Multi-function ToolBox

MTB Installation Guide

International Currency Technologies Corp.

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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

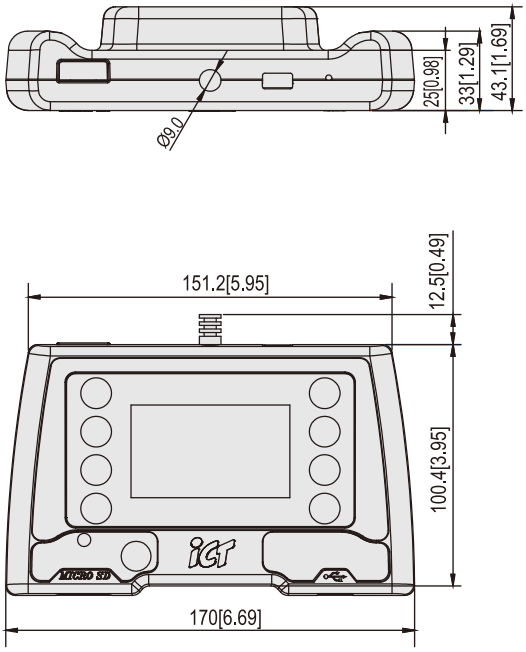
Power Consumption

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

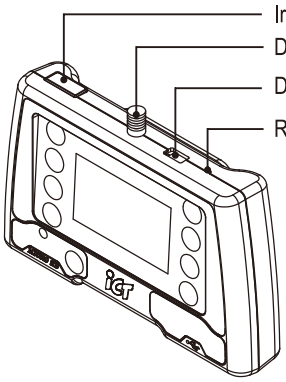
3. Dimension



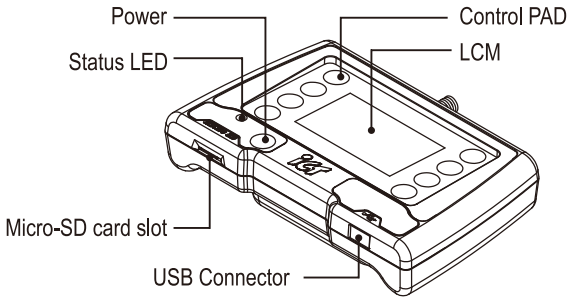
Unit:mm[inch]

3 FIG.01

3-1. Components

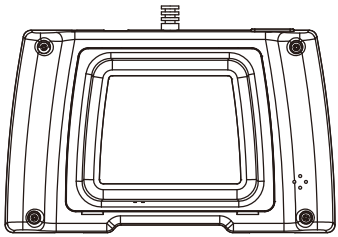


3-1 FIG.01



3-1 FIG.02

The reverse side



3-1 FIG.03

4. Installation

4-1. Harnesses Application

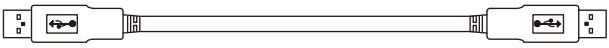
4-1 TABLE.01

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.	Data Communication	WEL-RHP57	6
Coin Changer: CC6100 **CA:** UCA, SCA. **Others:** CVD, CSD, GP58 CR/CA, Mini hopper.	Download FW & Data Communication	WEL-RSB11	7
XBA	Download FW & Data Communication	WEL-RHP57	6

4-1 FIG.01

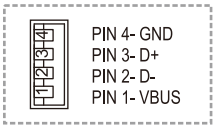
Interface	Used Voltage	Usage
USB	3.3V/5V	Download FW & Data Communication

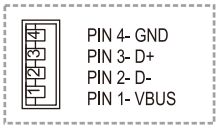
WEL-RHP57



USB-A-TYPE

USB-A-TYPE

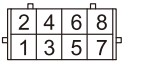




4-1 FIG.02

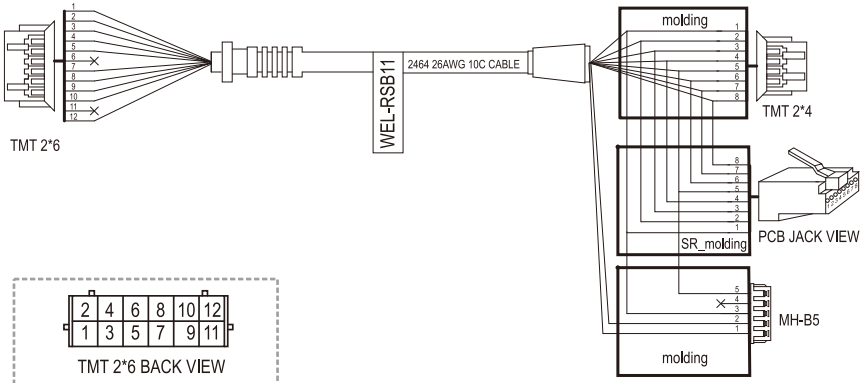
Interface	Used Voltage	Usage
UART	3.3V/5V	Download FW & *Data Comm.

WEL-RSB11



TMT 2*4 BACK VIEW

PIN 1- BLACK.....GND
PIN 2- YELLOW.....TX2
PIN 3- BLUE.....RX2
PIN 4- BROWN.....PROGRAM
PIN 5- GREEN.....RESET
PIN 6- RED.....Ex-5V
PIN 7- ORANGE.....RX1
PIN 8- GRAY.....TX1



TMT 2*6 BACK VIEW

PIN 1- WHITE.....TX2
PIN 2- GRAY.....RX2
PIN 3- BLUE.....TX3
PIN 4- YELLOW.....RX3
PIN 5- BLACK.....GND
PIN 6- NC
PIN 7- PURPLE.....RESET
PIN 8- BROWN.....PROGRAM
PIN 9- ORANGE.....PGC
PIN 10- GREEN.....PGD
PIN 11- NC
PIN 12- RED/PINK.....Ex-5V

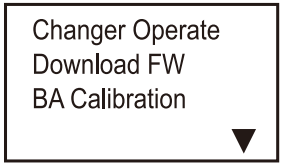
PCB JACK

PIN 8- GRAY.....TX1
PIN 7- ORANGE.....RX1
PIN 6- RED.....Ex-5V
PIN 5- GREEN.....RESET
PIN 4- BROWN.....PROGRAM
PIN 3- BLUE.....RX2
PIN 2- YELLOW.....TX2
PIN 1- BLACK.....GND

MH-B5

PIN 5- GREEN.....RESET
PIN 4- NC
PIN 3- BLACK.....GND
PIN 2- YELLOW.....PGD
PIN 1- ORANGE.....PGC

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.

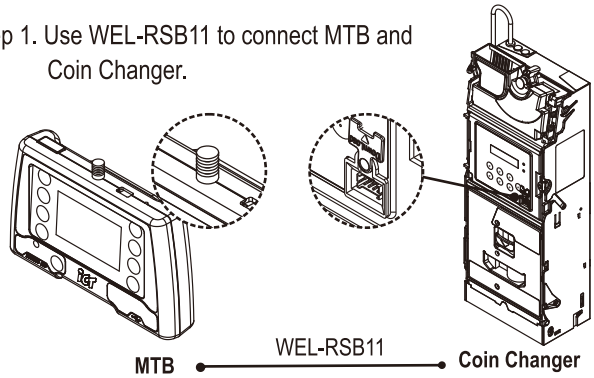
Device Info : Read machine program version.

Device Setting Passive mode.

5. Coin Changer operation setting

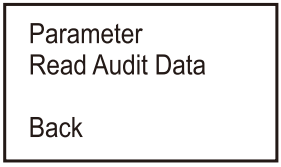
5-1. Connection

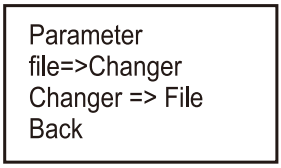
Step 1. Use WEL-RSB11 to connect MTB and Coin Changer.



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

5-2. Parameter into Coin changer Select Parameter

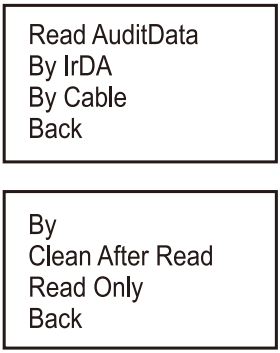




File => changer:
The parameters set Changer.

Changer =>File:
The parameters stored Changer.

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



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

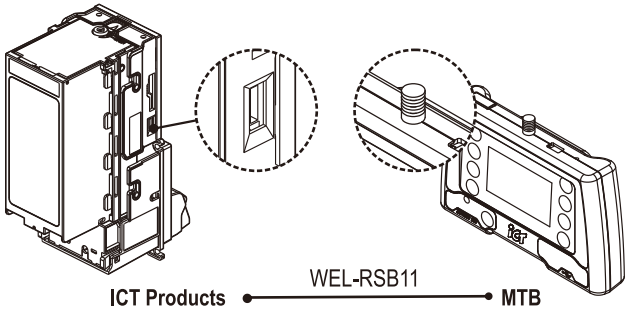
Step 2.
Select transmission.

Step 3.
Choose read-only or read Clear.

6. Download firmware for ICT products

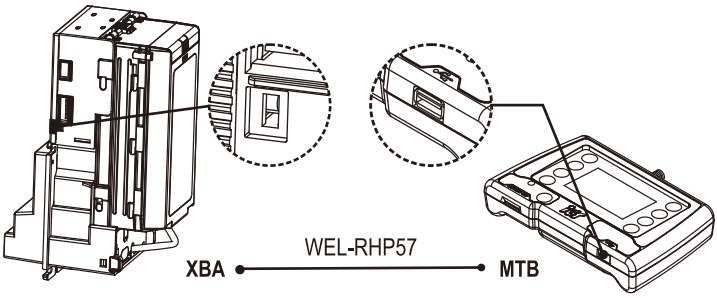
6-1. Connection

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



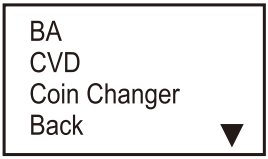
6-1-2. Use **WEL-RHP57** to connect MTB and XBA.

Please refer to 6-3 Steps for XBA download.



6-2. Instruction

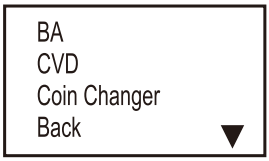
Step 1.
Press **"Download FW"** on pages of Main menu.

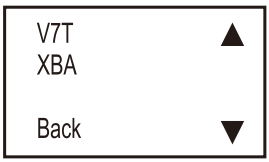


Step 2.
Select one Model Name to start download.

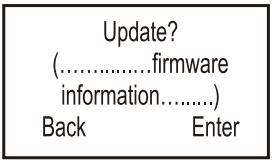
6-3. Steps for XBA download and DIP switches setting

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

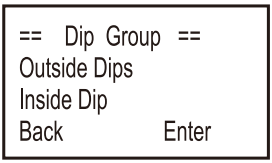




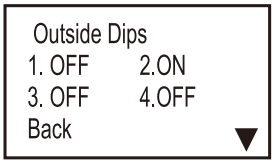
Step 2.
Select **"BA"** and then press **"XBA"**.



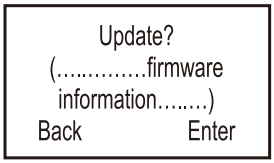
Step 3.
Press **"Enter"** to start downloading.
Press **"Back"** to return the prior page.



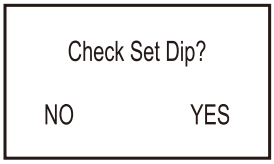
Step 4.
Press **"Outside Dips"** to set up XBA outside dips.
Press **"Inside Dips"** to set up XBA inside dips. If no necessary to set up XBA dip switches, please press **"Enter"** to download firmware directly.



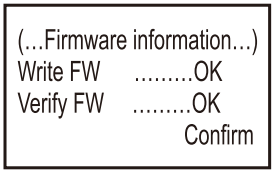
Step 5.
After entering **"Outside Dips"** or **"Inside Dips"**, please press any dips that you want to revise. (ON or OFF)
Press " ▼ " to set up NO.5~NO.8 dips.
Press **"Back"** to return the prior page.



Step 6.
Press **"Enter"** to start download.



Step 7.
Press **"YES"** to save dip setting into XBA.
Press **"NO"** not to save dip setting into XBA.



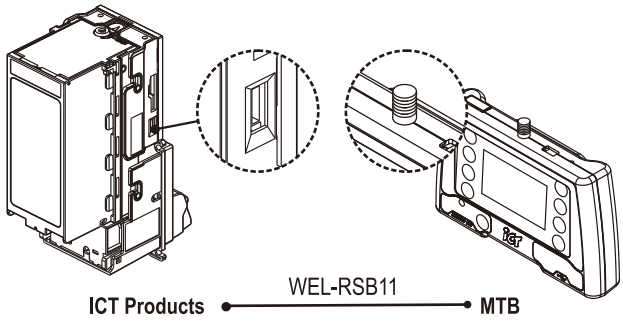
Step 8.
Download successfully and press**"Confirm"** back to prior page.

Download fail shown as below:

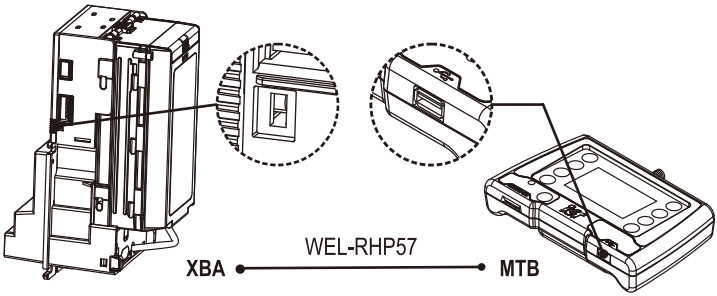
7. Sensor Calibration

7-1. Connection

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

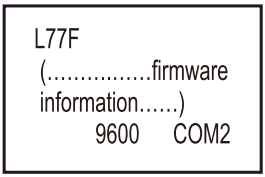


7-1-2. Use **WEL-RHP57** to connect MTB and XBA.



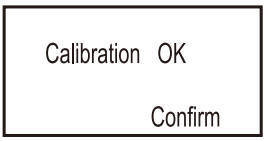
7-2. Instruction

Step 1.
Press **"BA Calibration"** on pages of Main menu.

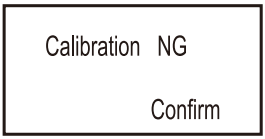


Step 2.
MTB detect device's model name and firmware information.

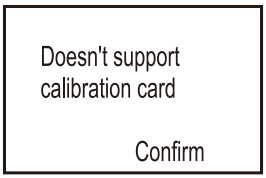
MTB couldn't support sensor calibration for some products that might show as below:



Step 3.
Please insert calibration card into device. Sensor calibration is successful as well resets device auto matically.

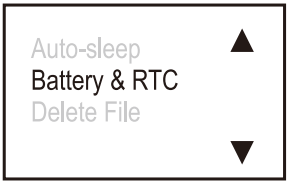


Sensor calibration is fail.

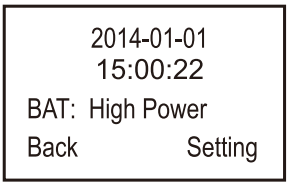


Step4.
Press **"Confirm"** to return the prior page.

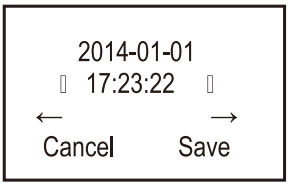
8. Battery Capacity & RTC (Battery & RTC)



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

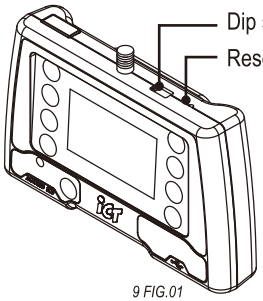


Step 2.
Press **"Set"** to set RTC date and time.



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

9. Connect to Device's PC tool

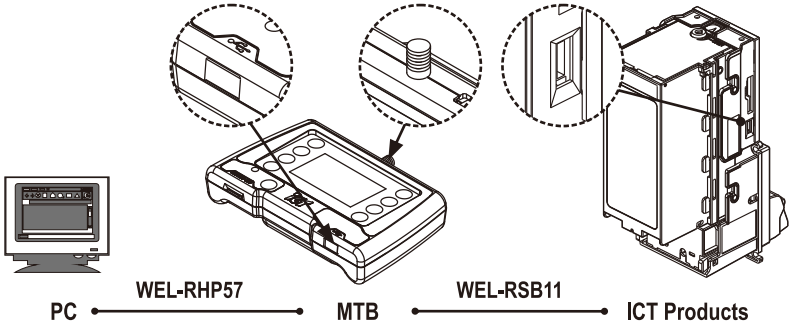


9 FIG.01

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)

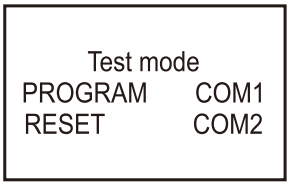


Step 4. Open device's tool and select visual comport.

Step 5. Download device's firmware.
Press **"COM1"** and **"PROGRAM"** to download device's firmware.
If PC tool shows download fail massage, 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.



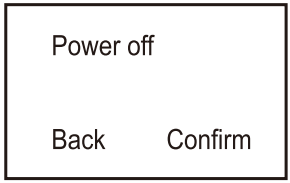
Step 7. Turn SW1 to OFF status and press **"Reset"** to back the Main Menu.

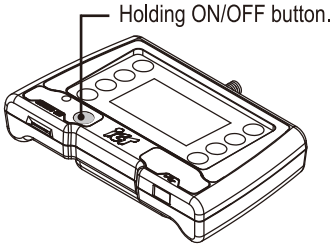
10. Download MTB's firmware by pen driver

Step 1.

Please turn off MTB first.

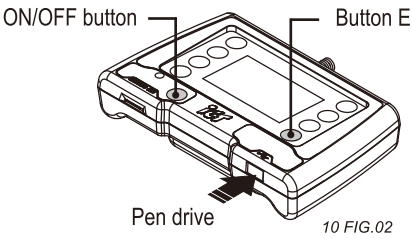
Press **"Confirm".**





10 FIG.01

Step 2.
Plug in Pen drive.



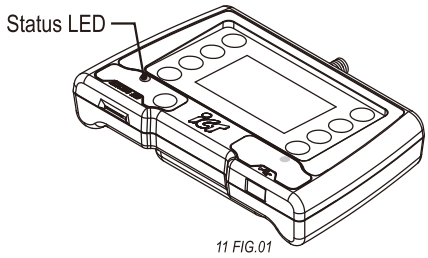
10 FIG.02

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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V.3.0 Part Number : H6732B-R