

GPS SOFTWARE

ST-4002A

ST-4002A is an Android application that uses an Android device as an external GPS.

System requirements

The following system is required to use the application.

- Android version 8.0 or later
The ST-4002A has been tested with Android 8.x, 9, 10, 11, 12, 13, and 14.
① This Instruction document is based on using Android 10, and ST-4002A version 1.10.
- USB host function on the Android device
- Acquire location information from the Android device

Disclaimer

- The application may not work properly, depending on the OS version, installed applications, or other reasons.
- Depending on the OS version or settings, the indications or items may differ.
- The screenshots on these Instructions are just examples, so the contents may differ from the actual ones.

Compatible radios and cables

◇ Compatible radios

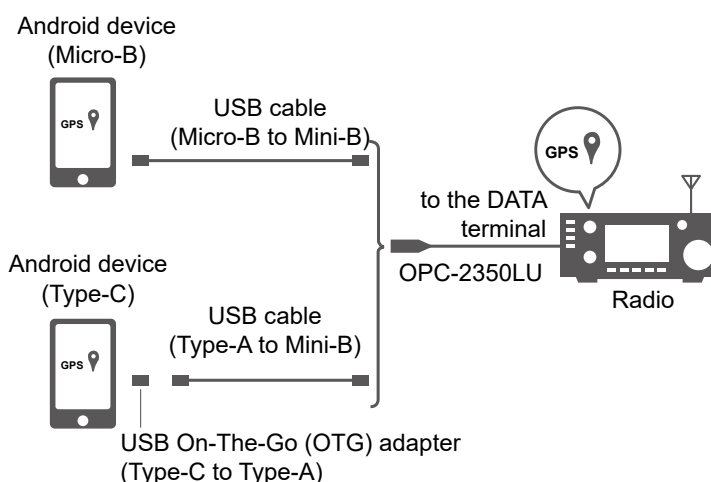
Radios that can acquire location information by connecting an external GPS to the DATA terminal.

Examples: IC-7100, IC-9100, IC-9700,
ID-4100A, ID-4100E, ID-5100A, ID-5100E,
ID-5200A, ID-5200E

◇ Required item

OPC-2350LU DATA CABLE

- ① The USB cables are supplied with the data cable (Micro-B to Mini-B, Type-A to Mini-B).
- ① When connecting the OPC-2350LU to an Android device with a USB Type-C port, a USB On-The-Go (OTG) adapter to convert to USB Type-C is required (user supplied).



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Preparation

Before using the application, make the following settings on the radio.

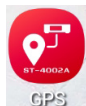
See the radio's manual for details.

Category	Item	Compatible radio	Option
GPS Set	GPS Select	IC-7100, IC-9700, ID-4100A, ID-4100E, ID-5100A, ID-5100E, ID-5200A, ID-5200E	External GPS
	7.MYPosition	IC-9100	GPS
Baud rate	GPS Receiver Baud rate	IC-7100, IC-9700	9600
	1.GPS Receiver Baud	IC-9100	9600
	Data Speed	ID-4100A, ID-4100E, ID-5100A, ID-5100E	9600bps
	External GPS Baud Rate (DATA)	ID-5200A, ID-5200E	9600
DATA Function	USB1 Function	IC-7100	GPS
	64.USB2/DATA1 Func	IC-9100	[GPS]
	DATA Function	IC-9700	GPS/Weather
GPS Out	GPS Out (To DATA Jack)	ID-4100A, ID-4100E, ID-5100A, ID-5100E	OFF

Download the application

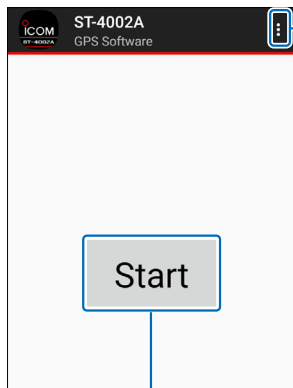
1. Touch "Play Store."
2. Enter "ST-4002A" in the search field.
3. Touch "🔍".
 - "ST-4002A" will be displayed as the search result.
 - ① You may need to enter "ST-4002A" as a complete word to get the search result.
 - ① If your Android device does not support the ST-4002A, "ST-4002A" may not appear as the search result.
4. Touch "ST-4002A."
 - Displays the introduction screen of the ST-4002A.
5. Touch <INSTALL>.
 - Installation starts.
 - After the installation is finished, the ST-4002A icon is displayed on the screen.

Example:

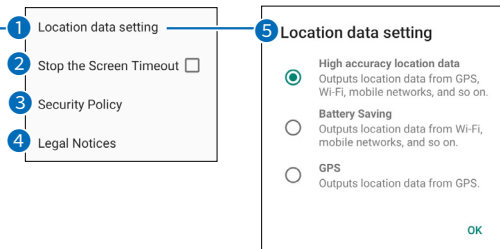


6. Connect the radio and the Android device with the OPC-2350LU data cable.

Operating screen



Touch to start outputting GPS data to the radio.



① Location data setting

Touch to open the Location data setting dialog.

② Stop the Screen Timeout

Touch check mark to stop entering the display sleep mode if the application cannot acquire the location information.

③ Security Policy

Displays the security policy.

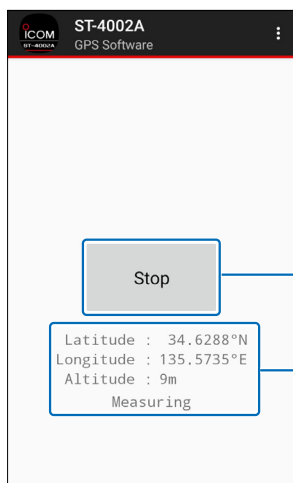
④ Legal Notices

Displays the information on the open-source software being used in this application.

⑤ Location data setting dialog

Select the location data output mode, then touch <OK>.

- High accuracy location data
Only while the Android device is using GPS, the satellite information will be output. At any other time, the satellite information is not displayed on the GPS Information screen of the radio.
- Battery Saving
Satellite information is not output and displayed on the GPS Information screen of the radio.
- GPS
The output sentences may be different, depending on the Android device.



Touch to stop outputting GPS data to the radio.

Displays the location information and the positioning status acquired by the Android device.

Operation

1. Touch the ST-4002A icon to start.
2. Touch <Start>.
 - The application starts to get the location information.
3. When the access confirmation dialog for location information is displayed, select "ST-4002A," and then touch <Just once> or <Always> to enable permission.
4. When the access confirmation dialog for the USB device is displayed, touch <OK> to enable permission to access the USB device.
 - <Start> changes to <Stop>.
 - The application starts outputting GPS data to the radio.
 - After the location information is acquired on the application, the latitude, the longitude, and the altitude will be displayed on the Android device.
 - After the radio receives GPS data from the application, the GPS icon will be displayed on the radio.
5. Push <Stop> to stop outputting the GPS data.

NOTE: The GPS icon is not displayed on the radio under the following conditions.

For the radio:

The radio settings are not correct.

For the Android device:

- Using a device that cannot acquire location information.
- The USB cable or the data cable connection is poor.

Operating notes

- Disconnect the OPC-2350LU when it is not in use. Keeping the cable connected increases the power consumption of your Android device.
- If the application requires some permissions, you need to grant permissions to use some functions. For operations of the Android device, read the Android device's instruction manual.
- Depending on the Android device,
 - The power supply to the USB terminal may be disabled while in the display sleep mode or the power-saving mode.
 - If the application cannot acquire the location information in the display sleep mode, touch the "Stop the Screen Timeout" check box to add a check mark.
 - The altitude may not output accurately. In that case, try to change the Location data setting.
 - If you use the application continuously for a long time, the application may be forced to quit.

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usb-serial-for-android

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