UNIVERSAL TIME BASE

by Trafictec

The Trafictec® ***Universal Time Base (UTB)*** is a precise and easy to use microprocessor-based device, which provides very accurate time and date information. Since it's "Set" and "Query" commands are very similar to earlier WWV receivers it is easy to interface with existing traffic signal controls.

The hardware consists of a GPS receiver with antenna and a microprocessor-based electronic circuit, which reads the raw GPS time data, accepts user commands, outputs serial data streams via a RS232C interface, and performs other processing tasks such as determining the day of the year, the day of week, etc. In the ASCII mode, the UTB is configured and its data read using "S" (Set) commands and "Q" (Query) commands respectively. Both types of commands can be sent to the Universal Time Base directly from a traffic signal controller, a dumb terminal or from a PC.

Some traffic signal controllers are designed to receive time data or reference pluses without issuing a request. The Universal Time Base can be configured to send time information at preset intervals or to send 500 millisecond pulses as a precise time of day.

The Trafictec Universal Time Base is housed in a small plastic enclosure, which has two mounting flanges. The enclosure is not weatherproof and must be mounted inside a suitable weatherproof cabinet or used indoors. The maximum operating temperature range for the Universal Time Base is -30 to +80 degrees centigrade. The unit must be connected to a +5 volts DC, regulated power supply, or a +24 volts DC, unregulated supply. The standard device's electrical current consumption, including the powered antenna, is approximately 200 milliamps.

The Universal Time Base comes with a user friendly, Windows based program, which is useful for training, system configuration and device testing. A small GPS antenna is supplied with a 1 meter long coax cable. Longer cable lengths are available as an option. The antenna must be mounted outside, with a clear view of the sky above. It may be necessary to mount the antenna on a pole or rooftop to improve its reception. If the antenna's view of the sky is reduced, the Universal Time Base will take longer to aquire the needed signals or in extreme conditions it may not be able to "LOCK ON" and will not provide the most accurate data possible.

Supported simulated WWV Commands

QA	Query time of day, date, status and more (binary output)
QC	Query time, day, day of week, status and more
QD	Query date and day of year
QM	Query configuration data
QT	Query time
QV	Query firmware version number
Sb	Set baud rate
Sd	Set daylight savings time Y or N
Sm	Set 12 or 24 hours time format
Sn	Set a new line character
So	Set time zone

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