1+1 POCKETS COIN SORTER

MAGNER 211

Operation Manual

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1. Introduction

MAGNER 211 is a coin sorter designed and produced by our company. It has counterfeit coin detection function. With the installed advanced eddy current sensor, it can simultaneously detect the metal coins' diameter, thickness and material, based on this feature, our MAGNER 211 can automatically recognize foreign coins, counterfeit coins and sheet metals etc. MAGNER 211 can count and sort coins of programmed denominations, during which process the foreign coins will be sorted into Rejected Coin Drawer. Our MAGNER 211 can be connected with printer, external display or computer through RS-232 port. All data can be printed out at any time.

2. Specifications

Sorting Speed	Approx.600coins/ min(15mm)
Hopper Capacity	Approx.600pcs
Suitable Sorting Coin Range	Diameter 14-31mm
	Thickness≦3.5mm
Sorting Number	Up to 20 kinds of denomination
Machine Dimension	365×280×294mm
Weight:	13Kg
Power Consumption	60W
Power Supply	AC 120V ± 10%, 60Hz
	or AC 220V ± 10%, 60Hz
Display	LCD Display(24064)
Ambient Temperature	0-40C°
Humidity	30-75%

3. Function

MAGNER 211 is used to verify, count and sort different denomination of coins, it can verify at most 20kinds of coins. It also has a reject box for accepting the suspected coins. The channel is listed as below:
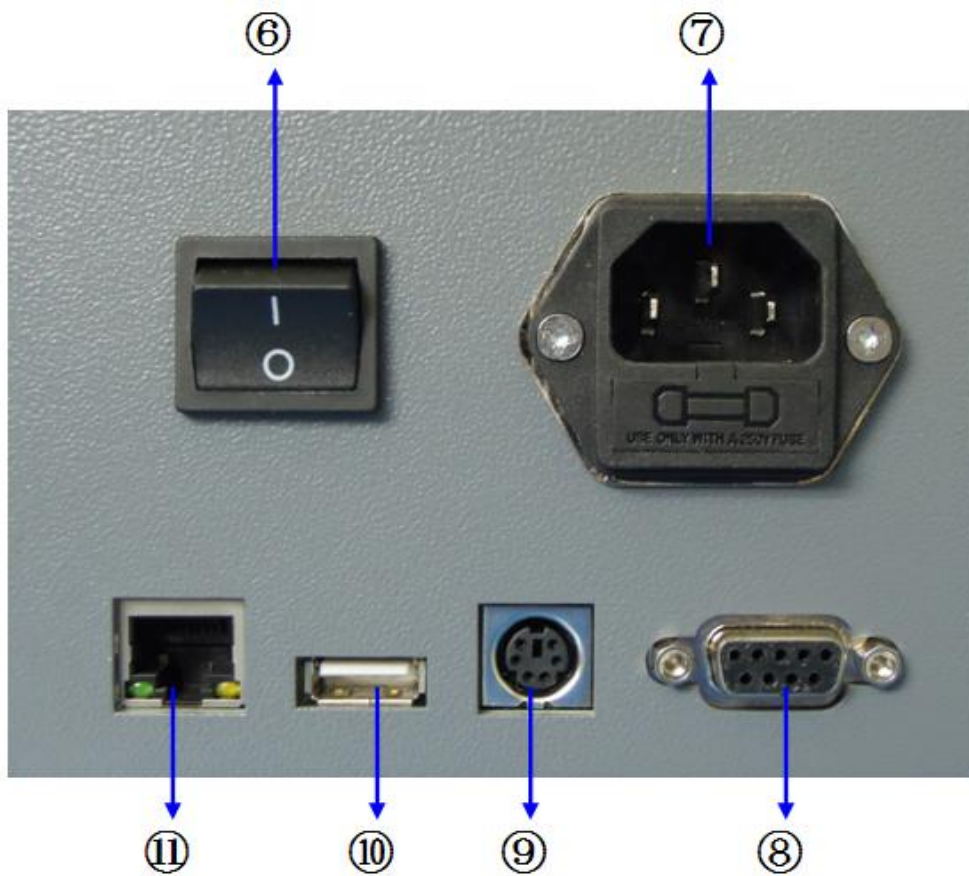
Channel 1	Reject box

By different setting, the user can sort the desired coins into specific channel, in the meantime, the foreign coins, fake coins and commemorative coins will be sorted into reject box.

4.Diagram

①：**Key panel**

②：**Visible Window**

③：**Built-in printer(option)**

④：**Drawer**

⑤：**Handle**

5. Socket board

⑥：**Power switch**

⑦：**Power socket**

⑧：**RS232（for communication with PC）**

⑨：**PS2（reserved interface for external display）**

⑩：**USB（for software upgrading）**

⑪：**LAN（reserved socket for network）**

6. Key Panel

Key Function:

1） $\boxed{0}$ ~ $\boxed{9}$: Numeric key for fast batch number settings

2） $\boxed{\text{START/STOP}}$: Start or Stop

3） $\boxed{\text{SET}}$: Set MENU or set some functions

4） $\boxed{\text{ESC:}}$ Return to MENU or clear rejected coin records

5） $\boxed{\text{CLR}}$: Clear counting records or clear error codes

$\boxed{\Leftarrow}$, $\boxed{\Uparrow}$, $\boxed{\Downarrow}$, $\boxed{\Rightarrow}$: Select different Channels, or select different Menu Setting; $\boxed{\Downarrow}$ can also control Batch function ON/OFF, $\boxed{\Leftarrow}$ can also control MIX-COUNT, SDC- COUNT.

6） $\boxed{\text{MR}}$: Read memory data

7） $\boxed{\text{M+}}$: Save Self-learning parameters

8） $\boxed{\text{LIST}}$: Check detailed counting list

9） $\boxed{\text{Print}}$: Print sorting result and Self-learning parameters

7. Main Display Modes

（1）Total Amount & Quantity Display Mode:

MIX- COUNT	STOP	
VALUE:	125.90	
COUNT:	190	
B	F:	2

（2）Separate Channel Amount & Quantity Display Mode:

VALUE	COUNT	AMOUNT
2.00	50	100.00
0.50	50	25.00
0.01	90	0.90

8. Operating Procedures

Turn on the machine, the machine will enter into self-test mode and show following interface

MODEL :	MAGNER 211
VERSION:	MainBoard V1.0
	DispBoard V1.0
	ADBoard V1.0

TESTING,PLEASE WAIT...	10

This self-test stage may needs about 10 seconds for machine to get warmed up. If the test result is OK, then machine will enter into normal working status shown as following interface:

```
MIX- COUNT          STOP
              VALUE:        0.00
              COUNT:          0
B                                    F:           0
```

MIX-COUNT means mix-counting mode

RUN/STOP is the sign showing machine's running or stop status.

B is the sign of Batch Function is ON.

VALUE is for total Amount. **COUNT** is for total Quantity, **F** shows the quantity of foreign/fake coins.

・Press START/STOP key，the machine will enter into Total Amount & Quantity Display Mode interface:

```
MIX- COUNT          RUN
              VALUE:        0.00
              COUNT:          0
B                                    F:           0
```

At the same time, Motor will begin to run to get the machine work. When coin sorting is finished, it will display the sorting result of genuine and foreign coins on the above interface. The foreign coins will be rejected into the right-most Rejected Coin Drawer.

After the machine stops running, press LIST key to check Separate Channel Amount & Quantity Display Mode, shown as follows: (Press ⬆, ⬇ key to turn to choose different channel)

```
VALUE        COUNT        AMOUNT
2.00          50          100.00
0.50          50           25.00
0.01          90            0.90
```

VALUE: refers to the denomination
COUNT: refers to the quantity for each denomination
AMOUNT: refers the amount for each denomination

Modes shift:

Under main interface, press ⬅ Key to switch the counting mode, from MIX-COUNT to SDC-COUNT, which means mixed counting and single denomination counting. The display interface is as below:

```
SDC- COUNT        STOP
2.00      VALUE:        0.00
          COUNT:         0
B                        F:          0
```

Under MIX-COUNT mode, all the genuine coins will go to pocket 1; under SDC mode, press ⬆ Key to choose the single denomination you want to sort, for example €2.00， 0.50，1.00，0.20，0.05，0.10，0.02，0.01. Based on the denomination you choose, the genuine coins with the same denomination will go to pocket 1, the other coins will go to reject pocket.

Data Clear:

·Under main modes interface, press CLR key to clear all counted data.

·Under main modes interface, press ESC key to clear rejected coin record.

Data Memory:

·Under main interface,press M+ Key to save the quantity and amount for genuine coins.It saves the accumulated data of the counting results 。Under main interface, when the counting quantity and amount for genuine coins is 0, you can press M+ key to clear the saved data.

Data Memory Read:

·Under main modes interface, press MR key to read stored data;

·Under self-learning interface, press M+ Key to read the original self-learning data, this function is only available for maintenance people.
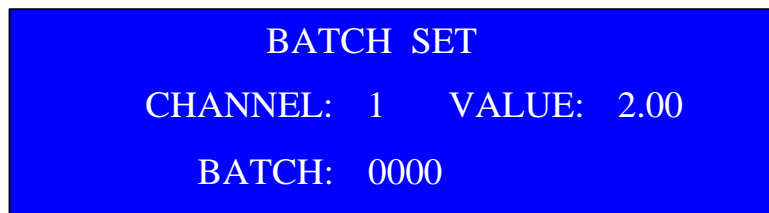
9. Function Settings:

Press SET key to enter into Menu interface, shown as follows:

> MENU
>
> \> 1.BATCH   4.TOTAL
>   2.VALUE   5.TEST
>   3.SYSTEM   6.LEARN
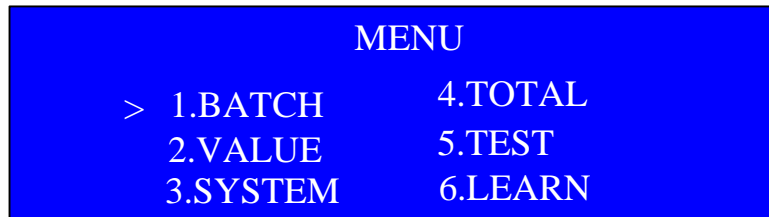
Directly press ⬅, ⬆, ⬇, ➡ four keys to choose target submenu and then press SET key to enter each into detailed operation interface:

(1) **BATCH**

> BATCH SET
>
> CHANNEL: 1   VALUE: 2.00
>
> BATCH: 0000

Enter into BATCH SET interface，press ⬆, ⬇ key to switch the channel.Under one channel, press SET key，the BATCH will flash, at this moment you can set the BATCH value through the numeric key 0 ~ 9 （the upper limit is 9999）。Press CLR key you can clear the BATCH setting.

NOTES：The above steps are used for setting the BATCH number. If you need to set the BATCH, you need to turn on the BATCH function in system. Under main interface, press ⬇ key to turn on the BATCH on/off. When BATCH function is on, there is a B shown at the left corner; if there is no B, it means the BATCH function is turned off.

When one channel Batch No. setting is finished, you can come back to channel number selection interface by pressing SET key and then repeat the above number setting way to set batch number for other target channels. After all settings are finished, press ESC key to

quit from BATCH submenu to come back into main menu interface.

When the machine reaches set Batch number, the LCD display will show as follows:

```
MIX- COUNT          STOP
            VALUE:      20.00
            COUNT:         10
B      2.00 BATCH OK    F:           2
```

For example, if you batch 10pcs for 2.00, when the quantity reaches 10pcs for 2.00, the machine will stop and show "2.00 BATCH OK"and flash. At this moment, you need to clear the drawer for 2.00 and press CLR to clear the message, otherwise other key functions are not workable.

(2) **VALUE**

```
            VALUE  SET
      CHANNEL:    1

         VALUE:   2.00
```

Under VALUE interface，press ⬆, ⬇key to switch the channel. Under one channel, press SET key to fix the VALUE setting mode, the VALUE will flash. At this moment, you can change the value of this channel through pressing numeric key 0 ~ 9 . Press CLR key，the setted the value can be cleared to be 0

Notes: The value is already set in the factory and the function is locked so the user can not change the value.

When one channel Value No. setting is finished, you can come back to channel number selection interface by pressing SET key and

then repeat the above number setting way to set value number for other target channels. After all settings are finished, press $\boxed{\text{ESC}}$ key to quit from VALUE submenu to come back into main menu interface.

(3) **SYSTEM**

```
                    SYSTEM  SET
          >  1.TIME           4.PRINT
             2.BUZZER         5.MAGNET
             3.POINT
```
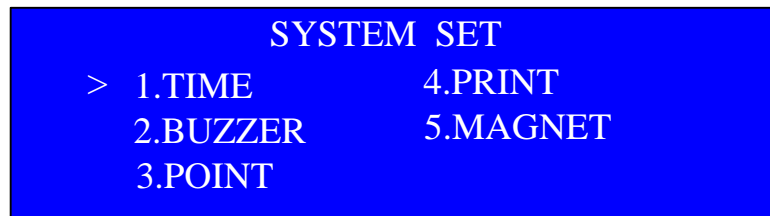
Firstly, it will enter into SYSTEM SET submenu, press $\boxed{\Uparrow}$ or $\boxed{\Downarrow}$ key to make the cursor up and down. And then press $\boxed{\text{SET}}$ key to enter different setting interface.

1)TIME

```
          >DATE：2013-08-29
           TIME：    05:44:32
```
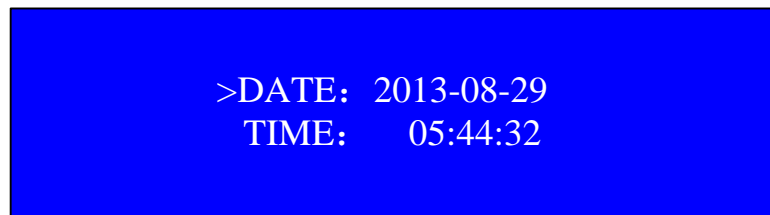
Under this interface, if you need to update date and time, please firstly press $\boxed{\text{SET}}$ key to make the cursor blinking and then by press $\boxed{\Rightarrow}$ key to make the cursor moving. Directly press $\boxed{0}$~$\boxed{9}$ numeric key to set your desired date and time. Press $\boxed{\text{CLR}}$ key to clear data. After all settings are finished, press $\boxed{\text{ESC}}$ key to return to main menu interface.

2)BUZZER

```
                BUZZER：ON
```

Under this interface, please press ⬆ or ⬇ key to turn ON/OFF this function. After setting, press ESC key to return to main menu interface.

3)POINT

```
                POINT：ON
```

Under this interface, please press ⬆ or ⬇ key to turn ON/OFF this function. After setting, press ESC key to return to main menu interface.

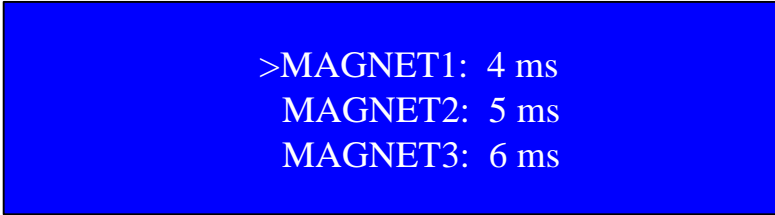4)PRINT

```
          >PRINT0:   ON
           BAUD ：   9600
```

Under this interface, please press ⬆ or ⬇ key to choose PRINT 0 or set BAUD rate. Press SET key to choose either one, and then press ⬆ or ⬇ key to turn ON/OFF the function. After setting, press ESC key to return to main menu interface.

5)MAGNET

```
          >MAGNET1:  4 ms
           MAGNET2:  5 ms
           MAGNET3:  6 ms
```

Under this interface, please press ⬆ or ⬇ key to choose MAGNET 1,2, or 3, and then press SET key to set solenoid activation time(suggested range is 3~9ms). By press ⬆ or ⬇ key, the time will be increased or decreased. After setting, press ESC key to return to main menu interface.

Notes: MAGNET 2 AND MAGNET 3 are reserved in software and user does not need to set it

(4) **TOTAL**

```
          TOTAL:       0000017331
```

This interface shows a memory record of all counted coin quantity. You can enter the 1017 view or press the ESC key to exit back to the main menu interface.

(5) **TEST**

This submenu is for production adjustments purpose only. It is not available for users.
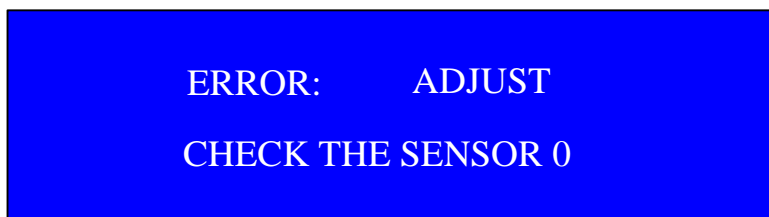
(6) **LEARN**

This submenu is for coin self-learning parameter tests and adjustments. It is not available for users.

10. Trouble Shooting

During self-testing or machine working status, sometimes the LCD screen may display following error code:

（1）**ERROR ADJUST**

<div style="background:blue; color:white;">

ERROR: ADJUST

CHECK THE SENSOR 0

</div>

·When it display ERROR ADJUST, it means the signal of alloy sensor is abnormal, the self-test can not be done normally, please contact your local distributor for solution.

（2）**ERROR 01**

<div style="background:blue; color:white;">

ERROR: 01

CHECK THE SENSOR 1

</div>
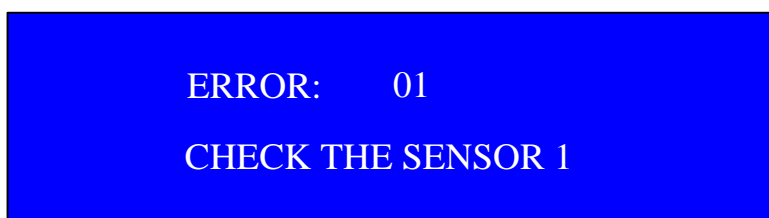
·When it displays ERROR 01, it means the IR transistor is blocked, please check the IR transistor and also the connecting cable. After the problem is solved, please press CLR key to enter into main interface. If the problem can not be solved, please contact your local distributor for solution.

Notes: _If there are any foreign things get jammed on the rail, the dropped coins may not be counted, which will cause counting mistake. Therefore, please clean all coins by moving foreign things before sorting._

11. Precautions:

·Power line using the machine configuration.

·Unplug the power cord before moving the machine.

·Avoid operation under direct sunlight.

·Do not put your hands, tools and clothes into the hopper to avoid personal injury or malfunction of the machine.

·Don't open the Visible Cover during operation.

12. Daily Maintenance

·Be sure to unplug the power cord before daily maintenance.

·Please clean the rail and side board at least once a day   .

·Clean the disc and hopper at least once a day with a brush.

· If the machine needs maintenance or spare parts, please contact
   the local supplier.

13. Accessories

1. Power Cable   1pc
2. Nylon Brush   1pc
3. Coin Scoop   1pc
4. Turn brush（Choose to use）   1pc

*** In the interests of our ongoing policy of continual product improvement,
specifications are subject to change without prior notice.   ***