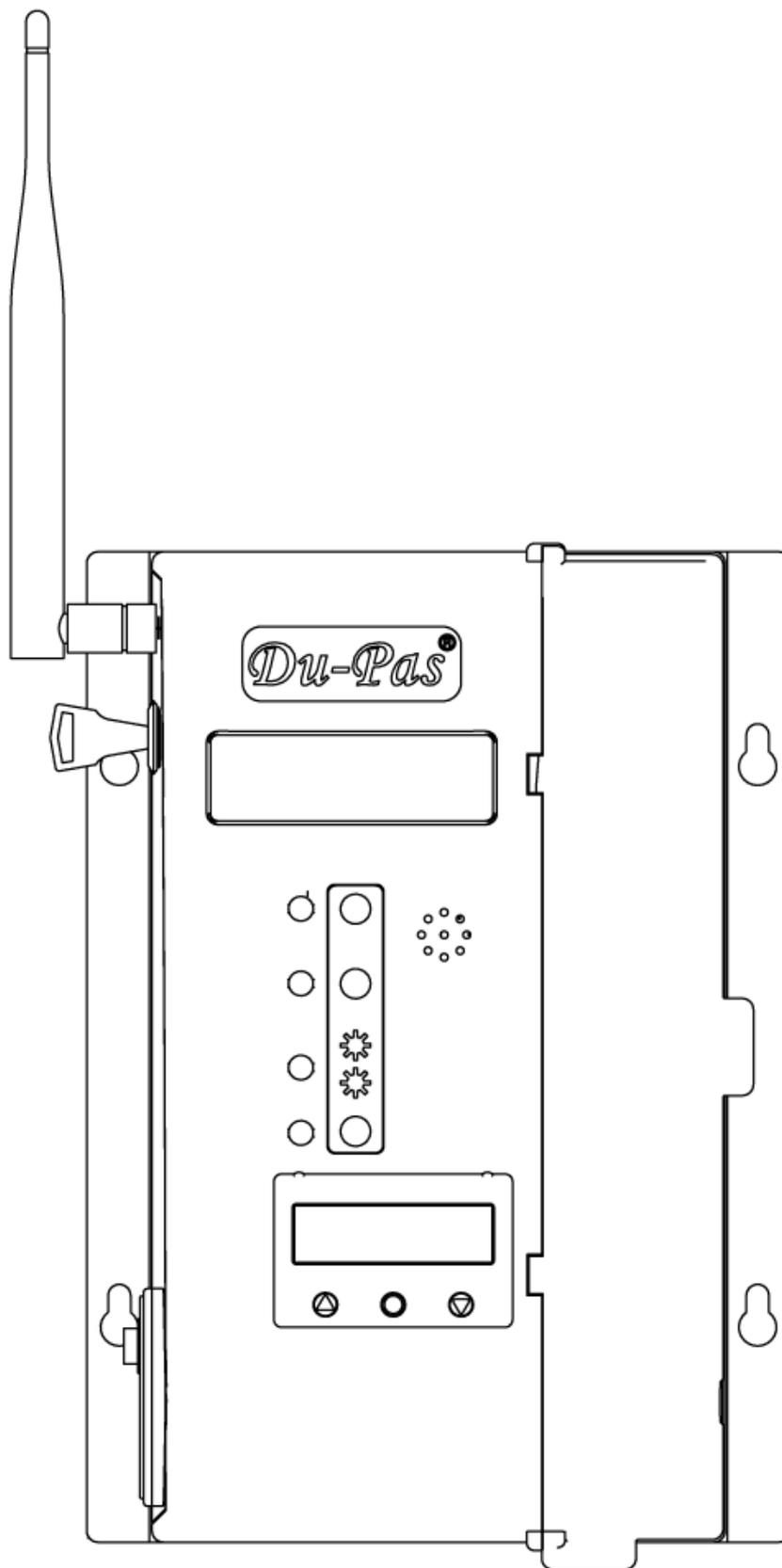


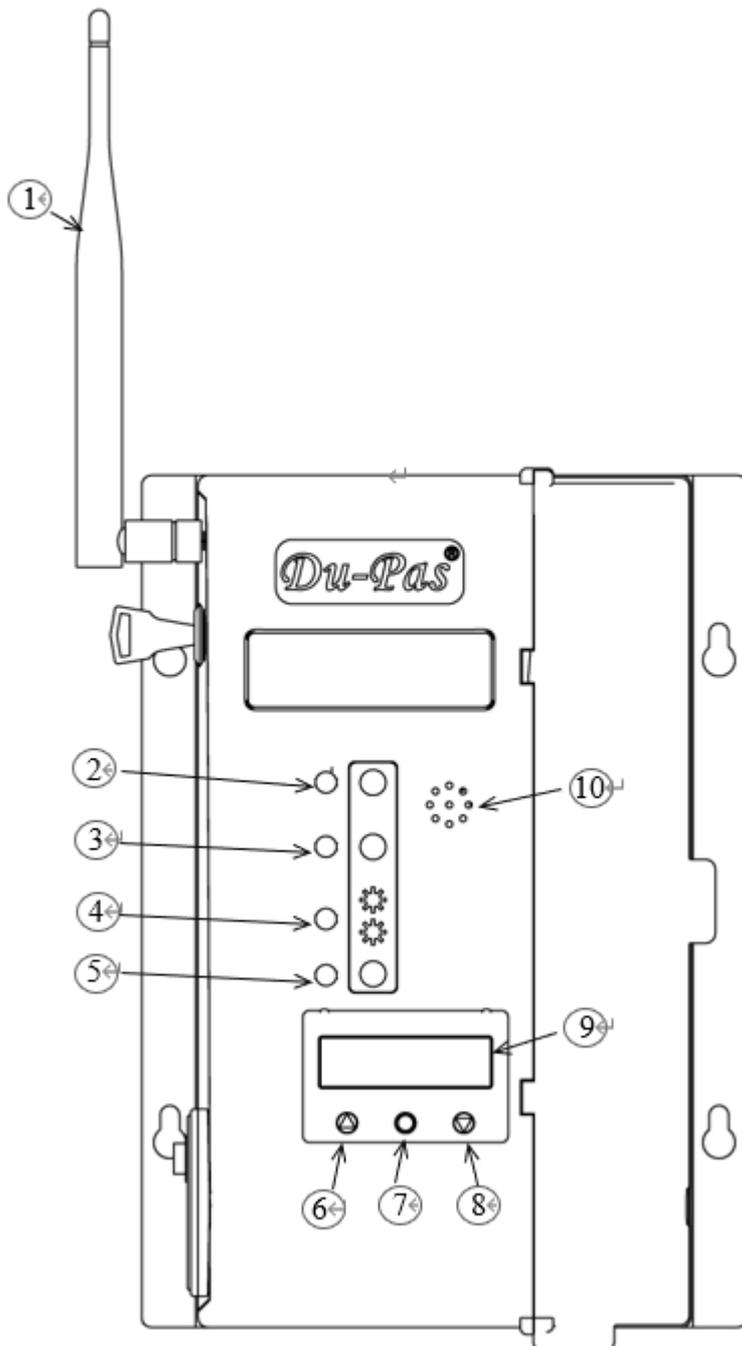
Wireless System (DWL)

User's Manual



Introduction

This document primarily explains how to set up the tool pairing connection and operate the DWL wireless system receiver, and transmit data to the back end (PC or server), and connect with the Programmable Logic Controller (PLC) on the production line to achieve the purpose of production line control. ◦



1. Wi-Fi antenna
2. NG red indicator light
3. OK green indicator light
4. Red/Blue communication indicator light
5. Power indicator light - yellow
6. Button switch 1 \triangle
7. Button switch 2 \circ
8. Button switch 3 ∇
9. LCD display screen
10. Buzzer sound hole

Fig 1 Product Features

1. Installation

The installation of DWL as shown in Figure 2 and fix the aluminum plate to the wall by using screws. Please refer to the dimensional information on the drawing for the hole spacing for the lock attachment screws. Make sure that the installation is within a stable and safe range.

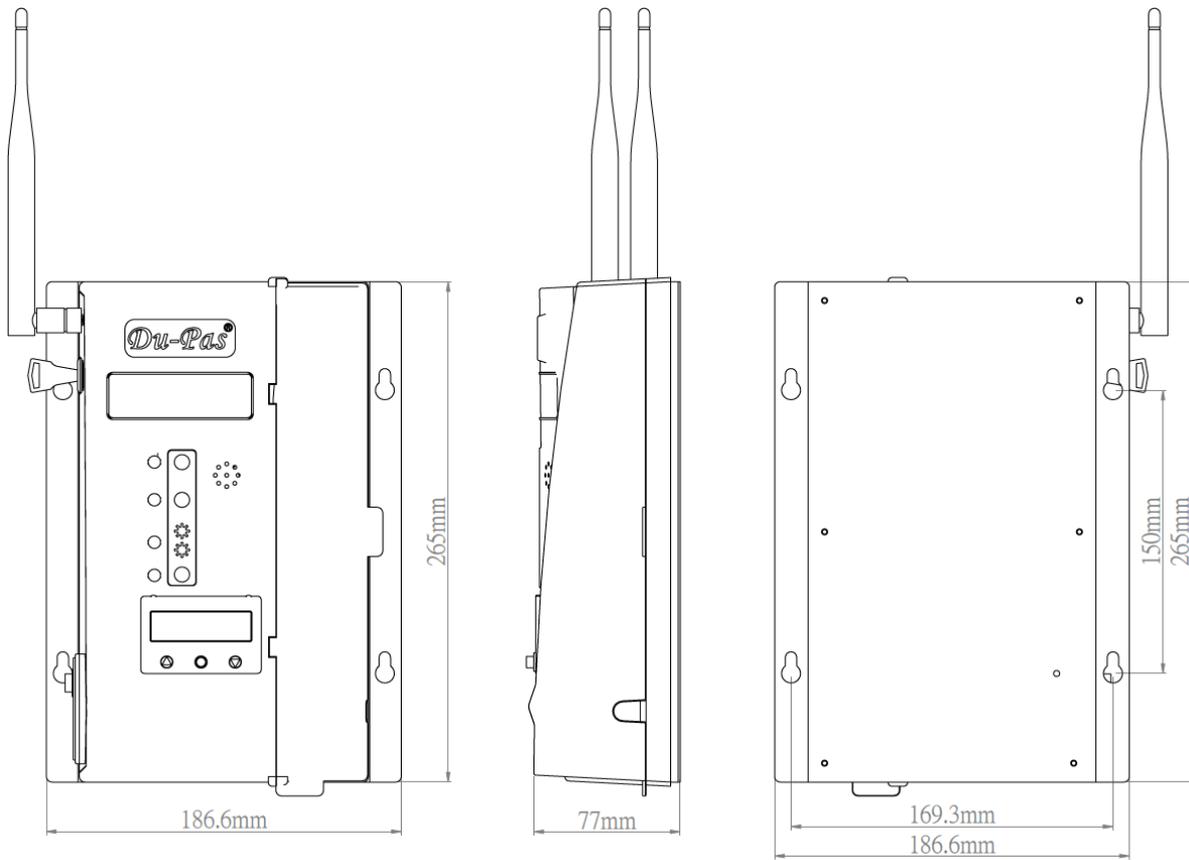


Fig 2

2. Connecting the I/O devices.

The I/O connection points of the DWL wireless receiver are at the both sides of the receiver box, as shown in Figure 3. °

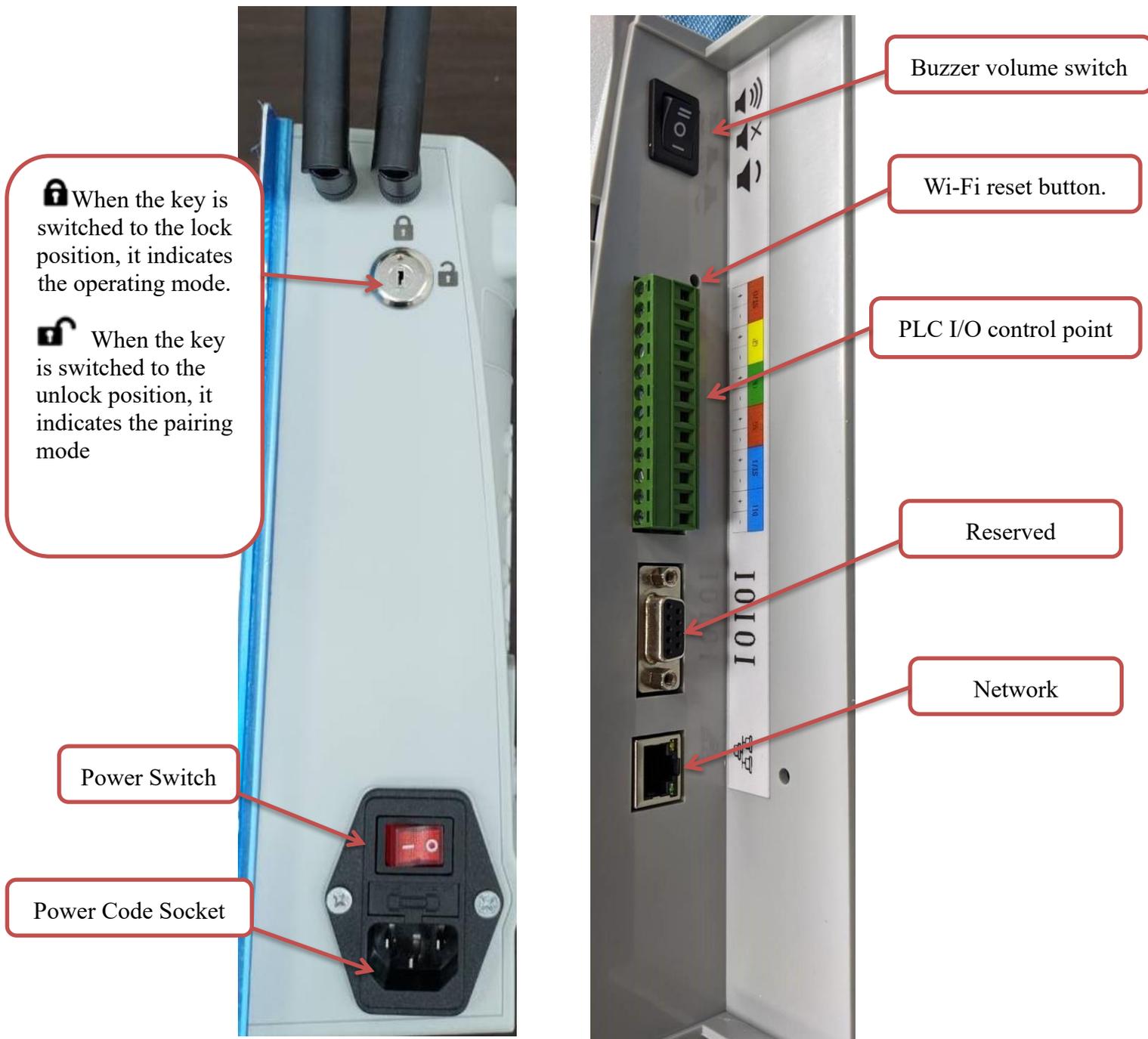


Figure 3 Wiring and Switches of DWL receiver

* *The pairing mode and operation mode functions will be described in the following sections

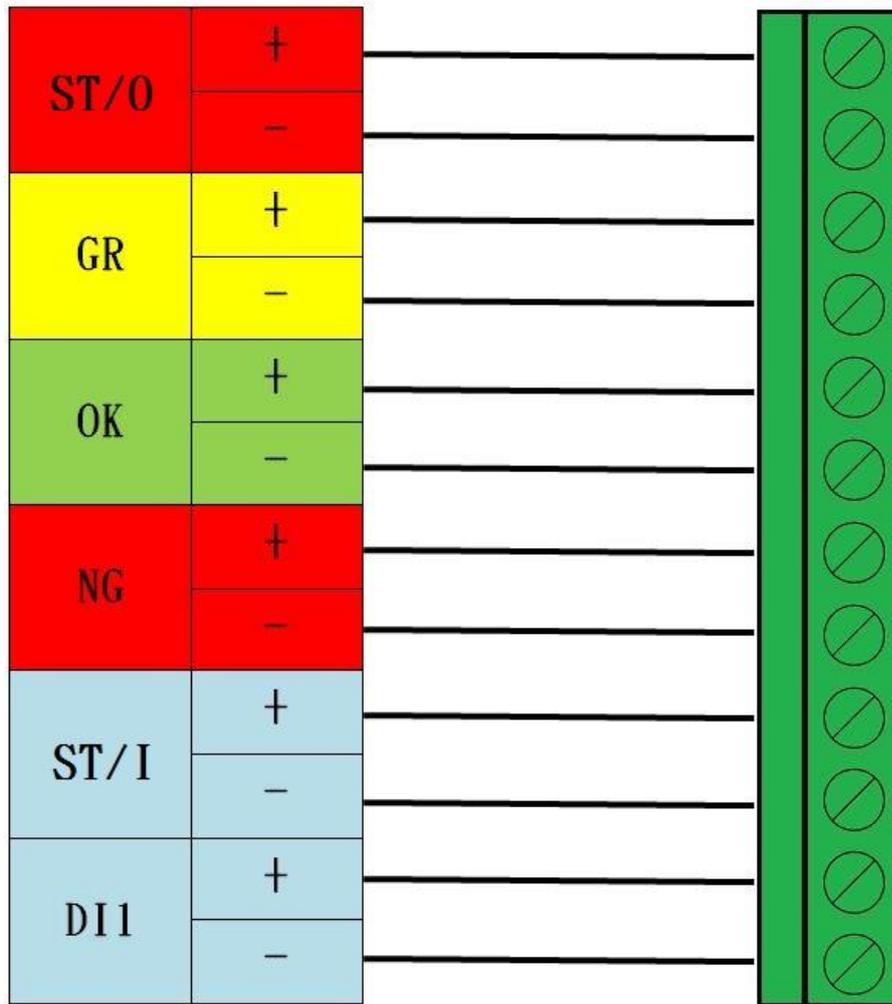
2-1. Definition and Connection Method of Input/Output (I/O) for PLC

PLC's input/output (I/O) requires external power supply and the contacts only provide corresponding functional signal control. Table 1 and Figure 4 show the definition and connection method of the contacts, and the operation corresponds to the tool number displayed on the LCD screen. For example, when "Tool

1" is displayed on the LCD screen, the PLC's I/O will be complying with the control signals according to the working condition of "Tool 1". At this time, when "Tool 2 to 7" will be disabled.

[Table 1 Definition of PLC contacts]

ST/O	Emergency stop for all of the external operation, the ST/O will be activated
GR	When tool completes the batch count, the GR contact will be activated
OK	When tool completes the target value, the OK contact will be activated
NG	When tool fails to complete the target value, the NG contact will be activated
ST/I	Input for emergency stop
DI1	Input for batch count reset and unlock tool (see remark 1)



※ When connecting to a PLC, it is important to pay attention to the voltage and polarity (+/-) of the connection

Figure 4 The connection of DWL receiver and PLC interface

** When 24V DC voltage is input to the "+" terminal of the ST/I contact and 0V is input to the "-" terminal, the emergency stop action will be triggered. At this time, all tools paired with this DWL will be locked, and the ST/O contact will be turned on ◦

** DI1 is the signal input terminal. When the tool completes the batch count, the tool will be locked. To reset the batch count and unlock the tool, input 24V DC to "+" and 0V to "-" .

This terminal is currently unavailable for INPA and INRA series tool

3.LED Indicator Light

The description of the LED signals on the DWL receiver are shown in Table 2 ◦

Yellow	When the indicator light is on, DWL is in the power-on state
Red/Blue Communication Light	A. In pairing mode: The red light flashes when pairing is unsuccessful, and the blue light stays on when pairing is successful. B. In normal operation mode: The stay-on red light means that the tool is not paired, and the stay-on blue light with red flashing indicates that the tool is already paired and in communication.
Green Indicator Light	A. In pairing Mode : When a green and red light flashing, the pairing is unsuccessful. When the pairing is successful established, the green light will become stay-on. B. In normal operation mode: When the tighten job is completed, the green light is ON. (see remark 1)
Red Indicator Light	A. In pairing mode : When a green and red light flashing, the pairing is unsuccessful. The red light will off when the pairing is successful. B. In normal operation mode: The red light turns on when the tool is unable to complete the job. (see remark 1)
LCD Display	Showing the present tool number or the tool number to be paired A. In pairing mode: The LCD display flashes when pairing B. In normal operation mode: LCD display stay on

[Table 2]

Remark 1 : When operation in standard mode, the DWL receiver will show the corresponding light for the tool number displayed on the LCD screen. Depending on the tightening result, the receiver will give a red or green LED light to indicate to the supervisor whether the tool is operating in compliance with the operation standard."

4.LCD Display Operation

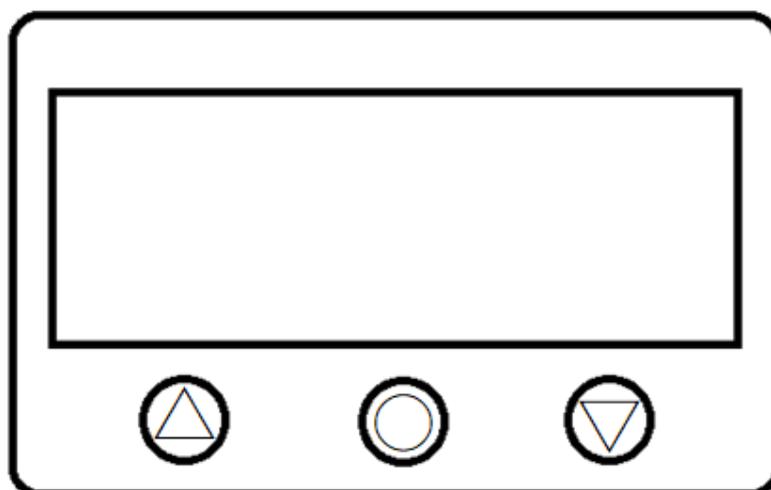
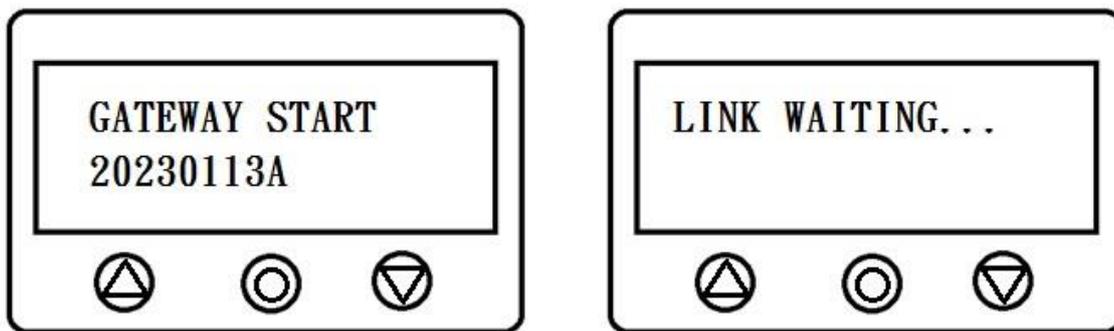


Figure 5

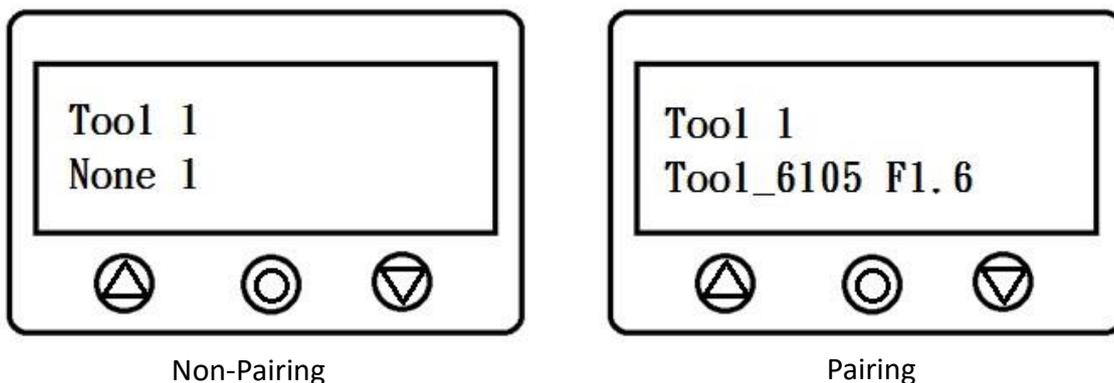
To access to the setting mode, please turn the key to “unlock” and use the three button on the display (see Fig. 5) to select the setting

A. LCD Display and Pairing Mode – Tool and DWL

- I. After turning on the power, the current software version will show on the display (i.e. 20230113A), LINK WAITING for about 30 seconds

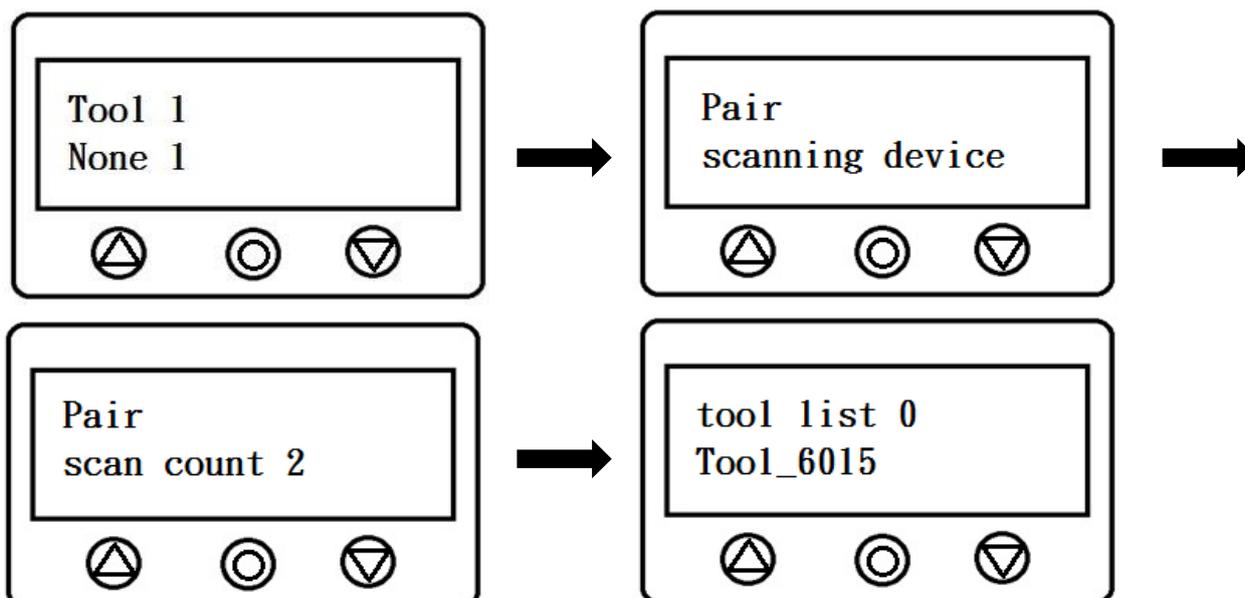


- II. Pairing Display



- III. Pairing Method

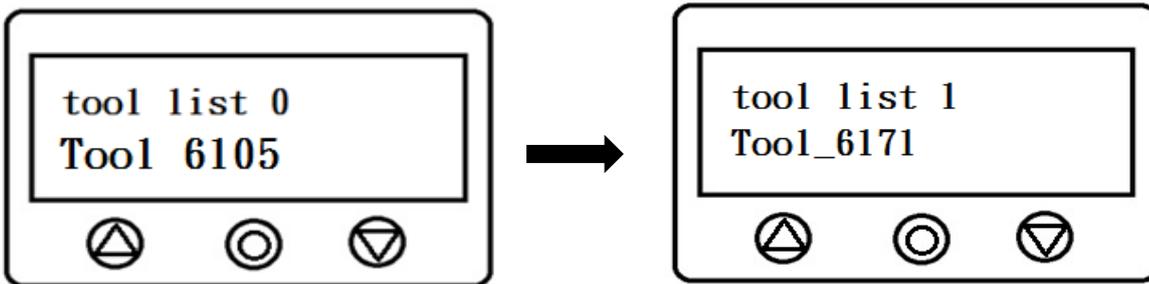
Turn the key from “lock” to “unlock”  → , the screen will become flashing in the pairing mod, press the middle button briefly (o), then the receiver will start searching for compatible devices to pair with ◦



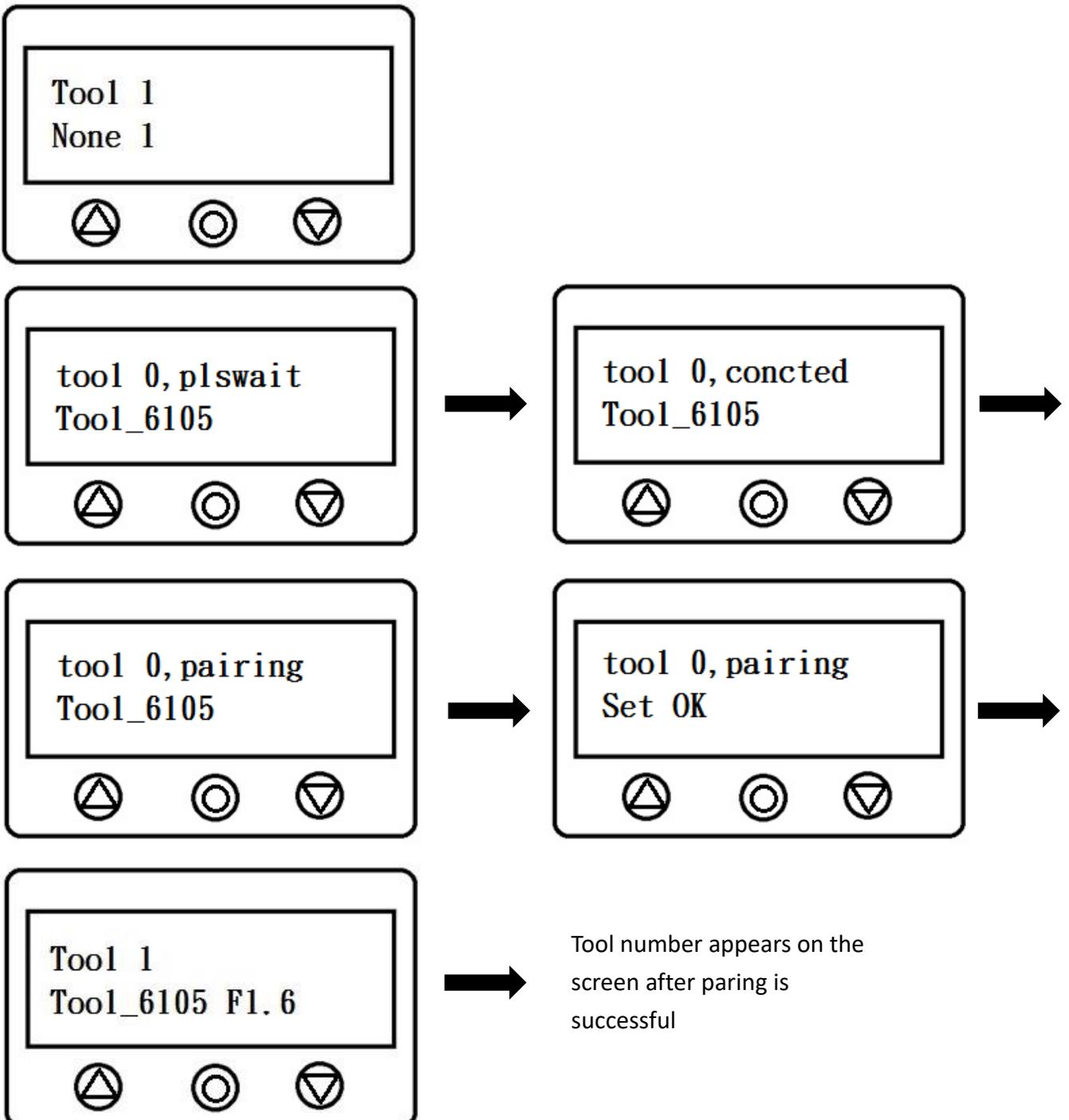
Scan count shows the total of compatible tools have been searched

The tool number will appear once pairing is successful

The screen will show the tool number after find a compatible tool. If the tool number on the screen is not the one you want to pair with, press the right button (▽) briefly to select the next tool that has been searched. ◦

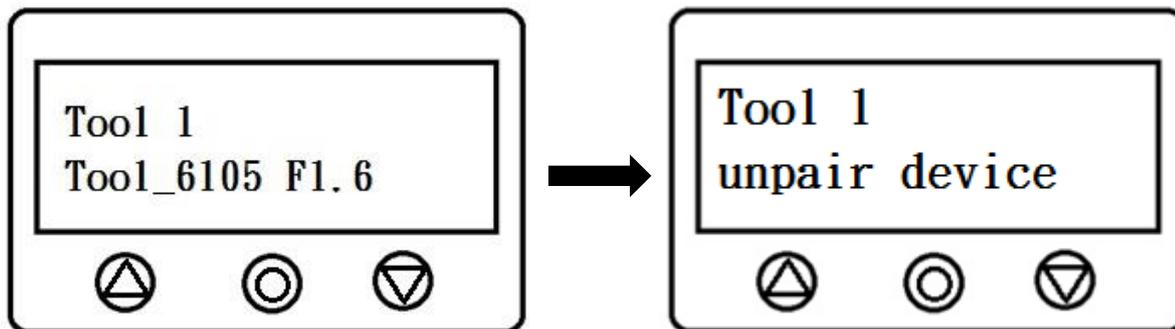


Briefly press(△) to re-search the compatible tool, the screen will return to the searching mode
Select and confirm the tool that would like to pair, press the middle button(◦) to start the pairing



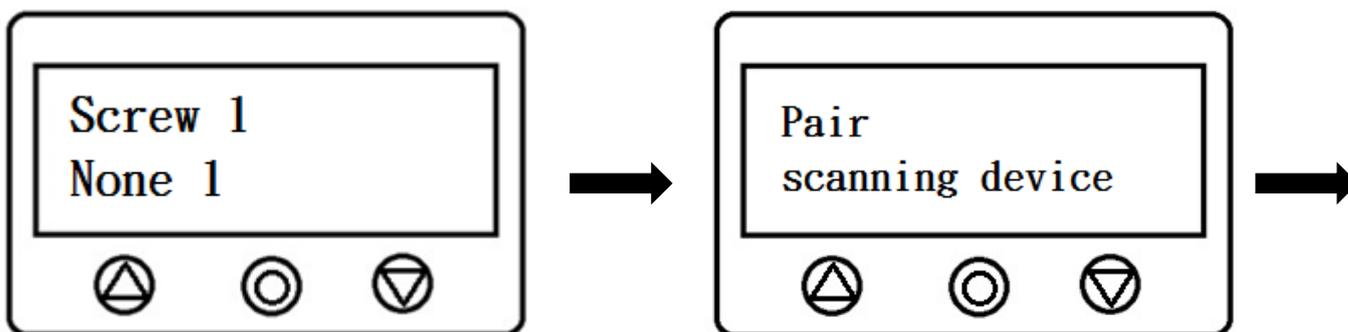
Once successfully paired, switch the key from “unlock” back to “lock” , the tool is now ready for operation.

To remove a paired tool, select the tool to be removed and press the middle button (○) briefly. The receiver will then remove the paired tool and allow for re-pairing

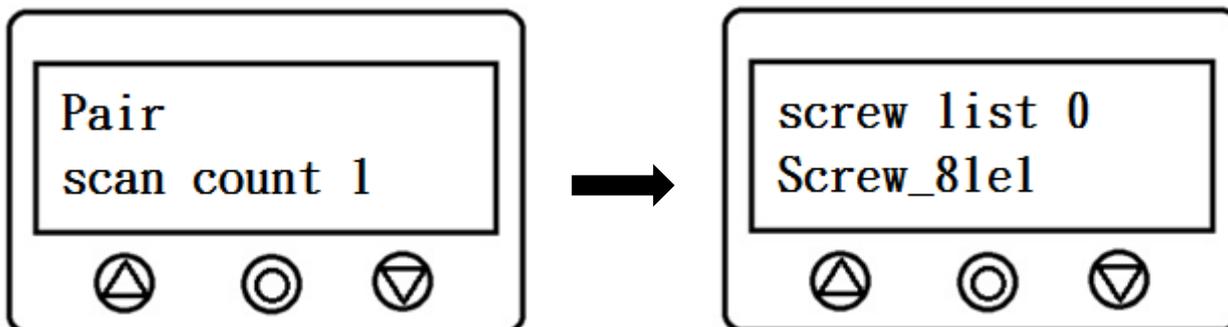


B. Socket selector tray (this feature is enabled only with a paired tool)

After pairing a tool, press the left (△) button in the tool section, the screen will switch to “Screw 1”. If there is no paired socket selector tray, the light will be flashing, briefly press the middle button (○), the receiver will start searching the compatible socket selector tray.

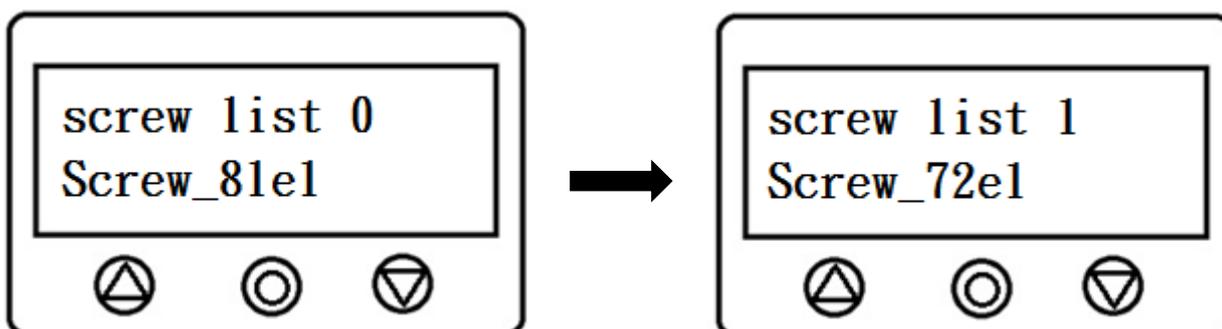


Unpaired Status

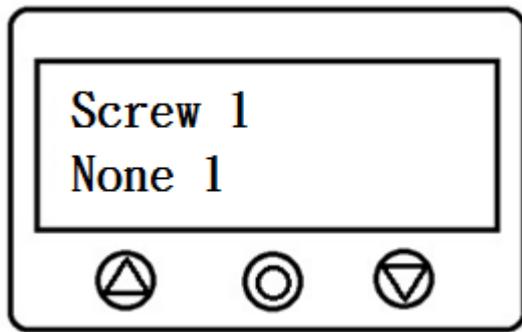


The socket selector tray number will be shown on the screen upon searched

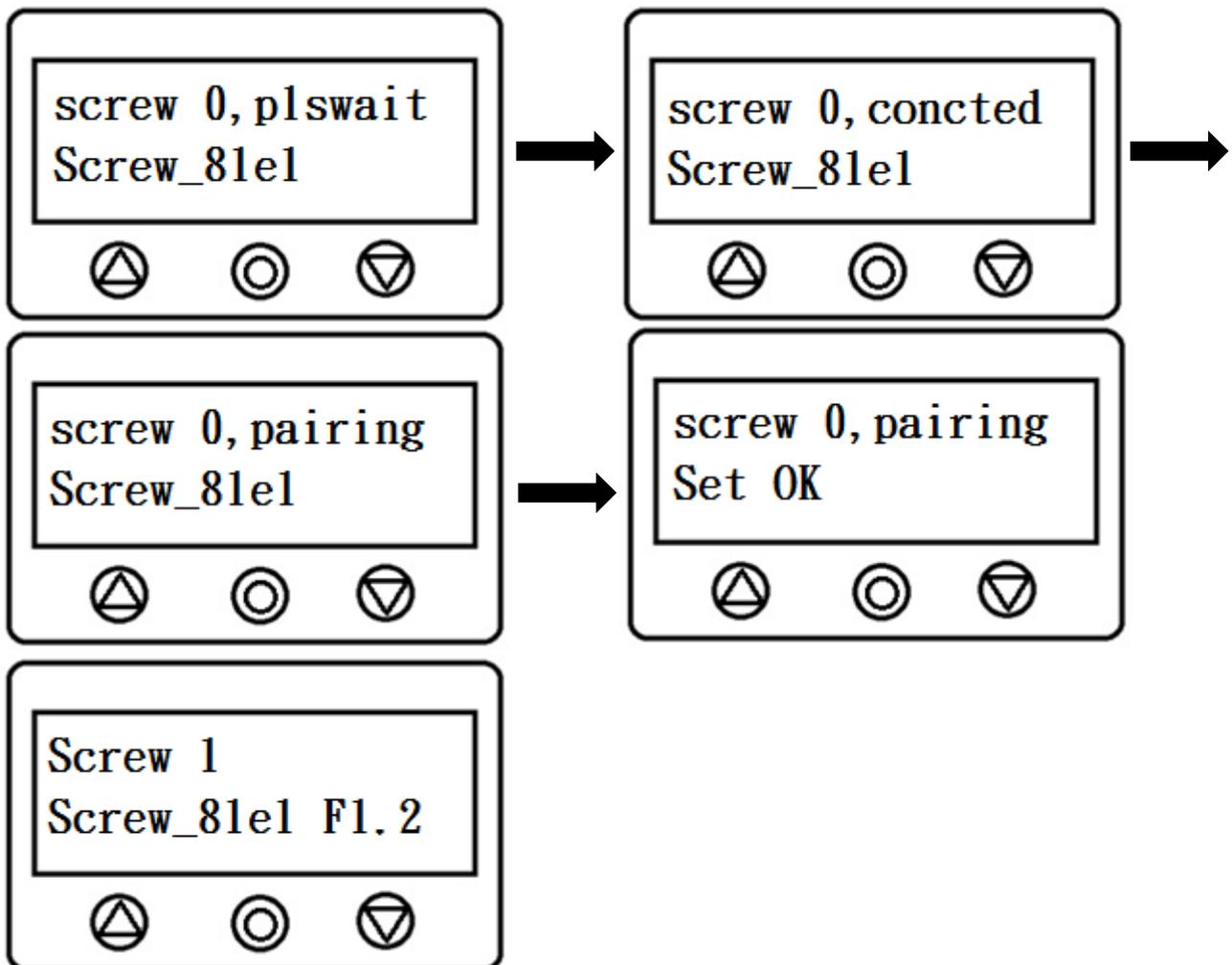
The screen will show the socket selector tray number that ready for pairing, if the socket selector tray is not the one you want to pair with, press the right button (▽) briefly to select the next socket selector tray that on the searching list.



If you would like to re-search the socket selector tray, press the left button (\triangle) to return to the searching mode

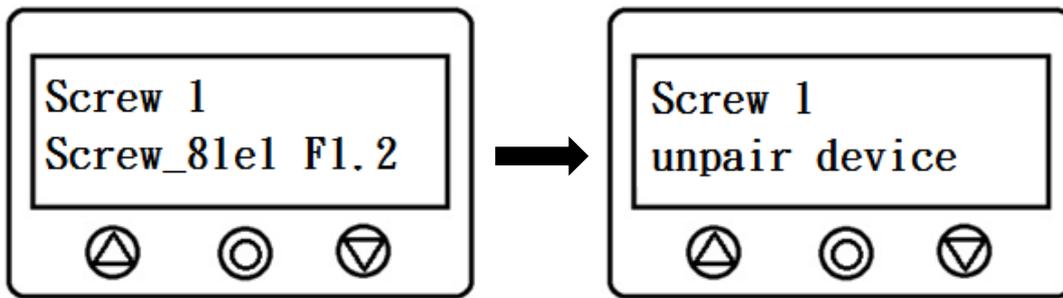


Once select and confirm the socket selector tray, press the middle button(o) to start the pairing



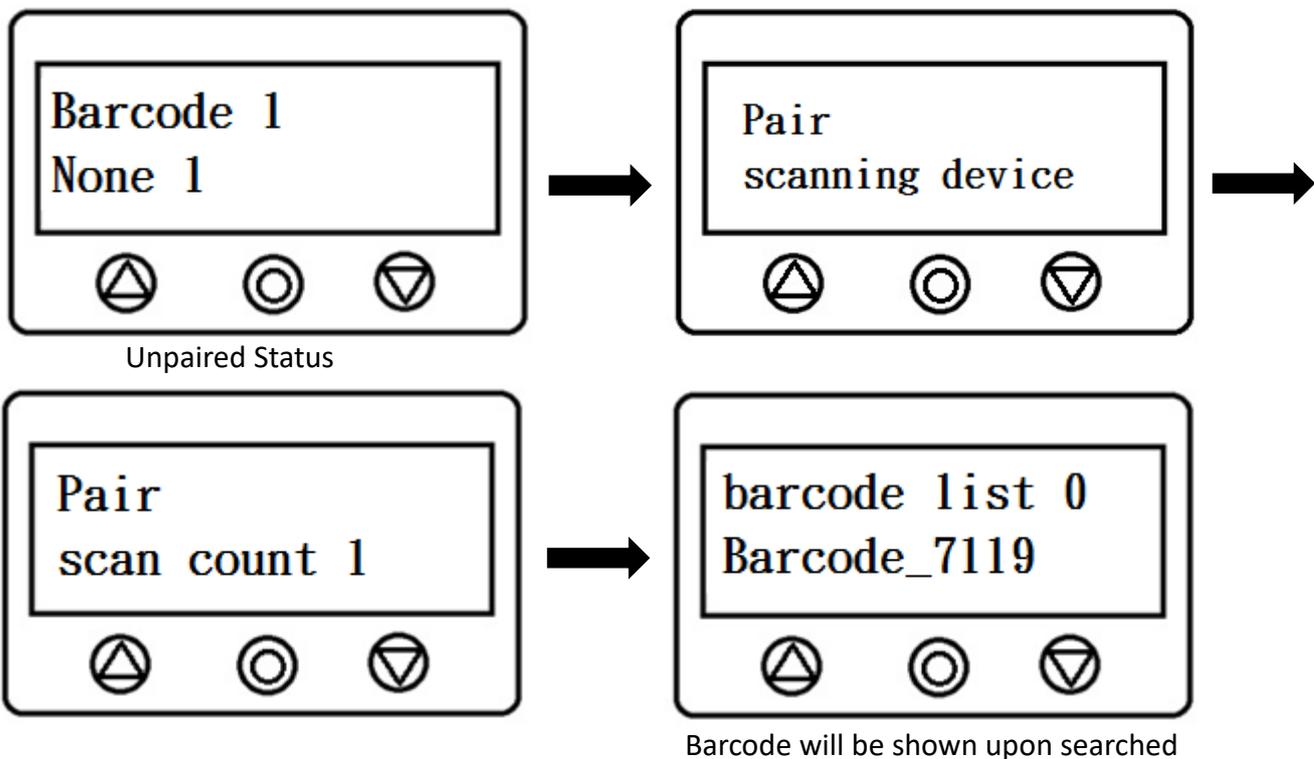
The socket selector tray number will be shown on the display upon paired.

To remove a paired tool, select the socket selector tray that need to be removed and press the middle button (o) briefly. The receiver will then remove the paired socket selector tray and allow for re-pairing

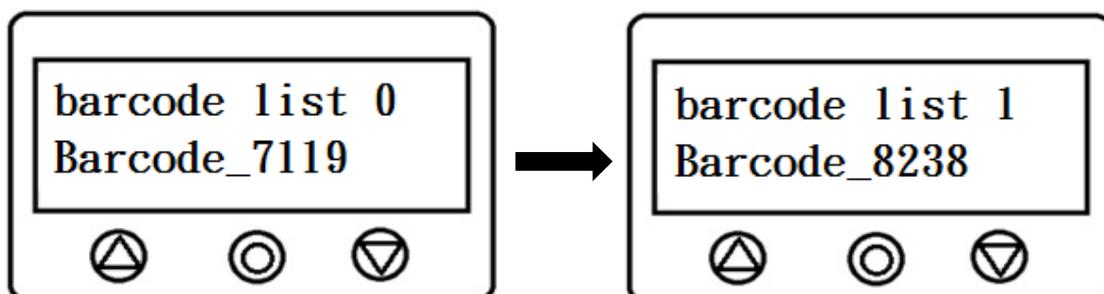


C. Barcode Scanner (this feature is enabled only with a paired tool)

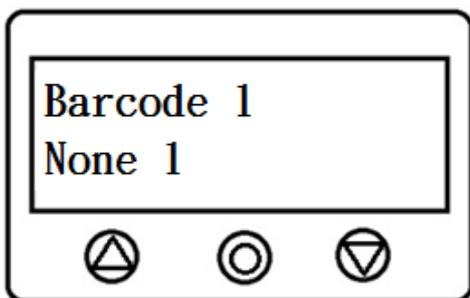
After pairing a tool, press the left (\triangle) button in the tool section, the screen will switch to "Screw 1". Press again the left (\triangle) button, the screen will then switched to Barcode 1, if there is no paired barcode, the light will be flashing. Briefly press the middle button (o), the receiver will start searching the compatible barcode scanner.



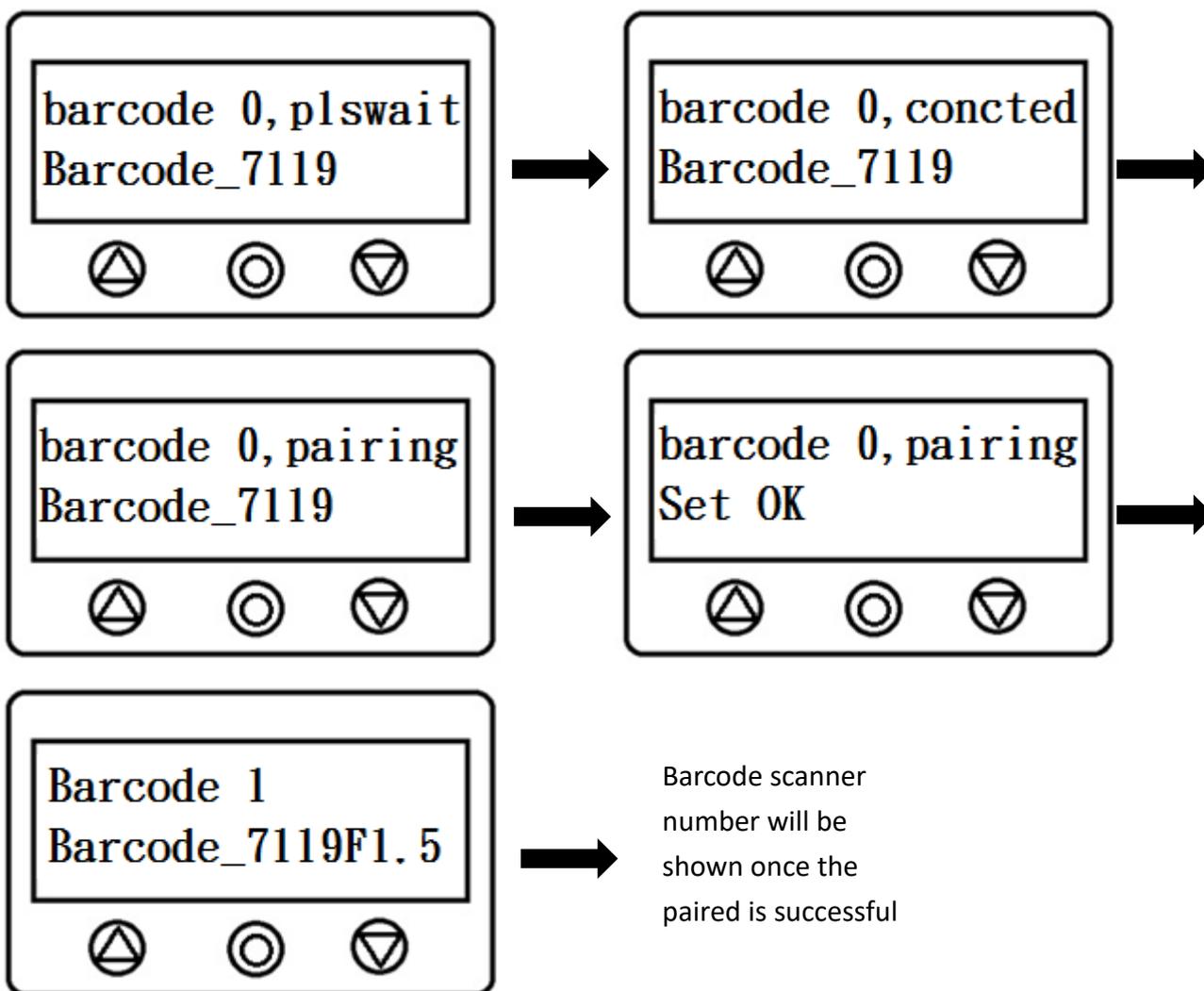
The screen will show the barcode number that ready for pairing, if the barcode scanner is not the one you want to pair with, press the right button (∇) briefly to select the next barcode scanner that on the searching list.



If you would like to re-search the barcode scanner, press the left button (△) to return to the searching mode



Once select and confirm the socket selector tray, press the middle button(○) to start the pairing



Once successfully paired, switch the key from “unlock” back to “lock” , the tool is now ready for operation.

5. Electrical Specifications

Input Voltage: AC100~240V 0.35A 50/60Hz

Wireless Transmission:

Wi-Fi Module 2.4GHz (802.11 b/g/n)

Wi-Fi Module 5.8GHz (802.11 a/ac/b/g/n)

6.Manufacture

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