

EU1 OPERATION MANUAL

A. Install the USB driver on the windows

Download the windows driver for CP2102, and Plug the USB programmer and install the driver, then after installed the driver, from the windows device manager,we can find the Com port created for later to use.

(Please be noted: For EU1 software only can use COM1 , so if use USB programmer, after created the virtual com port and must go to Device manager to change the COM number to COM1 ,then can open the right Port to continue)

B. Installation

a. Hardware

- 1) Connect the USB programmer to your computer and installed the driver to create the right com port
- 2) Connect the 10 pins IDC (ten colors) cable to the adaptor.
- 3) 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.

b. Software

1. Install Coin Selector program:

- 1) Download the files package to the PC
- 2) Run **Setup.exe** to install the system.

2. Run Coin Selector program:

StartMenu > Program File > CoinSelector > CoinSelector...

C. Program interface 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) **Teach Coin Selector**

Teach this 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) **Channel Calibration**

Function (B) is similar to (A) but preserve parameters of the Coin Selector.

Select item (B) while not (A) if you want to **add** or **calibrate** some channels but preserve other parameters.

- (C) **Edit Coin Selector**

Edit parameters of this on-line Coin Selector.

- (D) **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, the following dialog box is “**Sampling**”.

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 to main menu.

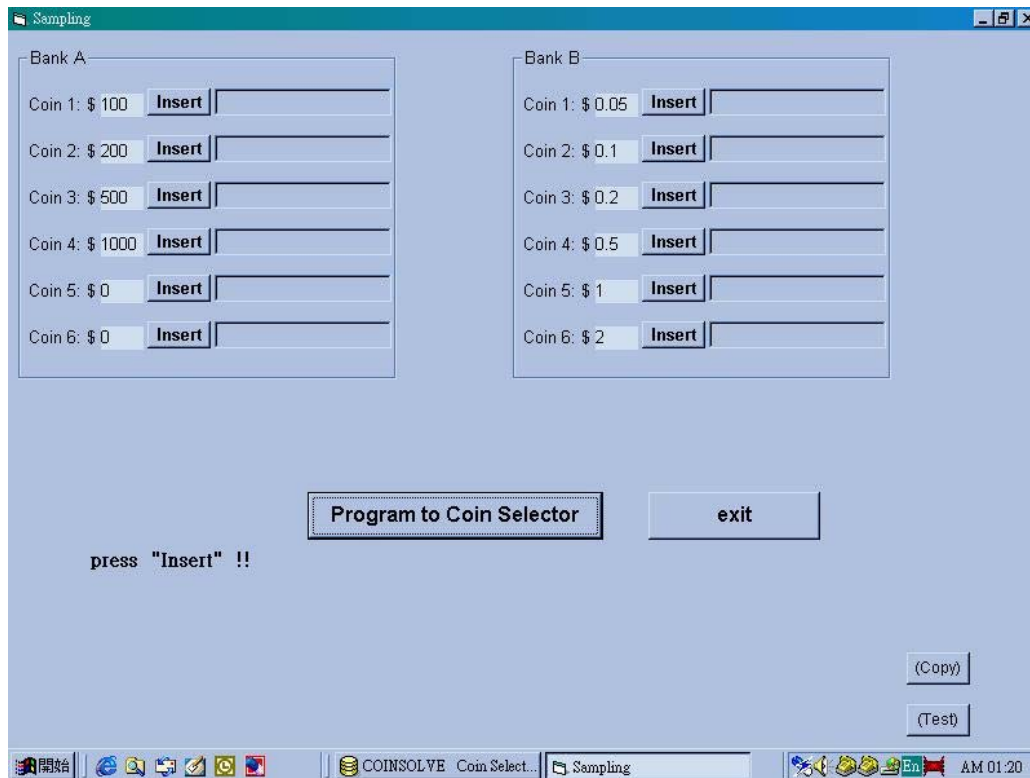


Fig.2 – View of the **Sampling** dialog box.

(B) Channel Calibration

Press “**Channel Calibration**” button, the following dialog box is “**Edit**”. If you agree with the setting values, press “**OK**” button. The following dialog box is “**Insert**”. Press correspond “**insert**” key of the designated coin channel and insert coins. After “**Calibrating**” the designated channels you want, press “**Program to Coin Selector**” to program this on-line Coin Selector. Finally press “**Exit**” to return main menu.

(C) Edit Coin Selector

Edit the parameters in the “**Edit**” dialog box you want.

Press “**Program to Coin Selector**” to program this on-line Coin Selector. Finally press “**Exit**” to return to main menu.

(D) Exit

To exit.

D. Explanation of terms:

If first time using, please set the correct **COM** port first:

Select the popup menu “**System**” and select the correct “**COM**” port (Com1/Com2/Com3/Com4).

a. Output mode:

Consider your usage; select one of the Output modes (not all available):

1. **Single price pulse output mode.**
2. **Single price pulse output mode on demand.**
(inhibit function works)
3. **Binary Code output.**
4. **Binary Code output on demand.**
(inhibit function works)
5. **6-pins vs. 6-Channels (NRI G13 conn.).**
6. **6-pins vs. 6-Channels (NRI G13 conn.) on demand.**
(inhibit function works)
7. **Output signal as a timer.**
8. **Output signal as a timer on demand.**
(inhibit function works)
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**“ function, 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. Separator

With or without Coin Separator. In 2-way Coin Separator, you can designate a certain coin to drop into hopper for paying out and the others collect to cash box.

d. Signal Time / Space Time

The length between two pulses is called “Space time”. In output mode “1” or “2” (Single price), The length of the pulse is determined by Switch “**25mS/50mS/80mS**” (on PCB) and the “Space time” is determined by this value (unit: 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) Unit 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 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:

$$\text{Number of sent out pulses} = (\text{Coin Value}) / (\text{Price})$$

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 coins will send out 1 pulse to the host machine ($5 + 5 = 10$) too.

The residual coin value (smaller than “**Price**”) will be hold for 131 seconds and will be cleared if without inserting any coin within 131 seconds.

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**”.

$$(\text{Denomination } \$) = (\text{Coin Value}) * (\text{Multiply Factor} / \text{Divide Factor}),$$

Reciprocally,

$$(\text{Coin Value}) = (\text{Denomination } \$) * (\text{Divide Factor} / \text{Multiply Factor}).$$

j. Tolerance

Tolerances include 3 items: **Tol-A, Tol-B, Tol-C**.

Tolerance value = 0~15, “0” is strictest, “15” is laxest. The initial value of Tol-A is 10, Tol-B is 5, Tol-C is 5.

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.

E. Operation Examples

Plug in the connector in accordance with “**B. Installation**”. Run “**CoinSelector**”:

Start > **Program File** > **CoinSelector** > **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 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 above “**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).

$100 * (1/100) = 1 \rightarrow$ key-in “**Coin value**” of channel 1 = 1

$200 * (1/100) = 2 \rightarrow$ key-in “**Coin value**” of channel 2 = 2

$500 * (1/100) = 5 \rightarrow$ key-in “**Coin value**” of channel 3 = 5

$1000 * (1/100) = 10 \rightarrow$ key-in “**Coin value**” of channel 4 = 10

and “**Price**” = 500 Dollar,

$500 * (1/100) = 5 \rightarrow$ 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. \rightarrow OK!

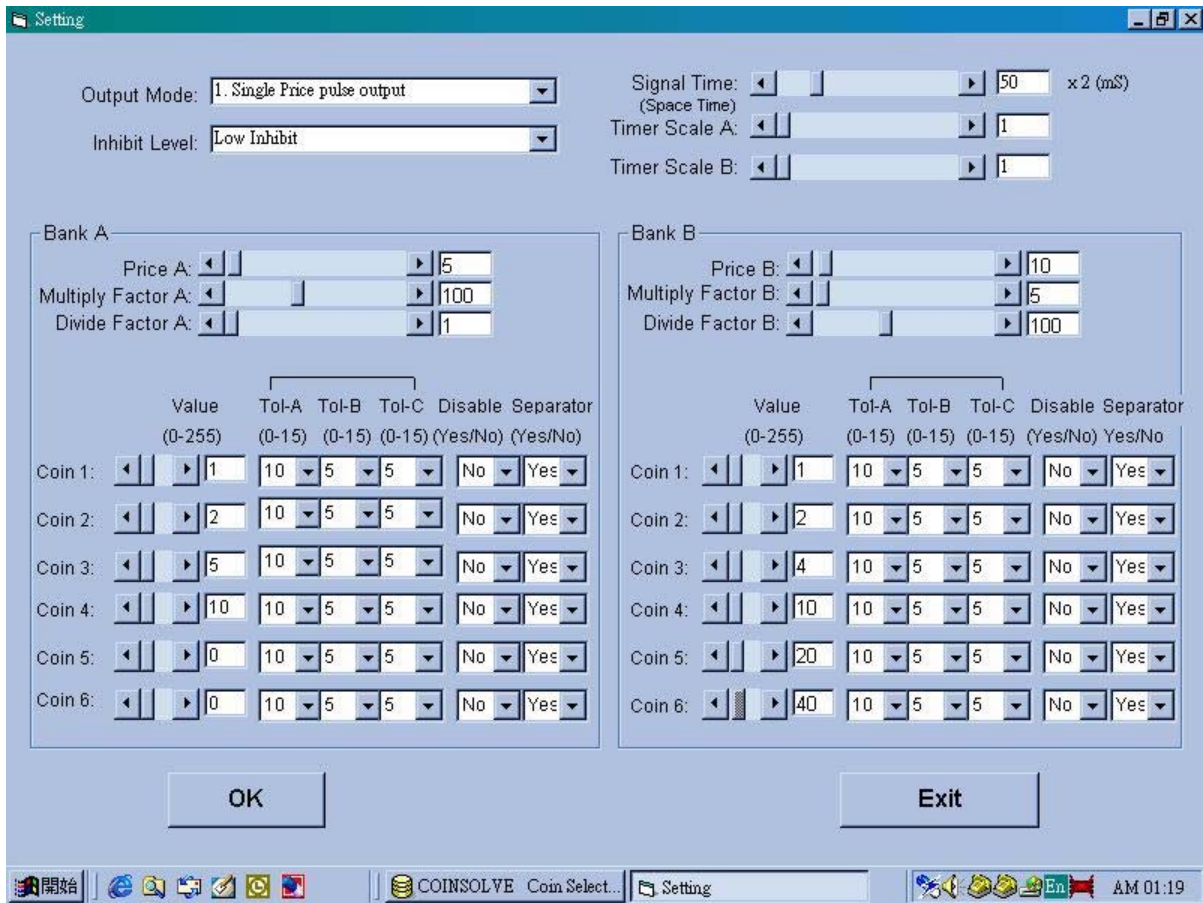


Fig. 3 – Dialogue box of Setting for Ex. 1 and Ex. 2

Ex. 2 Let Bank_A as **Ex. 1** 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)

Operating Procedures:

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

Let “Multiply Factor” = 5 and “Divide Factor” = 100:

$$(\text{Coin Value}) = (\text{Denomination } \$) * (\text{Divide Factor} / \text{Multiply Factor}).$$

$$0.05 * (100/5) = 1 \rightarrow \text{key-in “Coin value “ of channel 1} = 1$$

$$0.10 * (100/5) = 2 \rightarrow \text{key-in “Coin value “ of channel 2} = 2$$

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

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

$$1 * (100/5) = 20 \rightarrow \text{key-in “Coin value “ of channel 5} = 20$$

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

and “Price” = 0.5-dollar,

$$0.5 * (100/5) = 10 \rightarrow \text{key-in “Price”} = 10$$

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

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) As your need, set the “**Space 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!

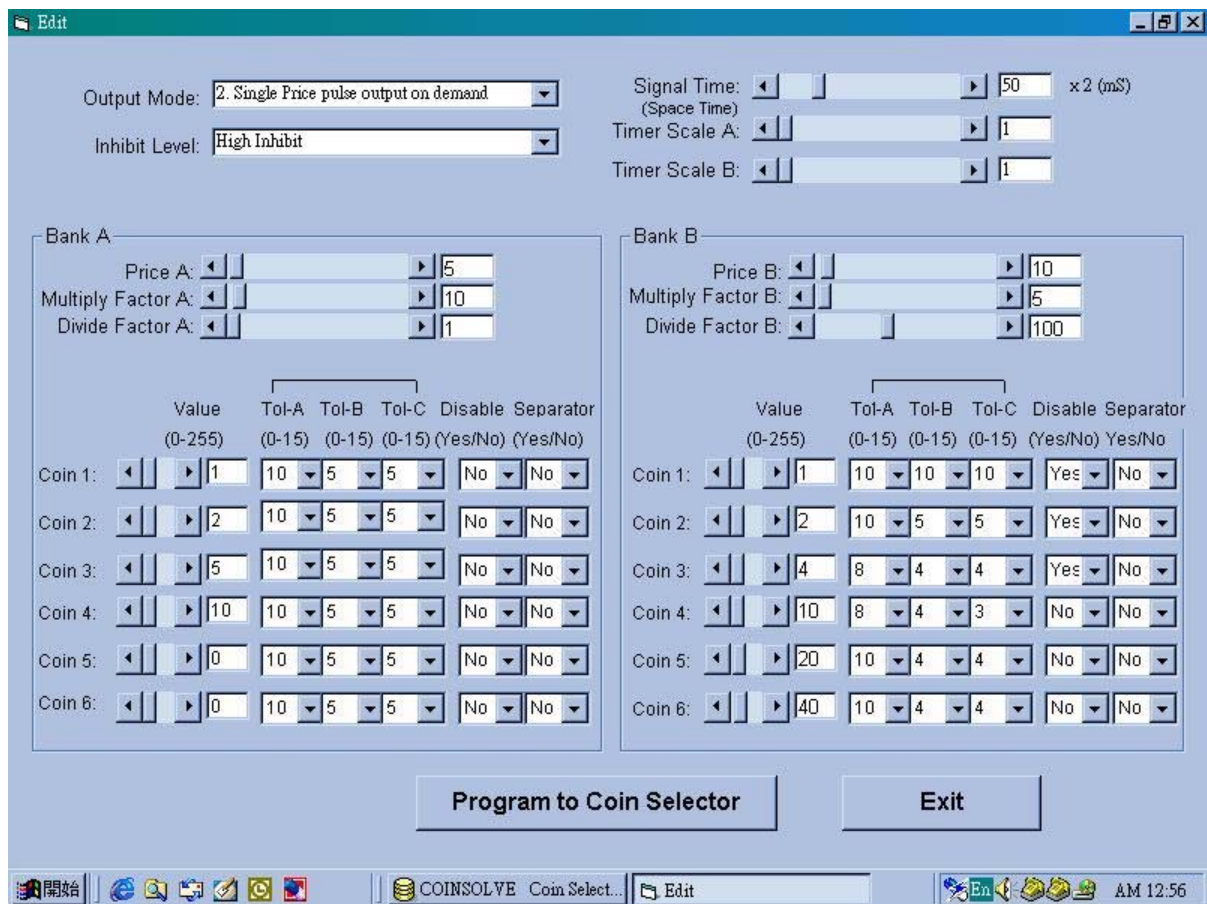


Fig.4 – Dialogue box of **Edit** for **Ex. 3**

Trick 1:

To make use of the retained value in the “**Setting**” dialog box, suggest you program a batch of Coin Selectors in one time to reduce the repeatedly setting time.

Trick 2:

If suffering for a certain fake coin, you can decrease the Tolerance value to pick it out. On the contrary, increase the Tolerance value if the low acceptance rate for certain channel. When picking out the fake coin, you should decrease the Tolerance value one by one while not decrease all in one time. For example, press “Edit Coin Selector” and:

- 1) Try to decrease **Tol-C** gradually (remember to press “**Program to Coin Selector**”) 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** gradually (remember to press “**Program to Coin Selector**”) 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** gradually (remember to press “**Program to Coin Selector**”) 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 better if only decrease one **Tolerance** value can pick fake coin out.

Once ascertain a suitable **Tolerances** combination, apply this effective **Tolerance** values combination to other coin selector.

Trick 3:

If you set **Bank_A** and **Bank_B** with the same coins but different in “**Price**”. A command “**Copy**” will be useful to avoid you insert a same coin twice:

- 1) Press “**Teach Coin Selector**” or “**Channel Calibration**”.
 - 2) In the following “**Setting**” dialog box, fill items both in **Bank_A** and **Bank_B**(it is necessary to fill in **Bank_B**)
 - 3) In the following “**Sampling**” dialog box, press corresponding “**Insert**” key of **Bank_A** and insert 16 coins for every channels.
 - 4) After “**Sampling**” for **Bank_A**, press the “**(Copy)**” button (at the right down corner) and shows “**from**” and “**to**” button for every channels. Press the “**from**” button of the source channel and press the “**to**” button of the destination channel. Press “**Program to Coin Selector**”.
- ➔ The Bank_B recognize coins of Bank_A too.

Spec.:

- 1) Applied voltage: DC +12V.
- 2) Working temperature: -5°C ~ +50°C
- 3) Coin diameter: 17mm~28mm.
- 3) Coin thickness: 1.0mm~3.0mm.

Dimension:

