X1/T1/A1/C1

CONFIGURATION MANUAL

Configuration

This document briefly describes the default configuration of X1/T1/A1/C1, and guide the users to configure and use the products.

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CONTENT

1 DEFAULT CONFIGURATION

1.1 Default Serial Port Format

Table 1-1 Default Serial Port Format

COM Ports	Baudrate	Input	Output
COM1	115200	AUTO	AUTO
COM2	115200	AUTO	AUTO
COM3	115200	AUTO	AUTO
ICOM Ports	**Baudrate**	**Input**	**Output**
ICOM1	115200	AUTO	AUTO
ICOM2	115200	AUTO	AUTO
ICOM3	115200	AUTO	AUTO
ICOM4	115200	AUTO	AUTO

The differential correction protocol of X1_T1_A1_C1 is RTCM3.2.

1.2 Default IP Configuration

IP	Subnet Mask	Gateway
192.168.8.151	255.255.0.0	192.168.8.1

1.3 Default NTRIP Configuration

NTRIP	Connection	NTRIP Protocol	NTRIP IP&Port	NTRIP Mountpoint	User Name	Password	Binding port	Input	Output
NCOM1	DISABLED	V1	--	--	--	--	ALL	Rtcm	Rtcm
NCOM2	DISABLED	V1	--	--	--	--	ALL	None	None

1.4 Default Work Mode

By default, it is rover station mode.

1.5 Default Messages Output

Table 1-2 Output messages by default

Mode	Output	Frequency
COM3/ICOM4	BESTPOSA	5Hz
	HEADINGA	5Hz
	GPGGA	5Hz
	GPRMC	5Hz

2 BASE STATION CONFIGURATION

2.1 Before Configuration

1) Make sure the control ports is bynav/auto format

2) After modification, make sure you have sent SAVECONFIG to save the configuration, otherwise the new configuration won't be saved after reboot.

3) Some other serial configuration softwares may need to add an "ENTER" after inputting the commands and then click send to take effect.

2.2 Configuration Steps

2.2.1 Fix Base Station Position

- In case the base station position is known:
  - FIX POSITION Lat Lon Hgt \\ set base station coordinates
    For example:
    "FIX POSITION 51.11636418888 114.03832502118 1064.9520", click "send" and the device will return "OK".
- In case the base station is not known: sent the following two commands three minutes after the receiver output position
  - FIX AUTO \\ set the last position results as the base station coordinates
  - LOG REFSTATIONA \\ query the base station coordinates
    Please keep and save this base station position well, in case the base station is accidentally damaged, it can be replaced with the same type base station

without affecting the accuracy wen opening the map.

● Saveconfig

2.2.2 Set as Base Station

Assuming that COM3 is connected and the baudrate is correct.

➢ rtktype base (set as base station)

➢ log com2 rtcm1074 ontime 1

➢ log com2 rtcm1084 ontime 1

➢ log com2 rtcm1094 ontime 1

➢ log com2 rtcm1114 ontime 1

➢ log com2 rtcm1124 ontime 1

➢ log com2 rtcm1006 ontime 5

➢ log com2 rtcm1033 ontime 10

➢ unlogall com3 (disable com3 output)

➢ log com3 gpgga ontime 1 (output gpgga at 1HZ, which shows the number of satellites received and positioning status)

➢ saveconfig

➢ log loglista (query output messagess)

3 ROVER STATION CONFIGURATION

3.1 Before Configuration

1) Make sure the control ports is bynav/auto format

2) After modification, make sure you have sent SAVECONFIG to save the configuration, otherwise the new configuration won't be saved after reboot.

3) If you are using other serial port configuration softwares, some of them may need to add "ENTER"and then click send.

4) When the receiver is configured as rover to output PJK messages, it is mandatory to set PJK parameters, refer UG016 PJKPARA to configure it as

local longitude or the meridian value set in the map.

3.2 Configuration Steps

➢ rtktype rover (set as rover station)

➢ log com3 gpgga ontime 0.2 (output GPGGA at 5Hz)

➢ set other messages which need to output

➢ saveconfig

➢ rtktype (query the receiver work mode)

3.3 Configure Output Messages

● Enable a certain message at certain frequency

➢ LOG COM1 GPGGA ONTIME 1 \\ enable com1 to output GGA at 1Hz

➢ LOG COM1 GPRMC ONTIME 0.2 \\ enable com1 to output RMC at 5Hz

● Disabel a certain message

➢ UNLOG COM1 GPGGA \\ disable com1 GGA output

➢ UNLOGALL COM1 \\ disable all messages output of com1

\\ serial port, messages, frequency (red marked) adjustable

3.4 Serial Port Configuration

● Set baudrate

➢ SERIALCONFIG COM1 115200 \\ set com1 baudrate 115200

➢ SERIALCONFIG COM2 19200 \\ set com2 baudrate 19200

\\ serial port, baudrate(red marked) adjustable

4 ETHERNET CONFIGURATION

The default IP address of X1/T1/A1/C1 is 192.168.8.151. You need to reset the IP address of the base or rover receiver in order to access to the local network, the steps are as below:

1）Connect the receiver to the computer using a cross-over Ethernet cable. Set the

computer IP address to 192.168.8.X, the X can not be the same with the receiver.

2）Open the CONNECT as figure4-1, if the input box becomes grey and can not be entered, it means the Ethernet communication between the receiver and computer is normal. If prompt Open Failure, you need to change computer IP address to ensure they are in the same network segment.
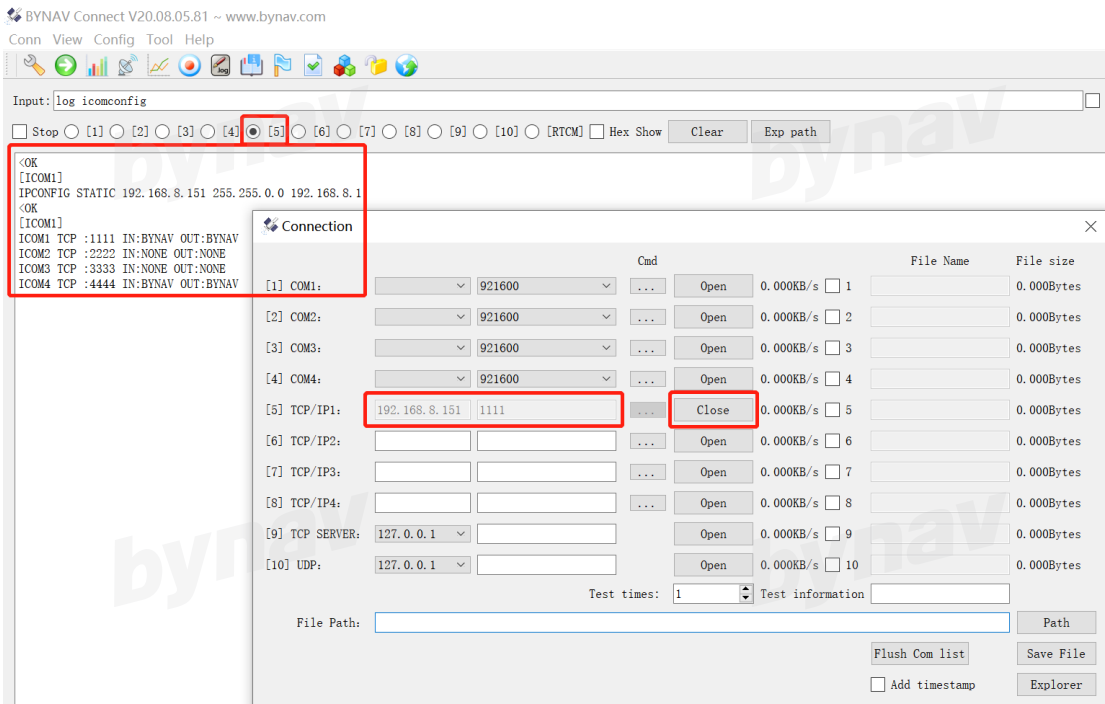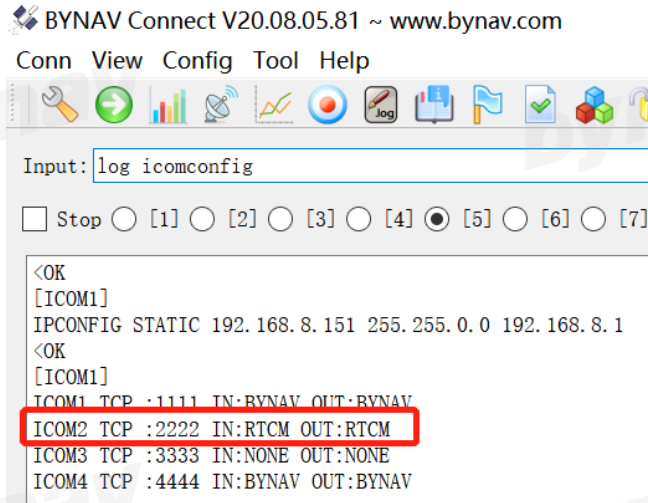

Figure 4-1 Ethernet configuration

4.1 TCP Configuration

Set the static IP address of the receiver. Default IP 192.168.8.151, subnet mask 255.255.0.0, gateway 192.168.8.1.

● Set serial port format

➢ INTERFACEMODE ICOM2 RTCM RTCM

\\ set com2 input and output in RTCM format

● Set serial port network mode

➢ ICOMCONFIG ICOM2 TCP :2222

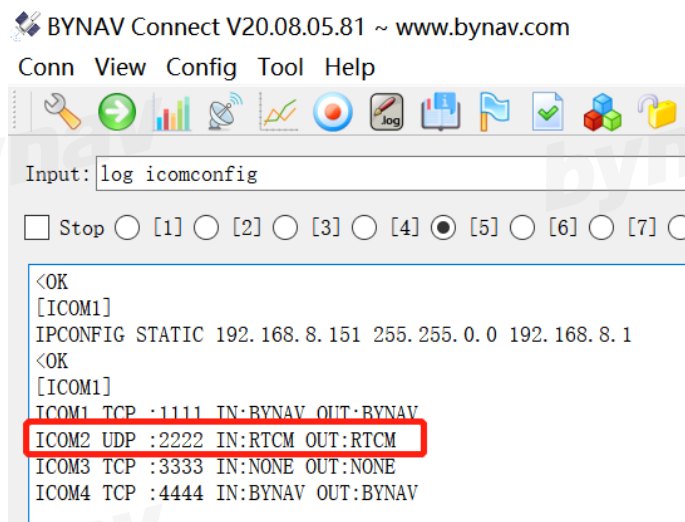\\ set icom2 in TCP mode

Figure 4-2   Ethernet configuration in TCP mode

4.2 UDP Configuration

Set the static IP address of the receiver. Default IP 192.168.8.151, subnet mask 255.255.0.0, gateway 192.168.8.1.

- **Set serial port format**

  ➤ INTERFACEMODE ICOM2 RTCM RTCM

     \\ set com2 input and output in BYNAV format

- **Set serial port network mode**

  ➤ ICOMCONFIG ICOM2 UDP :2222

     \\ set icom2 in UDP mode

图 4-3 Ethernet configuration in TCP mode