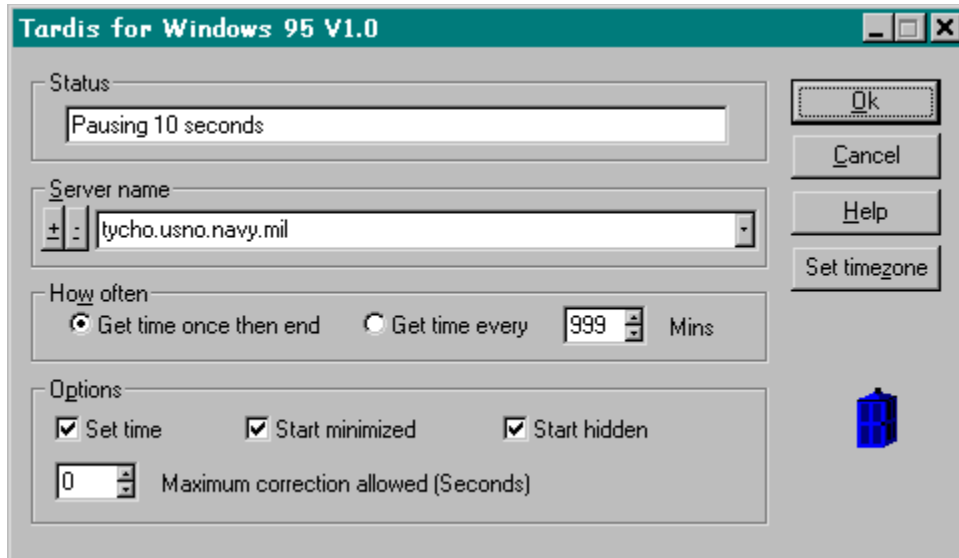


## Tardis for Windows 95 version 1.0

Tardis is a utility for Windows 95 that synchronises your PC's clock to a central time server. Tardis requires TCP/IP to be installed. A typical use of Tardis is to synchronise the PC's clock on starting a SLIP/PPP connection to an Internet provider. Another is to have it running all the time in a LAN environment correcting the clock once an hour.

Tardis uses the time protocol specified in [RFC868](#)

**Note: Tardis version 1.0 is shareware**



Click on the dialog box for help on Tardis settings.

If this is *not* set Tardis will *not* set the system time, useful if you don't initially trust the server you are connecting to. It gives you a chance to see what kind of time it is going to give you first without setting your PC's time to 10:61 77 Jan. 1914 accidentally.

If this is set Tardis will hide itself after starting up. You can show it and hide it again by clicking on the Tardis Icon in the system tray.

If this is set then Tardis will start as an icon.

Select your timezone here. This button takes you to the Control Panel for Date and Time

This setting is the name or address of the machine that knows the correct time. It may be entered as a name, e.g. tycho.usno.navy.mil, or as an Internet address e.g. 123.123.123.123.

Good timeservers on the Internet are

tycho.usno.navy.mil	US Naval Observatory
time-A.timefreq.bldrdoc.gov	NIST Boulder CO.

The server machine will typically be a Unix™ machine, but a version of Tardis is available for Windows NT 3.1/3.5 that does the same job as this version *but* also acts a time server. Available at all good NT archive sites. (ftp.cica.indiana.edu, etc.)

This tells Tardis to die once it has read the time. If it can't it will display the status and try again. This is useful for setting the time when first establishing a dial-up Internet connection.

This tells Tardis to get and set the time every  $x$  minutes. It depends on how bad your clock is. I use once every 60 minutes to keep mine in synch. Once a day may be enough for you, but don't forget that your time server may be down for those few crucial seconds.



This shows what Tardis is up to.

When you press Ok the settings currently shown become active.

When you press the help button you should end up here.

When you press Cancel the settings currently shown are replaced with those last saved by pressing Ok.  
Useful if you fiddled with the settings and then decided not to do it after all.

This is meant to be a cute icon showing a little picture of Dr Who's Tardis after which this program is named. It isn't as good as the real thing.

These buttons allow you to add and remove sites from the list. The + button adds the current site shown and the - removes it.

Tardis validates the time received from the server by checking that the amount of correction is not so far out that it must be wrong. The Allowable correction setting specifies what is reasonable. This is useful if your timezone is wrong or your time server has gone mad.

**A maximum correction of 0 means that any correction is allowed.**

# RFC868

Network Working Group  
Request for Comments: 868

J. Postel - ISI  
K. Harrenstien - SRI  
May 1983

## Time Protocol

This RFC specifies a standard for the ARPA Internet community. Hosts on the ARPA Internet that choose to implement a Time Protocol are expected to adopt and implement this standard.

This protocol provides a site-independent, machine readable date and time. The Time service sends back to the originating source the time in seconds since midnight on January first 1900.

One motivation arises from the fact that not all systems have a date/time clock, and all are subject to occasional human or machine error. The use of time-servers makes it possible to quickly confirm or correct a system's idea of the time, by making a brief poll of several independent sites on the network.

This protocol may be used either above the Transmission Control Protocol (TCP) or above the User Datagram Protocol (UDP).

When used via TCP the time service works as follows:

S: Listen on port 37 (45 octal).  
U: Connect to port 37.  
S: Send the time as a 32 bit binary number.  
U: Receive the time.  
U: Close the connection.  
S: Close the connection.

The server listens for a connection on port 37. When the connection is established, the server returns a 32-bit time value and closes the connection. If the server is unable to determine the time at its site, it should either refuse the connection or close it without sending anything.

When used via UDP the time service works as follows:

S: Listen on port 37 (45 octal).  
U: Send an empty datagram to port 37.  
S: Receive the empty datagram.  
S: Send a datagram containing the time as a 32 bit binary number.  
U: Receive the time datagram.

The server listens for a datagram on port 37. When a datagram arrives, the server returns a datagram containing the 32-bit time value. If the server is unable to determine the time at its site, it should discard the arriving datagram and make no reply.

## The Time

The time is the number of seconds since 00:00 (midnight) 1 January 1900 GMT, such that the time 1 is 12:00:01 am on 1 January 1900 GMT; this base will serve until the year 2036.

For example:

the time 2,208,988,800 corresponds to 00:00 1 Jan 1970 GMT,  
2,398,291,200 corresponds to 00:00 1 Jan 1976 GMT,  
2,524,521,600 corresponds to 00:00 1 Jan 1980 GMT,  
2,629,584,000 corresponds to 00:00 1 May 1983 GMT,  
and -1,297,728,000 corresponds to 00:00 17 Nov 1858 GMT.



## Shareware

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1994 H.C. Mingham-Smith. ("The author")

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Tardis for Windows 95 is Shareware. This is a complete working version. There are no annoying reminder screens about what it costs, and there are no disabled features. If you continue to use it after evaluating it please send US\$20 (or the rough equivalent in your local currency) to be sent by post to:

H. C. Mingham-Smith  
33 Arthur Rd.  
Wokingham,  
Berkshire RG11 2SS  
England.

A cheque made payable to H.C. Mingham-Smith would be acceptable.  
For sites where multiple copies are used I would request US\$40 for the right to use on any machine at the site. Source licenses are also available.

Please send e-mail regarding Tardis to [tardis@kaska.demon.co.uk](mailto:tardis@kaska.demon.co.uk).

