

BktTimeSync

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BktTimeSync

BktTimeSync adjusts the clock of PC using a time reference server internet (NTP server) or by using a GPS receiver connected to USB, serial port or Bluetooth.

This program requires an active internet connection or a GPS receiver.

If you are using BktTimeSync with the user account control (UAC) enabled will be asked for confirmation for the execution.

BktTimeSync by IZ2BKT

Internet Configuration

NTP server

List Time Server

Port :
Offset :
Enable NTP ☒

Timeout : s

GPS Configuration

Serial Port :
BAUD :
Bit :
Bit of Stop
Parity

RTS :
DTR :
Max Error : s
Offset : s

Always connected to the GPS ☒

Disconnect GPS

Protocol :
Enable GPS ☒

Coordinates : 45° 11' 32" N - 10° 10' 53" E
Altitude : 91M
WW Locator : JN55CE

BktTimeSyncGPS

Enable ☒

Download BktTimeSyncGPS

WSJT-X

Auto Grid ☒
Port :
IP :

Send WW Locator

General Options

Start on windows startup ☒
Start on system tray ☐
Sync on startup ☐

Sync every minutes (0 to manual sync to second
If error NTP try to use GPS ☒

Max corr. hours (0 = no limits)
Do not check the date ☐
Checks updates every days (0 to disable)

Display notifications ☐
Enable BktClock ☐
Diagnostic Log ☐

Delete Diag. Log

Synchronization Log ☐

...

View Sync. Log

Server/Client

Port :
IP :

Start

Last Sync :Wednesday, March 26, 2025 11:44:59
Time was successfully synchronized using server 192.168.1.167
Local clock offset was -0.038000 seconds

Change Language

Manual Set

Forum

Donate

Reduce in System Tray

Sync Now

Help

Close

Internet Configuration

- NTP server** : You can specify a name or IP address of a NTP server active on the internet.
Port : Port used by the server NTP (default 123).
Offset : Correction in seconds of internet time.
List Time Server : Displays a list of NTP servers (requires an active internet connection).
Timeout : Waiting time in seconds of the NTP server before reporting error
Enable NTP : Enable synchronization with a NTP server.

GPS Configuration :

- Serial Port, BAUD, Bit, Bit of stop, Parity, RTS and DTR** : Specify the configuration of the serial port associated with the GPS receiver.
Max Error : Maximum error in seconds, during synchronization with GPS the program will continue to adjust the clock of the PC until the error of difference is less than the specified value.
Offset : Correction in seconds of GPS time.
Always connected to the GPS : not break the connection to the GPS after synchronization.
Disconnect GPS : breaks the connection with the GPS receiver will be restored at the next synchronization.
Protocol : Protocol used by the GPS receiver: NMEA or TSIP (OLD NMEA and OLD TSIP are for old GPSs that don't recognize the date).
Enable GPS : Enable synchronization with GPS receiver.
Coordinates : Coordinates detected by the GPS receiver.
Altitude : Meters above mean sea level calculated by the GPS receiver.
WW Locator : Also known as Maidenhead Locator System is calculated as a function of coordinates read from the GPS receiver.

BktTimeSyncGPS :

- Enable**: Enable synchronization using [BktTimeSyncGPS](#)
Type: Connection type Bluetooth or WLAN
Devices/IP: List of Bluetooth devices paired with the PC, or, IP address of the waiting smartphone

WSJT-X

- Auto Grid** : Enables the sending of the WWLocator to WSJT-X (**Requires Microsoft Net Framework 4.8 or later**)
Port : Communication port with WSJT-X (default 2237).
IP : IP for communication with WSJT-X (default 127.0.0.1).
Send WW Locator : Sending WWL to WSJT-X is done automatically when synchronising the time with BktTimeSync, press this button to force immediate sending.

General Options

- Start on windows startup** : Start BktTimeSync on Windows startup.
Start on system tray : Run BktTimeSync reduced in the system tray of Windows.
Sync on startup : Synchronize the clock at the start of the program BktTimeSync.
Sync every to second : Minutes of interval between the synchronization.
If error NTP try to use GPS : First try synchronization via the internet if it fails it tries to synchronize through the GPS receiver.
Max corr. : Maximun hours time difference correctable, if 0 always sets.
Do not check the date : The date is not checked but only the time (not recommended).
Check updates every : Range of days to check if there are new updates, enter 0 to disable the control.
Display notifications : When starting synchronization displays a notification window in system tray.
Enable BktClock : Enable/Disable BktClock.
Diagnostic Log : Ability to write LogDiag.txt file in the program folder, this file is used for debugging, ATTENTION enable only if necessary.
Delete Diag. Log : Delete the file LogDiag.txt.
Synchronization Log : Writes a log for each synchronization

... : Select the folder to write the synchronization log
View Sync. Log : View the synchronization log

Server/Client

NONE : Does not activate any Client/Server function

SERVER : Activates the server and listens on the specified port after starting it with the Start button

CLIENT : Disables NTP and GPS synchronization and will make a local network call to the server at the specified IP address and port to synchronize the PC's clock. You can test the connection to the server with the Test button

Change Language : Change the language of the interface of BktTimeSync.

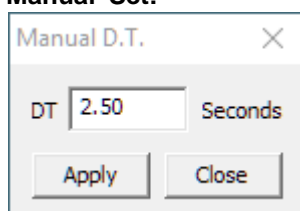
Manual Set : Displays the window for manually setting the time difference

Reduce in System Tray : Reduces the program in the system tray of Windows.

Sync Now : Start synchronization.

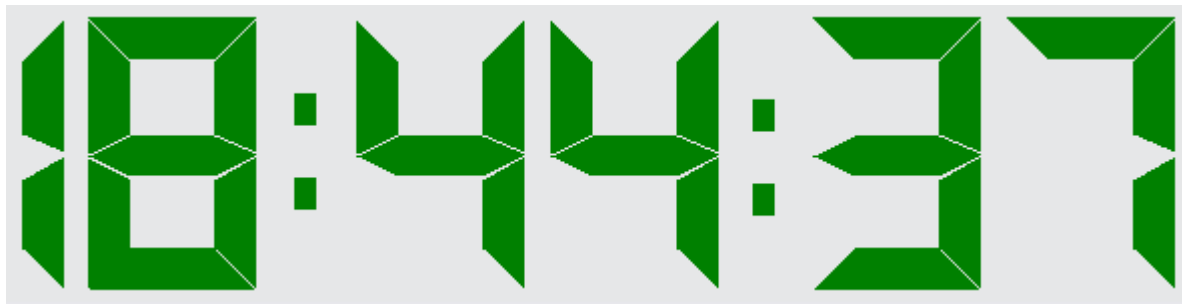
Close : Closes the program BktTimeSync.

Manual Set:



Write the desired time difference in seconds (eg 2.23 or -2.23) and press Apply

BktClock: displays the time on the screen, to change the configuration double click on a digit of BktClock to close BktClock double click with the right mouse button on a digit, move BktClock by dragging any digit

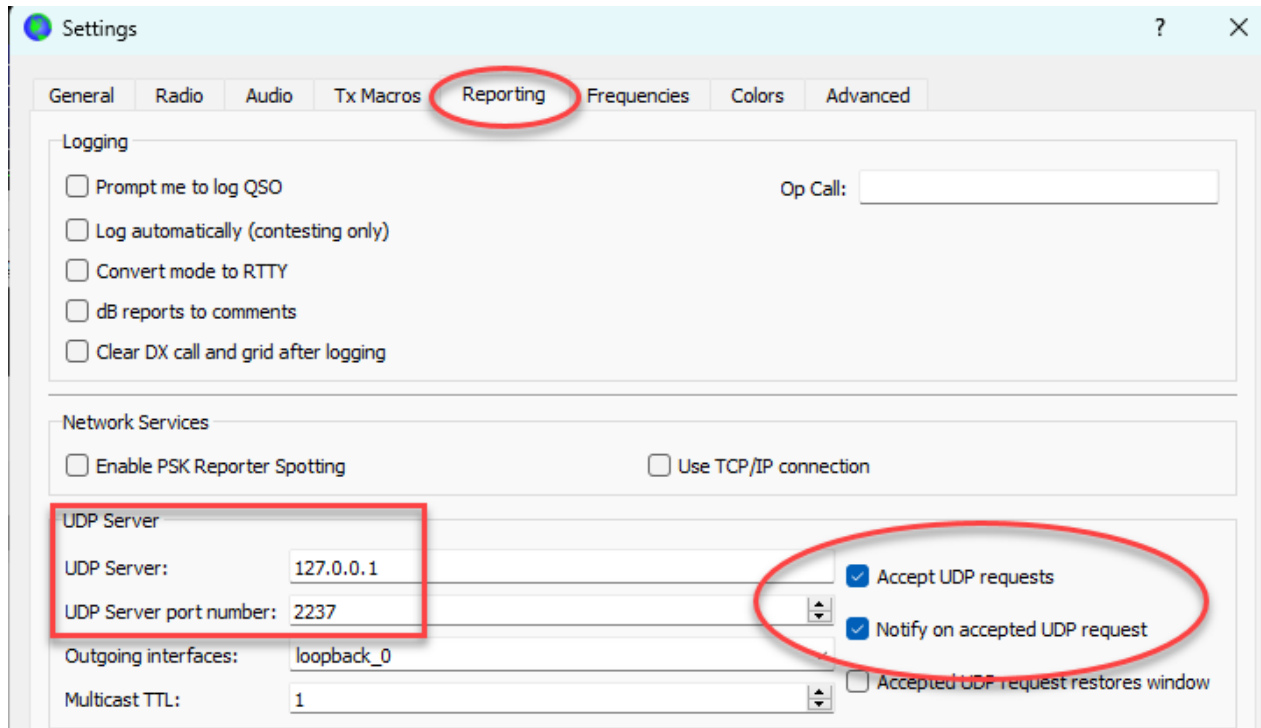
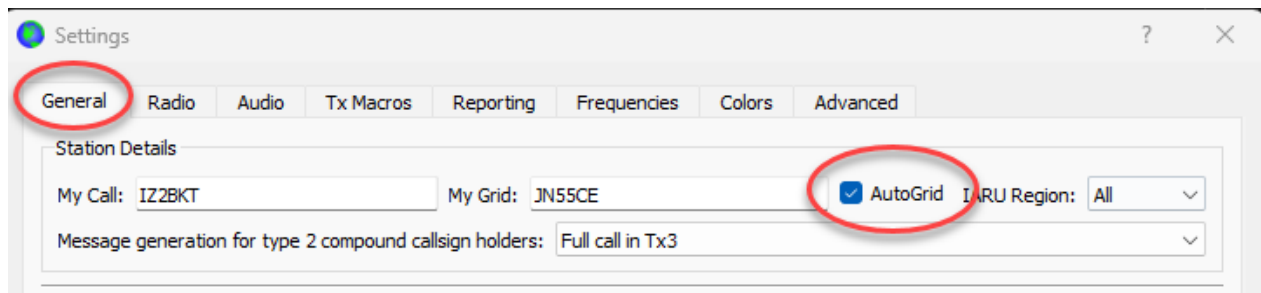


Donate : if you like the program you can offer me a coffee by clicking the [Donate]. Thank you.

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WSJT-X AutoGrid

To enable AutoGrid, which sends a temporary locator to WSJT-X, set the parameters highlighted in the figures within WSJT-X.

**IMPORTANT:**

- Requires Microsoft Net Framework 4.8 or later.
- It only works if you use GPS synchronization.
- The WW Locator is sent to WSJT-X when BktTimeSync synchronizes the time using GPS or by pressing the [Send WW Locator] button.
- The sending of the WW Locator may fail if there are other software programs using the connection with WSJT-X. In case of an error, BktTimeSync will automatically retry for one minute.

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BktTimeSyncGPS

What is BktTimeSyncGPS?

BktTimeSyncGPS is an Android smartphone application specifically designed to make the precise time and position data provided by the phone's integrated GPS sensor available.

What is it for?

The main purpose is to use this GPS data for synchronizing the time of other devices (such as a PC). The app on the smartphone acts as the "source" of the GPS time, while a client software on

the PC (e.g., BktTimeSync) receives this data.

How Does it Share Data?

The application can share the collected GPS data through two wireless connection modes:

1. **Bluetooth:**
 - Requirement: Before establishing a connection for synchronization via Bluetooth, it is mandatory that the Android smartphone running BktTimeSyncGPS and the receiving device (e.g., the PC) have been previously paired (Bluetooth pairing).
 - This mode is useful for direct short-range connections.
2. **WLAN (Wi-Fi):**
 - In this case, both devices (smartphone and PC/other device) must be connected to the same local Wi-Fi network.
 - This mode is useful if the devices are on the same network but not necessarily very close, or if Bluetooth is not preferred.

Internet Connection:

An important point is that BktTimeSyncGPS does not require an active Internet connection to function. The app relies solely on the signals received from the GPS system and the local connection (Bluetooth or WLAN) to transmit the data.

App Installation:

1. **Method:** A simple way to get the app is to scan the appropriate QR code with the smartphone's camera (a QR code reader app might be needed if not built-in).
2. **Security Enablement:** Since the app does not come from the Google Play Store, it is necessary to temporarily enable the Android security setting that allows "Installation from unknown sources" (or "Install unknown apps"). This option is usually found in the phone's security settings or app settings.

Initial Setup and Permissions:

1. **Accept All Permissions:** On the first launch, BktTimeSyncGPS will request several permissions to function correctly. It is crucial to accept them all.
2. **Crucial Location Permission:** Particular attention must be paid to the permission for Location access. The default or initially chosen setting might be "Allow only while using the app". This setting is not sufficient. It must be manually changed in the phone's app settings, selecting the "Allow all the time" option (or similar wording). This is vital because it allows the app to access GPS data even when it is not active in the foreground (running in the background), ensuring the continuous availability of data for synchronization.

How to Use (Synchronization Procedure):

1. **Start the App on the Smartphone:** Open the BktTimeSyncGPS application on the Android smartphone. Ensure it is waiting for Bluetooth and/or WLAN reception.
2. **Configure BktTimeSync on the PC:**

- Start BktTimeSync on the PC that needs to receive the data.
 - Find the section dedicated to connecting with BktTimeSyncGPS.
 - Enable reception: Check the checkbox labeled "Enable" (or similar) within the "BktTimeSyncGPS" group.
3. Choose and Configure the Connection Mode on the PC:
- If choosing Bluetooth mode:
 - ▪ Ensure the smartphone and PC have already been paired via Bluetooth.
 - ▪ In the PC software, select the "Bluetooth" mode.
 - ▪ From the appropriate dropdown menu (or device list), select the name of the smartphone running BktTimeSyncGPS.
 - If choosing WLAN mode:
 - ▪ Ensure the smartphone and PC are connected to the same Wi-Fi network.
 - ▪ In the PC software, select the "WLAN" mode.
 - ▪ Open the BktTimeSyncGPS app on the smartphone and note the IP address displayed in the WLAN section (e.g., "WLAN IP Address: 192.168.1.XXX").
 - ▪ Enter this IP address into the corresponding field within the PC software.
4. Start Synchronization: Once the connection is configured on the PC, the software should start receiving GPS data from the smartphone and proceed with time synchronization.

In summary:

BktTimeSyncGPS uses the phone's GPS to provide time synchronization data via Bluetooth (requires pairing) or WLAN (same network), it does not need internet. It is installed via QR code (enabling unknown sources) and requires accepting all permissions, with the location permission set to "Allow all the time". To use it, start the app on the smartphone, enable reception in the client software on the PC (e.g., BktTimeSync), and choose/configure the Bluetooth (selecting the device) or WLAN (entering the smartphone's IP) connection.

