GPS TESTER

Professional GPS Tester for SFN Network

> GPS Tester

> GPS Tester Overview control software

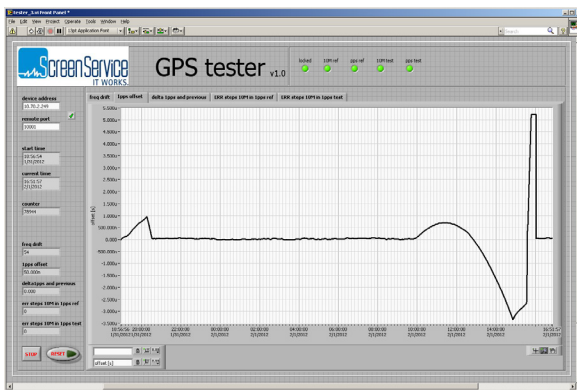> Delta 1PPS and previous

> 1PPS Offset

Description

It is a GPS (or any sync source, i.e. rubidium) validator for broadcasting.

GPS Tester is able to compare 2 different synchronization sources where one of the two can be used like a reference and the second one like the sync source under testing.
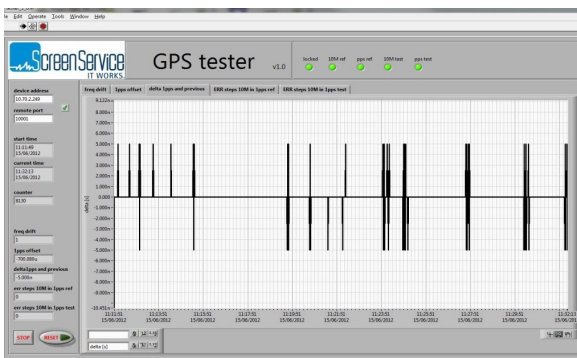The equipment shows failure condition, such as:

- Phase jumps.
- Uncorrelated 10 MHz toward 1 PPs.
- Come back from holdover status.
- 1PPS jumps.
- 1PPS offset.
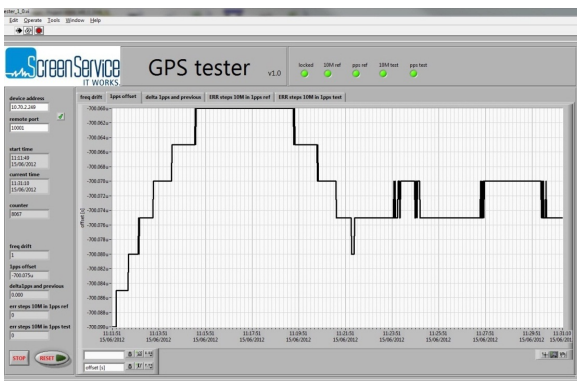- Number of cycles among each 1PPS.
- Frequency drift.

SFN quality depends on 2 parameters: frequency stability and symbol timing. As center frequency drift, null shift across spectrum; this force receiver to re-compute channel equalization all the time - this will reduce the capability of set-top-boxes to receive clean pictures. Symbol timing can affect coverage in 2 different ways; first has an effect similar to center frequency instability. Timing errors have more important effect where we want to use the full power of SFN solutions. It is important to remember that SFN implies covering large areas and signal will not stop to affect coverage outside planned area; therefore, it is vital that we have enough margin. All transmitter received in a given area must fall within Guard interval or have a power ratio enough for demodulation.
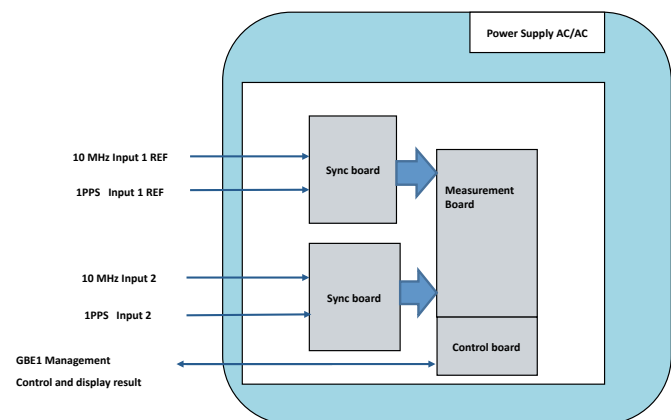

> GPS GTester Block Diagram