



Multi-function ToolBox

MTB

Installation Guide

Use of Materials Limitations

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1. Introduction

1-1. Overview

MTB(Multi-function ToolBox) is a total solution for ICT product maintenance. The portable programmer- MTB, presents data in a large LCM makes product maintenance easily and fast. MTB is high convenience that could storage several firmwares at the same time. Powerful multi functions include programmer, changer operation, IrDA download and sensor calibration. . All-in-one design meets all requirements form market.

1-2. Feature

- Multi-function: Firmware download, Coin Changer operational setting and sensor calibration.
- Support Coin Changer operational settings, built-in 9 options of operation parameter, effective update function and read audit data
- Replaceable battery and power saving design. (use 4 AA batteries (not included in shipment))
- Built-in memory and Micro-SD Card slot for large data storage.
- High convenience: storage several firmwares at one time.
- One multi-purpose cable for different ICT products.
- Large screen to show information.
- Friendly user interface .
- Easy to carry.

2. Specification

Power Consumption

Standby	6V, 100mA, 0.6W
---------	-----------------

Operation	6V, 250mA, 1.5W
-----------	-----------------

Maximum	6V, 350mA, 2.1W
---------	-----------------

Operation environment

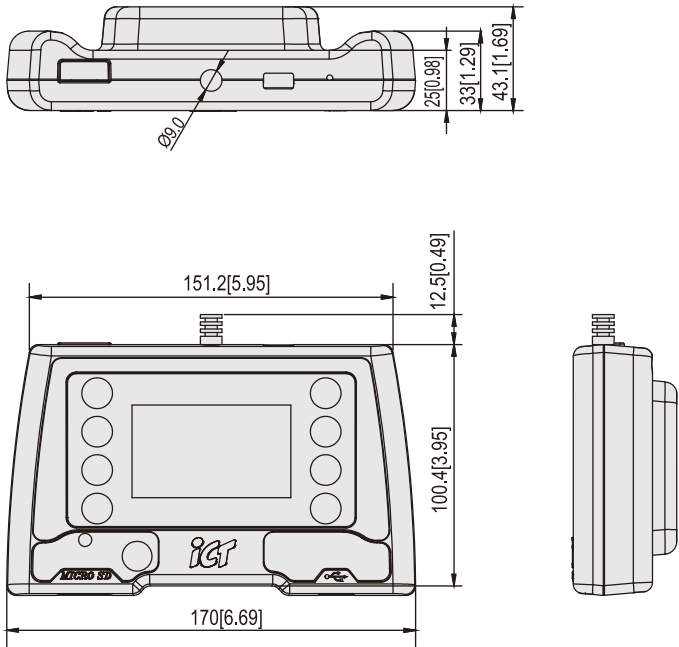
Operation Temperature	-5~50°C
-----------------------	---------

Storage Temperature	-20~70°C
---------------------	----------

Humidity	85% (no condensation)
----------	-----------------------

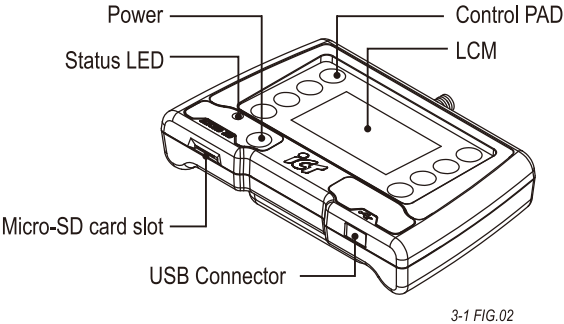
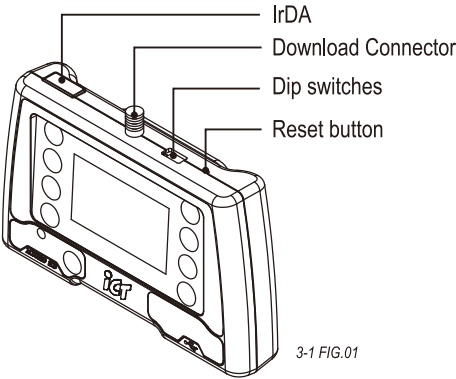
Weight	Approx. 288.5g
--------	----------------

3. Dimension

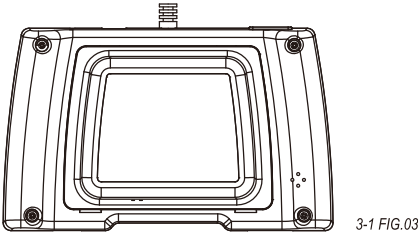


Unit:mm[inch]
3 FIG.01

3-1. Components



The reverse side



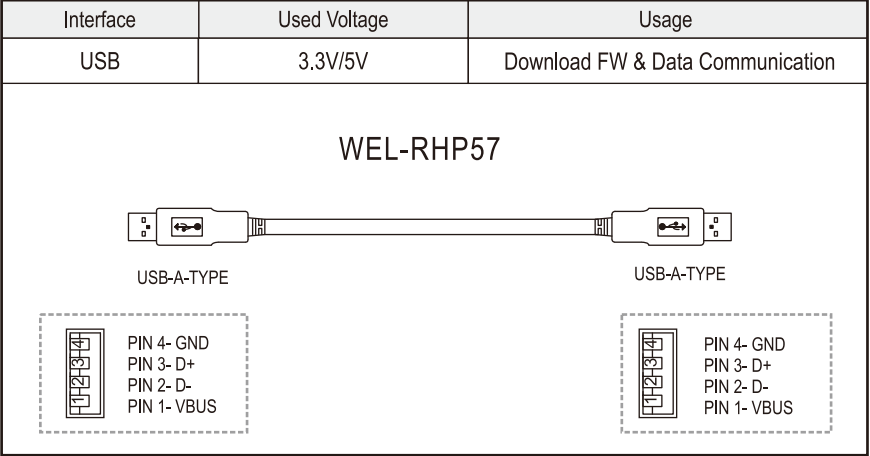
4. Installation

4-1. Harnesses Application

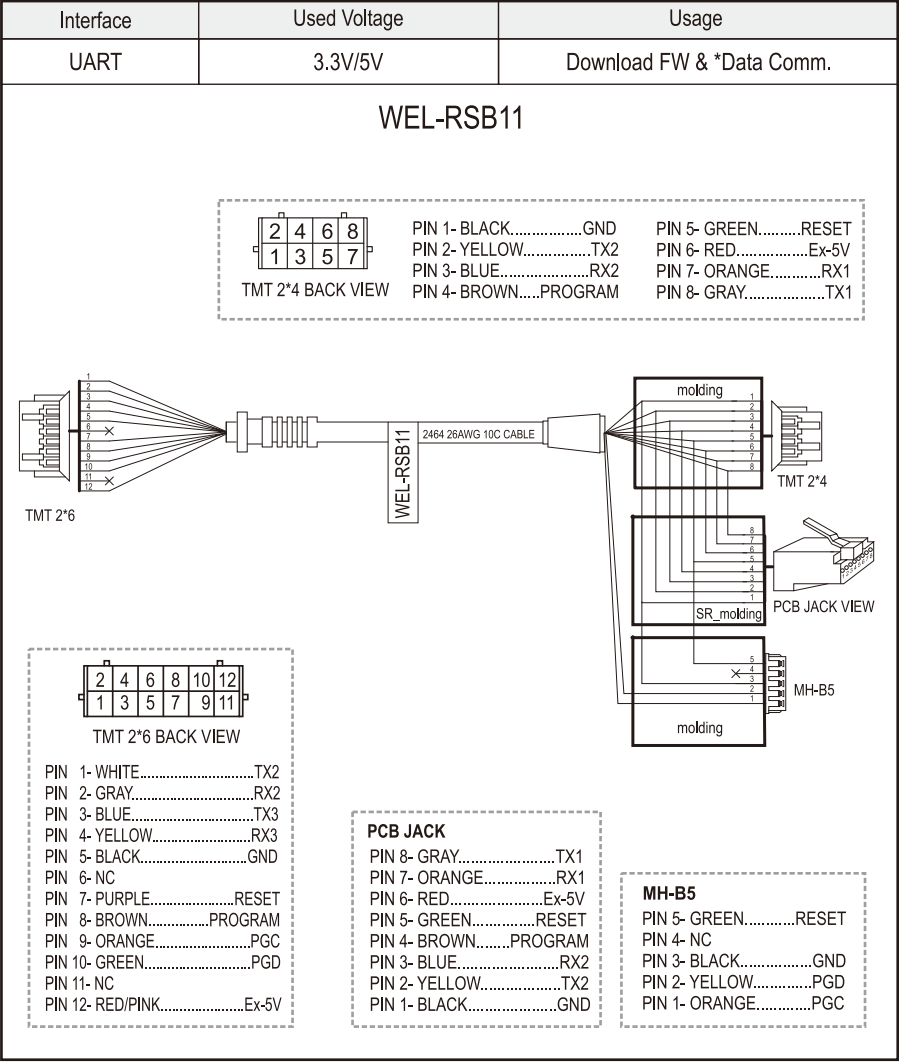
4-1 TABLE.01

Model	Usage	Harnesses	Page
Bill Acceptor: A / V series, BR2300, BS7, E77, Envy series, K77, L series, LV77 series, LX7, NK series, NBA , NE77, P series, PA7, PL77, S series, S7ER, S7A2, TAO Light, TAO-A/V, V7E, V77E, V7P, XBA, X7P. Coin Changer: CC6100 CA: UCA, SCA. Others: CVD, CSD, GP58 CR/CA, Mini hopper, DCM5.	Data Communication	WEL-RHP57	6
	Download FW & Data Communication	WEL-RSB11	7
XBA	Download FW & Data Communication	WEL-RHP57	6

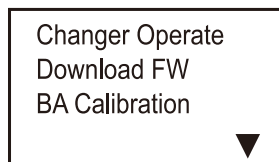
4-1 FIG.01



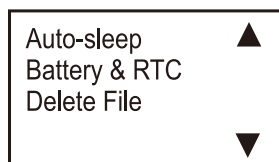
4-1 FIG.02



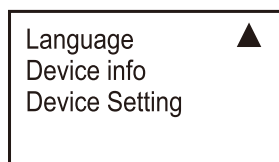
4-2. Getting started (SW1 OFF)



Step 1.
Press ON/ OFF button to wake up MTB and then Status LED turns on.



Step 2.
Press “▲” “▼” to switch pages of Main menu.



Step 3.

Choose one function that you need. Please refer Chapter 3~7 for more function detail.

Changer Operate: Set up Coin Changer operation contents.

Download FW : Download ICT products' firmware as well IrDADownload.

BA Calibration : Calibration devices' sensor.

Auto-sleep : Set MTB interval time to turn sleep mode.(5 or 10 minutes)

Battery & RTC : Check the remaining battery capacity as well set RTC (date & time).

Delete File : Deleted program files SD Card.

Language : Select Country Language.

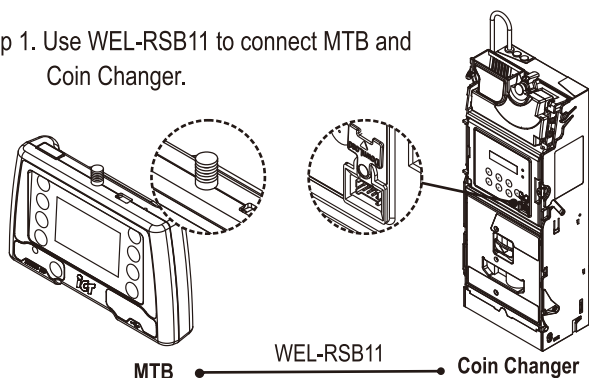
Device Info : Read machine program version.

Device Setting Passive mode.

5. Coin Changer operation setting

5-1. Connection

Step 1. Use WEL-RSB11 to connect MTB and Coin Changer.



Changer Operate
Download FW
BA Calibration



Step 2.
Press "**Changer operate**" on the page of Main menu.

5-2. Parameter into Coin changer Select Parameter

Parameter
Read Audit Data

Back

Parameter
file=>Changer
Changer => File
Back

File => changer:
The parameters set Changer.

Changer =>File:
The parameters stored Changer.

5-3. Read coin changer's audit data(EVA DTS)

Read AuditData
By IrDA
By Cable
Back

Step 1.
Select "**Read Audit Data**".

By
Clean After Read
Read Only
Back

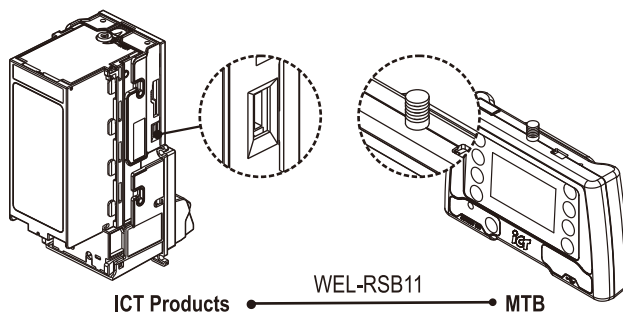
Step 2.
Select transmission.

Step 3.
Choose read-only or read Clear.

6. Download firmware for ICT products

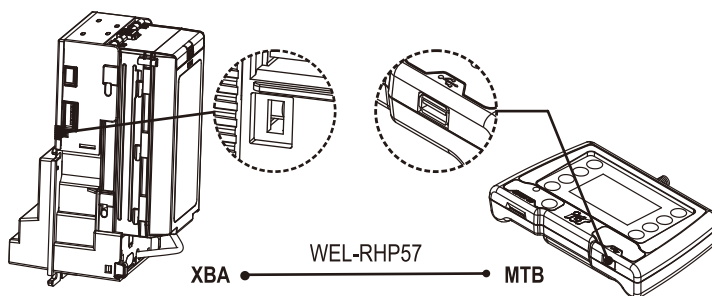
6-1. Connection BA/CA

6-1-1. Use **WEL-RSB11** to connect MTB and ICT products
(BA/CA etc..)



6-1-2. Use **WEL-RHP57** to connect MTB and XBA.

Please refer to 6-3 Steps for XBA download.



6-2. Instruction

Changer Operate
Download FW
BA Calibration



Step 1.
Press "**Download FW**" on pages
of Main menu.

BA
CVD
Coin Changer
Back



Step 2.
Select one Model Name to start
download.

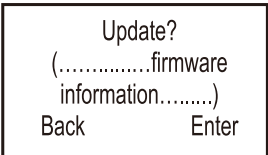
6-3. Steps for XBA download and DIP switches setting



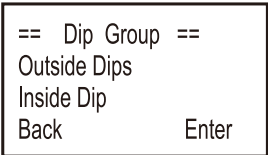
Step 1.
Use WEL-RHP57 to connect MTB and XBA.
Press **"Download FW"** on pages of Main menu.



Step 2.
Select **"BA"** and then press **"XBA"**.



Step 3.
Press **"Enter"** to start downloading.
Press **"Back"** to return the prior page.



Step 4.
Press **"Outside Dips"** to set up XBA outside dips.
Press **"Inside Dips"** to set up XBA inside dips. If no necessary to set up XBA dip switches, please press **"Enter"** to download firmware directly.

Outside Dips	
1. OFF	2.ON
3. OFF	4.OFF
Back	

Step 5.

After entering "**Outside Dips**" or "**Inside Dips**", please press any dips that you want to revise. (ON or OFF)

Press "▼" to set up NO.5~NO.8 dips.

Press "**Back**" to return the prior page.

Update?	
(.....firmware information.....)	
Back	Enter

Step 6.

Press "**Enter**" to start download.

Check Set Dip?	
NO	YES

Step 7.

Press "**YES**" to save dip setting into XBA.

Press "**NO**" not to save dip setting into XBA.

(...Firmware information...)	
Write FW	OK
Verify FW	OK
Confirm	

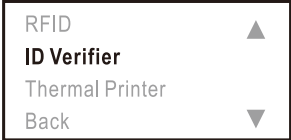
Step 8.

Download successfully and press "**Confirm**" back to prior page.

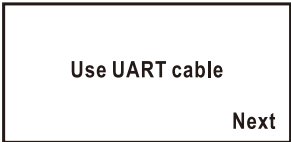
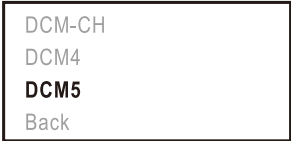
Download fail shown as below:

(...Firmware information...)	
Write FW	
Download Fail	
Confirm	

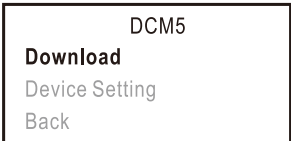
6-4. Connection DCM5



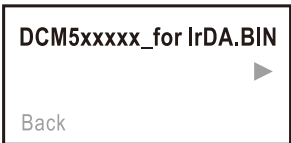
Step 1.
Select "**ID Verifier**" and
then press "**DCM5**".



Step 2.
Use UART cable.



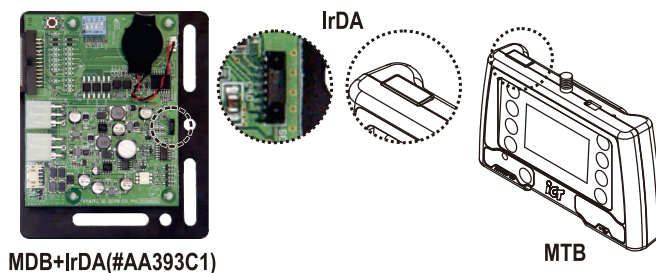
Step 3.
Go to Download (IrDA).



Step 4.
Select the updated firmware.
Prepare to update the DCM5.

Step 5.

To update the DCM5 firmware via IrDA, aim the DCM5 IrDA at MTB IrDA and keep them close to each other during the update.



5.1.

DCM5DS2008XXXXXX

Back

5.2.

Update ?

DCM5DS2008XXXXXX

UN0A(VXX.XX_0A8F)

Back

Enter

5.3.

DCM5DS2008XXXXXX

File ==> Flash

00%

5.4.

DCM5DS2008XXXXXX

Write FW.....

68%

5.5.

DCM5DS2008XXXXXX

Write FW.....OK

100%

5.6.

DCM5

Download

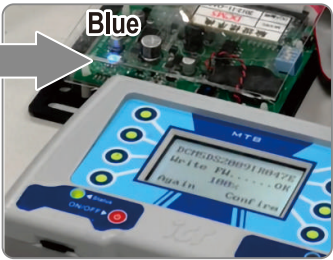
Device Setting

Back

Step 6.
Align the DCM5 IrDA port with the MTB IrDA port as shown in the picture then press Enter. Once the progress reaches 100%, wait until the DCM5 interface board LED changes from green to blue and completely turns off.

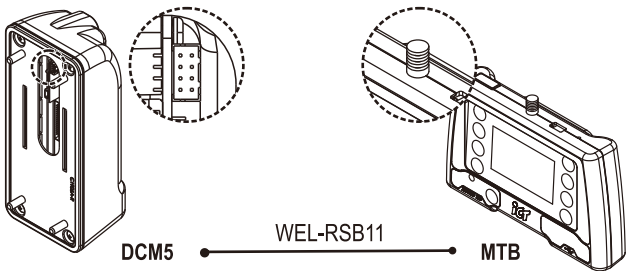


7-1 FIG.01



7-1 FIG.01-1

Step 7.
Check the updated firmware by MTB UART connector.



7.1.

ICT_Device_Operation
MTB_setting



7.2.

RFID
ID Verifier
Thermal Printer
Back

7.3.

DCM-CH
DCM4
DCM5
Back



7.4.

Use UART cable
Next

7.5.

DCM5
Download
Device Setting
Back



7.6.

=== DCM5 ===
<Connecting>
Press Any Button

7.7.

=== DCM5 ===
FW version
DCM5 Setting
RTC Resd



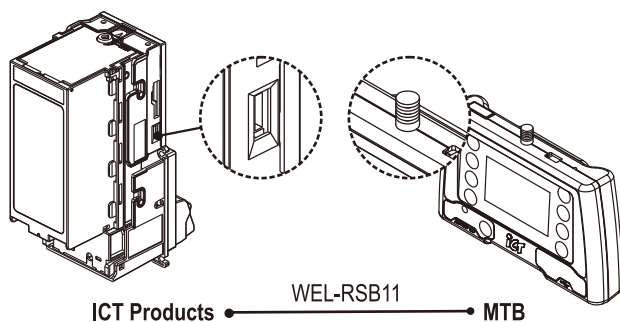
7.8.

=== DCM5 ===
DCM5DS2008
XXXXXXXXXX
OK

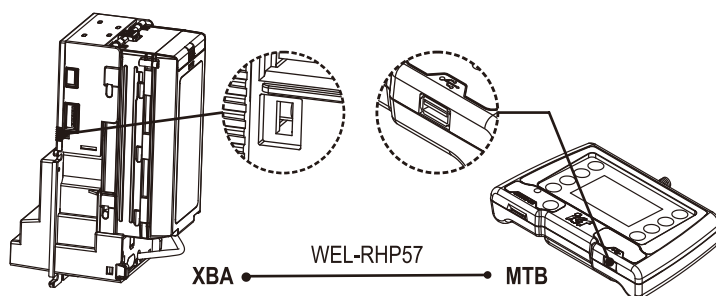
7. Sensor Calibration

7-1. Connection

7-1-1. Use **WEL-RSB11** to connect MTB and ICT products(BA/CA etc..)



7-1-2. Use **WEL-RHP57** to connect MTB and XBA.

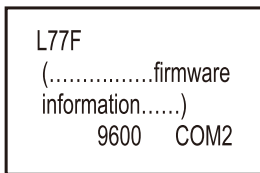


7-2. Instruction



Step 1.

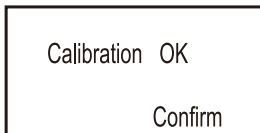
Press **"BA Calibration"** on pages of Main menu.



Step 2.

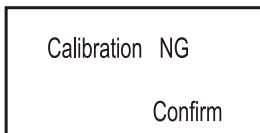
MTB detect device's model name and firmware information.

MTB couldn't support sensor calibration for some products that might show as below:

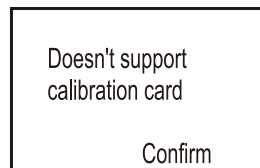


Step 3.

Please insert calibration card into device.
Sensor calibration is successful as well
resets device auto matically.



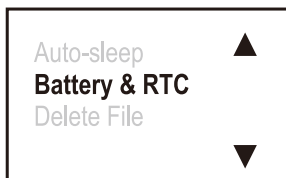
Sensor calibration is fail.



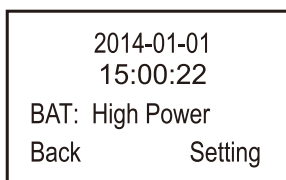
Step4.

Press **"Confirm"** to return the prior page.

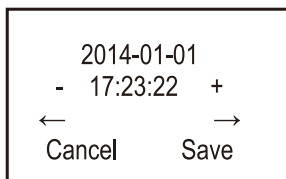
8. Battery Capacity & RTC (Battery & RTC)



Step 1.
Press "**Battery & RTC**" on Main menu.

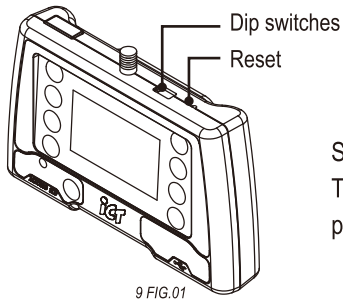


Step 2.
Press "**Set**" to set RTC date and time.



Step 3.
Press "←" "→" to shift configured digit.
Press "+" , "-" to plus/minus number.
Press "**Save**" to save setting.

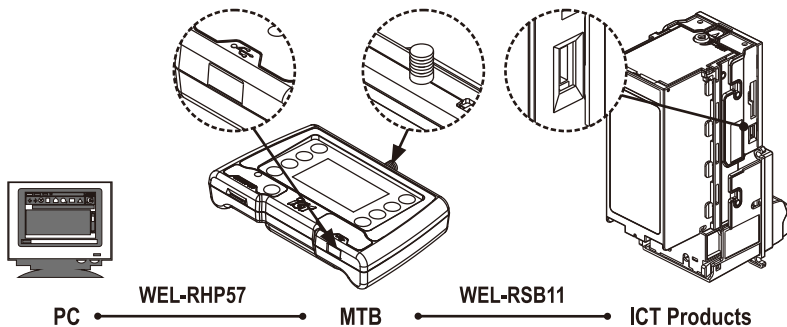
9. Connect to Device's PC tool



Step 1.
Turn SW1 to ON status and
press **"Reset"**.

Step 2. Please install USB Driver.

Step 3. Connect device, MTB and PC.
(Use WEL-RHP57 cable to connect MTB and PC)



Step 4. Open device's tool and select visual comport.

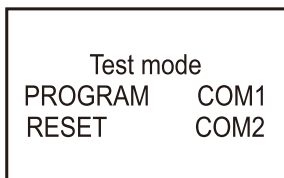
Step 5. Download device's firmware.

Press **"COM1"** and **"PROGRAM"** to download device's firmware.

If PC tool shows download fail message, please press **"COM2"** & **"PROGRAM"** and try it again.

Step 6. Reset device

Press " * **COM1**" and "**RESET**". If device doesn't reset, please press "**COM2**" & "**RESET**" and try it again.



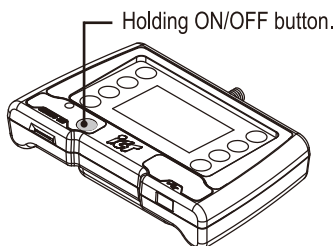
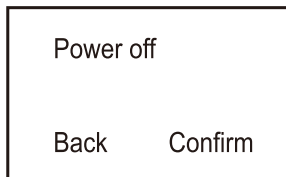
Step 7. Turn SW1 to OFF status and press "**Reset**" to back the Main Menu.

10. Download MTB's firmware by pen driver

Step 1.

Please turn off MTB first.

Press "**Confirm**".

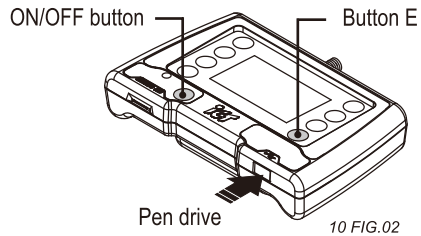


10 FIG.01

Step 2.

Plug in Pen drive.

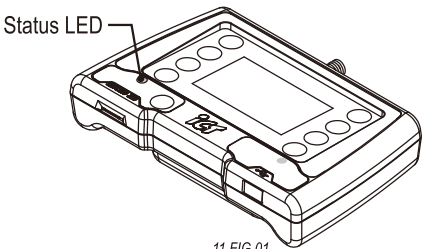
MTB's firmware in pen driver.
Keep pressing button **"E"**, then
press **"ON/OFF"** button in the
same time.



Update
'update.bin' in
pen driver
NO to MTB? YES

Press **"YES"** to download
MTB's firmware.

11. Troubleshooting



11 FIG.01

11 TABLE.01

Status LED indicator	Description
Green	Power on
Blink red	Battery low
Orange	Download in process
Turns back to Green	Download OK
Red	Download NG



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