



SIGNAL SIMULATOR GNSS CH-3810



Useful technologies of the signals simulator GNSS:

- design and debugging of GNSS receivers;
- testing of equipment GNSS on scenarios of motion;
- testing of trajectories of high-dynamic objects;
- certification of GNSS equipment.

Completeness:

- imitation unit;
- control computer;
- set of cables and adapters;
- set of operational documentation;
- set of basic simulation scenarios.

CH-3810

Specification

SNS type GPS L1 C/A code, L2 C(M+L) code
GLONASS L1 CT, BT code, L2 CT, BT code
SBAS L1 C/A code

Parameters of simulation scenarios:

- typical scenarios - a fixed point, a pedestrian, a car, a plane, a helicopter, a space object;
- range of motion parameters
 - height, km from minus 1 to plus 8000
 - speed, m/s from 0 to 14000
 - acceleration, m/s^2 from 0 to 500
 - jerk, m/s^3 from 0 to 500;
- types of trajectories - fixed point of space, linear motion, movement with acceleration, movement with acceleration and jerk, circular motion, spiral movement, take-off, jerk, pitching;
- the form of the scenarios instruction - parametric, discrete points, data in NMEA 0183 protocol, Euler's corners, tabular data;
- parameters of the simulation script - orbit satellites, pseudoranges, ionosphere, troposphere, multipath, motion, antenna pattern, differential corrections.

Normalized metrological characteristics:

- nominal output power levels of output signals, dB*W -160
- nominal output power levels at output MON/CAL, $\Delta dB*W$ -100
- dynamic range of regulation of output signals from nominal, dB +-20
- the magnitude of the rms value of the random fundamental error of the output signal strength for each of the imitation channels in normal application conditions, no more, dB 0,5
- the magnitude of the rms value of the random additional error of the output signal strength for each of the imitation channels in normal application conditions, no more, dB 0,5
- the error of formation of pseudorange (RMS) by code PRN, m, 0,1
- the error of the formation of pseudorange (RMS) in the phase of carrier, m 0,001
- Error forming pseudo speed (RMS), m/s 0,005
- Inter-Channel Delay (RMS), ns (equivalent to range, m) 1(0,3)
- Inter-band delay (RMS), ns (equivalent to range, m) 7(2,1)
- nominal frequency, MHz GPS L1 1575,420
- L2 1227,600
- SBAS L1 1575,420;
- limit of permissible basic error, Hz 32;
- limits of the permissible mean square component of the random error of the carrier frequency, Hz 1,
- the letterhead frequency of the GLONASS channels according to the ICD GLONASS version 5.1.