

P78P Quick Start

8" Rugged High-accuracy GIS Tablet

Version 1.0

Catalogue

- Catalogue 1
- Disclaimer..... 2
- About This Manual 2
- Technical Support..... 2
- Parts of the Device 3
- Dimension 4
- Installing microSD and SIM Card 5
- Charging the Battery 6
- Installing APK File 11
- Turn on GNSS module 14
- Ntrip connection 17
- GNSS data record 20
- GNSS Status..... 22
- Send command to GNSS module 23
- Third-party software supported..... 24
- Important Safety Instructions 27
- Rechargeable Battery Pack Safety 29
- Disposing of the Equipment 31
- Warranty 32

Disclaimer

The information in this document is subject to change without prior notice in order to improve the reliability, design and function. It does not represent a commitment on the part of the manufacturer.

Under no circumstances will the manufacturer be liable for any direct, indirect, special, incidental, or consequential damages arising from the use or inability to use the product or documentation, even if advised of the possibility of such damages.

About This Manual

This user's manual provides the general information and installation instructions for the product. The manual is meant for the experienced users and integrators with hardware knowledge of personal computers. If you are not sure about any description in this manual, consult your vendor before further handling.

We recommend that you keep one copy of this manual for the quick reference for any necessary maintenance in the future. Thank you for choosing HowayGIS products.

Technical Support

You can download the related technical documents such as datasheet and user's manual as well as driver on our website.

Please do not hesitate to call or e-mail our customer service when you still cannot get the information you need.

<http://en.howaygis.com/>

E-mail: supports@howaygis.com

sales@howaygis.com

Parts of the Device



1	Power button	9	Function Key (free for your assigned function)
2	GNSS antenna	10	Speaker
3	Pogo pin	11	Battery
4	USB connector	12	Camera flashlight
5	Front Camera	13	Rear Camera
6	Light sensor	14	NFC
7	Touch panel	15	Volume key
8	Microphone	16	SD card slot

Dimension



Installing microSD and SIM Card



Figure 1 Screw off and remove the cover.



Figure 2 Follow the direction of red arrow to open the lid of mSD slot.



Figure 3 Open the lid and insert the mSD card into the slot.



Figure 4 Close the lid and follow the direction to lock.



Figure 5 Follow the direction of red arrow to open the lid of SIM slot.



Figure 6 Open the lid and insert the SIM card into the slot.



Figure 7 Close the lid and follow the direction to lock.

Charging the Battery

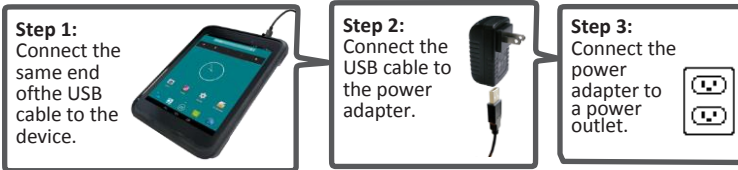
Due to shipment, the battery is partially drained when the package is delivered to you. Be sure to charge the battery to full when you are charging it for the first time.

Caution: Do not charge the P78 via computer USB connection due to that the voltage output from computer USB is not enough to charge the device.

1. Charging the Battery

To charge the battery using a electrical outlet:

- i) Using the USB cable that comes with the device, connect the small end of the cable to the USB port on the device.
- ii) Then connect the other end of the USB cable to the power adapter.
- iii) Connect the power adapter to an electrical outlet.



Warning: Use only the power adapter that comes with your device. Using a different power adapter may damage your device and may result in poor performance. It may also invalidate warranty applying to the device.

2. Checking the Battery Level

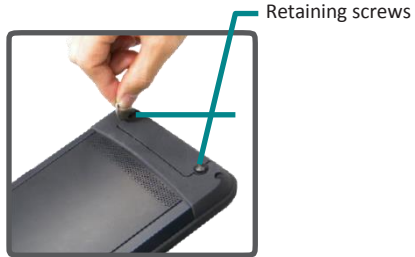
When the charging is in process, a battery indicator will appear in the status bar showing the charging percentage. Unplug the USB cable from the device when the battery is fully charged.

3. Installing/Replacing the Battery

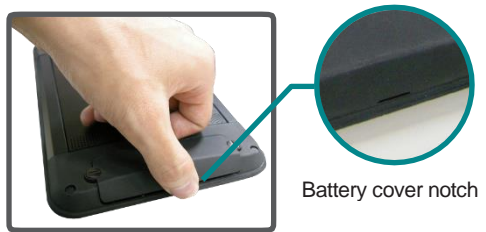
In case you need to install or replace the battery, follow the steps below to access the battery chamber and replace the battery.

4. Accessing Battery Chamber

i) Place the device on a flat surface, with the rear side facing up. Loosen the retaining screws on the battery cover with a coin.



ii) Remove the battery cover using the notch located on the bottom edge.



iii). The battery is in a compartment inside. Its opening is covered by a protective lid. Insert the tip of your finger onto the top of the cover and remove it.

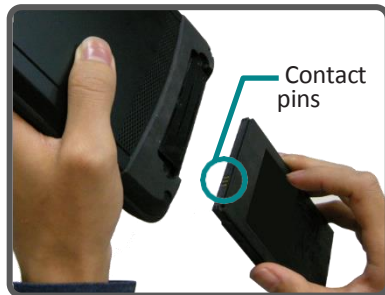


iv) Then you can remove the battery from the chamber.



v) Installing Battery

To install the battery, orient the battery so that the contact pins faces towards the compartment opening.



Slide the battery into the battery chamber.



To restore the protective lid, make sure the lid is oriented as shown in the photo to the right.



Align the top edge of the lid with the top of the opening.



Press the lid firmly into place to ensure it is secured.

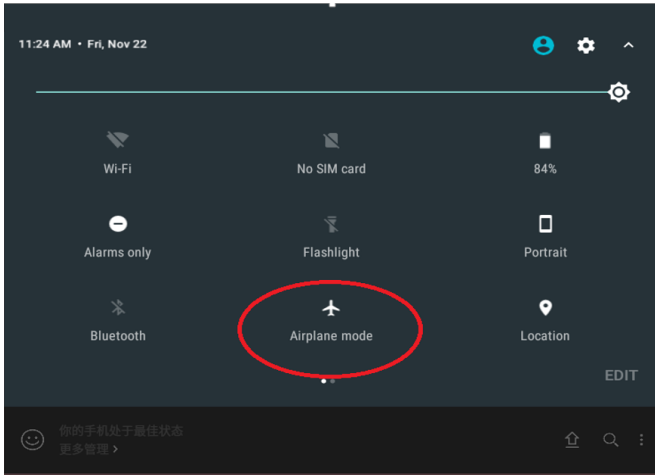


Replace the battery cover
and secure the retaining
screws with a coin.

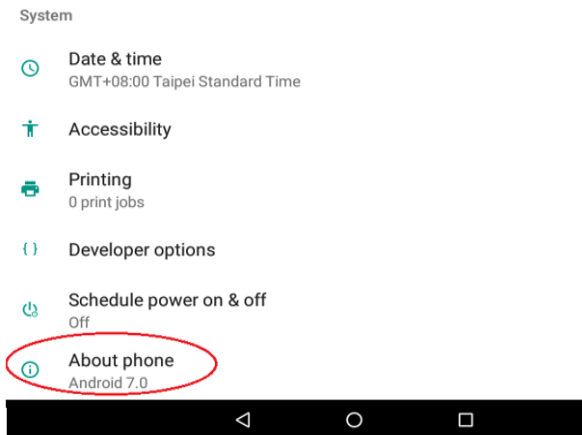


Installing APK File

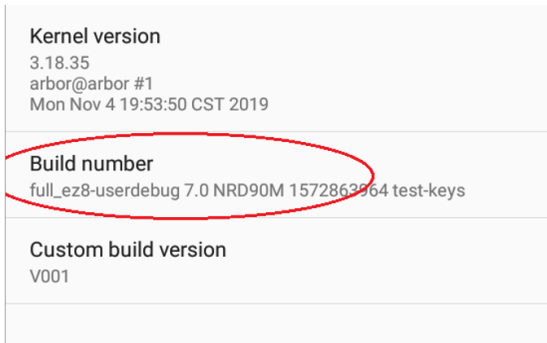
1. Swiping down the Status Bar will bring up a Quick Settings panel, tap the 'Airplane mode' to turn 'Airplane mode' on.



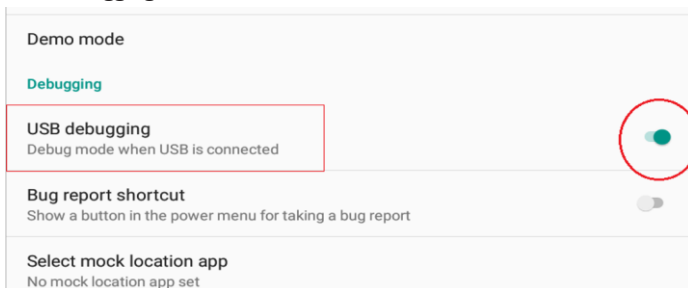
2. Tap **Settings** | **About phone** | **Build number**,



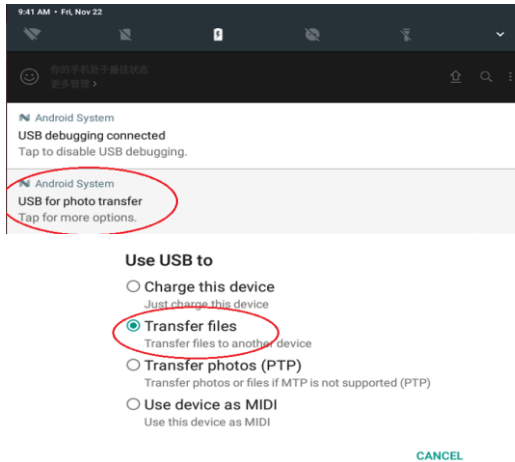
3. Tap **Build number** three times, change the P78 USB work mode to 'Develop Mode'



4. Turn **USB debugging** on.

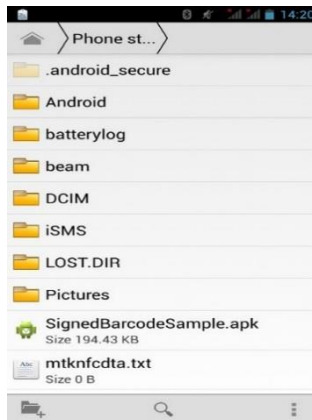


5. Connect the P78 to the computer using a USB cable. The P78 will prompts you to choose a USB option. Tap USB for photo transfer | Transfer files to transfer files between your computer and the P78.



6. Copy the APK file from your computer to the P78's internal USB storage or SD card. Then disconnect your computer from the GT78-V.

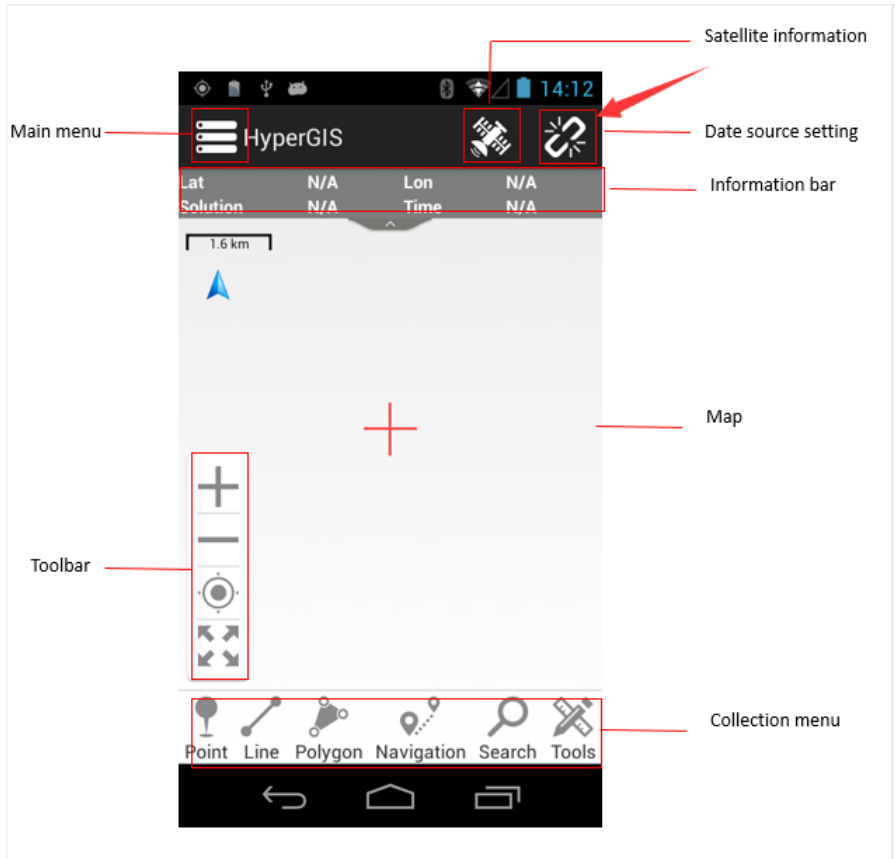
7. On the P78-V, use the File Manager App to navigate to the APK file.



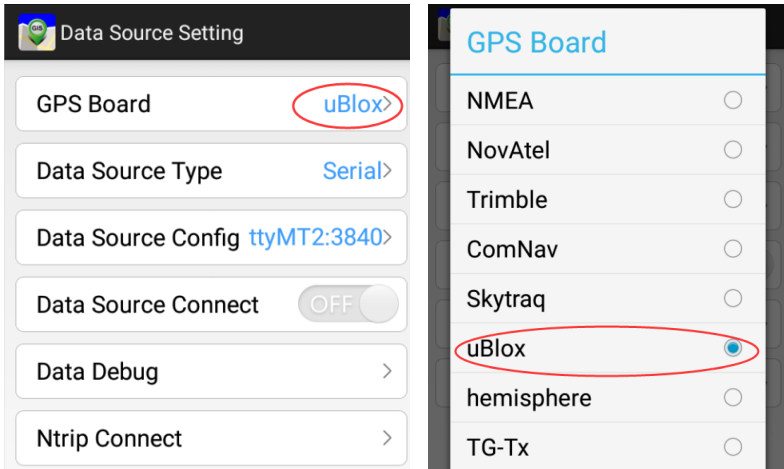
8. Click the APP, then install the APP according to the tips on the screen.

Turn on GNSS module

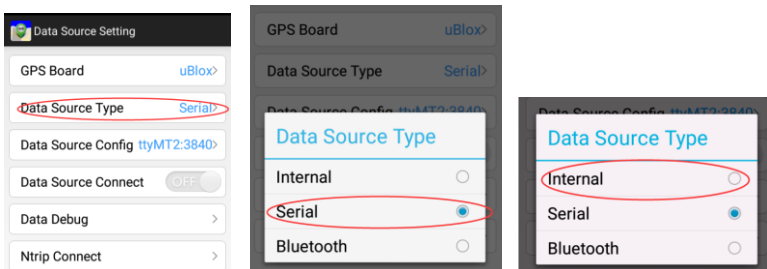
1. Copy then newest apk of **HyperGIS** into P78 by USB cable
2. Install it according to the tips on the screen.
3. Run it, then Click on  button.



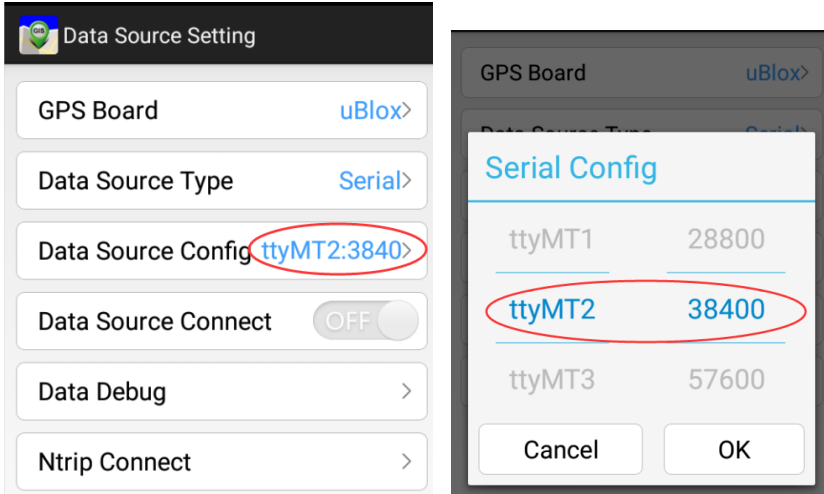
3. Click **GPS Board** then select **uBlox**.



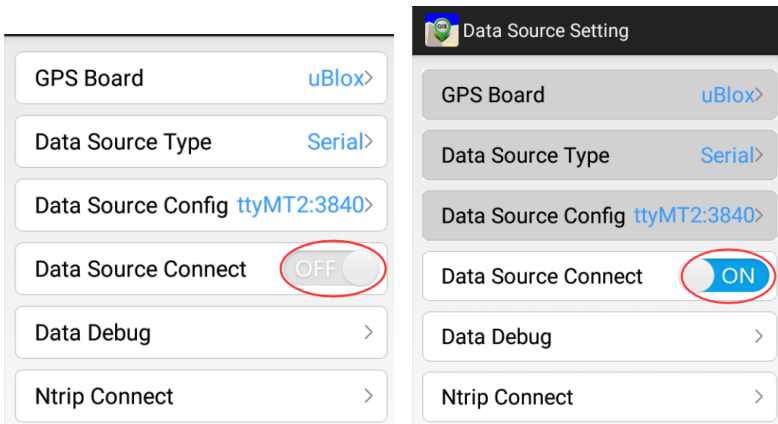
4. Click on '**Data Source Type**', then select '**Serial**' or '**Internal**'. If select '**Internal**' go to setp 6 directly



5. Click on 'Data Source Config', then select 'ttyMT3' and '38400'.



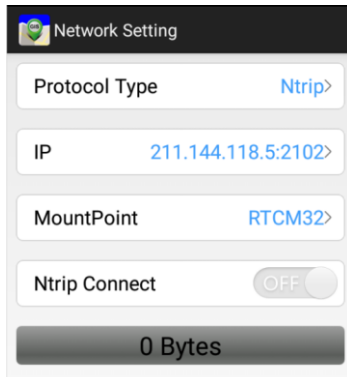
6. Turn 'Data Source Connect' on



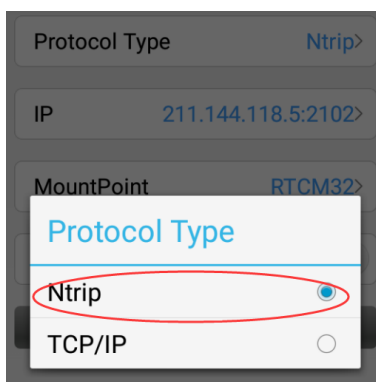
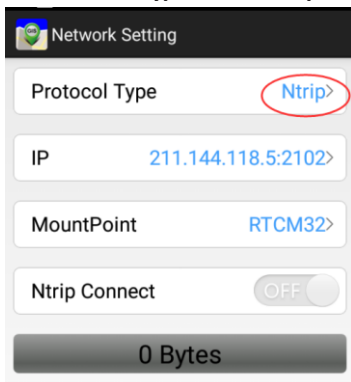
Ntrip connection

Notes: please select 'Data Source Type' as 'Serial' and set 'Data Source Connect' as 'ON' before Ntrip connection.

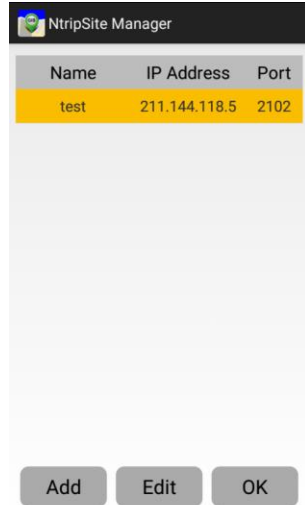
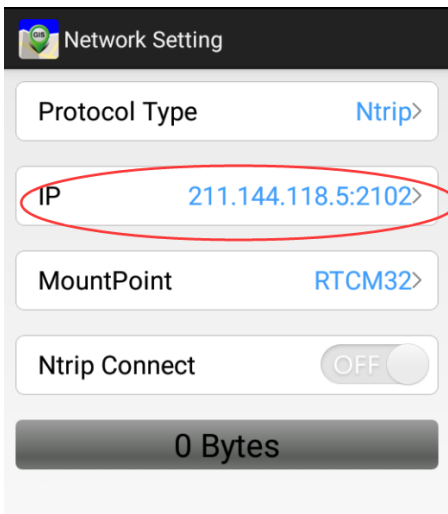
1. Click **Ntrip Connect**, then click '**Protocol Type**' after GNSS module be turned on.



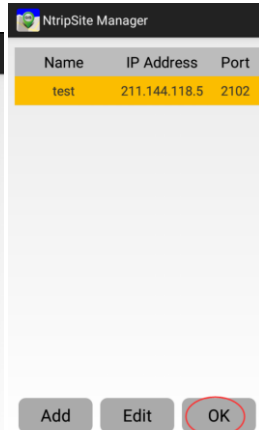
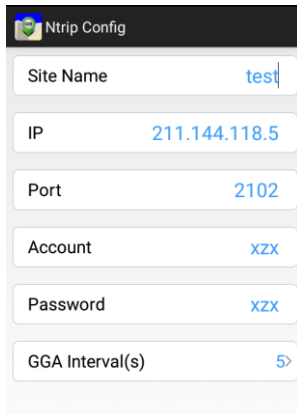
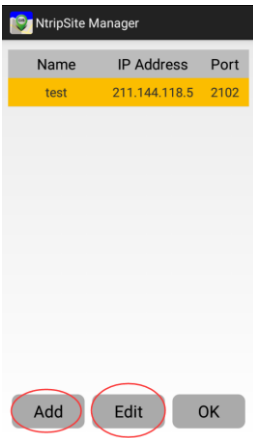
2. Click '**Protocol Type**', select '**Ntrip**'



3. Click 'IP'



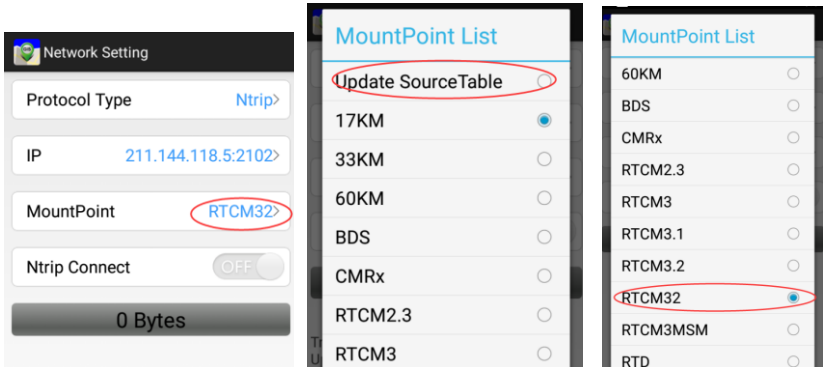
4. Add or Edit a new cors account, then click 'OK'.



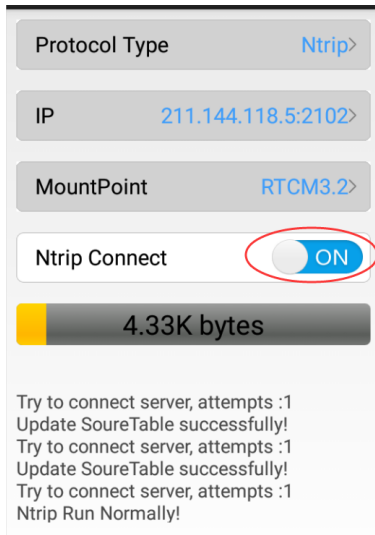
5. Click 'MountPoint'.

Select 'update SourceTable' to update mountpoint list.

Or select the right mountpoint.

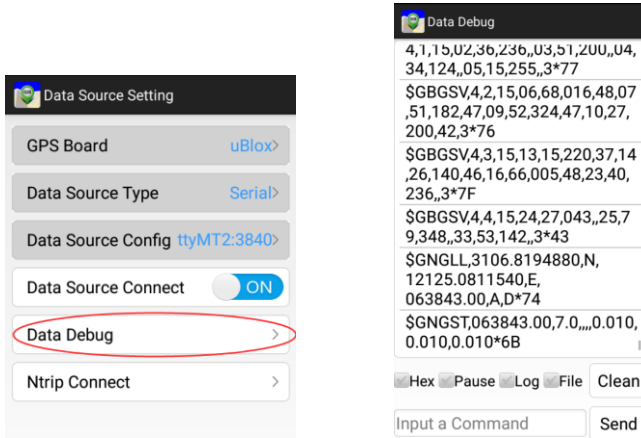


6. Turn 'Ntrip connection' on. It'll connect to cors station automatically

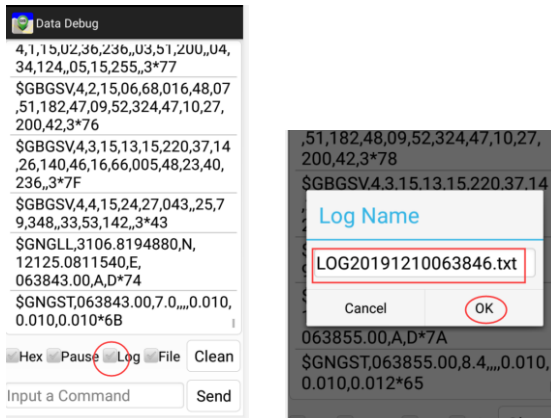


GNSS data record

1. Click 'Data Debug'

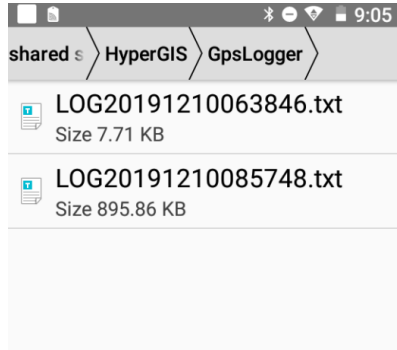
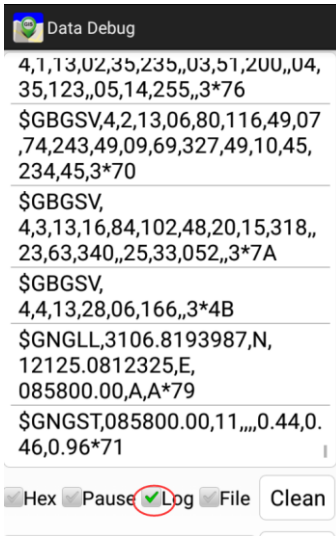


2. Select 'log', then input the file name for the data recording.




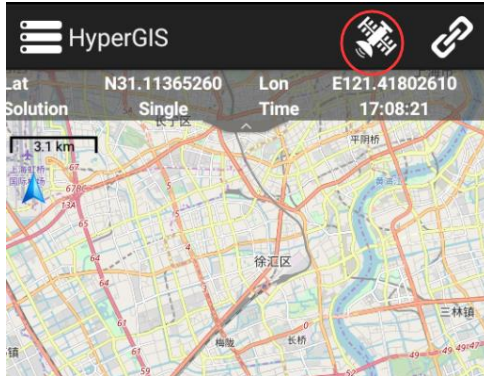
3. If you want to stop the data recording, uncheck 'Log'.

Find the reorded files from **Internal shared storage | HyperGIS | GpsLogger**

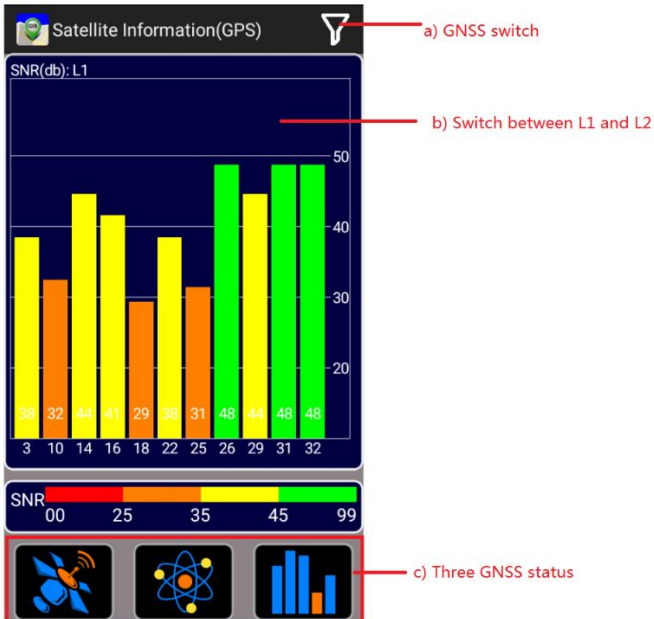


GNSS Status

1. Click  button to check the GNSS status.

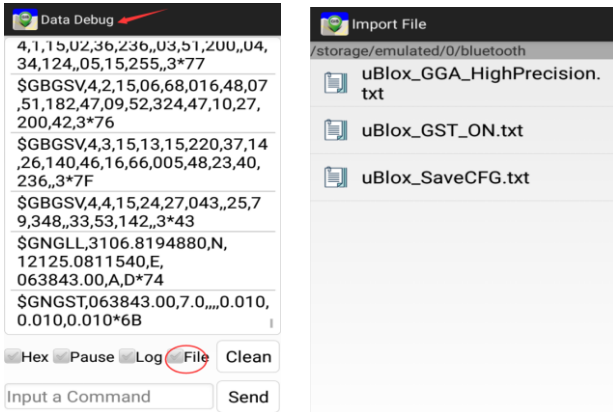


2. Different display mode

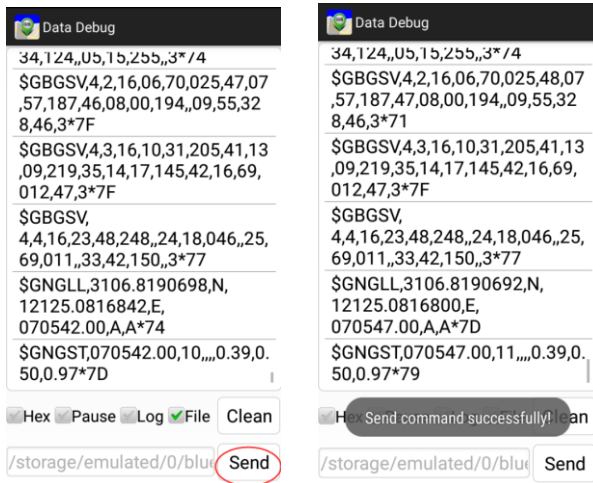


Send command to GNSS module

1. Go to 'Data Debug' interface of the app, select 'File', then find the command files.



2. Select one of the command files, then click 'Send'.

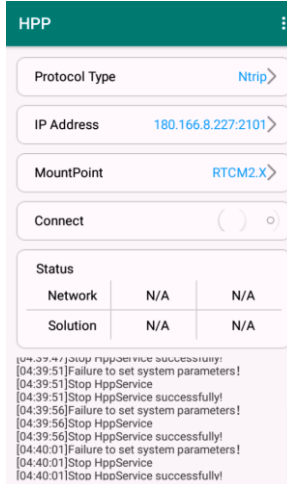


3. Repeat the steps until all the command files being sent to the P78P.

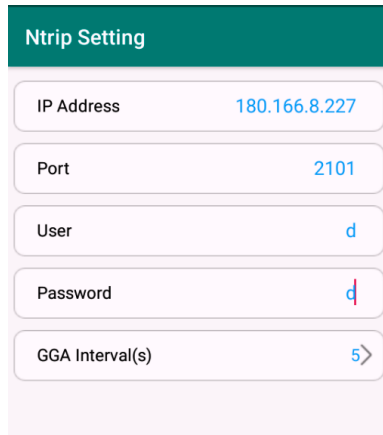
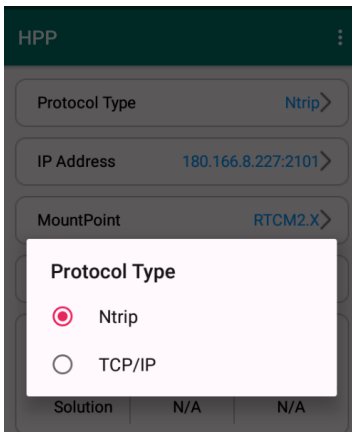
Third-party software supported



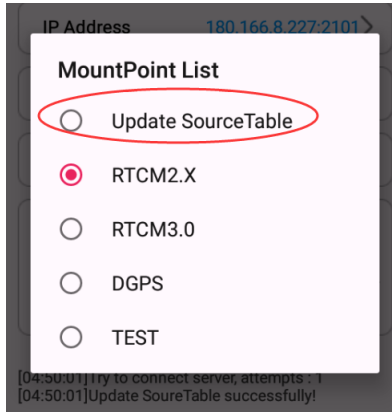
1. Run HPP tool.



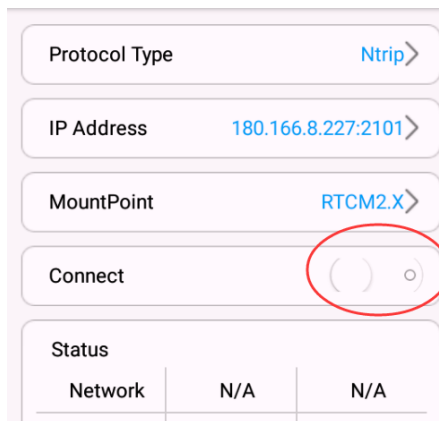
2. Setup Ntrip configuration.



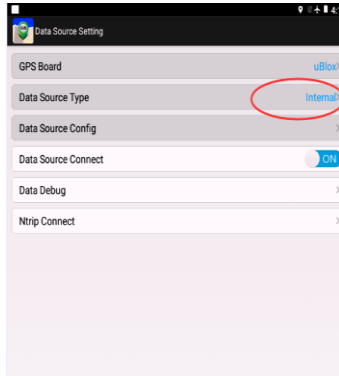
3. Update Source Table



4. Select the right Source Table then turn 'connect' on.



5. Run third-party APP, then get position information from Android internal GNSS services.



Notes:

1. The 'Data Source Type' should be set as 'Internal' when using HyperGIS at this mode.
2. More than one APP can get the position data at this mode

Important Safety Instructions

Read these safety instructions carefully:

1. Read all cautions and warnings on the equipment.
2. Place this equipment on a reliable surface when installing. Dropping it or letting it fall may cause damage
3. Make sure the correct voltage is connected to the equipment.
4. For pluggable equipment, the socket outlet should be near the equipment and should be easily accessible.
5. Keep this equipment away from humidity.
6. Disconnect this equipment from the A/C outlet before cleaning it. Use a moist cloth. Do not use liquid or sprayed detergent for cleaning.
7. To fully disengage the power to the unit, please disconnect the power from the AC outlet.
8. Do not scratch or rub the screen with a hard object.
9. Never use any of the solvents, such as Thinner Spray-type cleaner, Wax, Benzene, Abrasive cleaner, Acid or Alkaline solvent, on the display. Harsh chemicals may cause damage to the cabinet and the touch sensor.

10. Remove dirt with a lightly moistened cloth and a mild solvent detergent. Then wipe the cabinet with a soft dry cloth.
11. The openings on the enclosure are for air convection and protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
12. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
13. If the equipment will not be used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
14. Never pour any liquid into openings. This may cause fire or electrical shock.
15. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
16. If one of the following situations arises, get the equipment checked by service personnel:
 - a. The power cord or plug is damaged.
 - b. Liquid has penetrated into the equipment.
 - c. The equipment has been exposed to moisture.
 - d. The equipment does not work well, or you cannot get it to work according to the user's manual.
 - e. The equipment has been dropped or damaged.
 - f. The equipment has obvious signs of breakage.
17. The sound pressure level at the operator's position, according to IEC 704-1:1982, is no more than 70dB(A).
18. Keep this User's Manual for later reference.
19. **DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). THIS MAY DAMAGE THE EQUIPMENT.**



Do not use the power adapter that isn't made for the equipment. Supplying the equipment with inappropriate voltage may cause harm to the battery or, even worse, burn the equipment.



To prevent possible hearing damage, do not listen at high volume levels for long periods

Rechargeable Battery Pack Safety

With very little care, you can optimize the battery life and maximize the lifespan of the battery. Most importantly, use only the equipment in its ideal operating temperature (-10°C ~ 50°C / 14°F ~ 122°F) – do not leave it in a hot trunk during the summer.

- **Important Terms to Understand**

“Battery life” means the time the equipment will run before it must be recharged (sometimes this is also called “playtime” or “runtime”).

“Battery lifespan” means the total amount of time your battery will last before it must be replaced.

- **Using the Equipment for the First Time**

Be sure to fully charge (approx. 4 hours) the equipment when charging the equipment for the first time.

- **Long-Term Storage & Maintenance**

If you are putting away the battery for more than three months, it is recommended that the battery should be stored separately and fully

charged, and get recharged every three months. If you store an uncharged battery, it could fall into a deep worn-out state which would render it incapable of holding any charge. Be sure to store the equipment and battery at the proper temperature (as described in $-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$ / $-4^{\circ}\text{F} \sim 140^{\circ}\text{F}$).

- **Battery Lifespan**

The removable batteries for the equipment are designed to retain up to 80% of their original capacity after 300 charging and recharging cycles when properly maintained. You may choose to purchase new battery when it no longer holds the sufficient charge that meets your needs.

- The lithium-ion battery is currently one of the most popular battery packs. The best advantage is that it has no memory effect, so users needn't worry about that issue. Users can charge the battery anytime whether it is fully drained or not. However, it's recommended that users drain the battery until the system shows power shortage warning and then recharge the battery. Doing so is helpful to the reliability of your battery.
- Don't use the battery pack as a power supply for other equipment.
- Don't expose the battery to elevated heat situations such as under direct sunlight in a car or near fire.
- Don't disassemble the battery, or the battery leakage might cause skin or eye injury. If electrolyte leaking from the battery contacts your skin or clothing, immediately flush it with running water. If it splashes into eye, rinse the eye at least 15 minutes with clean water and then seek medical attention.
- To avoid battery leakage or explosion, don't discard the battery into water or fire, or put them near a heat source such as a gas stove or an oven.
- If you are putting away the battery for more than three months, it is recommended that the battery should be stored separately and fully charged, and get recharged every three months. If you store an uncharged battery, it could fall into a deep worn-out state which would render it incapable of holding any charge. Be sure to store your the equipment and battery at the proper temperature
- Use the appropriate container to store the battery such as a paper box. Do not allow a metal object to touch the terminal of the battery.
- The battery consists of precise electrical components and cells. Do not drop or hit the battery.

Disposing of the Equipment

- **Within the European Union**



EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste.

This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow the guidance of your local authority, or ask the shop where you purchased the product, or if applicable, follow any agreements made between yourself. The mark on electrical and electronic products only applies to the current European Union Member States.

- **Outside the European Union**

If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method.

Warranty

This product is warranted to be in good working order during the warranty period. Should this product fail to be in good working order at any time during this period, we will, at our option, replace or repair it at no additional charge except as set forth in the following terms. This warranty does not apply to products damaged by misuse, modifications, accident or disaster.

Vendor assumes no liability for any damages, lost profits, lost savings or any other incidental or consequential damage resulting from the use, misuse of, or inability to use this product. Vendor will not be liable for any claim made by any other related party.

Vendors disclaim all other warranties, either expressed or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose, with respect to the hardware, the accompanying product's manual(s) and written materials, and any accompanying hardware. This limited warranty gives you specific legal rights.

Return authorization must be obtained from the vendor before returned merchandise will be accepted. Authorization can be obtained by calling or faxing the vendor and requesting a Return Merchandise Authorization (RMA) number. Returned goods should always be accompanied by a clear problem description.