

## SR1010

# GPS synchronised time code generator with disciplined oscillator

## Features

- The equipment is a universal IRIG B or NASA 36 time code generator, GPS synchronized. The equipment is housed in a 19", 2U rack mount.
- An OCXO oscillator, GPS disciplined is integrated in the equipment
- The time code signal generated by the equipment is shown on the front face by 7 digits LED's. An alphanumeric LCD displays the GPS time, the satellites viewed, and the operation mode of the equipment.
- A 20 keypad keyboard on the front face allows the settings & command of the equipment. The two main functional block of the equipment are : the GPS receiver and the IRIG B (NASA 36) generator.

### The GPS receiver main functions are :

- Reference time delivering, allowing the UT automatic reset of the IRIG B generator.
- Providing the 1 PPS signal with  $\pm 50$  ns precision, allowing the IRIG B generated signal right phase.

■ The IRIG B sub-system include a central unit module in charge of the equipment control, an the IRIG B generator. The generated IRIG B signal could be automatically or manually adjusted on the 1 PPS reference. The 1 PPS reference is coming from the GPS receiver or from any other external sources.

■ In case of loss of the GPS signal at the power on, the starting time of the IRIG B generator could be manually input using the front face keyboard. The GPS receiver is a MOTOROLA Oncore receiver. The IRIG B generator is driven by his internal oscillator or by an 1, 5 or 10 MHz external source.

■ **Slave option** : The equipment is able to enslave an external frequency generator. The reference frequency is entered and compared to the satellite reference through the 1 PPS signal. A valuation of the frequency difference is computed in order to generate a correction tension used by the frequency generator.

■ All the input/output connectors (9) are located on the rear face of the equipment :

- GPS input antenna with isolated coax,
- 1 PPS external input,
- 1 external frequency input 1, 5 or 10 MHz,
- 1 IRIGB (or Nasa36) time code output
- 2 frequency outputs (oscillator frequency )
- 2 outputs for periodic emission of the serial time frame
- RS232 remote control output.



