OPERATION MANUAL

A. System Requirements

IBM PC compatibles, 486DX or better processor with **Microsoft Windows** plus a free **COM** port (D-sub 9 pins male connector)

B. Installation

a. Hardware

1) Connect the D-sub 9 pins cable to your computer's **COM** port

2) Connect the other end of D-sub 9 pins cable to the adaptor.

3) Connect the 10 pins IDC (ten colors) cable to the adaptor.

4) Connect the other end of 10 pins IDC (ten colors) cable to the COIN SELECTOR. (The flat side near the PCB and Flange/Arrow side leave the PCB when plug in)

Note: When programming, you must supply +12V power to Coin Selector.

The connection orders are:

1. **Coin Selector** → (Ten Colors Cable) → **Adaptor** → **Computer**

Afterward,

2. Coin Selector → (Ten Colors Cable) → "**J2**" of **Display**   (Cannot connect to Adaptor and Computer.)

3. Coin Selector → (Ten Colors Cable) → "**J2**" of **Extension Board** (Cannot connect to Adaptor and Computer.)

Both with the **Display** and the **Extension Board,** one of the following connection orders is acceptable:

1. Coin Selector → (Ten Colors Cable) → PC Adaptor → Computer

2. Coin Selector → (Ten Colors Cable) → <J2>Separator<J1> → (Grey Cable) → <J1>Display<J2> → (Grey Cable) →PC Adaptor → Computer

3. Coin Selector → (Ten Colors Cable) → <J2> Display <J1> → (Grey Cable) → <J1> Separator <J2> → (Grey Cable) →PC Adaptor → Computer

b. Software

1. Install Coin Selector program:

(A) Floppy:

1) Insert the floppy #1 and #2 to disk A, copy 4 files and subdirectory "SUPPORT" into a new directory (for example C:\CS12) :

    1.   Setup.exe   2. Setup.lst   3. CS121.cab   4. CS122.cab

2) Run the Setup.exe to install the system.

(B) <u>CD</u>:

  1) Insert the CD to CDROM disk.

  2) Run **Setup**.exe to install the system.

2. Run Coin Selector program:

  <u>StartMenu</u> > <u>Program File</u> > <u>CoinSelecto</u>r > <u>CoinSelector…</u>

C. MENU Introduction

  1. Main menu

Fig. 1 – View of the **Main Menu**

The upper part of the main menu window bears a series of pull-down menus; on the right, there are the keys to choose the options directly. The option keys are:

- **(A) <u>Teach Coin Selector</u>**

    Teach this on-line Coin Selector to recognize designated coin set(s).
    To set parameters for coin set(s) first then teach this Coin Selector to recognize designated coins.

- **(B) <u>Channel Calibration</u>**

    Calibrate channels.

- **(C) <u>Edit Coin Selector</u>**

Edit parameters of this on-line Coin Selector.

● **(D) Exit**

To exit.

(A) Teach Coin Selector

Press the "**Teach Coin Selector**" key; the following dialog box is "**Setting**". Fill in the items of this dialog box:

Press "**OK**" at the bottom to confirm your choice and open the "**Sampling**" dialog box automatically.

Ref. *Fig. 2*, press correspond "**insert**" key of a certain coin channel and insert 16 coins. If there are two obviously different types of coin have the same denomination, you must separate different type of coin to different channels, otherwise insert the different types of coin in the same channel may cause seriously recognize confuse.

After "**Insert**" all the channels you desire, press " **Program to Coin Selector**" to program this on-line Coin Selector. Finally press "**Exit**" to return main menu.
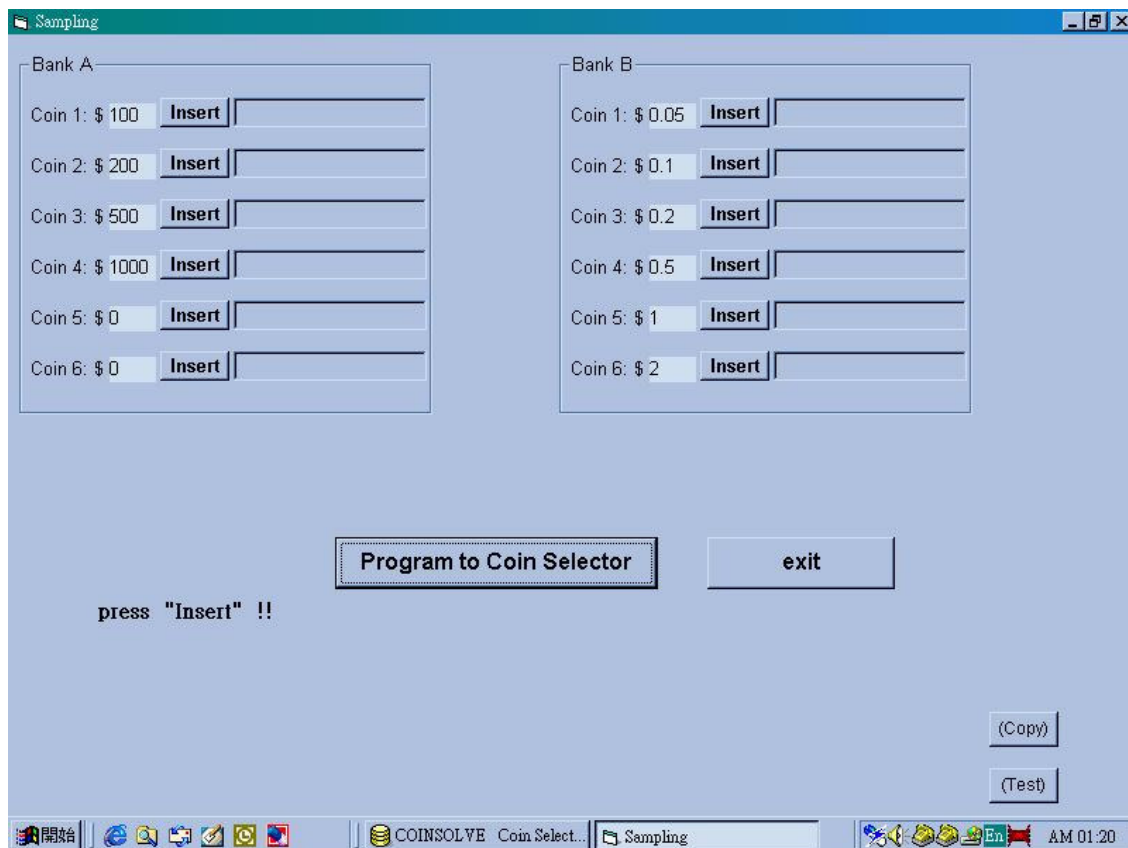

Fig.2 – View of the **Sampling** dialog box.

(B) <u>Channel Calbration</u>

Press "**<u>Channel Calibration</u>**" and open the "**Edit**" dialog box (for your reference) automatically.

Press correspond "**<u>insert</u>**" key of designated coin channel and insert coins.

After "Calibrating" designated channels you want, press "**<u>Program to Coin Selector</u>**" to program this on-line Coin Selector. Finally press "**<u>Exit</u>**" to return main menu.

(C) <u>Edit Coin Selector</u>

Edit the terms in the "**Edit**" dialog box you want.

Press "**<u>Program to Coin Selector</u>**" to program this on-line Coin Selector. Finally press "**<u>Exit</u>**" to return to main menu.

(D) <u>Exit</u>

To exit.

D. Explanation of terms:

> If used for the first time, the following system parameters must be set before the program can function:

> - COM (port)

These parameters are to be set as follows: first select the popup menu "**System**" and then select correct "**COM**" port (Com1/Com2/Com3/Com4).

> **a. Output mode:**
> Consider your usage; select one of the Output modes (some are under working):
> **1. Single price pulse output mode.**
> **2. Single price pulse output mode on demand.**
> **3. Binary Code output.**
> **4. Binary Code output on demand.**
> **5. 6-pins vs. 6-Channels (NRI G13 conn.).**
> **6. 6-pins vs. 6-Channels (NRI G13 conn.) on demand.**
> **7. Output signal as a timer.**
> **8. Output signal as a timer on demand.**
> **9. Not available**
> **10. Not available**
> **11. Not available**
> **12. Not available**
> **Note: The EU-1 only has output modes "1","2","3","5".**

b. Inhibit level (Inhibit High / Inhibit Low)

If the host machine has "**Inhibit**" design, to connect the inhibit line between them. According the inhibit level (High/Low) of your host machine, select the correct one.

Inhibit High = +3~30V, Inhibit Low = 0~0.5V.

c. Coin Separator

With or without Coin Separator.

d. Signal Time / Space Time

The length between two pulses is "Space time". In output mode "1" or "2" (Single price), The length of the pulse is determined by Switch on PCB (**25mS/50mS/80mS)** and the "Space time" is determined by this value (x 2 millisecond). In output mode "3", "4", "5", "6", both the pulse and space time are this value.

e. Timer Scale (A/B)

In the "Timer output" mode;

Signal time = (Coin Value) * (Timer Scale) …. in second.

f. Bank A / Bank B

EU-1 has 12 coin channels and be divided as 2 coin sets called "Bank A" and "Bank B" (every bank has 6 channels; 6 + 6 = 12). There are two banks in one Coin Selector so that you can program 2 currencies in one Coin Selector. Bank selection is determined by switch (Bank_A / Bank_B).

g. Price (A/B)

"Price" is the threshold to send out pulse or signal:

Number of sent out pulses = (Coin Value) / (Price)

For example, if you set "Price" = 10-dollar, then insert a 50-dollar coin will send out 5 pulse to the host machine (50 = 10 + 10 + 10 + 10 + 10). Insert two 5-dollar coin will send out 1 pulse to the host machine (5 + 5 = 10) too.

h. Multiply Factor (A/B)

i. Divide Factor (A/B)

The range of all values are integer: 0~255. How to scale "Price" and "Coin Value"? There are 2 relevant parameters for user's adjusting: "Multiply Factor" and "Divide Factor".

(Denomination $) = (Coin Value) * (Multiply Factor / Divide Factor),

Reciprocally,

(Coin Value) = (Denomination $) * (Divide Factor / Multiply Factor).

j. Tolerance

Tolerance value = 0~15, "0" is strictest, "15" is laxest. The initial value is 10.

k. Disable

Set "Disable" = "Yes", you can keep the relevant parameters of a coin channel but reject this coin. On the contrary, set "Disable" = "No", you can re-accept this coin again.

l. Separator

In 2-way Coin Separator, you can designate a certain coin drop into hopper for paying out and the others collect to cash box.

E. Operation Examples

Plug in the connector in accordance with "**B. Installation**". Run "**CoinSelector**":
Start > **Program File** > **CoinSelecto**r > **CoinSelector**
Open the main menu. If you are first time using this program, select the pop-up menu "**System**" and choose the correct COM port.

Ex. 1 Suppose that you received a set of coins, to say 100-Dollar, 200-Dollar, 500-Dollar, 1000-Dollar and you want this Coin Selector sent out an impulse to the host machine as receiving 500-Dollar (i.e. "Price" = 500-Dollar).

Operating Procedures:

<1> Press "**Teach Coin Selector**" button.
<2> The following dialog box is "**Setting**". Fill in the items of this dialog box:
    a) Select Output mode: "**1. Single Price pulse output**"
    b) Neglect items: **Signal Time, Timer Scale A/B**. (When set in "**Single Price pulse output**" mode, the pulse interval is determined by **SWITCH - 5mS/50mS/80mS**)
    c) Let "Multiply Factor" = 100, "Divide Factor" = 1:
        (The "Factor" combination is not the only one, any reasonable combination of "Multiply Factor" and "Divide Factor" will be OK!)
        (Denomination \$) * (Divide Factor / Multiply Factor) = (Coin Value).
            $100 * (1/100) = 1$ → key-in "Coin value " of channel 1 = 1
            $200 * (1/100) = 2$ → key-in "Coin value " of channel 2 = 2
            $500 * (1/100) = 5$ → key-in "Coin value " of channel 3 = 5
            $1000 * (1/100) = 10$ → key-in "Coin value " of channel 4 = 10
               and "Price" = 500Dollar,
            $500 * (1/100) = 5$ → key-in "Price" = 5
        (See "**Bank A**" of fig 3.)
<3> Press "**OK**" at the bottom to confirm your choice and open a "**Sampling**" dialog box automatically (see Bank_A of *Fig. 3*).

Press corresponding "**Insert**" key of channel 1 and insert 100-Dollar coins 16 times.

Press corresponding "**Insert**" key of channel 2 and insert 200-Dollar coins 16 times.

Press corresponding "**Insert**" key of channel 3 and insert 500-Dollar coins 16 times.

Press corresponding "**Insert**" key of channel 4 and insert 1000-Dollar coins 16 times.

<4> Press "**Program to Coin Selector**" to program this on-line Coin Selector.

<6> Press "**Exit**" to return to main menu. → OK!

Note:

Suffering for one fake coin, you can decrease the Tolerance value to pick it out. How to deal with these 3- Tolerance value? For picking out the fake coin, you should to decrease the Tolerance value one by one while not decrease all Tolerance values in one time. For example, press "Edit Coin Selector":

1) Try to decrease Tol-C and watch the rejection effect on the fake coin. If not work; return Tol-C to the original value.

2) Try to decrease Tol-B and watch the rejection effect on the fake coin. If not work; return Tol-B to the original value.

3) Try to decrease Tol-A and watch the rejection effect on the fake coin. If not work; return Tol-A to the original value.

To experience the 3-tolerance values effect on coin rejection first, find a suitable Tolerance values combination. It would be best if slightly decrease one Tolerance value can pick fake coin out.

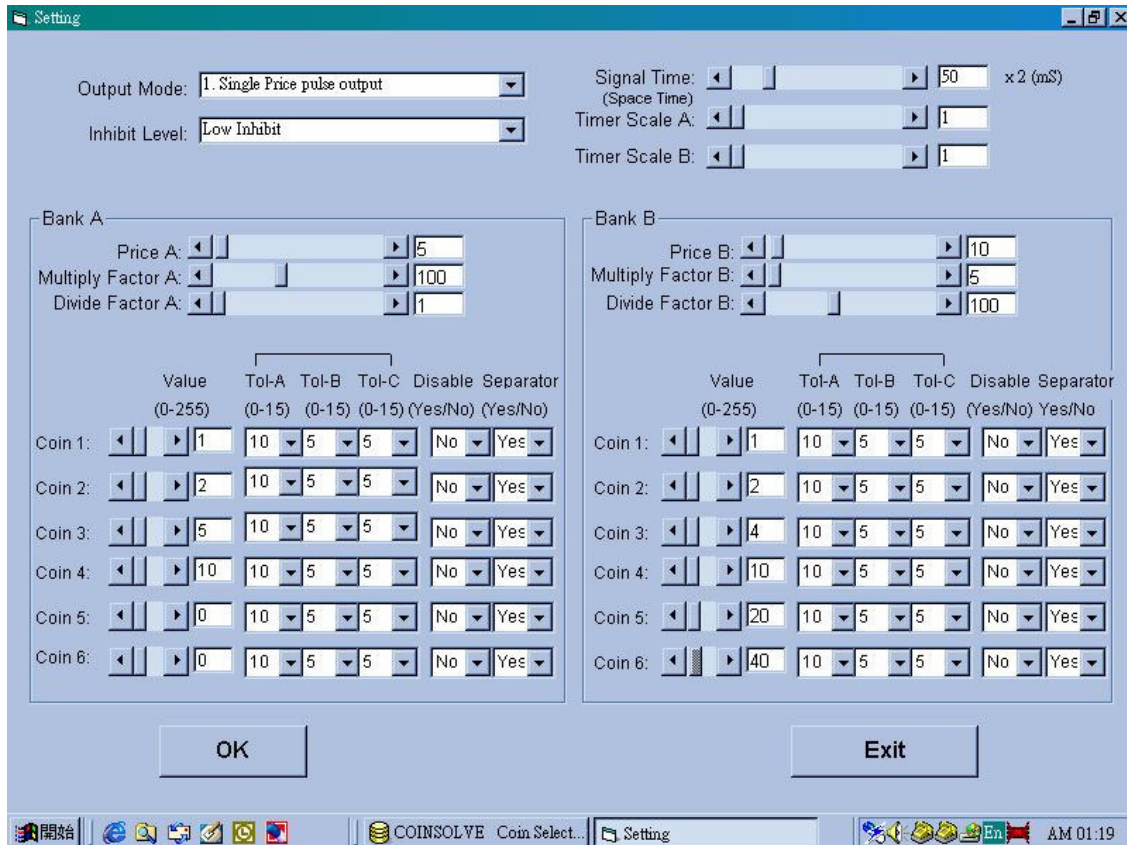You can apply this effective Tolerance values combination to other coin selector.

Fig. 3 – Dialogue box of **Setting** for <u>**Ex. 1**</u> and <u>**Ex. 2**</u>

<u>**Ex. 2**</u> Let Bank_A as <u>**Ex. 1**</u> and set EURO coins in Bank_B: 5-cent = 0.05-dollar, 10-cent = 0.1-dollar, 50-cent = 0.5-dollar, 1-dollar, 2-dollar. Sent out a pulse to the host machine as receiving 0.5-dollar (i.e. "Price" = 0.5-dollar)

<u>**Operating Procedures:**</u>

<1> See Bank_B of ***Fig. 3***

Let "Multiply Factor" = 5 and "Divide Factor" = 100:

(Coin Value) = (Denomination $) * (Divide Factor / Multiply Factor).

0.05 * (100/5) = 1 → key-in "Coin value " of channel 1 = 1

0.10 * (100/5) = 2 → key-in "Coin value " of channel 2 = 2

0.20 * (100/5) = 4→ key-in "Coin value " of channel 3 = 4

0.5 * (100/5) = 10 → key-in "Coin value " of channel 4 = 10

1 * (100/5) = 20 → key-in "Coin value " of channel 5 = 20

2 * (100/5) = 40 → key-in "Coin value " of channel 6 = 40

and "Price" = 0.5-dollar,

0.5 * (100/5) = 10 → key-in "Price" = 10

<2> Ref. <u>**Operating Procedures**</u> of <u>**Ex. 1**</u>.

Ex. 3 Set Euro coins as **Ex. 2** but use inhibit function ("High" level inhibit) and disable (do not accept) coins of 5-cent, 10-cent and 20-cent:

Operating Procedures:

<1> From the main menu, to press "**Edit Coin Selector** key.

<2> The following dialog box is "**Edit**". Fill in the items of this dialog box:

a) Select "Output mode": "**2. Single price pulse output mode on demand**"

b) Select "Inhibit Level": "**High inhibit**" (assume the inhibit level of the host machine is "**High**")

c) Neglect items "**Signal Time**"(Under **Single price pulse output mode**, the Signal time is determined by the **switch 25mS/50mS/80mS**).

d) Let "Multiply Factor" = 5 and "Divide Factor" = 100:

(Coin Value) = (Denomination $) * (Divide Factor / Multiply Factor).

$0.05 * (100/5) = 1 \rightarrow$ key-in "Coin value " of channel 1 = 1

$0.10 * (100/5) = 2 \rightarrow$ key-in "Coin value " of channel 2 = 2

$0.20 * (100/5) = 4 \rightarrow$ key-in "Coin value " of channel 3 = 4

$0.5 * (100/5) = 10 \rightarrow$ key-in "Coin value " of channel 4 = 10

$1 * (100/5) = 20 \rightarrow$ key-in "Coin value " of channel 5 = 20

$2 * (100/5) = 40 \rightarrow$ key-in "Coin value " of channel 6 = 40

and "Price" = 0.5-dollar,

$0.5 * (100/5) = 10 \rightarrow$ key-in "Price" = 10

(See "**Bank A**" of *Fig 4*)

<3> Choose adequate "Tolerance" for individual channels.

<4> To disable coin "5-cent", "10-cent" and "20-cent" (choose "Yes").

<5> Press "**Program to Coin Selector**" to program this on-line Coin Selector

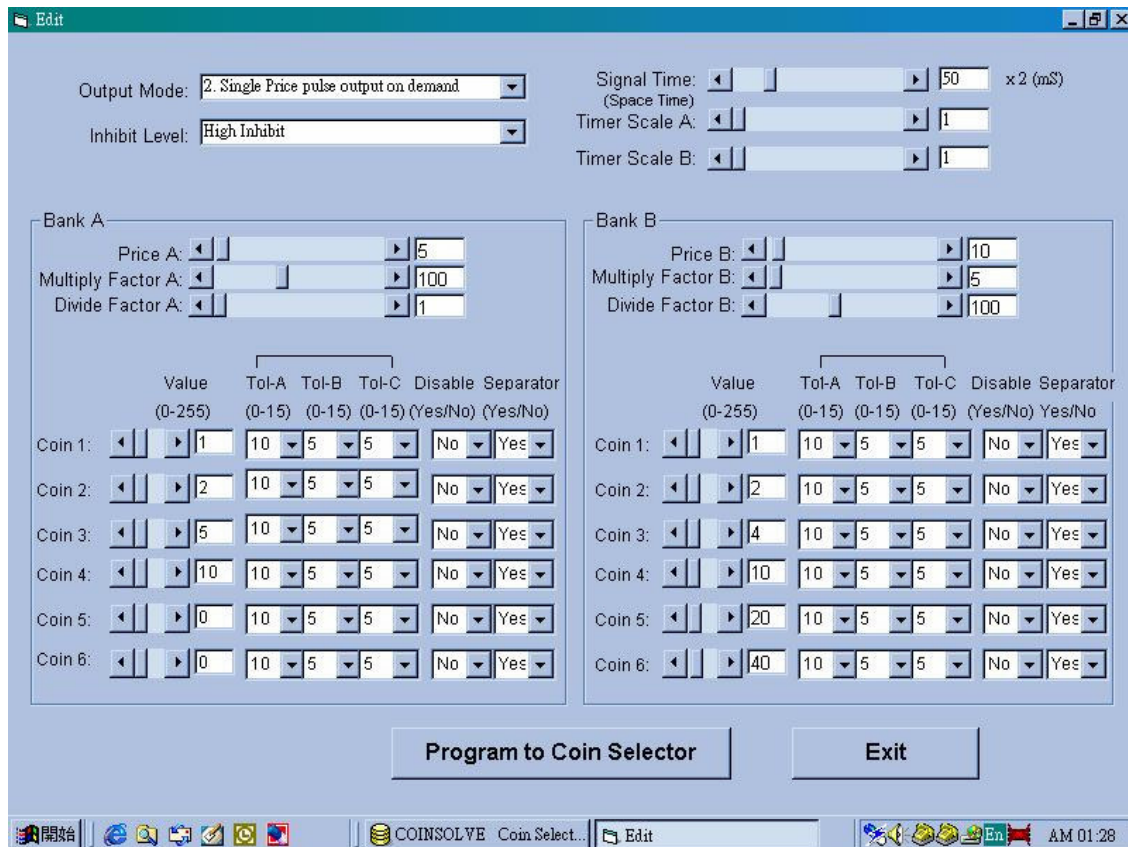<6> Press "**Exit**" to return to main menu. $\rightarrow$ Edit OK!

Fig.4 – Dialogue box of **Edit** for **Ex. 3**

Remark 1: Methods for picking out fake coins:

<1> Decrease the "**Tolerance**" value in the "**Edit**" dialog.

or

<2> Press "**Channel Calibration** " button in the main menu. Decrease the "**Strictness**" value and inserting coins for the correspond channel.

If the coin contents of different issued year are obvious different with others, try to set different coins in different channels.

Remark 2:

If the coin selector does not accept certain coin, executing "**Channel Calibration**" for the corresponding channel to solve this problem.

Spec.:

1) Applied voltage: DC +12V.

2) Working temperature: -5□ ~ +50□

3) Coin diameter: 17mm~28mm.

3) Coin thickness: 1.0mm~3.0mm.