# A6 N6 S6 V6

# A7 N7 S7 V7

# B70UF B77UF B85UF

# U70$_{(px)}$ U77$_{(px)}$ U85  connection

## with   FP-001

## for Program Downloading
## and Calibration

*Amusement*

*Nisr*

*power Saving*

*Vending*

These connection also for A6 V6 A7 S7 V7

U_series UF_series Data Capturing

This flowchart is the overview from physical connection to program downloading then to calibration of U70 U77 U85 B70UF B77UF B85UF A6 N6 S6 V6 A7 N7 S7 V7.

These steps that are filled with yellow color are the subjects in this document.

**0
Start**

**1
P.2 ~ P.6
A6 N6 S6 V6
A7 N7 S7 V7 U70 U77 U85
B70UF B77UF B85UF
Physical connection to
FP-001 and PC**

New bin file
from ICT

**2
FP-001 switch to
L2 & Program Mode**

**3
Direct Program
Dowloading from PC
with
FW16 and FP-001**

See page. 12

No

**6
Bill Acceptor
calibration**

**5
FP-001 switch to
L2 & Normal Mode**

Yes

**4
Is download
successful?**

See page.21

No

**7
Is the calibration
successful?**

Yes

**8
A6 N6 S6 V6
A7 N7 S7 V7 U70 U77
U85 B70UF B77UF
B85UF new program
update finished.**

A6 V6 A7 S7 V7 U70
U77 U85 B70UF
B77UF B85UF
data capturing
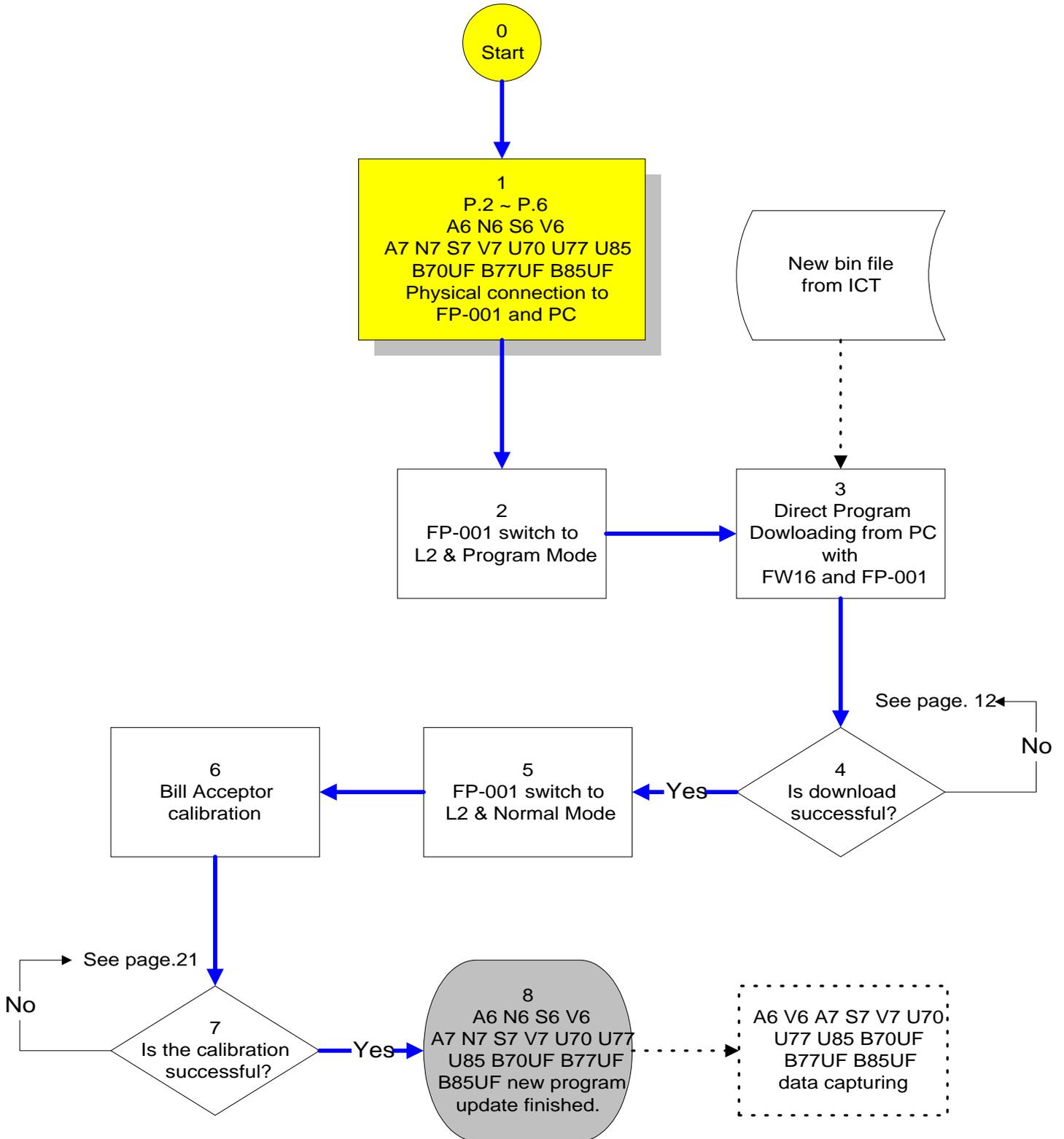
# 1. The physical connection for downloading   calibration and data capturing.

## 1.1   Download Board FP-001 (Top)   Harness WEL-M009 (Left)
WEL-7U03 (Middle) and RS232 cable WEL-087 (Right).

## 1.2 The location of the com port is at the back side of the PC.
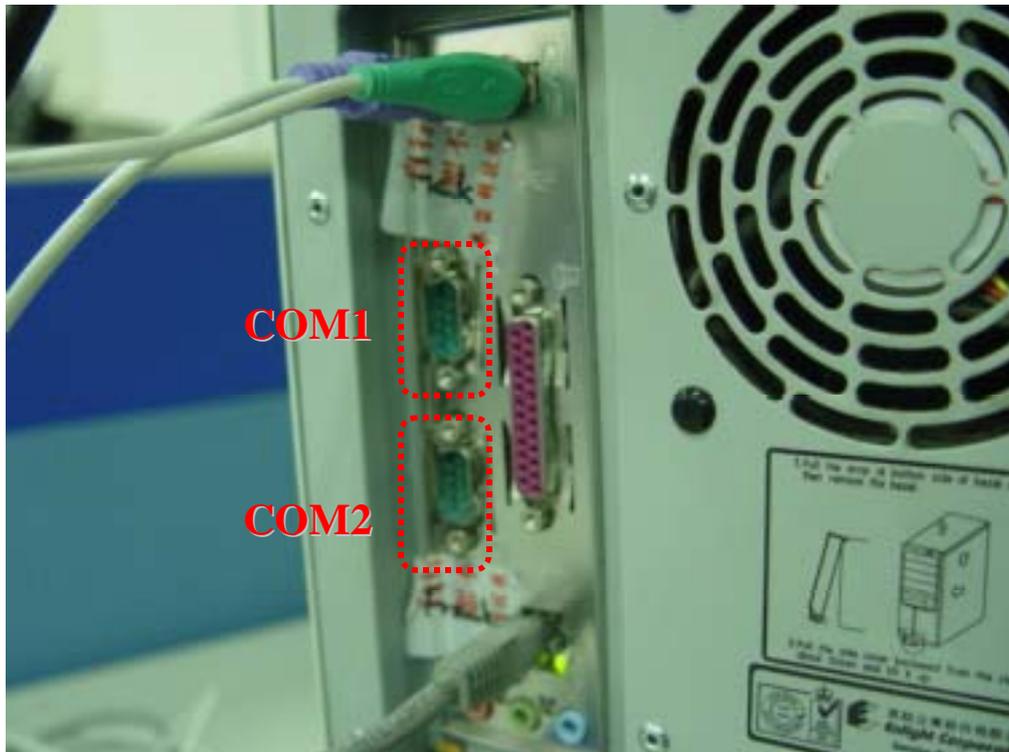


## 1.3 Plug the WEL-087 RS232 connector to com1 or com2 on PC
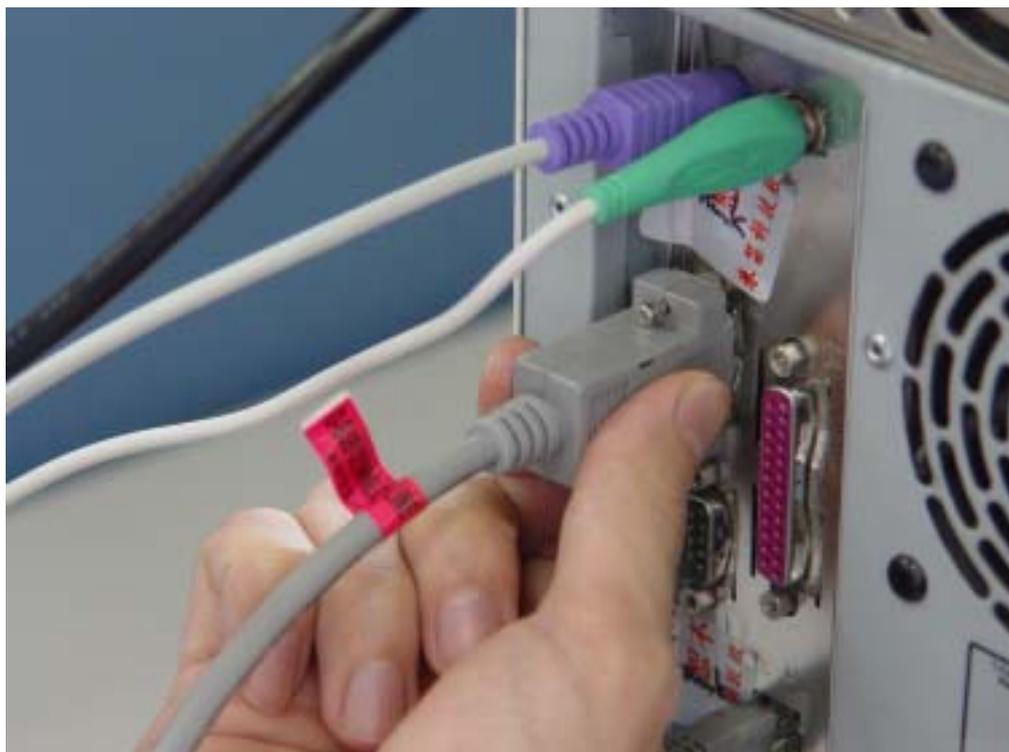
**1.4** Plug the other WEL-087 RS232 connector to Download Board FP-001.



**1.5 Plug the harness RJ45 connector to the Download Board FP-001.**

Harness WEL-M009 is for A6 N6 S6 V6 A7 N7 S7 V7.

Harness WEL-7U03 is for U70(px) U77(px) U85 B70UF B77UF B85UF.

1.6 Plug the WEL-M009 another RJ45 connector to the BA firmly.

　　For model A6 N6 S6 V6 A7 N7 S7 V7.



(1.6) Plug the WEL-7U03 another connector to the BA firmly.

　　For model U70(px) U77(px) U85 B70UF B77UF B85UF
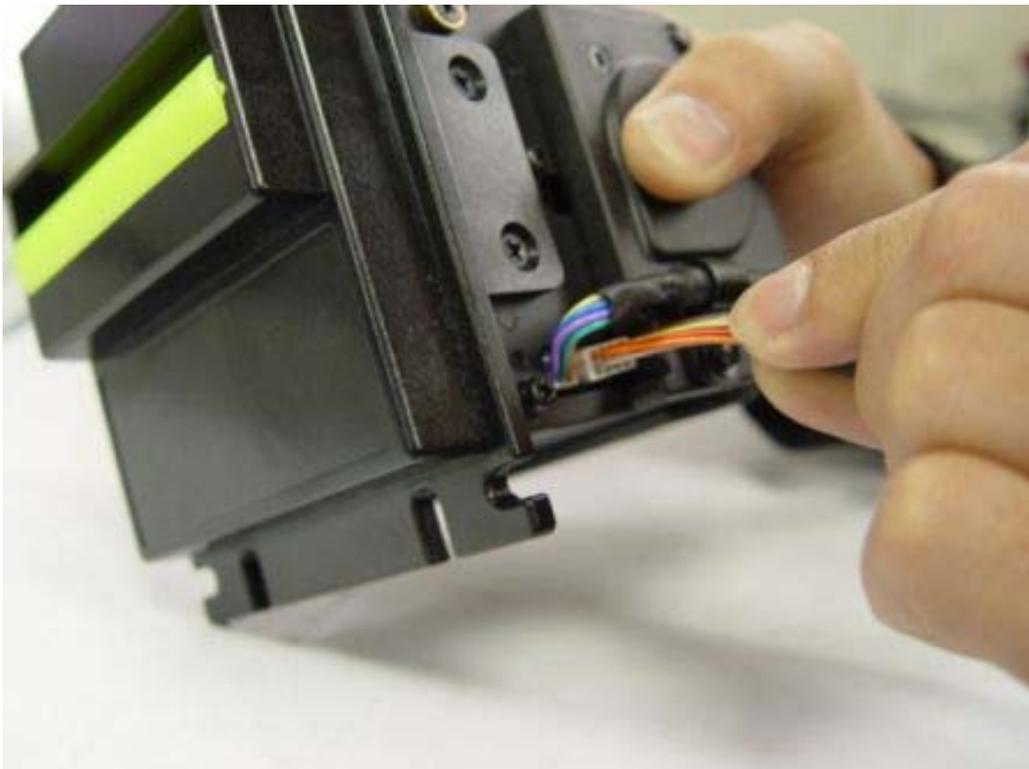
**The overview of the A6 N6 S6 V6 A7 N7 S7 V7 and FP-001 connection**



Connect to PC (COM Port)

Connect through RJ45 (Phone Jack)

**The overview of the U70(px) U77(px) U85 B70UF B77UF B85UF and FP-001 connection**
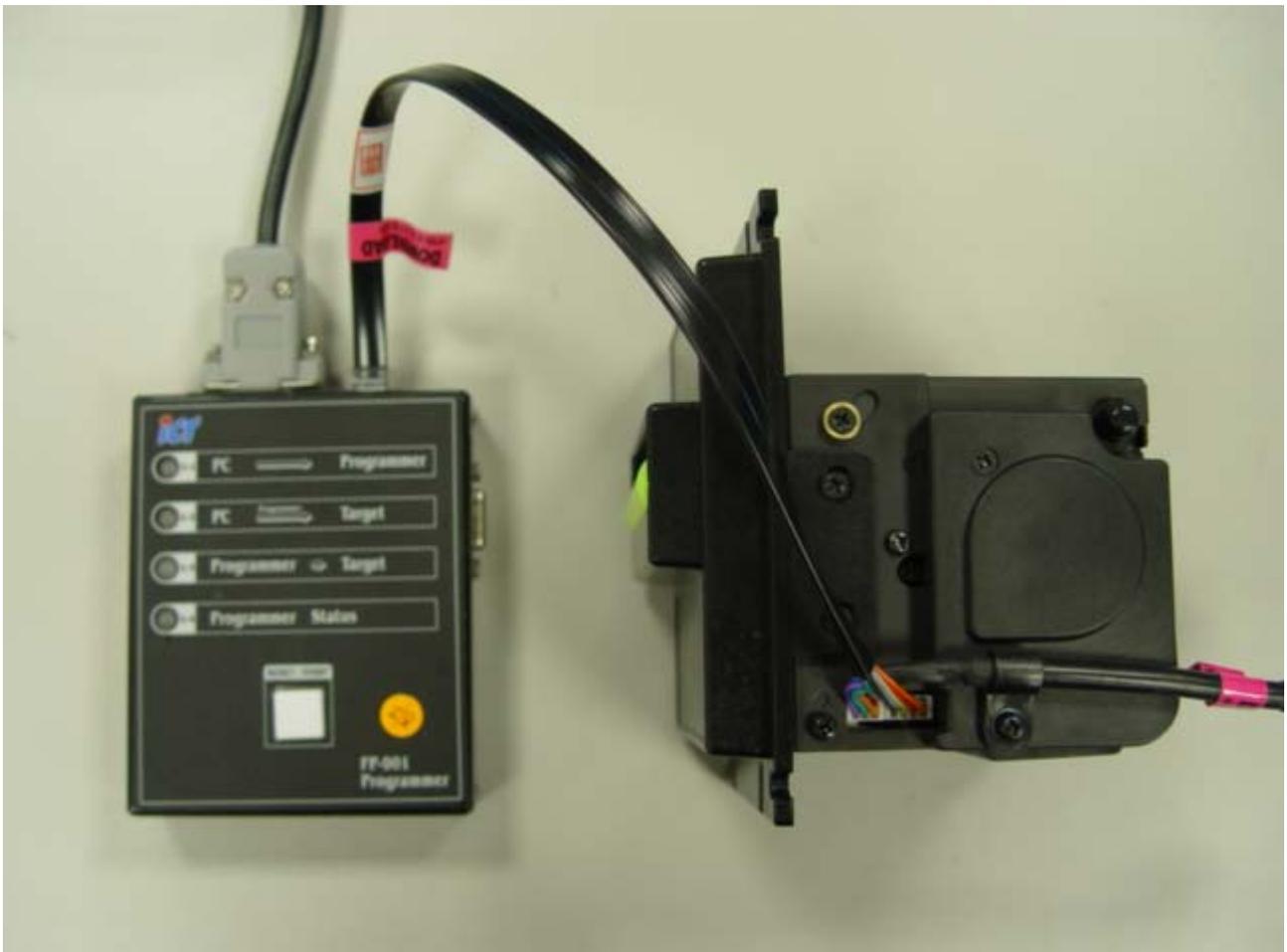
A6 N6 S6 V6

A7 N7 S7 V7

B70UF B77UF B85UF

U70$_{(px)}$ U77$_{(px)}$ U85

Direct Program Download

with FP-001 using FW16

*Amusement*

*Nisr*

*power Saving*

*Vending*

This flowchart is the overview from physical connection to program downloading then to calibration of A6 N6 S6 V6 A7 N7 S7 V7 B70UF B77UF B85UF U70 U77 U85.

These steps that are filled with yellow color are the subjects in this document.

```
                              ┌──────────┐
                              │    0     │
                              │  Start   │
                              └────┬─────┘
                                   │
                                   ▼
                    ┌──────────────────────────┐        ┌──────────────────┐
                    │            1             │        │                  │
                    │  A6 N6 S6 V6 A7 N7 S7 V7 │        │  New bin file    │
                    │  B70UF B77UF B85UF U70   │        │  from ICT        │
                    │  U77 U85 Physical        │        │                  │
                    │  connection to           │        └──────────────────┘
                    │  FP-001 and PC           │                 ┊
                    └────────────┬─────────────┘                 ┊
                                 │                               ┊
                                 ▼                               ▼
                    ┌──────────────────┐         ┌──────────────────────┐
                    │        2         │         │          3           │
                    │       P.10       │ ──────▶ │     P.11 ~ P.12       │
                    │  FP-001 switch to│         │   Direct Program      │
                    │  L2 & Program    │         │   Dowloading from PC  │
                    │  Mode            │         │   with                │
                    └──────────────────┘         │   FW16 and FP-001     │
                                                 └──────────┬───────────┘
                                                            │        See page. 12 ◀──┐
                                                            ▼                         │
   ┌──────────────┐   ┌──────────────────┐       ◇─────────────────◇            No   │
   │      6       │   │        5         │      /        4          \◀───────────────┘
   │  P.16 ~ P.20 │◀──│      P.16        │◀─Yes─│   Is download      │
   │  Bill Acceptor│  │  FP-001 switch to│      \   successful?      /
   │  calibration │   │  L2 & Normal Mode│       ◇─────────────────◇
   └──────┬───────┘   └──────────────────┘
          │
          │  See page.21
          ▼
   ◇──────────────◇       ┌────────────────────────┐     ┌──────────────────────┐
  /      7        \       │           8            │     │ A6 V6 A7 S7 V7 U70   │
 │     P.21       │─Yes─▶ │ A6 N6 S6 V6 A7 N7 S7 V7│┈┈┈▶│ U77 U85 B70UF        │
 │ Is the calib-  │       │ B70UF B77UF B85UF U70  │     │ B77UF B85UF          │
  \ ration        /       │ U77 U85 new program    │     │ data capturing       │
   ◇──────────────◇       │ update finished.       │     └──────────────────────┘
       No                 └────────────────────────┘
```

9

# 2.Switch to L2 & Program mode

2.1 Set FP-001 dipswitch to L2 and Program mode.

You must do this setting before power on when doing the S6 and S7.



2.2 Press the Reset/Start Button



**Attention**

S7 can also be set the eighth dip of DipSW1[1.] to ON & third and fourth dips of DipSW2[2.] to OFF.

This setting can disable the S7's sleeping function and let it alive without MDB communication.

1. DipSW1 The dipswitch setting for the bank of eight dipswitches on the side of the bill acceptor.
2. DipSW2 The dipswitch settings for the bank of four dipswitches on the side of the bill acceptor.

# 3. Direct program downloading

3.1 Launch the program  FW16

Select CPU MB90F549　Speed 16MHz and Com port.

The com port varies according to the connection on the PC.
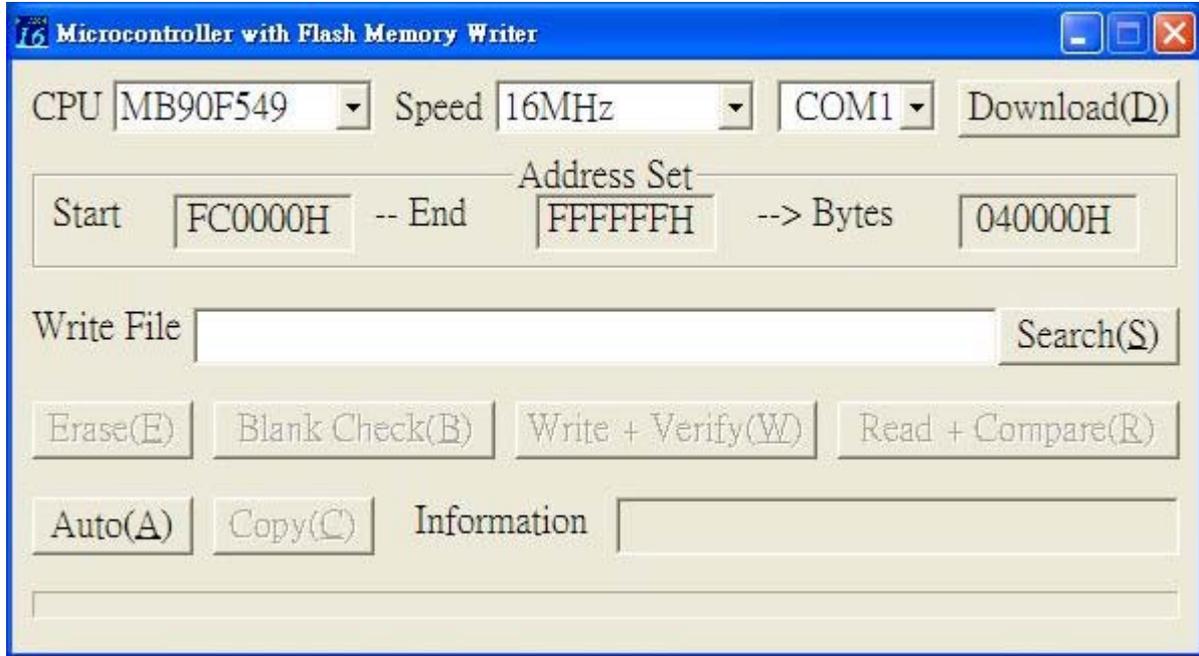


3.2 Drag the new firmware (bin file) into FW16 window.
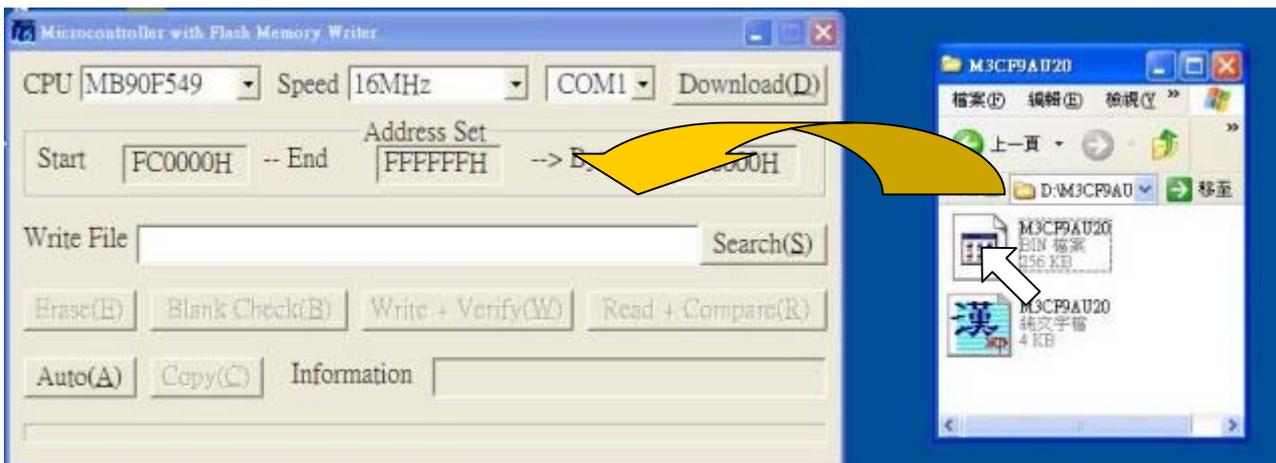
3.3 Click the Auto(A) button.
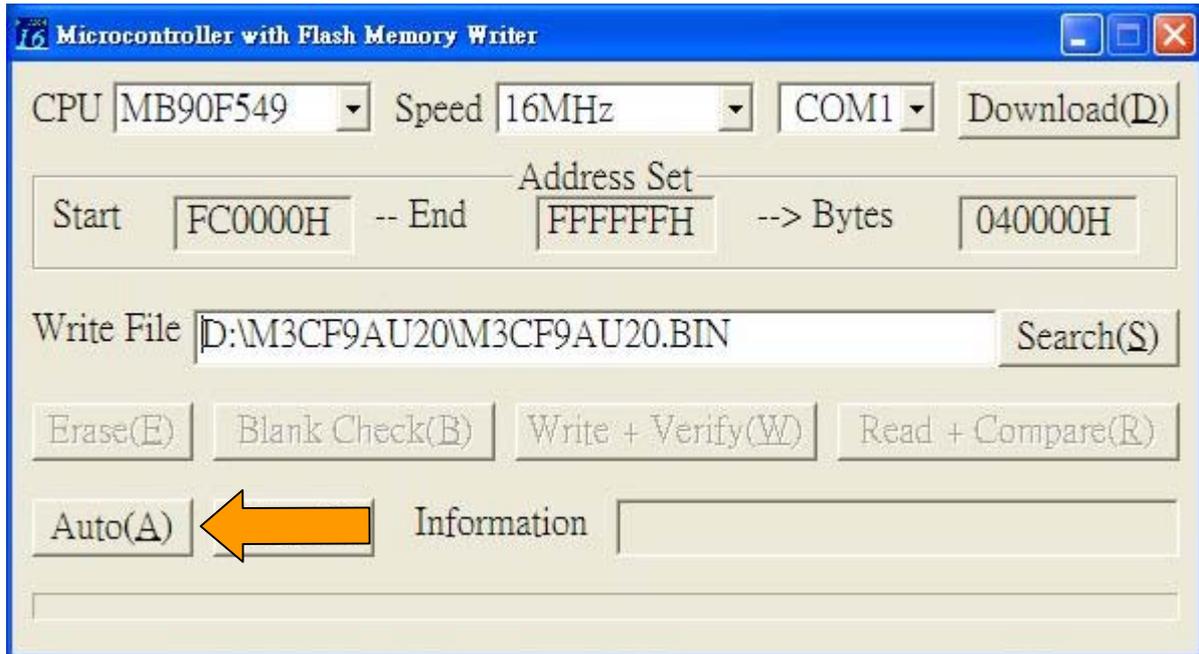


3.4 The program will do
the Erase
Blank Check
Write and verify
Read and compare    automatically.
And then show the OK message box when
the downloading is successful.
Finally, close the program FW16.



# 4. If the downloading procedure is failed, please check

a. Is there any other program occupying the same com port.
b. The harness connection is ok!!
c. Press the RESET/START button then start from step 3.3 to download again.

A6 N6 S6 V6

A7 N7 S7 V7

B70UF B77UF B85UF

U70(px) U77(px) U85 calibration

with PC and Testing Kits

Amusement

Nisr

power Saving

Vending

This flowchart is the overview from physical connection to program downloading then to calibration of U70 U77 U85 B70UF B77UF B85UF A6 N6 S6 V6 A7 N7 S7 V7.

These steps that are filled with  yellow color  are the subjects in this document.

**0**
**Start**

**1**
A6 N6 S6 V6 Physical connection to
FP-001 and PC

New bin file
from ICT

**2**
FP-001 switch to
L2 & Program Mode

**3**
Direct Program
Dowloading from PC
with
FW16 and FP-001

See page. 12

**4**
Is download
successful?

No

**6**
P.16 ~ P.20
Bill Acceptor
calibration

**5**
P.16
FP-001 switch to
L2 & Normal Mode

Yes

See page.21

No

**7**
P.21
Is the calibration
successful?

Yes

**8**
A6 N6 S6 V6 A7 N7 S7 V7
B70UF B77UF B85UF U70
U77 U85 new program
update finished.

A6 V6 A7 S7 V7 U70
U77 U85 B70UF
B77UF B85UF
data capturing
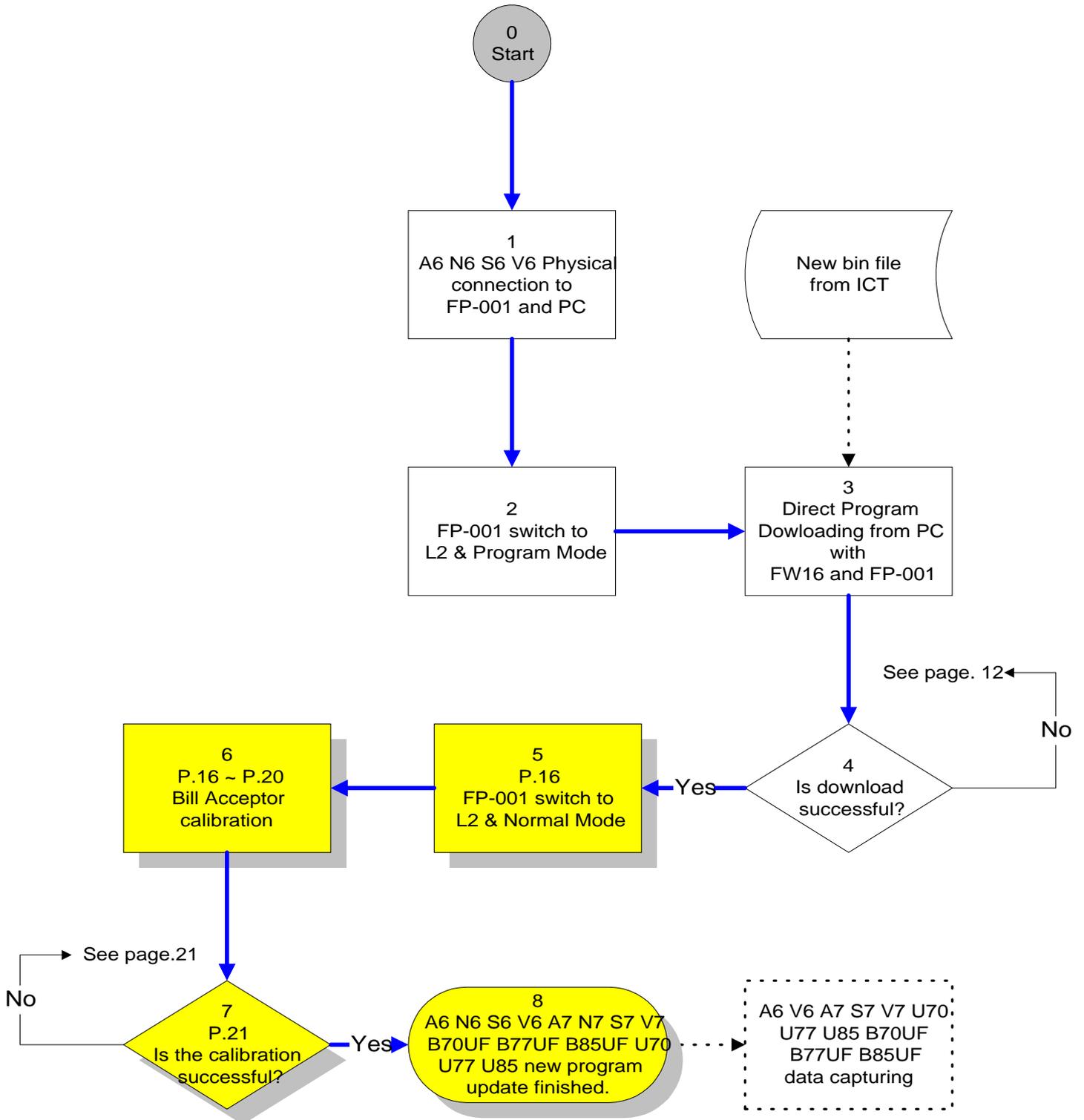
# 5.switch to L2 & Normal mode

5.1 Set FP-001 to L2 & Normal Mode



# 6.Calibration procedure

6.1 Launch the program TTA613.exe for A6 N6 S6 V6.

Launch the program TTA720.exe for A7 N7 S7 V7.

Launch the program TTU11.exe for B70UF B77UF B85UF U70 U77 U85.
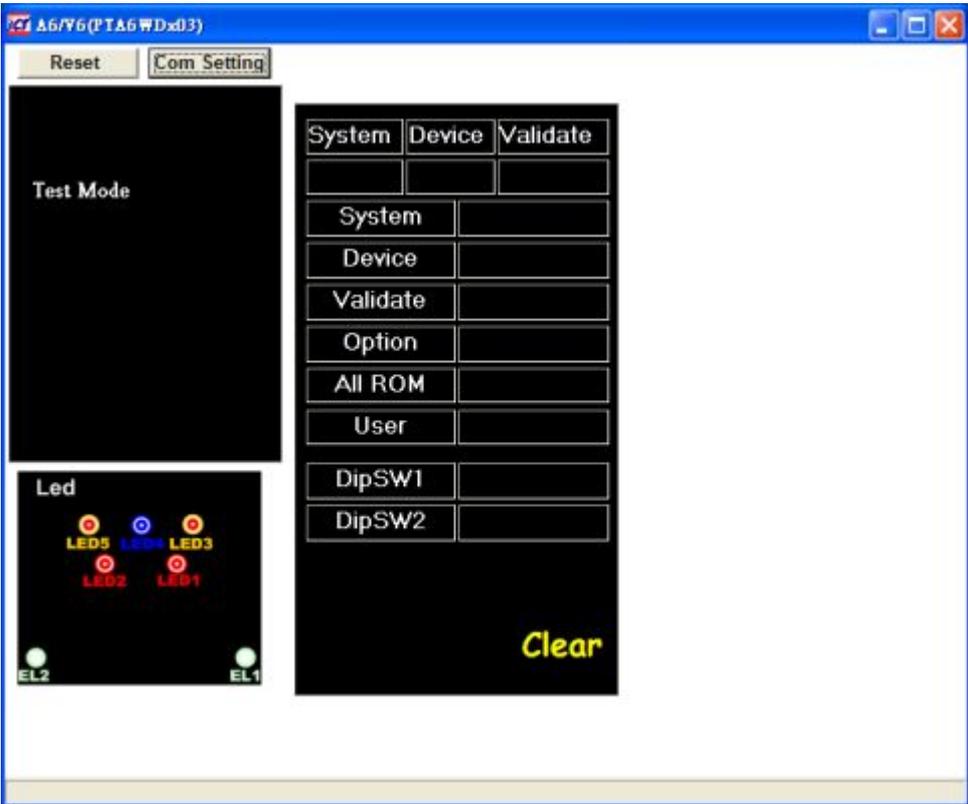
6.2 Select which com port on PC.
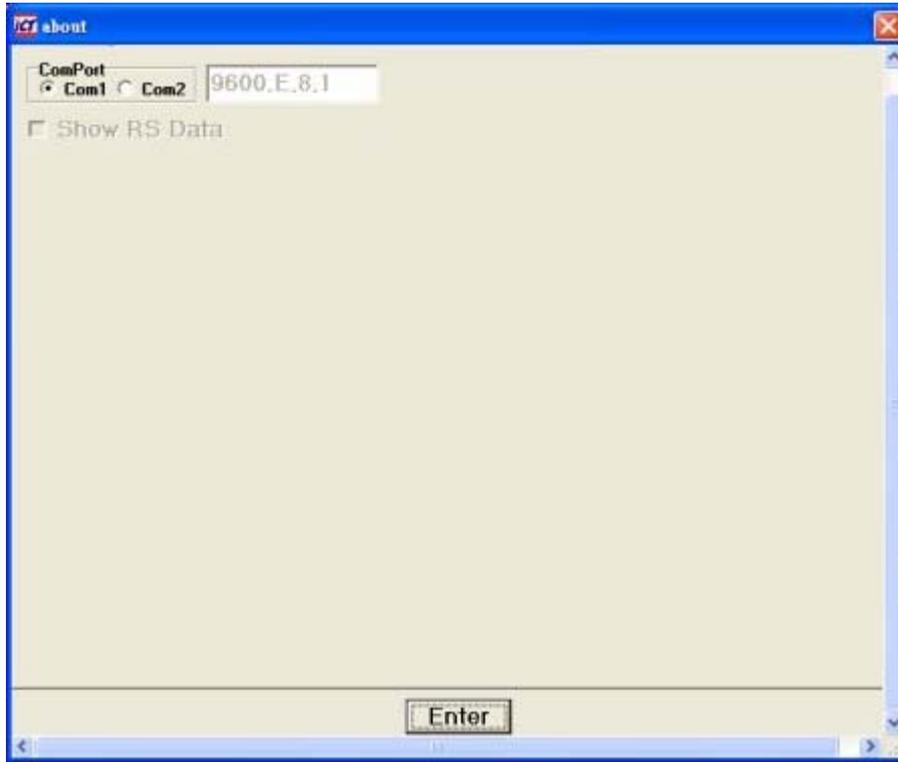


6.3 Power on the Bill Acceptor and the kit will show the system information that is transferred from Bill Acceptor.

If there is no information shown, press the RESET/START button of FP-001.

S6 and S7 must do this before they sleep.

6.4 Click TestMode then tool will show the testing items.

And you must do this within 3 sec right after S6/S7 power on before they sleep.



6.5 Click the "Auto VR Adjust".
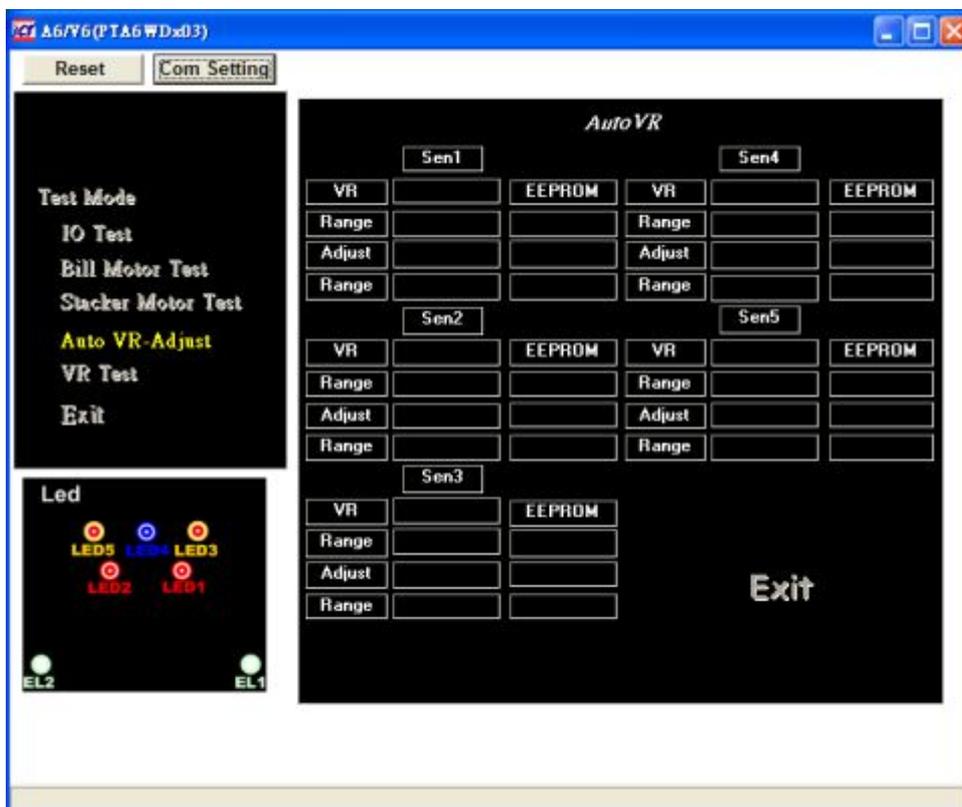
6.6 Input the A6/V6 white card for A6 N6 S6 V6.

Input the A7/V7 white card for A7 N7 S7 V7.



Please use the specific white card to do the calibration.

Input the B70UF/U70 white card for B70UF and U70.



The yellow strip side face down.

U70        B70UF

Please use the specific white card to do the calibration.

Input the B77UF/U77 white card for U77 and B77UF.
Input the B85UF/U85 white card for U85 and B85UF.



The yellow strip side face down.

U77    B77UF
U85    B85UF

Please use the specific white card to do the calibration.

6.7 After calibration it will show the code and the calibration is successful. And you may close the tool.
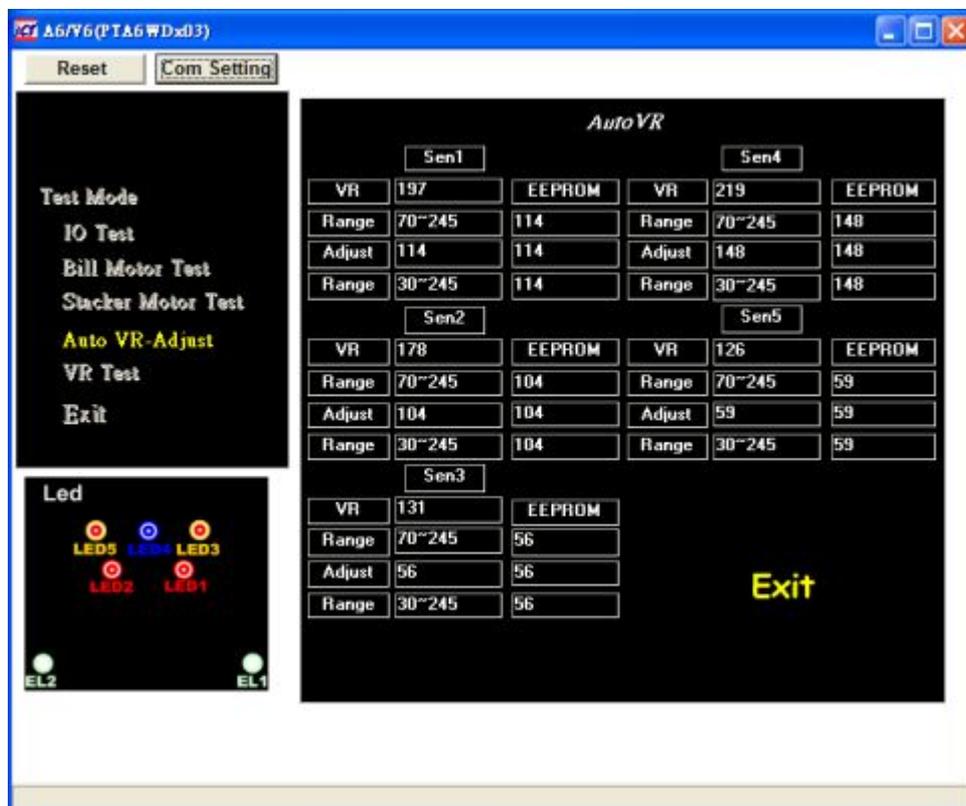
# 7.If the calibration is failed

This means there are some problems during calibration.
Please click Exit and turn off BA then restart calibration
procedure again.



**Attention**

## If the calibration is still failed

A. Please check is there any dirt on the judgment LED or Sensor according it's number.
B. If the LED or Sensor isn't dirty, it may be function failure.

The FW16.exe Flash Memory Writer is provided by FUJITSU LIMITED.