NymoLabs

NB-WPT-X5 Wireless Probe

V2.0 Sep.2025

Contents

Thank you for purchasing the Wireless Probe Tool from NymoLabs.

For technical support or replacement, please email us at support@nymolabs.com. We're always here to help.

Facebook: @NymoLabs

Scan QR code to join the group	

For more tutorials and downloads, Please visit our official website	

For detailed operating instructions, please visit our YouTube channel.	

Scan the QR code to watch the Wireless Probe Tool tutorial video.	

Disclaimer

- Before installing, setting up, and operating this product, please read this manual carefully to ensure safe and proper use.
- This product is compatible with most desktop engraving machines on the market. Please familiarize yourself with the electrical specifications and usage precautions before use to avoid potential hazards.
- Do not use this product in harsh environments such as high temperature, high humidity, excessive dust, or flammable and explosion conditions to prevent safety hazards or performance abnormalities.
- This product is a wireless transmission device and may be affected by radio frequency interference(RFI). Especially in environments with long distances or metal obstructions, it is recommended to use it in open areas with minimal interference to ensure stable signal transmission.
- The product contains a button battery inside. Please keep it properly, away from children. Do not swallow, as it may lead to serious injury or even death.
- The receiver supports a DC input voltage range of 5V to 24V. Do not connect power sources exceeding 24V to avoid circuit damage. Any damage resulting from improper power usage is not covered by the warranty.
- It is recommended to perform a function test before each use: plug the receiver into the controller host, press the Touch Plate on the transmitter manually; if the transmitter's indicator light turns on and the receiver's buzzer sounds simultaneously, the Z-probe tool is functioning normally and the battery level is sufficient.
- Any malfunction or damage caused by unauthorized actions such as self-disassembly, modification, soldering, or connecting non-original accessories is not covered by the warranty.
- If the user does not use, maintain, or store the product as recommended in this manual, any direct or indirect loss resulting therefrom-including but not limited to product damage, loss of functionality, or personal injury. The company shall not be held liable for any such losses.

1.Transmittermodule

2.Receiving module

3. 200mm Cable A

4. 200mm Cable B

5. Double-sided tape

6.User Manual

Φ28

19mm

39mm

40mm

60mm

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Model: NB-WPT-R5
Signal Range: 2 M
Probe Sender
Voltage: 3 VDC
Battery: CR2032
Receiver
Voltage: 5 -24 VDC
https://www.ny-nvolabs.com

38mm

18mm

4xM3 Mounting
Screw Holes

(For situations where you
want to fix theTransmitter
module in a specific location)

25mm
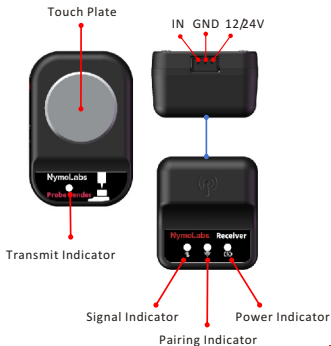
40mm

45mm

D12x5mm-M4
Strong magnet
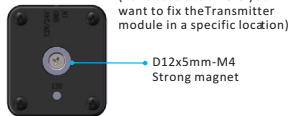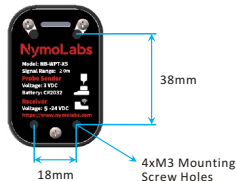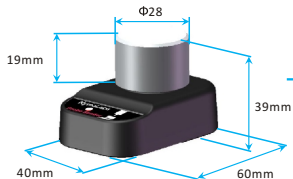
- Model number : NB-WPT-X5
- Model name : Wireless Probe

Receiver Specifications:
- Operating Voltage: DC5V-24V
- Operating Current: Averagecurrent 100mA, 30mA (typical)
- Wireless Range: 20 meters
- Maximum Supported Load: 24V /500mA

Transmitter Specifications:
- Operating Voltage:DC 2.4V-3.6V
- Battery Type: CR2032
- Operating Current: 20mA
- Probing Cycles per FullBattery: Approx. 3000 (varies
  with battery condition)
- Wireless Range: 20 meters
- Repeatability Accuracy: 0.02mm

Touch Plate

IN GND 12/24V

Transmit Indicator

Signal Indicator

Pairing Indicator

Power Indicator

Part 4. Installation and Connection

Step1. Preparation

Pull out the insulation tab from the battery.

Pull out
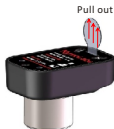
Scan the QR code to view the official tutorial video for the Wireless Probe Tool.

Step 2. Receiver Mounting Method.

When securing the receiver of the Z-probe tool to the machine, you can attach it using magnets, or stick it with double-sided adhesive tape.
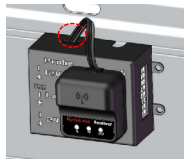
Double-sided tape

Mounting Method 1

Bottom magnet

Mounting Method 2

Step3. Connection Method 1 (Using NBS-6040 and NBX-5040 as Examples)

1. Insert one end of cable A into the port of the receiving module of the Z-probe tool in the correct direction.

2. Connect the other end of the cable to the probe port.

Part 4.Installation and Connection

Step 4.Connection Method 2(Using Control Boards from Other Manufacturers as an Example)

1. Insert one end of cable B into the port of the receiving module of the Z-probe tool in the correct direction.

2. Connect the other end of the cable to the control board.

Control Boards from Other Manufacturers

IN GND 5-24V

Probe Port

Black
IN

Black
GND

Gray
5-24V
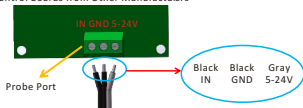
⚠ Note: The actual wiring sequence should follow the probe interface pinout of your control board. Users must make adjustments based on their specific control board configuration. The probe interface voltage must be within the range of 5-24V; exceeding this range may cause damage to the device!

Step 5.Testing Whether the Probe Is Connected Correctly

Press

Bzzz
Bzzz
Bzzz

Indicator light

Manually press the touch plate on the transmitter If the transmitter's indicator light turns on and the receiver's buzzer emits a "beep" sound simultaneously, it means the probe is connected correctly and can function normally.

Instructions for Z Probe Operation in GrblControl (Gsender)

Edit the Z-probe toolsetting command: The triggering height of the Z-probe tool has been tested and calibrated before the product leaves the factory as shown in the image below. The triggering height is 38.25mm. Please set this value according to the marking on the actual tool you purchased. The value Z45.000 represents the lift height of the Z-axis after probing, which can be adjusted according to your actual needs.

> Note: Please set the Z-probe tool height according to the actual marked height on the probing tool.

Probe Tool height: 38.25mm

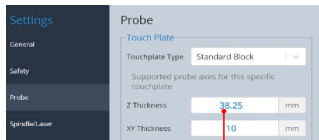**Probe G code:**

G21 G91 G38.2 Z-50 F50
G92 Z38.25

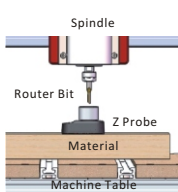G1 G90 Z40.000 F200

G91 G38.2 Z-50.000 F20
G92 Z38.25

G1 G90 Z45.000 F200

• Use GrblControl (Gsender) to set up the Z-probe tool setting commands. Click the [Gear] icon at the top right of the main screen, then click [Probe]. The configuration window shown in the bottom-left image will appear. Click the [Z-Probe] label on the GrblControl (Gsender) interface, as shown in the right image. At this point, the [Start Probe] button will be greyed out. You need to touch the Z-axis probing tool so that it can be detected. Once recognized, the icon will turn green and the [Start Probe] button will become active, as shown in the lower right image. Click the [Start Probe] button, and the software will automatically lower the tool and calibrate the height.

Settings

Probe

Touch Plate

Touchplate Type | Standard Block

Supported probe axes for this specific touchplate

Z Thickness | 38.25 | mm

XY Thickness | 10 | mm

General

Safety

Probe

Spindle/Laser

Set the height of the Z-probe tool according to the actual measured value.

Spindle

Router Bit

Z Probe

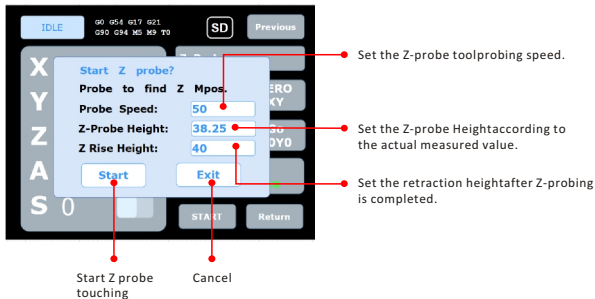Material

Machine Table

Not Triggered

No Touch

Triggered

Touch detected

Note: During tool probing, align the tool as close to the center of the probe as possible to ensure better accuracy and consistency.

• Use Offline Controller to set up the Z-probe tool setting commands. Tap the [Z-Probe] icon in the Offline Controller selection interface .
The configuration window shown in the image below will appear.

Set the Z-probe tool probing speed.

Set the Z-probe Height according to the actual measured value.

Set the retraction height after Z-probing is completed.

Start Z probe touching

Cancel

Part 6.Battery Replacement

1.Remove the three screws at the bottom of the transmitter (black round-head Phillips flat-tip self-tapping screws M3x8), and take out the bottom case.
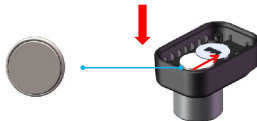
2.Use an Allen wrench to remove the battery.

4.Place the bottom case back into position and fasten it with the three screws.

3.Insert the battery into the battery compartment with the concave side of the battery facing downward.

Battery Safety Instructions

1. Ensure the batteries are installed correctly according to polarity (+and -).
2. Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.
3. Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time according to local regulations.
4. Always completely secure the battery compartment, If the battery compartment does not close securely, stop using the product, remove the batteries, and keep them away from children.

⚠ **WARNING**	
• **INGESTION HAZARD:** This product contains a button cell or coin battery. • **DEATH** or serious injury can occur if ingested. • A swallowed button cell or coin battery can cause **Internal Chemical Burns** in as little as **2 hours.** • **KEEP** new and used batteries **OUT OF REACH of CHILDREN** • **Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body.	⚠

Compliance Information

FCC Compliance Statement

FCC ID:

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

UL4200A Compliance Statement

- This product complies with the UL 4200A safety standard, which applies to consumer electronic products containing button or coin cell batteries.

Button Battery Ingestion Warning

WARNING: Keep batteries out of reach of children.

- If swallowed, button batteries can cause serious internal chemical burns within a short time and may lead to death.
- If swallowed, seek emergency medical attention immediately. Do not induce vomiting.
- This product features a child-resistant battery compartment.

Child Safety Warning

- WARNING: This product contains small parts and may pose a choking hazard. Not for children under 3 years.

FCC Warning

This device complies with part15 of the FCC Rules.Operation is subject tothe following two conditions:(1) This device may not cause harmful interference, and (2) this devicemust accept any interference received, including interference that may cause undesired operation.

Note:

This equipment has been tested and found tocomply with the limits for a Class A digitaldevice, pursuant to part15 of the FCC Rules. These limits are designedto provide reasonable protectionagainst harmful interferencewhen the equipment is operated in a commercialenvironment. This equipment generates, uses, and canradiate radio frequencyenergy and, if not installed and used in accordance with the instruction manual,may cause harmful interference to radio communications. Operation of this equipmentin a residential areais likely to causeharmful interference in whichcase the user will berequired to correct the interference at his ownexpense.

Measures:

— Reorient or relocatethe receiving antenna.
— Increase the separation betweenthe equipment and receiver
— Connect the equipment into anoutlet on a circuit different from thatto which the receiveris connected.
— Consult the dealer or anexperienced radio/TV technician forhelp.

FCC Warning

Note:

The Grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. such modifications could void the user's authority to operate the equipment.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

IC Warning

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil contient des émetteurs/récepteurs exempts de licence qui sont conformes aux normes CNR exemptes de licence d'Innovation, Sciences et Développement économique Canada. Son fonctionnement est assujetti aux deux conditions suivantes :
(1) Cet appareil ne doit pas causer d'interférences.
(2) Cet appareil doit accepter toute interférence, y compris celles qui peuvent Entraîner un fonctionnement indésirable de l'appareil.

The device has been evaluated to meet general RF exposure requirement. The device can
be used in portable exposure condition without restriction.
L'appareil a été évalué pour répondre aux exigences générales d'exposition aux RF.L'appareil peut être utilisé sans restriction dans des conditions d'exposition portables.

IC Warning

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil contient des émetteurs/récepteurs exempts de licence qui sont conformes aux normes CNR exemptes de licence d'Innovation, Sciences et Développement économique Canada. Son fonctionnement est assujetti aux deux conditions suivantes :
(1) Cet appareil ne doit pas causer d'interférences.
(2) Cet appareil doit accepter toute interférence, y compris celles qui peuvent Entraîner un fonctionnement indésirable de l'appareil.

The device has been evaluated to meet general RF exposure requirement. To maintain compliance with RSS-102 - Radio Frequency (RF) Exposure guidelines, this equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.
Le dispositif de a été évalué à répondre général rf exposition exigence.pour maintenir la conformité avec les directives d'exposition du RSS-102-Radio Fréquence (RF). ce matériel doit être installé et exploité à une distance minimale de 20 cm entre le radiateur et votre corps.

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