GPS PC TIME SYNC

Inspired by CQ article Dec 2017 by N5PA

All accolades to VisuaGPS LLC

And N5PA

Presented by N5PGH

NTP

- WHY?
- FT8 wants pc time correct to 1 second
- NTP produces desired result
- NTP is a limited service
- Internet connection required
- Would be great if NTP was “Broadcast”
- Guess What?

GPS

- GPS to the rescue
- Available everywhere
- Low initial cost and free access
- Should produce better accuracy than NTP
- NOT best accuracy possible (5-20 milisec)
- Vs nanosecond for GPS disciplined osc
- “Good enough”

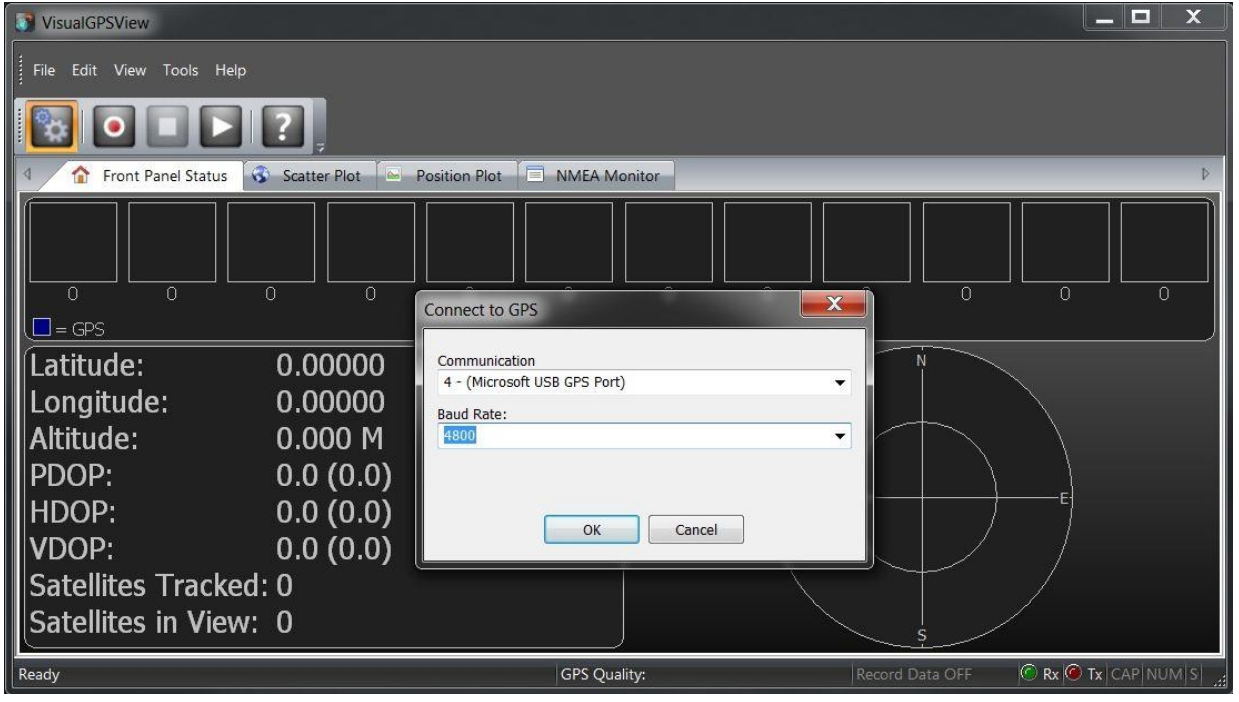
Configuration

- PC Configuration:
- Dell I5-2400 8gb win7
- Microsoft Streets GPS puck GPS-360
- Made by Pharos USA.
- Puck works on Win 7, not Win 10
- Uses 1% cpu

Step 1

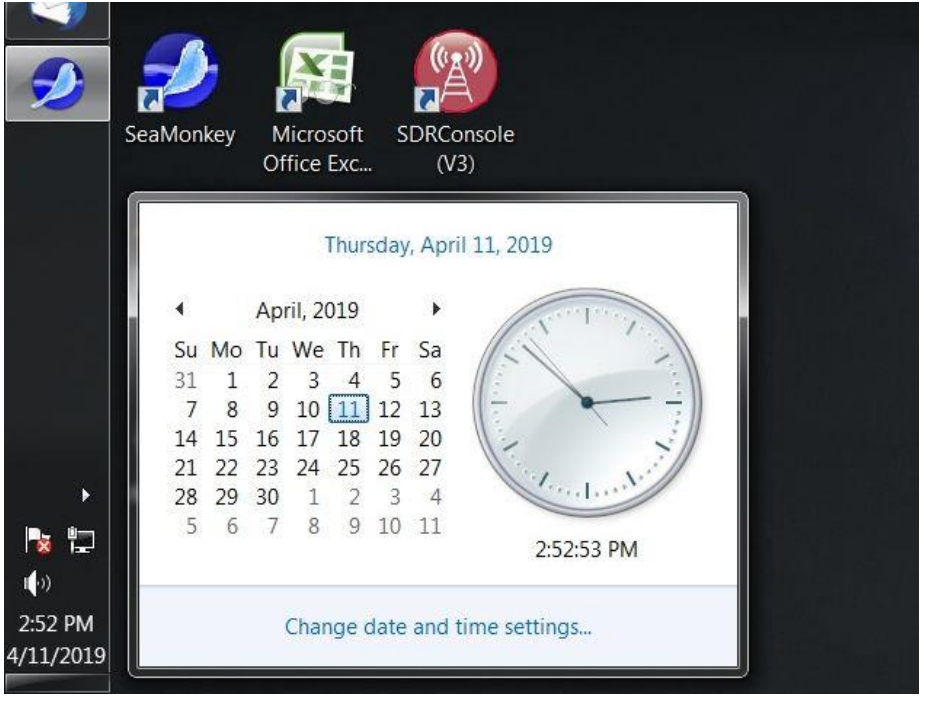
- Plug the puck into any USB port
- If BSOD, get a different GPS receiver
- After the USB comm port is created, go into the device and assure the speed is 4800 baud.
- Then run VisualGPSview
- If it displays GPS data, end program
- Proceed to install of NMEATime2 step 2

VisualGPSView



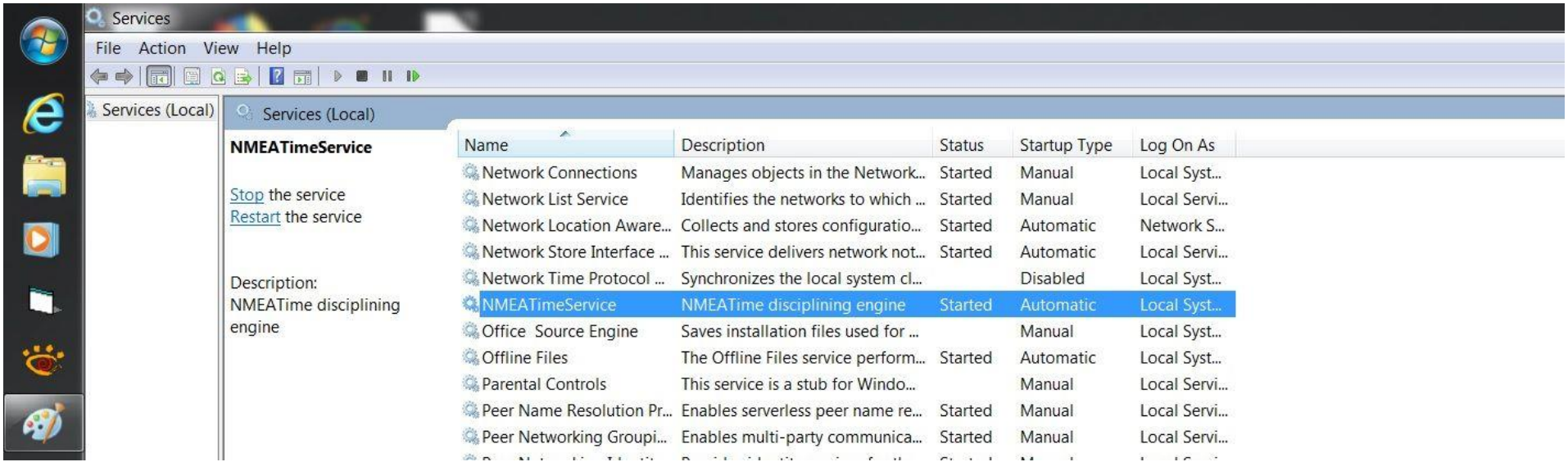
Turn off default internet time

- Change date and time setting, internet time, change setting, synchronize with an internet time server (click to empty box)
- Ok, ok, ok back out

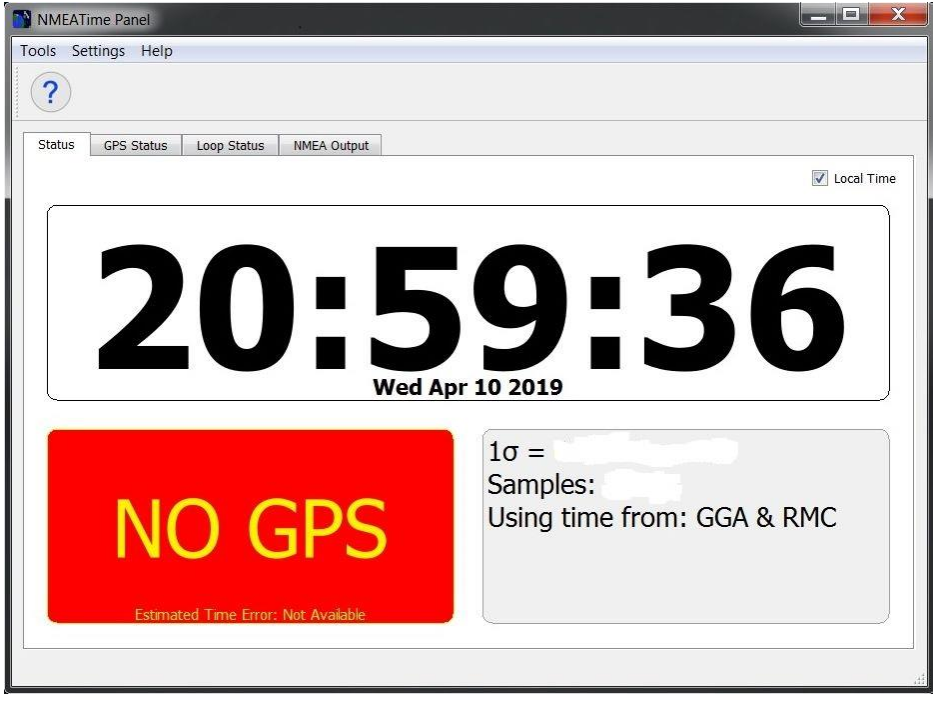

SeaMonkey
Microsoft Office Exc...
SDRConsole (V3)
Thursday, April 11, 2019
April, 2019
Su Mo Tu We Th Fr Sa
31 1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 1 2 3 4
5 6 7 8 9 10 11
2:52:53 PM
Change date and time settings...
2:52 PM
4/11/2019

Step 2

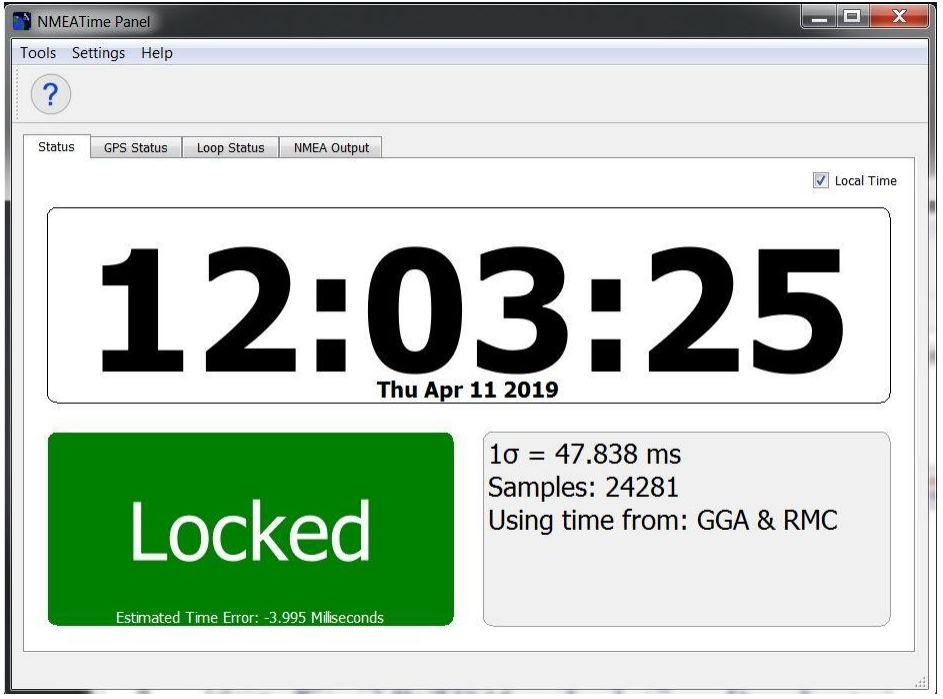
- Download and install NMEATime2
- Works on win 7, 8 and 10
- Double click to run
- Settings, setup, setup communications
- Should start displaying NMEA data text
- Note that it runs as a service


Services
File Action View Help
Services (Local)
Services (Local)
NMEATimeService
Stop the service
Restart the service
Description:
NMEATime disciplining engine
Name
Description
Status
Startup Type
Log On As
Network Connections
Manages objects in the Network...
Started
Manual
Local Syst...
Network List Service
Identifies the networks to which ...
Started
Manual
Local Servi...
Network Location Aware...
Collects and stores configuratio...
Started
Automatic
Network S...
Network Store Interface ...
This service delivers network not...
Started
Automatic
Local Servi...
Network Time Protocol ...
Synchronizes the local system cl...
Disabled
Local Syst...
NMEATimeService
NMEATime disciplining engine
Started
Automatic
Local Syst...
Office Source Engine
Saves installation files used for ...
Manual
Local Syst...
Offline Files
The Offline Files service perform...
Started
Automatic
Local Syst...
Parental Controls
This service is a stub for Windo...
Manual
Local Servi...
Peer Name Resolution Pr...
Enables serverless peer name re...
Started
Manual
Local Servi...
Peer Networking Groupi...
Enables multi-party communica...
Started
Manual
Local Servi...

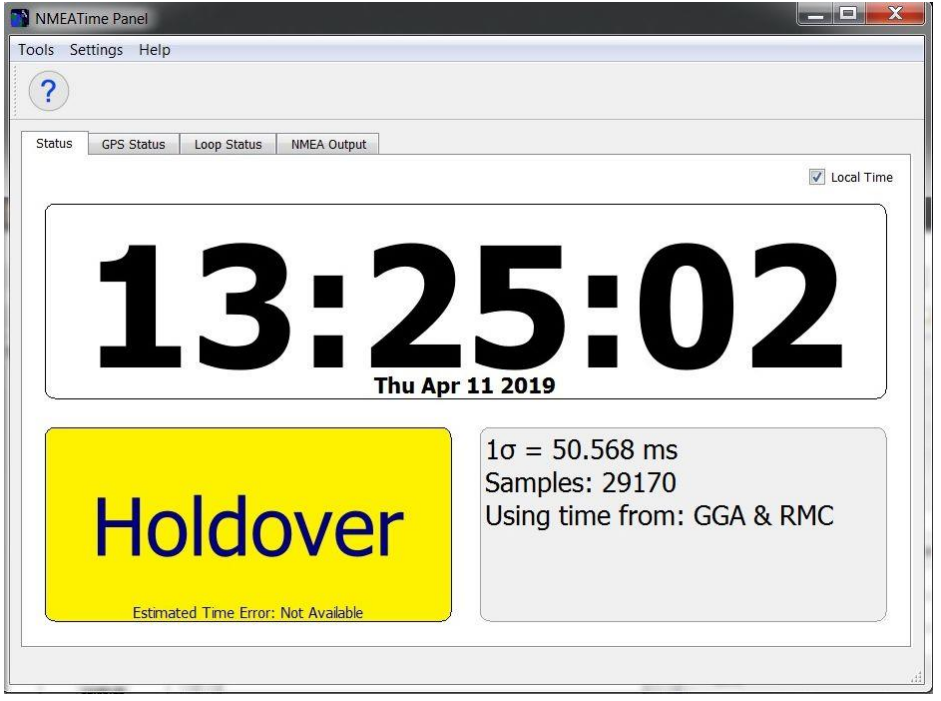
1st status no GPS



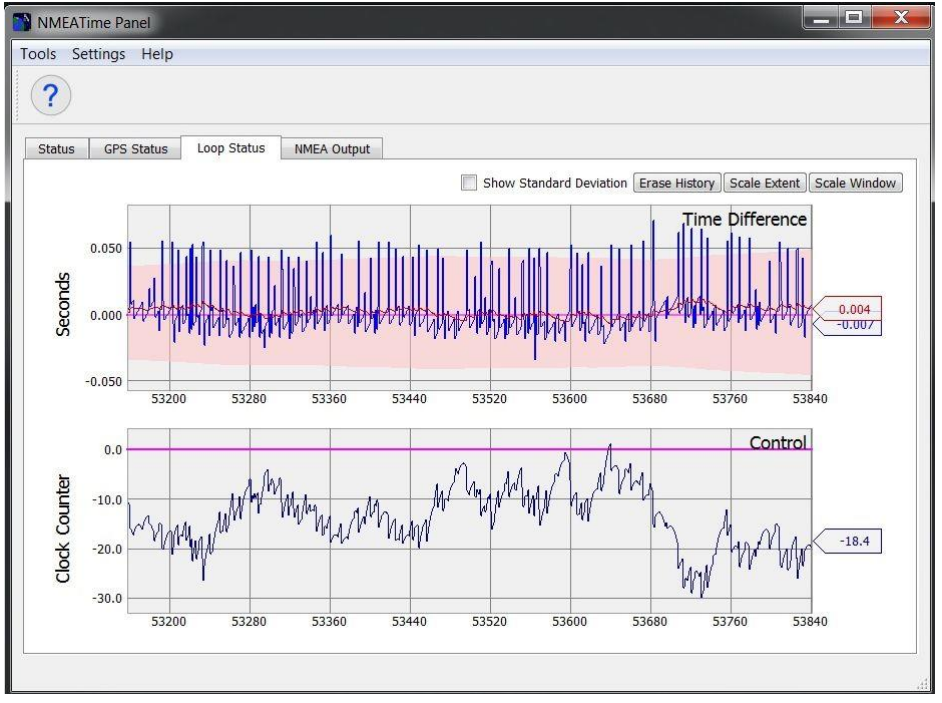
2nd status lock



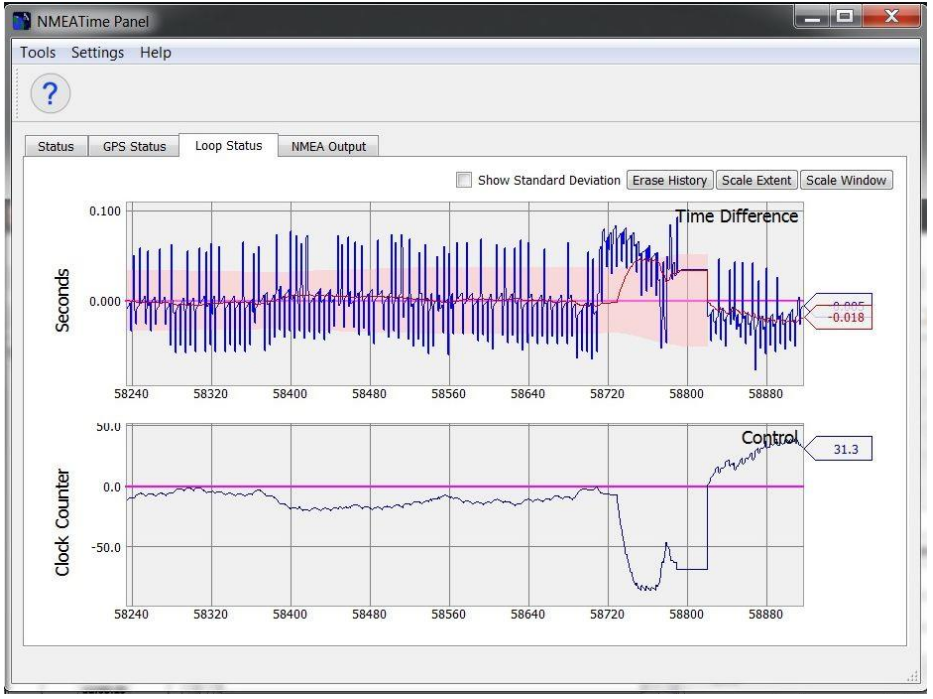
3rd status- holdover



Status during lock



Status after holdover



Links & Notes

- http://visualgps.net/
- http://k5pa.com/
- The NMEATime2 Software is licensed
- Cost is $20.48 from visualgps.net
- http://www.laptopgpsworld.com/
- http://www.laptopgpsworld.com/3235-pc-clock-synchronization-using-gps