

## FEATURES

- Twelve channel GPS receiver with active antenna.
- IRIG B time code generator.
- Front Panel Time/Status Display.
- Six Event Trigger Inputs.
- Five Selectable Output Clocks
- Fully Remote Controllable via 10/100 Ethernet Port.
- Operates on 100 to 240 VAC 50/60 Hz Power.



## DESCRIPTION

The Model 6115G-TSM is a GPS synchronized IRIG B time code generator designed to provide a precise IRIG B serial time code output, selectable synchronized clock outputs and provide the facility of time tagging events. The unit 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 6115G-TSM 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 6115G-TSM has six event inputs, each operating independently. Upon receipt of an event trigger, the time is read and placed in a buffer for retrieval via an included Ethernet port.

The 6115G-TSM may also be used as a stand-alone unit to generate an IRIG B signal. The time-of-year may be set by the user via front panel switches. A backlit LCD readout displays the days, hours, minutes and seconds as well as unit status. In the event of a power failure the 6115G-TSM will no longer output a serial time code however the time will continue to advance by automatically switching to a battery backed-up internal clock. The IRIG output will resume, without resetting, upon reapplication of power.

Besides the retrieval of the event timestamps, the Ethernet port is used to provide remote control and programming of the 6115G-TSM.

The 6115G-TSM is housed in a 1U, 19 inch rack mountable aluminum enclosure, 1.72" high and 9" deep (including connectors) and is powered by 100 to 240VAC 50/60 Hz.

# Model 6115G-TSM

## GPS Synchronized IRIG B Time Code Generator

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### SPECIFICATIONS

#### Frequency Stability

Powered (never locked):	<1 part in $10^6$ . (0 to +55°C) <2.5 parts in $10^6$ (-30 to 70°C)
Powered (previously locked):	<5 parts in $10^7$
On Battery backup:	<1 part in $10^4$ . (0 to +55°)
When GPS locked:	<+/- 100nsec
Backup Batt. life (un-powered)	1 year minimum

#### GPS Performance

Channels:	12 Parallel channels, tracks all satellites in view
Time-to-first-fix:	<25 seconds typical (warm start), <100 seconds typical (cold start)
UTC Time Mark:	Synchronized with Global Reference Standard
Reacquisition:	2 seconds typical

#### Event Trigger Input

Six Inputs, TTL level pulse >400ns with rise time of 10ns to 5us. Trigger occurs on rising or trailing edge (user selectable). Maximum burst rate: 1MHz per channel. Each channel fully isolated.

#### IRIG B Output

Standard IRIG B serial time code (B122) in accordance with IRIG Standard 200-98. Fully isolated (Transformer Coupled). Output level is user adjustable to a maximum of 5V p-p, 3V p-p into a 50-ohm load. Modulation ratio 3:1

#### Clock Outputs

Five-volt peak pulse, approx 50% duty cycle, <1us rise time. Time reference on rising edge.

#### Ethernet Port

Standard TCP/IP protocol, 10/100 Mbit/sec, configured as using Telnet port 23 access. Password protected access.

#### Antenna

High gain active GPS antenna with 50' cable. 5V power to antenna is supplied by unit via cable.

#### Power

100-240VAC 50/60 Hz, 6.5 Watts.

#### Environmental

Temperature:	0°C to +55°C operating, -20 to +70°C storage
Humidity:	95% non-condensing
Shock:	5G all axis

#### Package

Size	19" wide x 9" deep (including connectors) x 1.72" high (1U)
Weight	4.5 lbs

