

Mirko Dalmonte (IZ4PNN)

MySondyGo

(Installation manual for Windows by Aldo Moroni (IW2DZX))

Hardware requirements:

- TTGO Esp32 LoRa 433 MHz V2
(version with or without GPS)
- ANDROID from version 4.4.2
- TTGO Esp32 LoRa 433 MHz V1
(by changing the pins of its LCD:
SDA (4) and SCL (15))



The MySondyGO software consists of two parts:

Firmware, distributed in a binary file called `MySondyGo.bin` to be loaded on the TTGO that will take care of the reception and decoding of the direct signal.

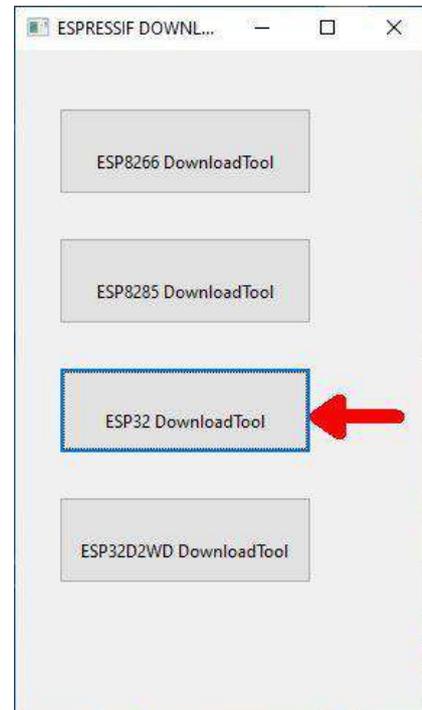
An Android app. called `MySondyGo`, which can be downloaded directly from PlayStore for the complete control of the TTGO via Bluetooth and the visualization of the received signal.

To load the firmware using a PC (Windows 10), we must first install the drivers that will allow the PC to communicate via USB with the TTGO through a COM port. This COM port will be added to the list of COM (physical or virtual) already present on our PC.

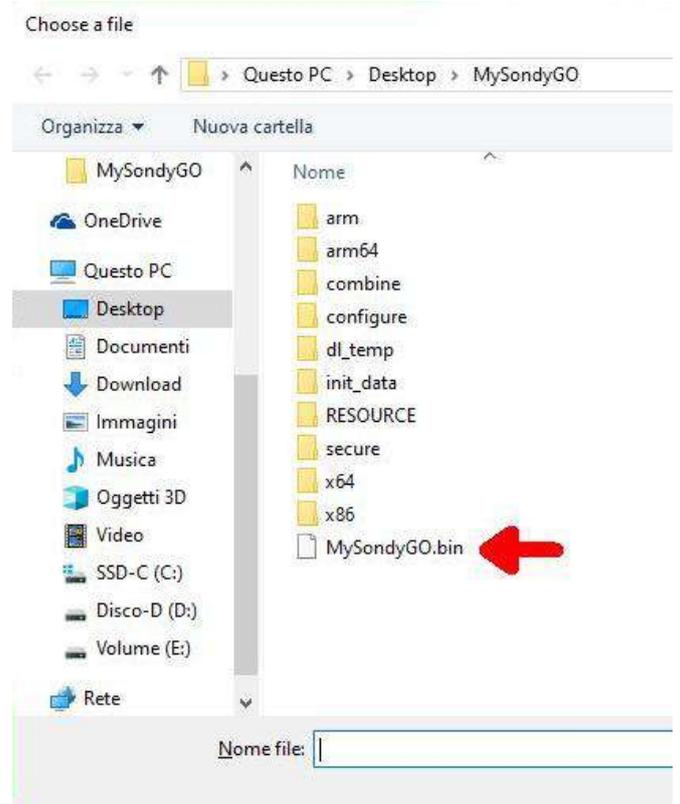
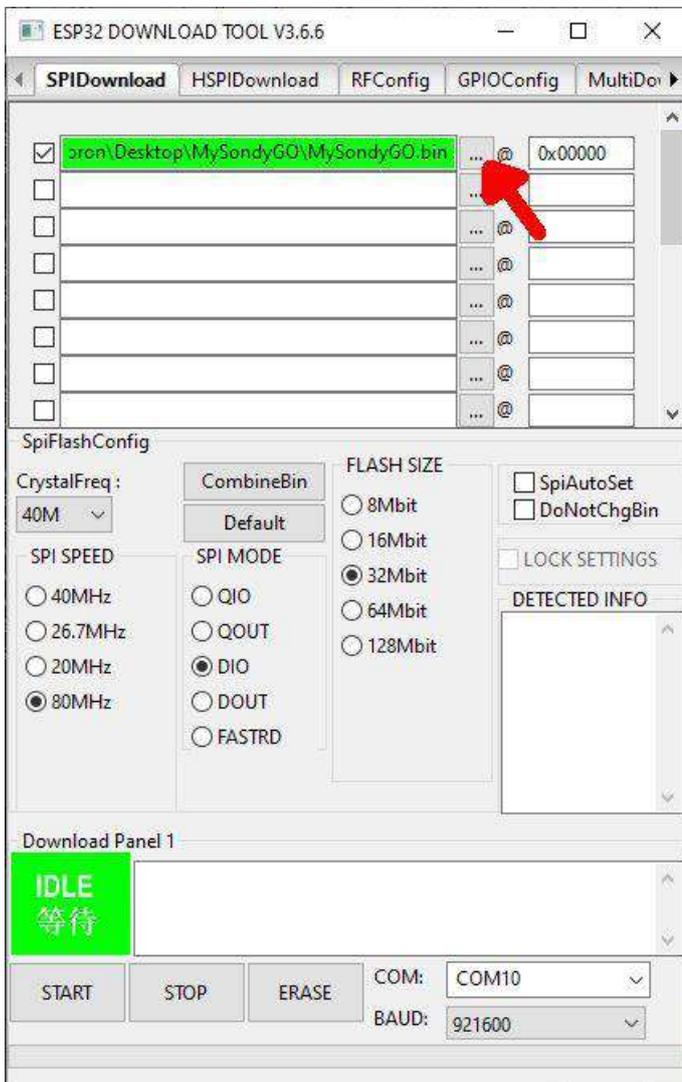
In the example images, the `MySondyGo.zip` file has been unpacked on the desktop by creating a folder called `MySondyGO` containing everything needed for installation

1. First, we need to install the drivers according to our operating system
 - CP210xVCPInstaller_x86.exe for 32 bit systems
 - CP210xVCPInstaller_x64.exe for 64 bit systems
2. Once the driver installation is complete, connect the TTGO via USB. Let's go back to our `MySondyGo` folder and use `flash_download_tools_v3.6.6.exe` to load the firmware through the following procedure.

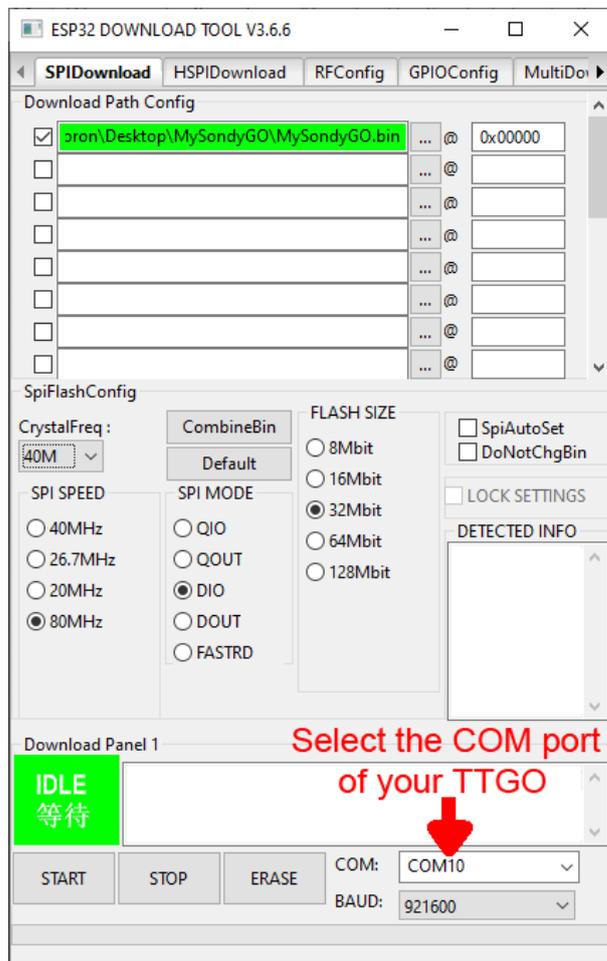
Select the ESP32 DownloadTool in the first screen that appears.



Click the 3 points indicated by the arrow, and indicate the location of the MySondyGO.bin file.



Next, choose the COM port.
 In the image on the side it is COM10
 due to the presence on this PC of
 numerous other COMs

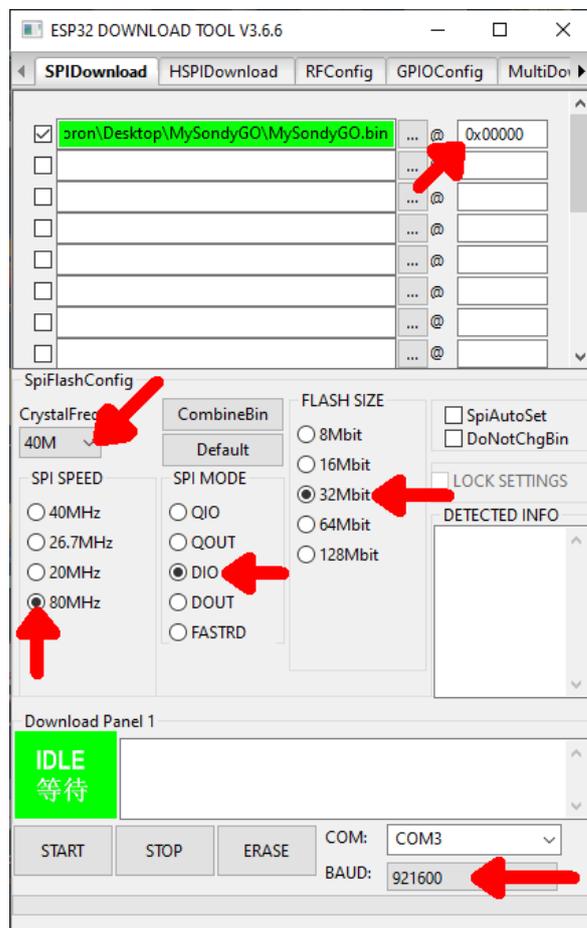


We check that everything
 corresponds to the screen on the
 side, apart from the COM number
 which could be different on you
 machine.

Once the parameters have been
 checked, press the



button to start loading the firmware.

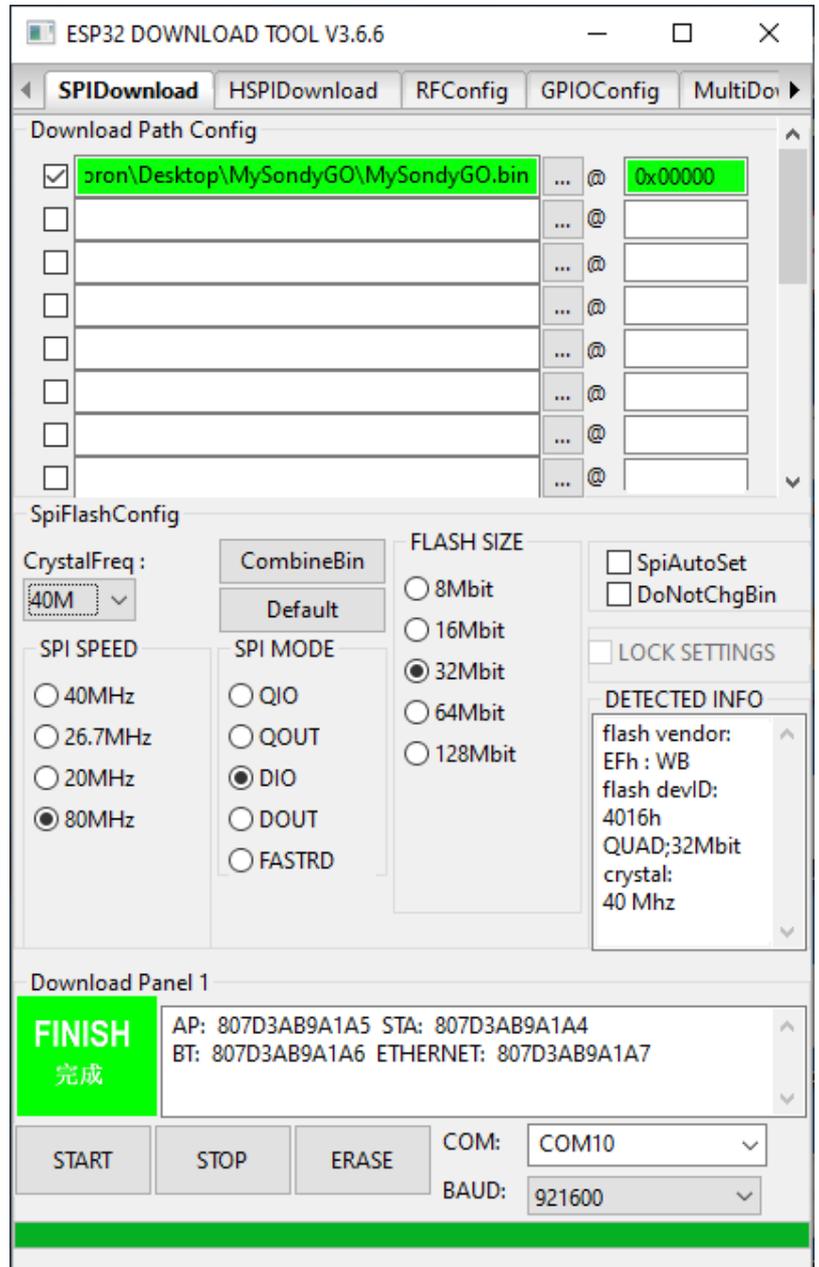


Completion is confirmed by the word **FINISH** on a green background at the bottom left.

All that remains is to close the ESP32 DOWNLOAD TOOL and restart the TTGO



<<<< RST



A series of characters, as seen below, appear during upload. Should this fail then press the **RST** button on the TTGO to restart the process.

```
test offset : 0 0x0
case ok
=====
CONNECT BAUD: 115200
=====
.....
.....[2019-10-07 15:40:33,526][ESP8266Loader_spi[1]][espDownloade
r.py][line:358][ERROR]: Chip sync error: Failed to connect to ESP32: Timed out w
aiting for packet header
[2019-10-07 15:40:33,526][ESP8266Loader_spi[1]][espDownloader.py][line:446][ERRO
R]: ESP32 Chip sync error esp_sync_blocking.
```

MySondyGo

Android App.

From mobile access Google "Play Store"



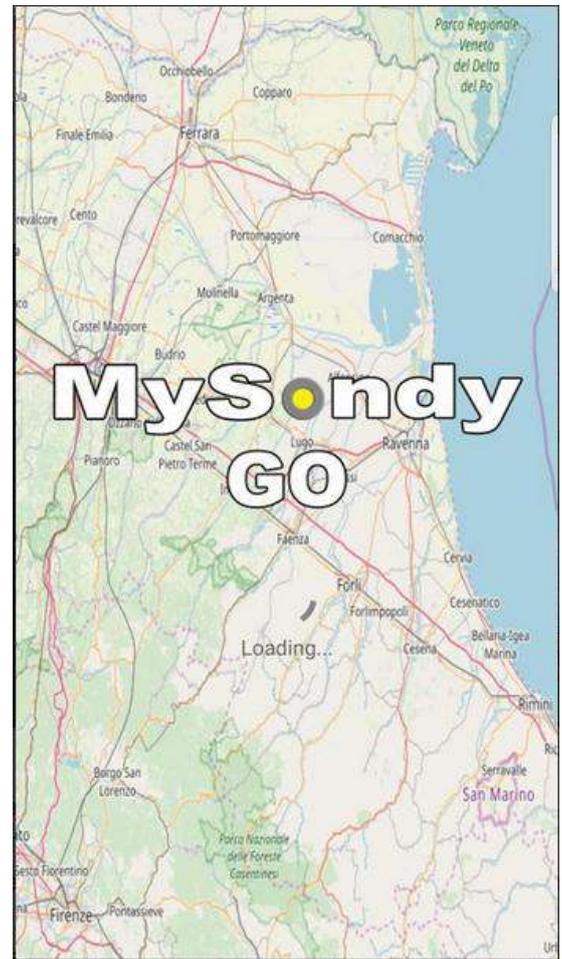
Search for the MySondyGo app
Select it and install it, giving all permissions.



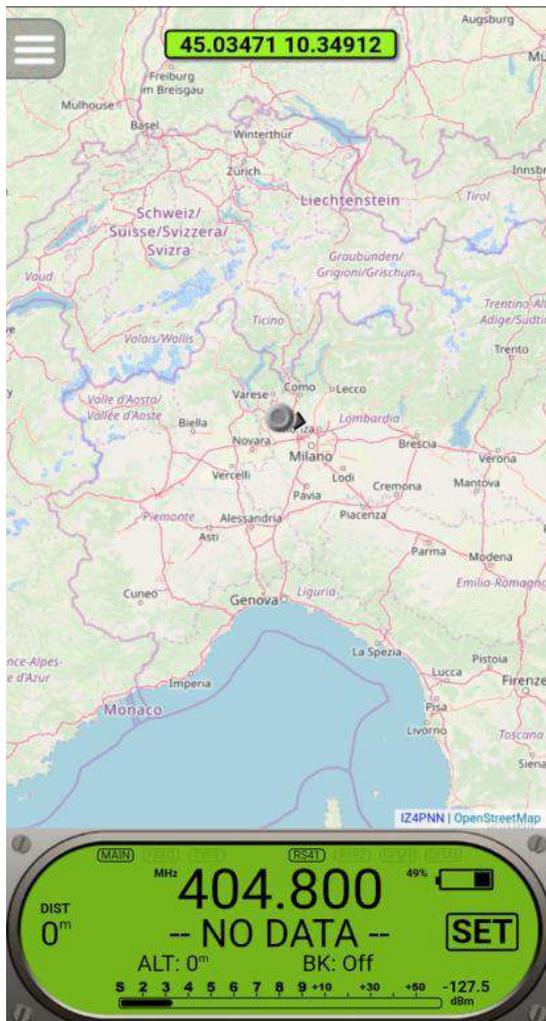
Upon startup, MySondyGO will ask for authorization to use the Bluetooth.

The application will turn on the Bluetooth and turn it off when the app is closed.

It will then carry out a search for the activated TTGOs and, upon first association, will ask for authorization.



Menu
>>>>>



Press SET to set the frequency to receive, then NEXT for the type of probe and SEND to send the new settings to the TTGO.

Menu buttons

Zoom on the GPS position >>>

Zoom on the position of the probe >>>

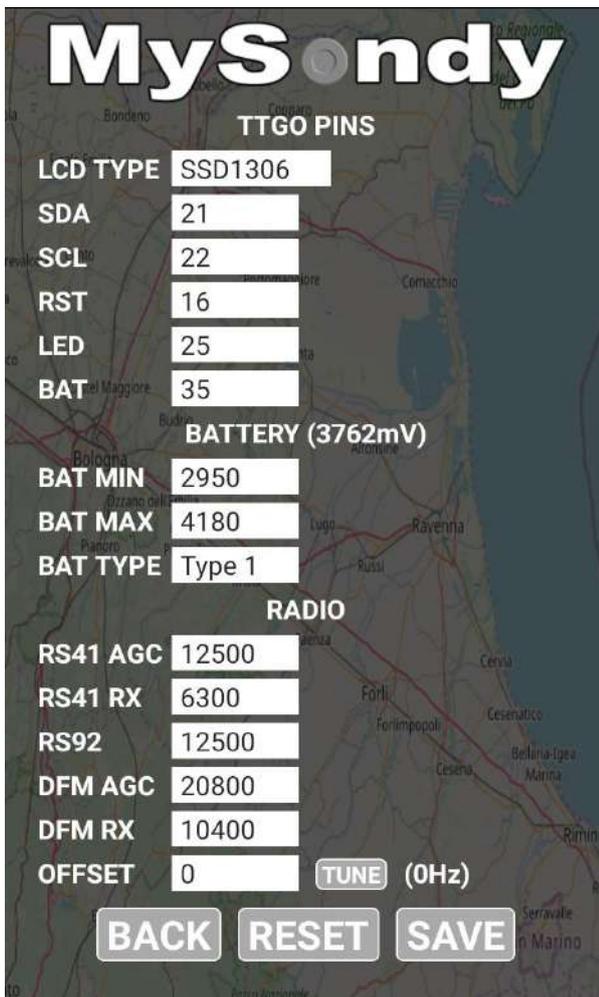
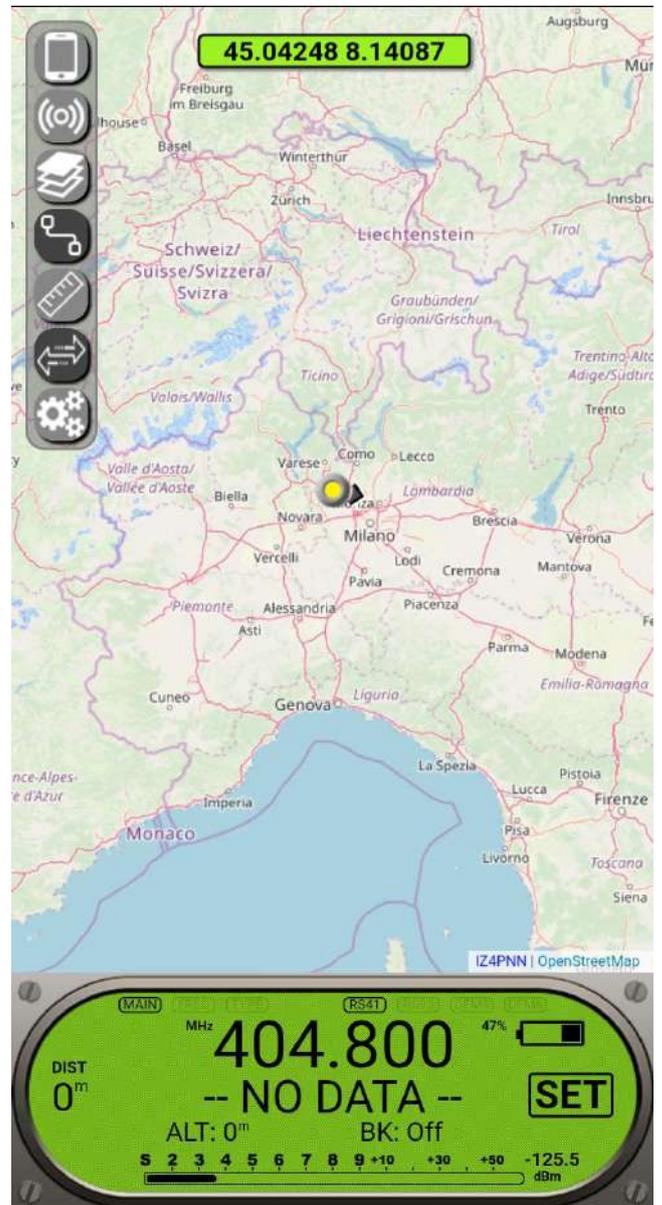
Map type >>>

Track on / off >>>

Measure distance >>>

TTGO connection >>>

Configuration >>>



The only adjustment we will eventually have to make will be to correct the offset of our TTGO.

Calibration must be performed in the presence of a signal of at least moderate intensity.

By pressing TUNE, MySondyGO will scan in a range of 500kHz with respect to the frequency set in the main screen.

When a useful signal is found, it will enter the offset value and there will be nothing left to do but press SAVE.

While receiving a signal, the offset value is constantly indicated in parentheses. Slight deviations are irrelevant.