inches wide and 2.55 inches high, which includes rechargeable batteries and an attached, active antenna. An LCD display shows the IRIG time and also provides lock and battery status. All controls and indicators are on the front and all connectors are on the top (end surface). The batteries are accessible via a removable panel on the bottom.

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## SPECIFICATIONS

<b>Internal Frequency Stability</b>	2.5 parts in $10^6$ when not locked.
<b>IRIG B Output</b>	Standard IRIG B serial time code IAW OSG IRIG Standard 200-98 (synchronized with time code generator). Output level range is 0 to 5V peak to peak unloaded. Factory set to 3V peak to peak
<b>GPS Performance</b>	
<b>Channels:</b>	12 Parallel channels, tracks all satellites in view.
<b>Time-to-first-fix:</b>	<24 seconds typical (warm start), <150 seconds typical (cold start).
<b>UTC Time Mark:</b>	Synchronized with Global Reference Standard.
<b>Reacquisition:</b>	2 seconds typical.
<b>Datum:</b>	WGS 84
<b>GPS Antenna</b>	Active Patch Antenna, 5 VDC. Gain: 26 db $\pm$ 2 db. Noise figure: 1.5 db Max.
<b>Serial Interface</b>	EIA RS-232C, Asynchronous, 19200 baud, 8 data bits, 1 start bit, 1 stop bit, no parity, no flow control.
<b>Temperature</b>	
<b>Operating:</b>	0°C to +55°C
<b>Non-operating:</b>	-20 to +70
<b>Humidity</b>	95% non-condensing
<b>Package</b>	Hand held configuration, aluminum enclosure, 8 inches long, 3.8 inches wide and 2.55 inches high.
<b>Battery</b>	Six each "AA" NiMH, 1500 mah batteries.