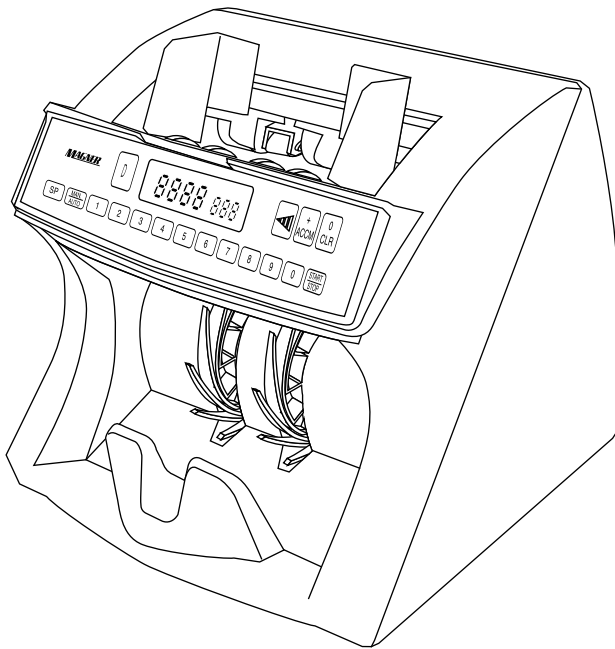


Magner 35-2003/35-3 Series Currency Counter

Operator's Manual



MAGNER

Introduction.

The MAGNER 35-2003 / 35-3 is the most advanced Currency Counter available today.

MAGNER's Design Engineer's have gathered input from experienced Currency Counter experts to develop a machine that is as compact as possible yet fast and extremely accurate.

This instruction sheet for the MAGNER 35-2003 / 35-3 will provide the essential information to operate the MAGNER 35-2003 / 35-3 Currency Counter.

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I. Safety Instructions.

WARNING

The currency counter automatically starts operating in certain circumstances. Consequently, it is important to always follow these precautions:

1. Do not wear loose clothing or jewelry while operating the currency counter.
2. Make sure that your hair does not touch the currency counter.
3. Do not touch currency that has been placed in the stacker while the motor is running.
4. Turn off the power before performing any maintenance or error corrections that require you to put your hands into the machine.
5. When replacing fuses, use only the same type and rating. A fire hazard can be created by using a higher rate fuse.
6. Do not operate the currency counter if it is wet. Also, do not touch the currency counter if you are wet. Operating the currency counter around water creates an electrical shock hazard, which might result in serious injury.

CAUTION

Keep drinks, food and other foreign objects away from the currency counter. Placing foreign objects on or into the currency counter can disable it.

II. Installation.

Unpacking

After unpacking the currency counter, store the box and packing materials for future shipping. Failure to ship the currency counter in the original box and packing will void the warranty.

Installation

1. Select an appropriate workspace. Make sure that the work surface is flat and level, away from bright sunlight, and as free of dust, dirt and smoke as possible. This will ensure proper operation and prevent damage to the rubber components of the machine.
2. Connect the power cord to the back of the currency counter.
3. Plug the cord into the wall outlet.

WARNING

Ensure that the outlet and the currency counter voltage settings match before performing step 2. If the settings are not correct, a fire hazard could be created or the machine could be damaged. If you have any questions about the power supply, do not connect it into the currency counter.

III. Parts Description.

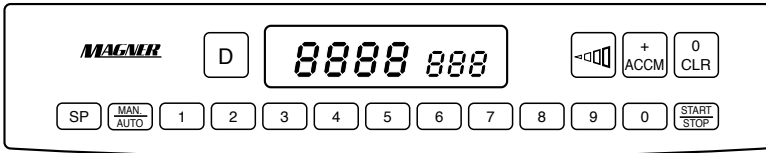


Figure 1 : Sheet key

 Size Detection Key (35-2003 only)

 Speed Selection Key

 Manual/Auto Start Key

Numeric Keys

 Start/Stop Key

 Clear Key

 Accumulation Key

 Density Key

LCD Display (4-digit/Total Display + 3 digit/Batch Display)

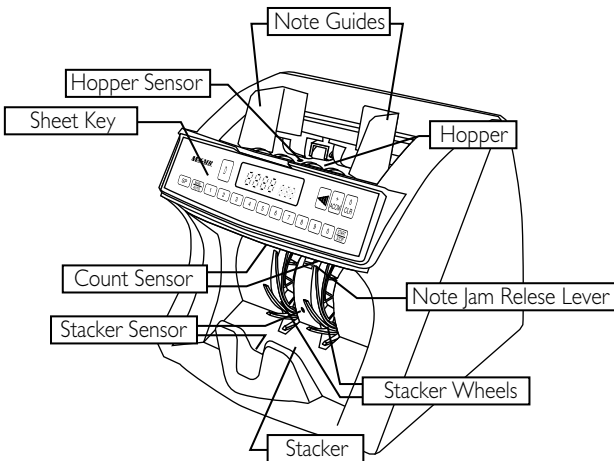


Figure 2 : Front view

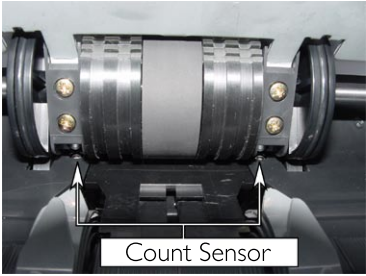


Figure 3 : Count Sensor



Figure 4 : Note Jam Release Lever

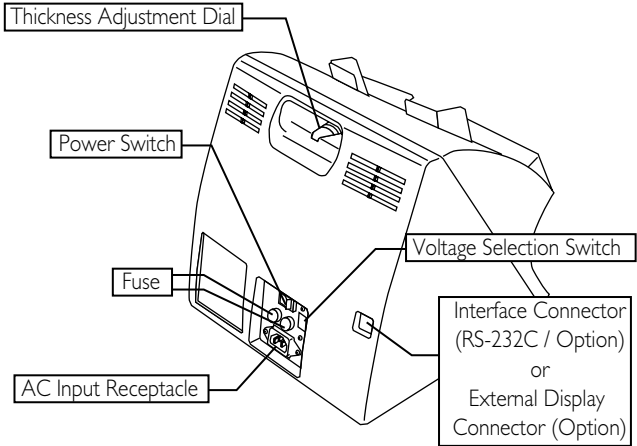


Figure 5 : Rear view

IV. Function of Parts.

I. Sheet Key and Function of each key

[D] Size Detection Key (35-2003 only)

This function is available with the mode 35-2003.

- Press [D] key. "D" appearing on the display indicates that this function is on.
- The counting speed is automatically set at SPEED - 2 when this function is in use.
- Adjust the position of the Note Guides so that notes are centered in the hopper. When setting these Guides, allow enough clearance to enable the notes to move freely.
- When a note of different length is detected, the machine stops and "dSI" appears on the display. Pressing of [ACCM] key can include the note into the batch. Pressing of [CLR] key can exclude the note from the batch. The remove the note from the staker.
- To turn the size check Function (length) off, press [D] key again.

NOTE

*Manufacturer recommend users to set the 5mm detection level.
(= setting value : 0.010)*

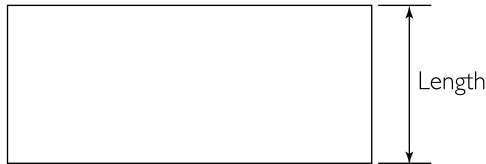
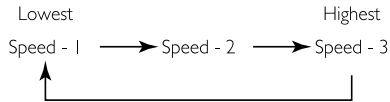


Figure 6 : Note Length

SP Speed Selection Key

- Three counting speeds are available on this machine:
SP 1: Counts approximately 600 notes per minute.
SP 2: Counts approximately 1,200 notes per minute.
SP 3: Counts approximately 1,500 notes per minute.



- To display the counting speed, press **SP** key.
- To change the counting speed, press **SP** key again to the desired counting speed. Once a speed has been selected, the machine will always goes back to the selected setting until another change is made.

MAN/AUTO Manual/Auto Start Key

- This key sets the machine at either manual or auto start mode.
- To turn the manual start mode on, press the **MAN/AUTO** key. "MAN" appearing on the display indicates that this function is on. The machine does not start automatically when notes are placed in the hopper. To start counting notes, press **START/STOP** key.
- To turn the manual start mode off, press the **MAN/AUTO** key. "MAN" on the display goes out. The machine starts counting automatically when the notes are placed in the hopper.

Numeric Keys (Variable Batch Setting Keys)

You can preset a desired number of notes, from 0 through 999, to be counted in a batch before the machine pauses, so that the operator can remove the notes.


NOTE

The factory default setting is 200.

To set a batch:

- Touch the desired number using the numeric key.
- A 3-digit display indicates the preset batch number.
- The machine is now ready to count in the preset batch mode.

To clear the current preset batch number and batch setting:

- Press  key until the 3-digit display indicates "0".
- Press the desired number again.

Start/Stop Key

- This key can be activated when the manual start mode is on.
- The machine starts counting when this key is pressed.
- The machine stops counting when this key is pressed during the counting.
(The note count for the batch may be inaccurate.)

Clear Key

Press the key to clear the count figures on the display and reset errors.


Accumulation Key

This function keeps a running total of the number of notes counted.

- To start the running total function, press  key.
"ACCM" appearing on the display indicates this function is on.

IMPORTANT

Any batch that has an error is not counted in total. Any batch count that is interrupted by an error must be counted again.

To turn off this function, press  key again. The "ACCM" in the display will go out. When counting begins again, the display will start from zero.

Density Key

Five different density levels are available.


Currency that is light or dark colored can be counted with fewer errors by changing the density settings.

LEVEL I: This is the most sensitive level to catch double notes that have a very similar level to single notes.

LEVEL 2: More sensitive than LEVEL 3

LEVEL 3: More sensitive than LEVEL 4

LEVEL 4: Default level from the factory

LEVEL 5: The machine accepts any density of notes. When level 5 is in use,  in the display will flash.

The factory default setting is set at level 4.

- To display the density level, press  key once.

- To change the density level, press  key again to the desired density level.

Once a density has been selected, the machine will always goes back to the selected setting until another change is made.

LCD DISPLAY

- 4-Digit Display: Counts and error messages are displayed.

- 3-Digit Display: A preset batch number is displayed.

2. Hopper

The “Hopper” is capable of accommodating up to approximately 300 circulating bank notes.

3. Note Guides

- When counting 5, 10 and 20EURO denominations, move the note guides to the middle.

- When counting 50, 100, 200 and 500EURO denominations, move the note guides to the outside end.

NOTE

The note guide adjustment is more critical on the lower denomination. The 5 and 10EURO notes need to be centered on the hopper when counted.

4. Stacker and Stacker Wheels

- The machine automatically stops after 200 notes are counted and stacked in the stacker.

- In batch mode, the machine automatically resumes counting as soon as the previously batched notes are removed from the stacker.

- Two stacker wheels ensure neat stacking of notes at all times.

5. Note Jam Release Lever

This lever is used to release the note(s) jammed inside the currency counter.

6. Thickness Adjustment Dial

- This dial is used for adjusting the gap between the feeding and separating rollers so that only one note may pass through at a time.
- For new(thinner) notes, adjust to a lower number: 4, 3, 2 and 1
- For used(thicker) notes, adjust to a higher number: 6, 7, 8 and 9
- Should error signals, "DBL" or "CH", occur frequently, turn the dial to the left to adjust the gap for proper thickness.

7. Power Switch

- When the power switch is turned on, "8888" will appear on the display. The machine will stop automatically after the start-up sequence is performed. The display will show "0" which indicates the machine is ready for counting.
- If a "Sensor Error Code" (see page 10) appears on the display instead of "0", take corrective actions in accordance with the instructions on page 12.
- The Power Switch should be turned "OFF" if the machine is not used for an extended period of time.

8. Fuse

Use only recommended fuse: 2A

9. AC Input Receptacle

10. Interface Connector (RS-232C/option or External Display/option)

- As an optional part, the RS-232C interface is available to interface the currency counter with PC.
- External display is also available as an optional part.

11. Voltage Selection Switch

Please make sure that switch is set at the correct position for the available voltage.

USA, Canada & Mexico : 120V

European countries & others : 230V

V. Operating Procedure

For trouble-free operation, perform the following steps in the order given.

I. Prepare the currency

- A. Remove and discard clips, rubber bands and tags from the notes to be counted.
- B. Fan each group of notes before counting as shown in Figure 6, and remove the following:
 - Torn, wet, oily or soiled notes
 - Notes of incorrect denomination
 - Any other foreign matter attached to, or inserted between the notes.
- C. Put the notes aside. Do not place them in the currency counter hopper until you set the desired functions.

WARNING

The currency counter runs momentarily when you first turn it on. Figure 6 : Fanning the stack

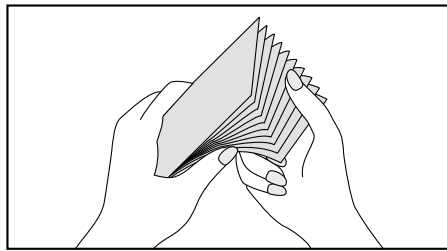


Figure 7 : Fanning the stack

2. Turn the power switch to "ON"
 - A. Be sure that the machine does the following:
 - The motor turns the hopper and stacker wheels.
 - The display reads "8888" to test all of the display segments.
 - Each function key turns on in sequence to show that it is operational.
 - B. When "0" appears on the LCD display, the currency counter is in the ready-

to-count mode.

- If a "Sensor Error Code" (see page 10) appears on the display instead of "0", take corrective actions in accordance with the instructions on page 12.

3. Adjust the thickness adjustment Dial

The thickness adjustment dial is set at 5 as the standard setting.

- For new(thinner) notes, adjust to a lower number: 4, 3, 2 and 1
- For used(thicker) notes, adjust to a higher number: 6, 7, 8 and 9

WARNING

Trial and error is recommended before you make the final adjustment. Small adjustment of 1/2 number or less works best.

VI. Troubleshooting

If you experience an operational error while using the currency counter, the following section will help you identify the problem and provide a possible corrective action.

Should an error occur, a code will appear on the display Refer to the error code chart on page 11 to determine the cause of the error and its possible resolution.

In some situations, a problem occurs in the actual operation of the machine without displaying an error code. If this happens, refer to the operation faults chart on page 11 to determine the corrective action.



Figure 8 : Note Jam Release Lever

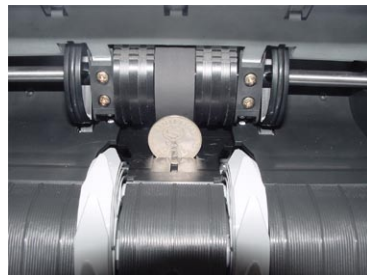



Figure 9 :To lockup the Note Jam Release Lever.

VII. Error Codes

When an error occurs, the machine immediately stops and produces an electric “beep” while the display alternately flashes the error code and count figure.

The note count for the batch in which the error occurred may be inaccurate.

NOTE

To ensure an accurate count, recount the last batch in the stacker after correcting the error and pressing  key.

Use tables on the following pages to find the error code, possible causes and corrective actions.

I. Sensor Error Codes

Error Code	Corrective Action
HJ	Hopper sensor is blocked - Remove the note(s) from the hopper to restart.
SJ	Stacker sensor is blocked - Remove the note(s) from the stacker to restart.
JA	Count sensor is detecting note(s) in the machine - Remove the note(s) to restart.
FEEd	Feed motor is not working.
CSE	Count sensor(both left and right) error - Clean the sensors to restart.
CSEl	Count sensor(left) error - Clean the left side sensor to restart.
CSE2	Count sensor(Right) error - Clean the right side sensor to restart.

2. Counting Error Codes

Error Code	Corrective Action
HF	Half note detected - Press <CLR> key to restart.
CH	Chained note detected - Press <CLR> key to restart.
dbL	Double note detected - Press <CLR> key to restart.
SE	Skewed - Press <CLR> key to restart.
SC	Short count when batching. When the notes on the hopper were not enough to reach the desired number.
SF	Stacker is full(notes in the stacker reach 200 pieces) - Remove the notes from the stacker.

3. Operation Fault

Fault	Corrective Actions:
Currency counter does not power up when machine is turned on.	<ol style="list-style-type: none">1. Make sure that the currency counter is plugged into a wall outlet and that the power cord is plugged into the back of the machine.2. Check that the voltage selection switch matches power input.
Self-test failure.	Call for service.
Electrical burn orders.	Turn off and unplug the currency counter. Call for service.
Loud buzzing slapping or other unusual noises during the operation.	CAUTION <ul style="list-style-type: none">• DO NOT insert tools into the currency counter. Doing so may damage the machine.• DO NOT use oil on any part of the currency counter. Oil on sensors or internal mechanisms can prevent correct operation.

IMPORTANT

If the corrective actions suggested here do not solve the problem, call your service representative.

VIII. Cleaning Jams Manually

- Record the running and grand totals.
- Turn the power switch off.

NOTE

Turning off the currency counter clears the memory of totals.

- Remove all notes from the hopper and stacker. Also, remove notes from inside the currency counter by using the Note jam release lever.
 - Push the Note jam release lever all the way up.
 - If it is necessary to keep locking up the Note jam release lever to release jam note(s), insert a coin into the slot.
 - Make sure that the Note jam release lever is returned to the original position after jam note(s) is cleared.

IX. Preventive Maintenance

Preventive maintenance, requiring partial disassembly by service technicians, is recommended every 180 days. With heavy usage (more than one shift per day, continuous service, etc.), this service will be needed more often. To make sure the operation is as trouble-free as possible, perform the following steps:

<Daily>

Perform the following steps on a daily basis:

1. Turn off the currency counter when not in use.
2. Use the protective cover (dust cover) when the currency counter is not in use.
3. With a clean, lint-free, dry cloth, dust hopper and stacker areas.

<Weekly>

Perform the following steps on a weekly basis:

1. Turn off the currency counter and disconnect the power source.
2. Use a vacuum, lint-free cloth or dry air to remove dust from the bill passages and sensors.

<Sensor Locations>

1. Count Sensors
2. Hopper Sensors
3. Stacker Sensors

See Figure 2 ~ 4 Page 4 and 5

X. Specifications

Counting Speed:	Approximately 600 / 1200 / 1500 notes per minute
Display Type:	LCD: 4-digit total display / 3-digit batch display
Document Size Limits:	110x185 ~ 50x85 (mm) 4.33x7.28 ~ 1.97x3.35(inches)
Input Hopper Capacity:	Approximately 300 circulated notes
Output Stacker Capacity:	Approximately 200 circulated notes
Batching:	variable 1 to 999 (maximum)
Error Detection:	Double/Chain/Half-note/Jam
Document Feed Mechanism:	Friction, intermittent roller type
Overall Dimensions:	255(H)x280(W)x245(D) mm 10.04(H)x11.02(W) x9.69(D) inches
Net Weight:	5.5Kgs./12.1Lbs.
Power Source:	AC120V±10%, 60/50HZ / AC230V±10%, 60/50HZ
Power Consumption:	40W
Temperature Limits:	Operating: 0°C ~ 40°C / 32°F ~ 104°F Storage: -30°C ~ 85°C / -22°F ~ 185°F
Density Setting:	Adjustable 5 levels
Accessories:	Power Code

NOTE

Specifications and design are subject to change without prior notice.

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