



At the center of your data flows

Nhub
User Guide



Version: 1.1.0

Document Revision History

Version	Description	Date
V1.0.0	Initial Release.	August.3 rd , 2023
V1.1.0	Add 2 way comms	September 13th,2023

Table of Content

1	About NHub	4
2	NHub Functions	4
2.1	Device Management	4
2.2	Configuration Management	4
2.3	Test	5
3	How to use NHub	5
3.1	Device Settings	5
3.2	Configuration Settings	9
4	Troubleshooting	11
4.1	Device Connection Problem	11
4.2	App Signature Problem	11
4.3	Others	12
5	Send commands to device	113

1 About NHub

NHub App is used to facilitate users to realize quick pairing and connection between Newland barcode scanners and Android phone by scanning QR code. It replaces the traditional method of going to the Bluetooth setting page and manually selecting the specific Bluetooth device (need to know the device name) for pairing.

The app provides support for Bluetooth device management (adding, deleting, modifying names) and enables data interaction, such as obtaining scan results, sending commands, and outputting scan results. It supports various communication methods such as broadcasting, IP (TCP/UDP/HTTP(S)), and more.

2 NHub Functions

2.1 Device Management

- 1) Pair and connect devices by scanning QR code (devices must be in BLE mode).
- 2) Support adding and deleting devices.
- 3) Device list displays device names, MAC addresses, connection (binding) status, and battery status.
- 4) Allow modification of device name and sending commands.
- 5) Find devices: Notify with beep and vibration alerts (currently supported by BS30 and BS50 devices, some devices may not support this feature).
- 6) Support long-press for batch deletion and batch command sending.

2.2 Configuration Management

- 1) Support 1D/2D code for Bluetooth pairing.
- 2) The 2D code supports dynamic addition of configuration codes (old devices do not support it, the CPU firmware needs to be updated, and the BS30 version is currently supported).

- 1) Output via Broadcast

-
- 2) Fill in EditText directly
 - 3) Output via IP

When using broadcast as the scan output method, the device will output the scan information with the specified broadcast ACTION and EXTRA.

- 1) TCP
- 2) UDP
- 3) Http
- 4) Https
- 5) IP Data Format Settings

Notes: You can use third-party Hercules debugging tools or similar apps to simulate the server and perform communication testing.

- 1) Auto hide after successful pairing
- 2) Launch App after successful pairing
- 3) One-click unbind all devices

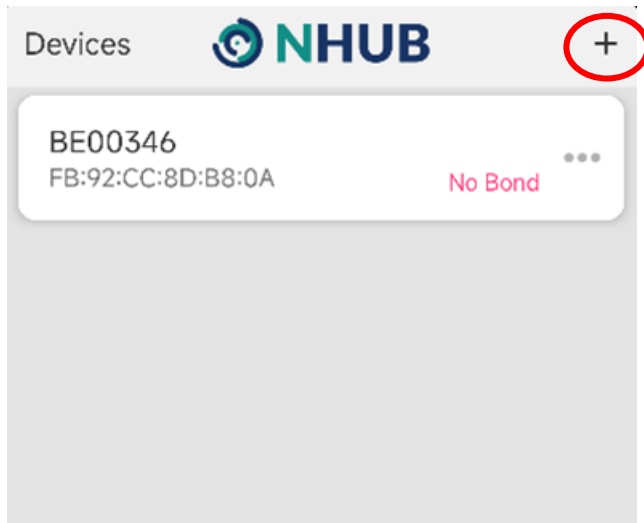
2.3 Test

Scan barcode to verify whether the configuration is valid or not. It will output scanned data in EditText.

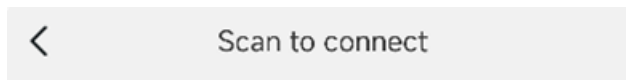
3 How to use NHub

3.1 Device Settings

- 1) Open the NHub app, then tap the  on the top of the Devices page, it will pop-up the connection code.

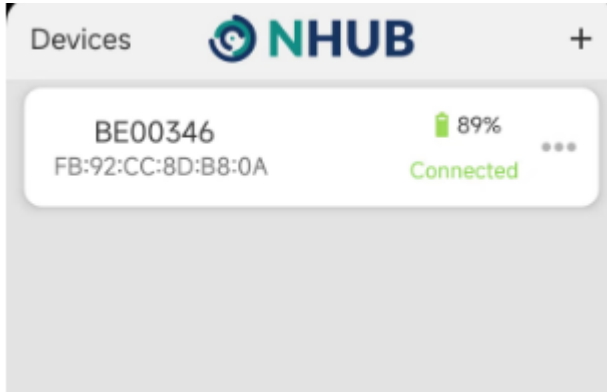


- 2) Scan the connection code with scanner.

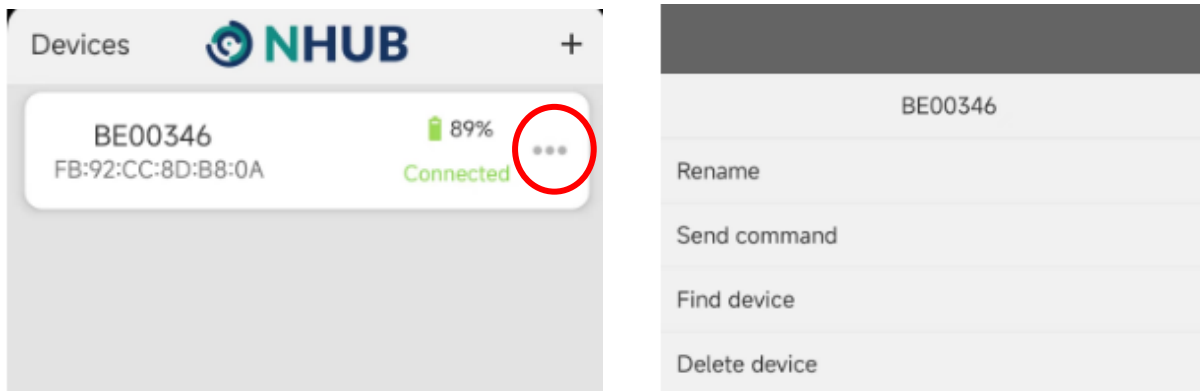


Scanning...

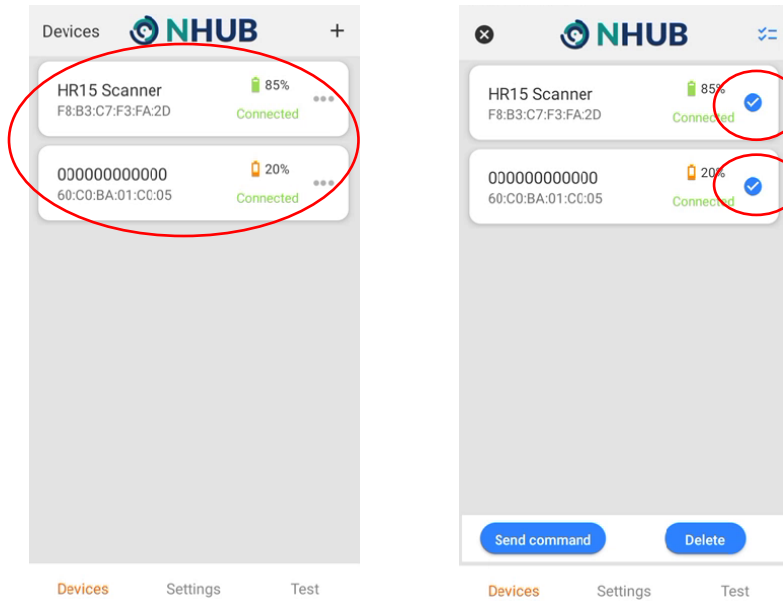
- 3) After paired successfully, the device name and connection status will be displayed as shown below.



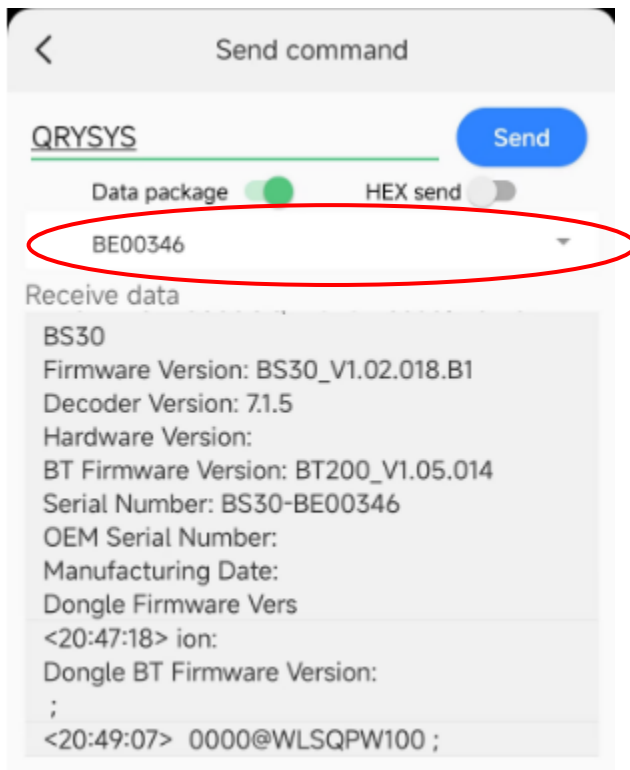
- 1) Tap the "...". on the devices list, then it will pop up the setting list.



- 2) You can set below functions per actual need.
 - a. Rename
 - b. Send command
 - c. Find device: Send reminders by vibration or beep (some devices do not support)
 - d. Delete device
- 3) Long-press the device list, then it will pop up the settings for " Delete" and " Send Commands", you can select corresponding devices for operations per your needs.



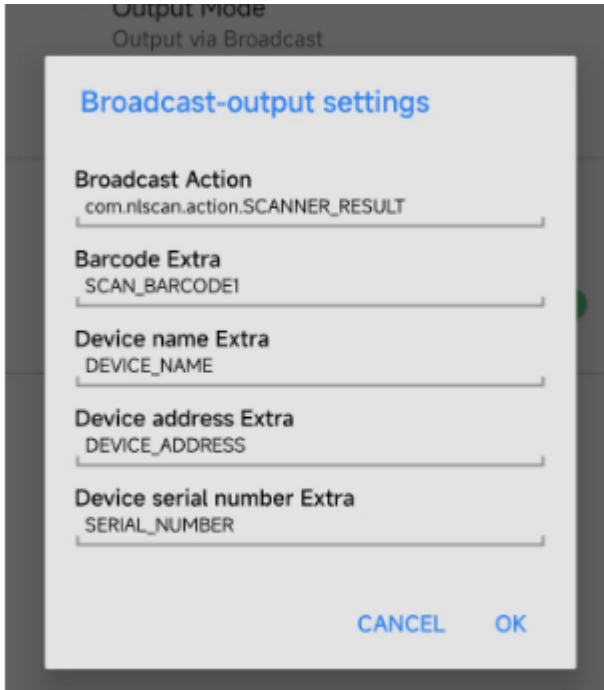
- 1) The commands are usually written in uppercase (capital letters).
- 2) To view the receive data of each device, simply click the dropdown list and select the desired device accordingly.



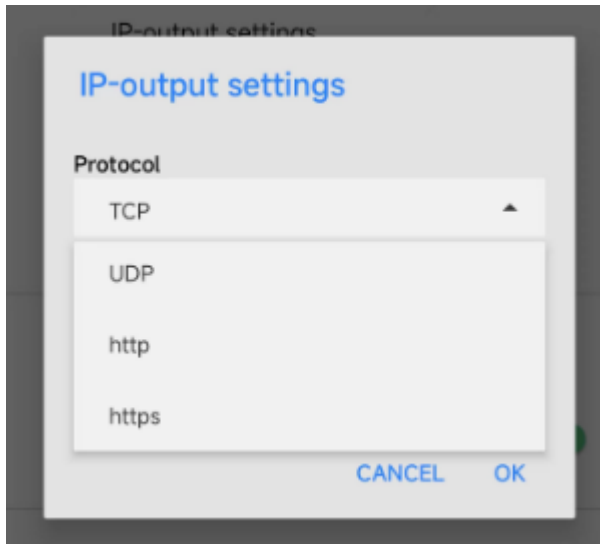
3.2 Configuration Settings

When using broadcast as the scan output method, the device will output the scan information with the specified broadcast ACTION and EXTRA.

Scan barcode to verify whether the configuration is valid or not on test page.



- 1) Various IP-output settings are available per your needs
 - a) TCP
 - b) UDP
 - c) Http
 - d) Https



Packet header: The first 4 bytes represent the length of content.

- 1) Auto hide after successful pairing
- 2) Launch App after successful pairing
- 3) One-click unbind all devices

4 Troubleshooting

4.1 Device Connection Problem

- 1) Make the device scanning mode to Bluetooth BLE mode. Please scan the following barcodes.



Enter Setup



Enable Bluetooth BLE Mode

- 2) If the above steps are not effective, please try clearing the pairing code and then reconnecting the device again.

- 1) Turn off Bluetooth first, and then turn it on again.
- 2) If the issue remains unresolved, please restart the phone.

The scanner will automatically shut down after a period of inactivity for power saving.

4.2 App Signature Problem

Some functions of the app depend on the system signature. NQuire and Newland PDA have different system signatures. Hence, when installing the app on NQuire devices, it is essential to use the NHub version signed with NQuire's signature.

App Name Differentiation:

- Nhub_for_PDA: This version is signed with the PDA platform signature (previously named Nhub_for_Android).

-
- Nhub_for_NQuire: This version is signed with the NQuire platform signature.

Functionalities that rely on corresponding system signatures include:

- Automatic Bluetooth pairing without user confirmation is supported on higher versions of Android (NQuire devices with Android 7.1.1 or earlier versions do not need system signatures.).
- Simulate keystroke output function.

4.3 Others

If you encounter any other issues, kindly gather the log files from the log directory and provide a video demonstrating the problem. Please take note of the time when the abnormality occurred and share it with the tech support team.

Log Location:

The logs are stored in the directory: <sdcard root>\Android\data\com.nlscan.ncomgateway\files\log

5 Two way comms to device

It is possible to send Unified commands to the NHUB connected device(s) via intents.

The 3th party application needs to broadcast below info to NHUB :

Intent:

Broadcast Name: com.nlscan.nhub.action.SEND_CMD

Device Id extra:DEVICE_ADDRESS

Command extra: CMD

Device Response Information:

Response Action: com.nlscan.nhub.action.RECEIVE_CMD_RESULT

Device Id Extra:DEVICE_ADDRESS

Command Extra: CMD

Staus extra: STATUS

Result Extra: RESULT

Example : beep the device with 2000hz frequence, 500 ms beep at maximum volume

```
i.Initialize("com.nlscan.nhub.action.SEND_CMD", "")  
i.PutExtra("DEVICE_ADDRESS", "11:22:33:44:55:66:77")  
i.PutExtra("CMD", "#BEEPON2000F500T20V")  
Phone.SendBroadcastIntent(i)
```

Newland EMEA
+ 31 (0) 345 87 00 33
info@newland-id.com

Rolweg 25
4104 AV Culemborg
The Netherlands

Need more info?
Contact us or one of our partners at
newland-id.com/contact

