



- 1 Bubble level.
- 2 Start / Stop scan button.
- 3 Activity led. Flashing at start/stop scan or with low battery.
- 4 Power indicator LED.
- 5 Micro-usb input for battery recharging and static communication.
- 6 ON-OFF switch, ON down.
- 7 Sensor head, IR temperature and brightness sensors.
- 8 Base with photographic tripod head.

To use TAS you need the **Tess P** app, available in the stores.  
 For Android versions higher than 10, install it manually by downloading the app from here: <https://www.observatorioemoto.com/tess.apk>  
 It is necessary to give the requested permissions.

Manual (sp): <https://tess.stars4all.eu/products/>  
 Youtube: [Video app Android](#) [Video app IOS](#).

### Battery Charge.

1. Connect usb power supply (5).
2. Turn **ON device**, switch 6 down.
3. For a full charge wait 4 hours.
4. Disconnect power supply.
5. Turn **OFF device**, switch 6 up.

### First Android connection.

Edit the name sensor, located in the upper right part of the app (TASSXXX) and put your device name. By clicking on the name we can edit it. All letters uppercase whitout spaces. Finish by pressing keyboard return.

In the phone BT settings, TAS should **never** appear as **paired device**, it should appear as an available device when the app is closed and device ON.

### Perform a Scan.

1. Place TAS on a tripod, manually level and orient north.
2. Manually, point sensor head to the zenith.
3. Turn ON device, switch 6 down. PWR led will turn on, ACT led will make a brief blink and remains off. If this led flashes continuously, the battery is too low.
4. Launch TESS-P app.
  - On Android, wait for connection.
  - On IOS, select your TAS device.
5. Start the scan by pressing the the Start button (2) or better "START" in the app.
6. When finished, **turn OFF device**, swtich 6 up, to save battery,.

Use phone file explorer to find saved data files:  
*InternalMemory/Android/data/b4a.tessp/files/*

### App TESS P for Android (recommended)

The app connects to TAS via BT. You can make measurement scans or single readings.  
 It can also connect to TESS-W via wifi for single measurements.

- 1 Battery level: Green full, Red low.
- 2 Message counter.
- 3 Sensor Temperature °C.
- 4 IR Temperature °C.
- 5 Magnitude V (magv/arcsec2).
- 6 NELM, Naked Eye Limiting Magnitude.
- 7 Log, informative messages.
- 8 Start/Stop Scan.
- 9 Presentation area, measurement map (saved to file).
- 10 Close app, long click to exit.
- 11 Name sensor, click to edit.
- 12 Dir IP, for TESS W only.
- 13 GPS coordinates.
- 14 Alt Az from scan or accelerometer.
- 15 Optional text added to filename.
- 16 Record counter.
- 17 Button and time for single no scan records.
- 18 TIR shift alarm (+-2°C).
- 19 Magnitude shift alarm (+0.5 mag).
- 20 Check for show IR maps.
- 21 List saved files, click to show.
- 22 Mult Scan. Launch scan every 15min.
- 23 Send current single data to broker (for future use).

The APP saves data in the phone internal memory.  
 Use your phone's file explorer to find it:  
*Internal Memory/Android/data/b4a.tessp/files/*

