

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”

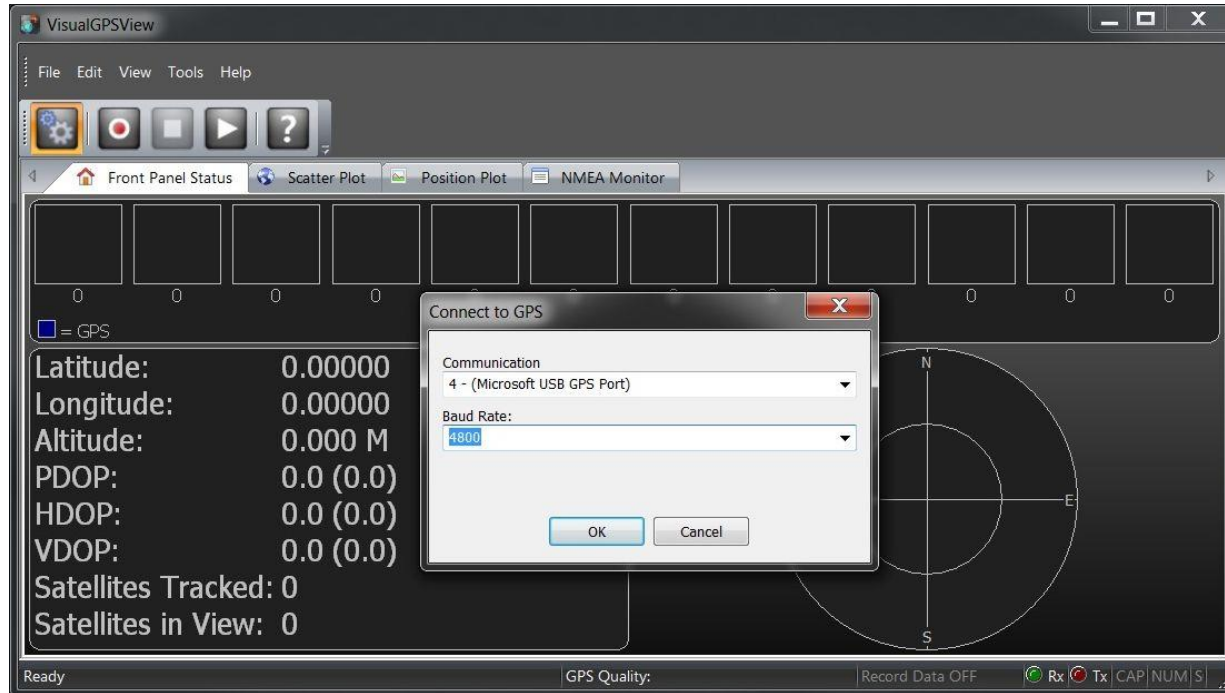
Configuration

- .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

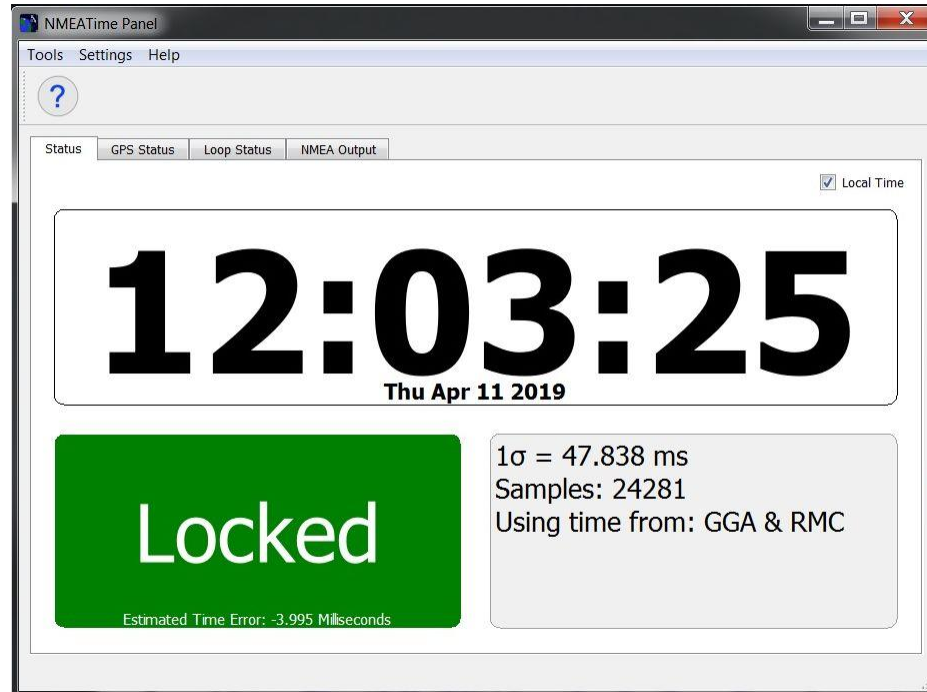
The screenshot shows the Windows Services console. The title bar reads "Services". The menu bar includes "File", "Action", "View", and "Help". The address bar shows "Services (Local)". The left pane shows "Services (Local)" with "NMEATimeService" selected. Below the selection, there are links for "Stop the service" and "Restart the service", and a description: "Description: NMEATime disciplining engine". The main pane displays a table of services.

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...

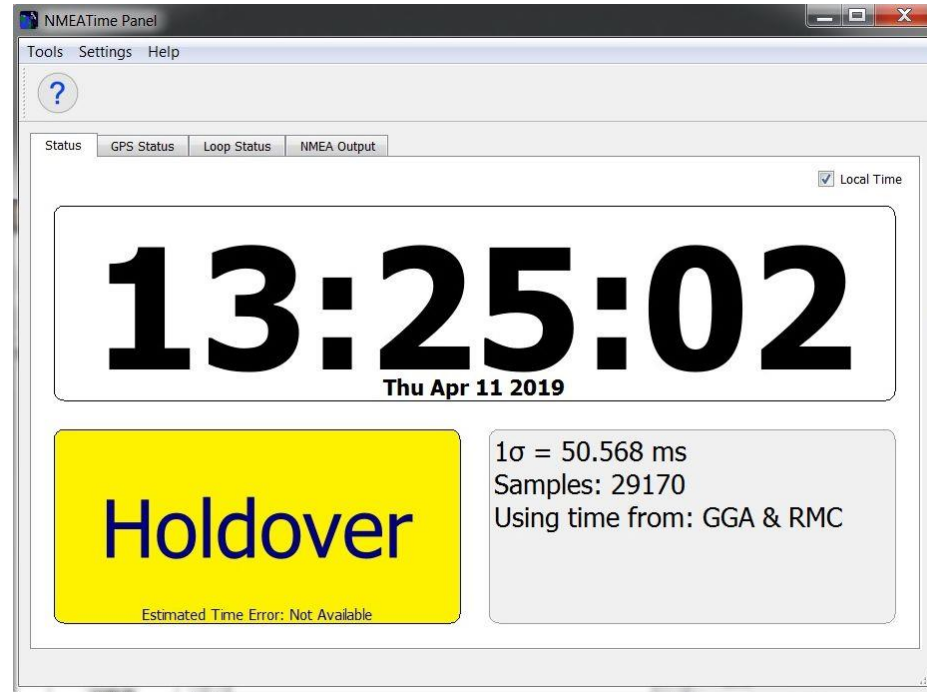
1st status no GPS

The screenshot shows the NMEA Time Panel software interface. At the top, there is a menu bar with 'Tools', 'Settings', and 'Help'. Below the menu bar is a status bar with a question mark icon and a 'Local Time' checkbox which is checked. The main display area is divided into several sections. The largest section shows the time '20:59:36' in large black digits, with 'Wed Apr 10 2019' below it. To the left of this time display is a red rectangular box with the text 'NO GPS' in yellow. Below this red box, in smaller text, it says 'Estimated Time Error: Not Available'. To the right of the time display, there is a grey box containing the text: '1σ = [blacked out]', 'Samples: [blacked out]', and 'Using time from: GGA & RMC'. The software window has a standard Windows-style title bar with the text 'NMEA Time Panel' and window control buttons.

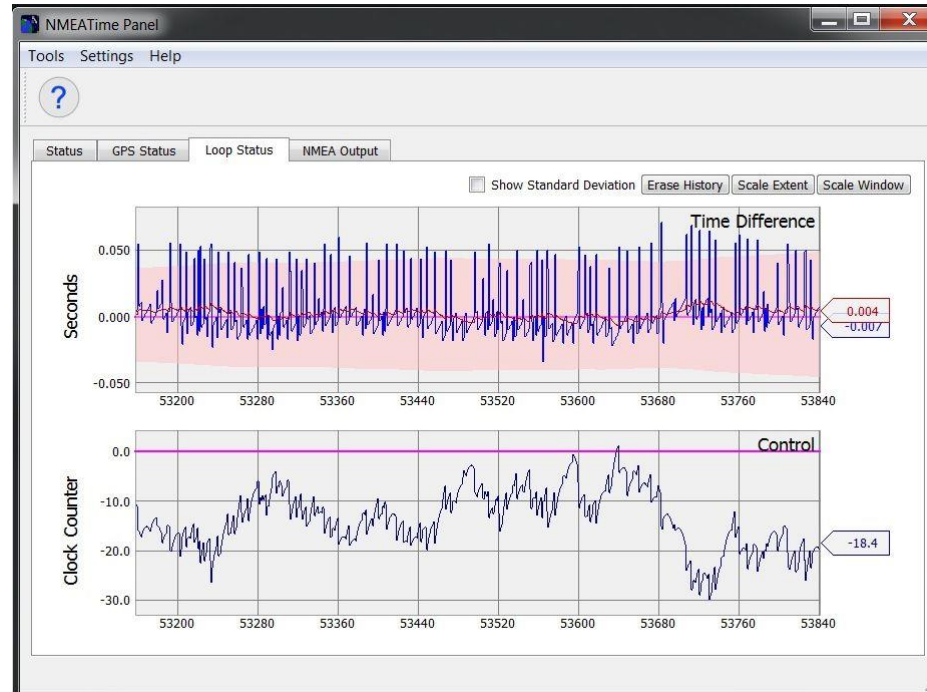
2nd status lock



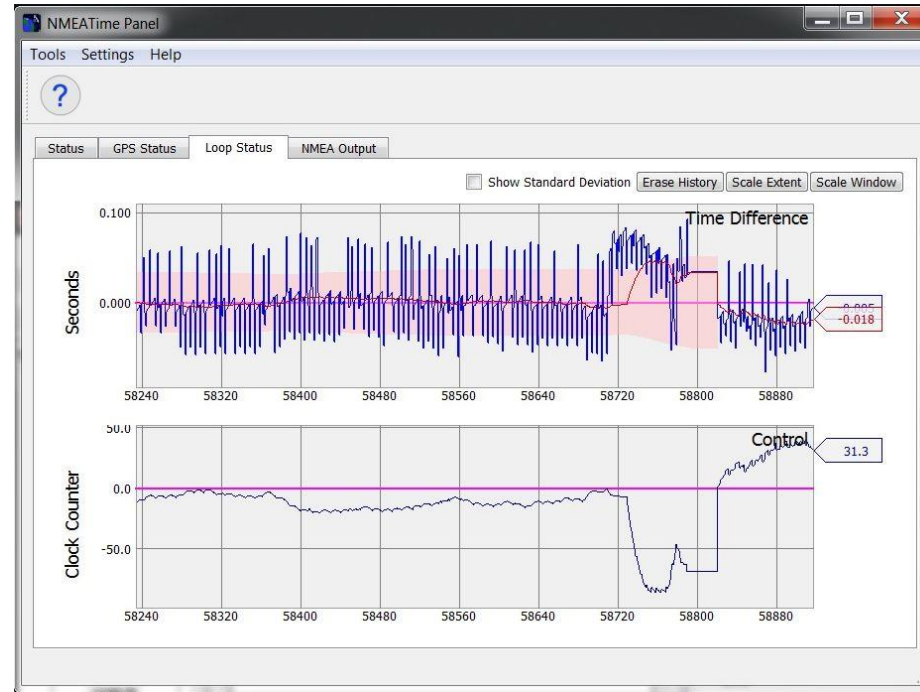
3rd status- holdover



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>