

HF Antenna Effectiveness Test

Open to any operator; Rx only no license is necessary

What equipment is needed:

- HF antenna, any HF antenna
- HF radio
- PC (windows or linux OS) with internet connect
- audio cable (ring/tip/sleeve) or radio/PC interface (Signalink, RigBlaster, DIY...)

What PC software is used:

- “WSJT-X” (if you are currently not using this program, see Attachment A – WSJT-X for install and setup details).
- “NetTime for better time synchronization” other than standard PC time (if you are currently not using this or a similar time synchronization program, see Attachment B – NetTime for install and setup details).

Setup radio and PC:

- Tune radio to 7.0740 MHz, USB
- Connect audio cable (or radio/PC interface) between radio phone/speaker output and PC mike input
- Check that NetTime or similar program is running
- Run WSJT-X and setup as detailed in attachment A – WSJT-X
- Adjust radio volume between 30db to 60db on the WSJT-X input analog scale (lower left area of the main display/operation screen)
- In about 10 minutes check PSKreporter if you are receiving FT8 signals

What will this do:

- Program (WSJT-X) will send over the internet all your received CQ calls to PSKreporter in the cloud. <https://pskreporter.info/pskmap.html>
- After a delay of about 5 minutes, PSKreporter maps will display your received CQ signals
- Your received signals are available in the “show logbook” on the PSKreporter map screen
- Your received signals can also be down loaded as an ADIF file by clicking “last 24 hr” in the “show logbook” data screen
- Comparing ADIF files between different antennas will show which antenna is receiving the most and greater distance signals
- Note performance is independent of the radio performance since the critical filtering and decoding is done by the same WSJT-X program

The Antenna Effectiveness Test:

- Setup radio, PC and programs
- Operate continuously for 24 hr from the scheduled start time (probably 9 pm)
- After the 24 hr time, PSKreporter has all your received CQ signals. Down load an ADIF file of your “show logbook data”. (See Attachment C – PSKreporter for ADIF down load details)
- Email the ADIF file to frickron@aol.com to be compared to other ADIF files.

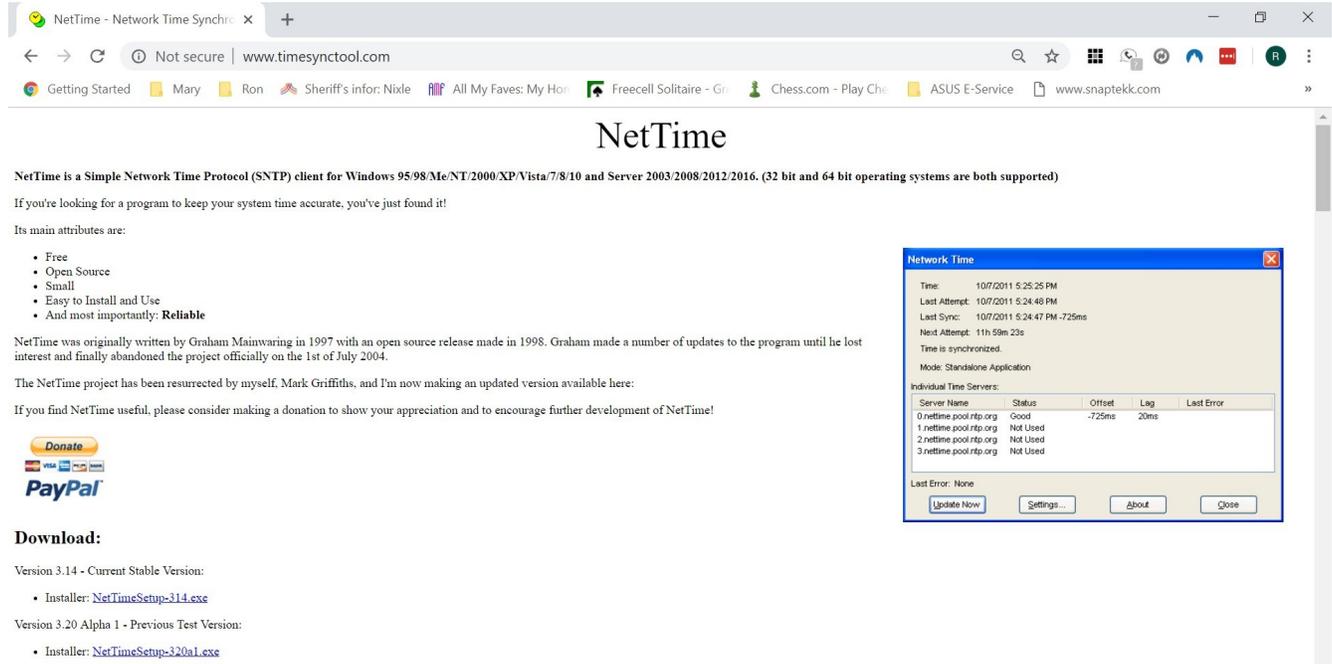
The Rules:

- The first effectiveness test will be 40m (7.074 MHz / USB)
- Contest start date and time TBD
- Operate full 24 hr
- Any data outside the contest window will be eliminated
- Submit ADIF file within 24 hrs after the contest ends

For Attachment A, go to separate file named “Attachment A- WSJT-X install and setup”

Attachment B – NetTime

Install NetTime from <http://www.timesynctool.com/>, version 314. See sample below, the down load area is lower left, and use “NetTimesetup-314.exe”



The screenshot shows the NetTime website with the following content:

NetTime

NetTime is a Simple Network Time Protocol (SNTP) client for Windows 95/98/Me/NT/2000/XP/Vista/7/8/10 and Server 2003/2008/2012/2016. (32 bit and 64 bit operating systems are both supported)

If you're looking for a program to keep your system time accurate, you've just found it!

Its main attributes are:

- Free
- Open Source
- Small
- Easy to Install and Use
- And most importantly: **Reliable**

NetTime was originally written by Graham Mainwaring in 1997 with an open source release made in 1998. Graham made a number of updates to the program until he lost interest and finally abandoned the project officially on the 1st of July 2004.

The NetTime project has been resurrected by myself, Mark Griffiths, and I'm now making an updated version available here:

If you find NetTime useful, please consider making a donation to show your appreciation and to encourage further development of NetTime!

[Donate](#)



Download:

Version 3.14 - Current Stable Version:

- Installer: [NetTimeSetup-314.exe](#)

Version 3.20 Alpha 1 - Previous Test Version:

- Installer: [NetTimeSetup-320a1.exe](#)

The screenshot also includes a preview of the NetTime application window showing the following information:

Network Time

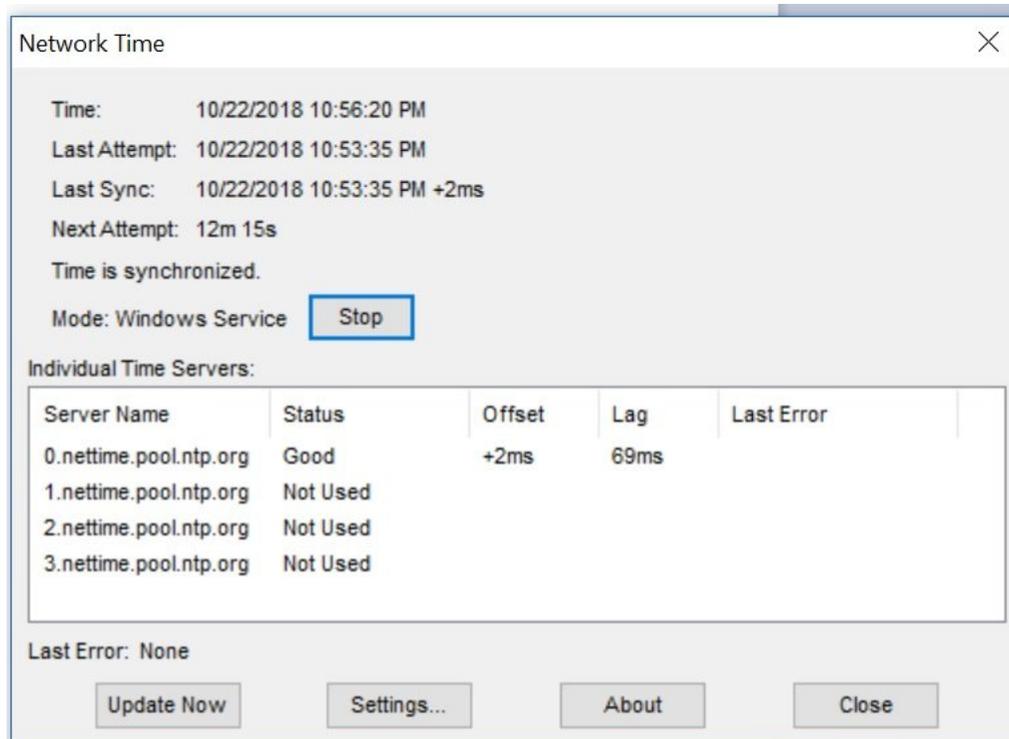
Time: 10/7/2011 5:25:25 PM
Last Attempt: 10/7/2011 5:24:48 PM
Last Sync: 10/7/2011 5:24:47 PM -725ms
Next Attempt: 11h 59m 23s
Time is synchronized.
Mode: Standalone Application

Individual Time Servers:

Server Name	Status	Offset	Lag	Last Error
0.nettime.pool.ntp.org	Good	-725ms	20ms	
1.nettime.pool.ntp.org	Not Used			
2.nettime.pool.ntp.org	Not Used			
3.nettime.pool.ntp.org	Not Used			

Last Error: None
[Update Now](#) [Settings...](#) [About](#) [Close](#)

The setup is shown below after installation.



The screenshot shows the NetTime application window with the following information:

Network Time

Time: 10/22/2018 10:56:20 PM
Last Attempt: 10/22/2018 10:53:35 PM
Last Sync: 10/22/2018 10:53:35 PM +2ms
Next Attempt: 12m 15s
Time is synchronized.
Mode: Windows Service [Stop](#)

Individual Time Servers:

Server Name	Status	Offset	Lag	Last Error
0.nettime.pool.ntp.org	Good	+2ms	69ms	
1.nettime.pool.ntp.org	Not Used			
2.nettime.pool.ntp.org	Not Used			
3.nettime.pool.ntp.org	Not Used			

Last Error: None
[Update Now](#) [Settings...](#) [About](#) [Close](#)

Click on setting and use setting in the sample below.

NetTime Options

Time Servers:	Hostname or IP Address	Protocol	Port Number
	0.nettime.pool.ntp.org	SNTP	123
	1.nettime.pool.ntp.org	SNTP	123
	2.nettime.pool.ntp.org	SNTP	123
	3.nettime.pool.ntp.org	SNTP	123

Update Interval: 15 minutes

Retry Interval: 1 minutes

Demote Servers after 4 failures.

Allow other computers to sync to this computer

Always provide time (NOT recommended!)

Show NetTime icon in the system tray at login

Start NetTime service at bootup

Max Free Run: 24 hours

If Time adjustment greater than 15 milliseconds Adjust System Time

Automatically Check For Updates every 7 day(s) Check Now

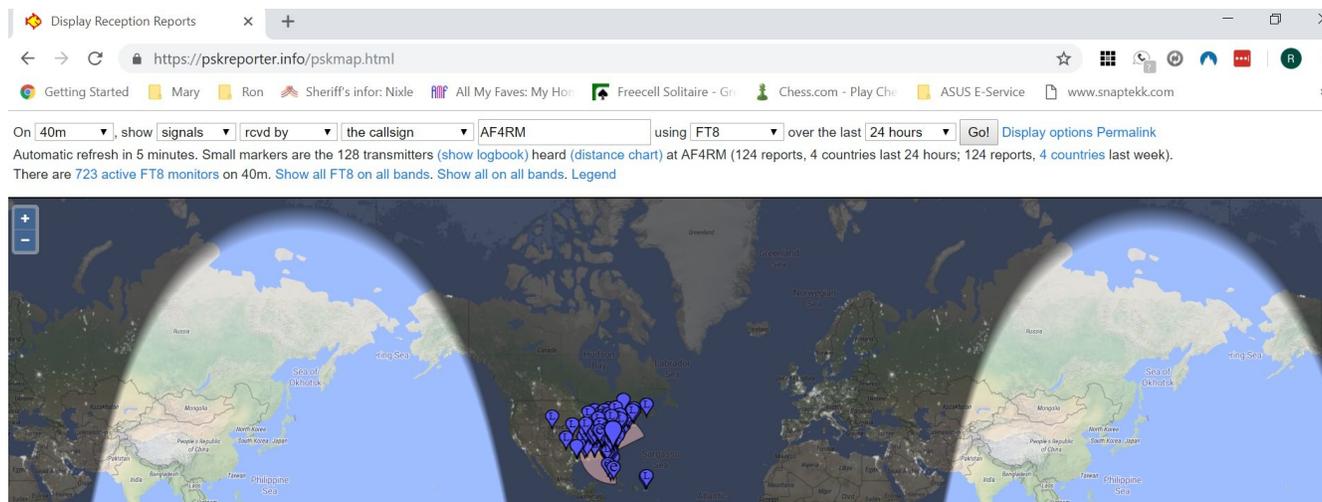
Logging Level: Normal View

OK Cancel

Attachment C – PSKreporter

Go to PSKreporter map: <https://pskreporter.info/pskmap.html>

Use your callsign, instead of the screen shot sample “AF4RM”.



Click on “show logbook” to see data as shown below. In the show logbook data click on “last 24 hours” in upper left area. The will down load your ADIF file.

Txmtr	Band	Mode	Distance	Time (UTC)
KB5PGY	40m	FT8	926 miles	01:31:59
N4LOV	40m	FT8	408 miles	00:42:44
KN4LTR	40m	FT8	485 miles	00:41:29
KF4UDL	40m	FT8	493 miles	00:40:59
W5XB	40m	FT8	233 miles	00:39:59
K3WW	40m	FT8	585 miles	00:39:29
KW4LV	40m	FT8	232 miles	00:37:14
W3LES	40m	FT8	609 miles	00:33:29
WA4USA	40m	FT8	290 miles	00:32:44
WB4RA	40m	FT8	376 miles	00:31:14
W4PSV	40m	FT8	272 miles	00:22:44
AB5GC	40m	FT8	727 miles	00:22:14
N5JH	40m	FT8	709 miles	00:21:59
WC4H	40m	FT8	488 miles	00:20:29
WA4IXW	40m	FT8	244 miles	00:20:29
W5DHE	40m	FT8	671 miles	00:17:14
WD4DIY	40m	FT8	258 miles	00:16:59
NI2E	40m	FT8	562 miles	00:13:59
W4RTN	40m	FT8	583 miles	00:06:14
KE8JSR	40m	FT8	501 miles	00:03:29
KE0QPG	40m	FT8	1033 miles	00:02:29
WW9S	40m	FT8	775 miles	23:55:59
W85YX	40m	FT8	731 miles	23:51:44
VA3RMV	40m	FT8	1131 km	23:40:14
WP4AZT	40m	FT8	1337 miles	23:39:29
K04O	40m	FT8	419 miles	23:35:59
K8EEE	40m	FT8	638 miles	23:35:44
AC2MM	40m	FT8	725 miles	23:35:29
KD9HAV	40m	FT8	656 miles	23:34:59
N5RIV	40m	FT8	926 miles	23:34:30
K8VA	40m	FT8	665 miles	23:34:29
WX4C	40m	FT8	399 miles	23:34:14
KK2M	40m	FT8	707 miles	23:32:14
K3ABE	40m	FT8	597 miles	23:30:29
VE3SBI	40m	FT8	1120 km	23:29:59
KS4OT	40m	FT8	180 miles	23:28:44
KN4NSL	40m	FT8	534 miles	23:21:59
KB8BIP	40m	FT8	404 miles	23:19:59
NS9I	40m	FT8	248 miles	23:17:59
KS0CW	40m	FT8	345 miles	23:17:59
K4JKB	40m	FT8	345 miles	23:16:59
KB1EFS	40m	FT8	796 miles	23:15:59
KM4WAA	40m	FT8	353 miles	23:14:59
KK8E	40m	FT8	464 miles	23:13:59
W3SCA	40m	FT8	503 miles	23:12:59
K6JDC	40m	FT8	370 miles	23:12:59
AA4LS	40m	FT8	229 miles	23:10:59
KB3FN	40m	FT8	478 miles	23:08:59
WD17	40m	FT8	425 miles	23:08:59

Send your ADIF file to frickron@aol.com.