COIN COUNTERS

OPERATING MANUAL

Preface

This guide provides information about the coin counters. We recommend reading this guideline to learn how to use this machine. Then, as you become more familiar with this machine, use it as a reference guide to look up information when you need it.

Coin Counters

Model	Coin Hopper approx	Speed approx	Off-Sorting	Conveyor Belt Driven	External Remote Display	Foot Paddle
Small-Duty	1500	2000	●	●	option	X
Medium Duty	2500	2000	●	●	option	X
Heavy-Duty	4300	2500	●	●	option	option

Specification of Euro coins:

Denomination	1Cent	2Cent	5 Cent	10 Cent	20 Cent	50 Cent	EUR 1	EUR 2
Diameter	**16.25mm**	**18.75mm**	**21.25mm**	**19.75mm**	**22.25mm**	**24.25mm**	**23.25mm**	**25.75mm**
Thickness	**1.36mm**	**1.36mm**	**1.36mm**	**1.51mm**	**1.63mm**	**1.88mm**	**2.13mm**	**1.95mm**

1. Introducing Coin Counter:

Thank you for choosing the Coin Counter. The coin counters are easy to use and offer broad functionality to accomplish a variety of low volume to heavy-duty coin processing tasks. This chapter introduces coin counters and provides you with a set of safety precautions to follow when installing and operating the machine.

The Many uses of Coin Counter

An electric coin counter is mainly used for processing coins in financial institutions, vending businesses, amusement parks, payphone businesses, transportation companies, and other coin-op businesses.

Electric Coin Counters count and separate all US or Euro or other international coins at a fast speed into a bag. You can also roll coins into standard paper wrapper using accessories provided with this machine. Two independent adjustment knobs on the machine allow users to select coin diameter and thickness for processed coins or to separate mixed coins.

Terms to know

Term	Definition
Automatic Conveyor Belt	A conveyor Belt automatically transfers coins into coin hopper for processing.
Batch	A group of coins to be processed together having a specified number from 1 – 9999 pieces
Diameter & Thickness	Diameter and thickness of coins. Every denomination of coin is different in diameter and thickness from other denomination of coins.
Reject	Rejection of unspecified / non-selected coins into a reject coin channel.
Separating	Separating one denomination of coins from others.
Bagging	A specific number of coins processed into a coin bag.
Packaging	Roll / package coins into standard paper wrapper.
Memory recall	To view total counting results stored in the memory.

Safety Precautions!

Please read the safety precautions below before operating the machine. Operating procedures must be observed to avoid any potential hazards that could result in personal injuries or damage to the currency counter.

Electrical Safety!

To avoid the risk of electrical shock, fire or damage to the machine

- Do not remove the bottom or back cover of the machine. Do not dissemble the machine yourself.

- Do not turn over or subject the machine to strong impact. Make sure that there are no objects nearby which may readily drop on the machine or turn over and contact the machine.

- Do not use damaged or worn power cords or plugs. Use the Power Cord provided in the box.

- Machine should only be connected to main socket with proper grounding and correct voltage. Operate on only the following power sources: 115/60Hz or 230V/50Hz AC

- Keep metal objects, such as paper clips, away from the coin hopper. If any object fall into the machine, turn off the power and unplug the machine immediately. Contact an authorized service provider for help.

- Keeps liquids away from the machine. If a spill occurs, turn off the power and unplug the machine immediately. Contact an authorized service provider for help.

Installation Precautions!

Follow these precautions when installing the machine.

- Keep the machine away from any heating device, such as a radiator, direct Sunlight, or a location where there is excessive dust or mechanical vibration.

- Select a level place, which is not subject to vibration, for installation of the machine. There is a risk of the machine being tipped over by strong vibrations.

- Place the machine in a location that allows for adequate air circulations to avoid heat buildup inside.

2. Getting to know Coin Counters:

Model: Heavy-Duty

- **Hardware components (*Figure 1*)**

- **Optional Accessories: (*Figure 2*)**

Model: Medium Duty

- **Hardware components (*Figure 3*)**

Model: Small-Duty

- **Hardware components (*Figure 4*)**

Components	Description
Large Coin Hopper	Automatic conveyor belt transports coins to the coin hopper for processing.
Extended Hopper	Hopper extension to increase coin hopper capacity.
Coin Tray	Coins to be counted are prepared on the coin tray
Thickness Knob	The thickness Knob is regulated on a scale according to the maximum thickness of the coin being processed.
Diameter Knob	The thickness Knob is regulated on a scale according to the maximum thickness of the coin being processed.
Control Panel	Control Panel includes function keys and numeric keys.
LED Data Displays	2 LED displays to show batch number, counting results, error messages, memory display etc.
Side Cover	Open to remove jam coins
Coin Bag Holder	Grasps bag so that it does not slip off from the holder
Coin Reject Path & Reject Cup	Non-selected coins are discharged from the Coin Reject Path. Reject cup is used to receive unspecified coins.
Foot Switch (optional)	Use to resume Batch or Normal counting. Usually place under the desk.
External Display Unit (optional)	External Remote / customer display to verify counting results. Use as a second data display.

Use this Key	To……
START/STOP	Start or stop counting.
COUNT/BATCH	Two functions: 1. Show the contents in the bag or tube in normal counting mode. 2. Set the batch mode.
ADD/STORE	Two functions: 1. To accumulate counting results or batch numbers. 2. To display last counting result.
CLEAR	Clear the results from the LED display;
+1	Set the batch number from 0 to 9
+10	Set the batch number from 10 to 90
+100	Set the batch number from 100 to 900
+1000	Set the batch number from 1000 to 9999
RD	To show the total number of coins counted after the machine is powered up.

3.Features and Specifications:

FEATURES	SPECIFICATIONS
Main Features	Counting, Separating, Bagging, Packaging
Counting Speed	**Small-Duty**: 2000 coins/min **Medium Duty**: 2000 coins/min **Heavy-Duty**: 2500 coins/min
Durability	**Small-Duty, Medium Duty**: Low ~ Medium duty operation **Heavy-Duty**: Heavy-Duty Duty operation.
Hopper capacity	**Small-Duty**: 1500 coins w/extended hopper **Medium Duty**: 2500 coins w/o coin tray **Heavy-Duty**: 4300 coins w/large hopper
Countable coin size	Thickness 1.0 mm – 3.4mm Diameter 14.0mm - 34mm
Count Display	5 digits (up to 99999)
Batch Display	4 digits (1 to 9999)
Counting Mode	Normal count and Batch count
Remote Display	4 digits (up to 9999)
Batch number	Manually adjustable from 1 – 9999
Error Detection	Open cover, coin jamming
Communication Port	1. Port for foot Switch (**Option**) 2. Port for External Remote Display unit. (**Option**)
Electrical	AC 230V/50Hz 0.5A AC115V/60Hz 0.7A
Operating Environment	Temperature: 10°C - 35°C Humidity: 30% to 80% RH
Power consumption	**Small-Duty**: 60w approx. **Heavy-Duty**: 65W approx **Medium Duty**: 60w approx
Net Weight	**Small-Duty**: 8Kgs **Heavy-Duty**: 12.5Kgs **Medium Duty**: 8.5Kgs
Dimension (W x H x D)	**Small-Duty**: 400mm (L)x 240mm (W)x 185mm(H)approx **Medium Duty**: 400mm(L) x 240mm(W) x 250mm(H)approx **Heavy-Duty**: 400mm(L) x 240mm(W) x 360mm(H) approx

4. The Operating Modes:

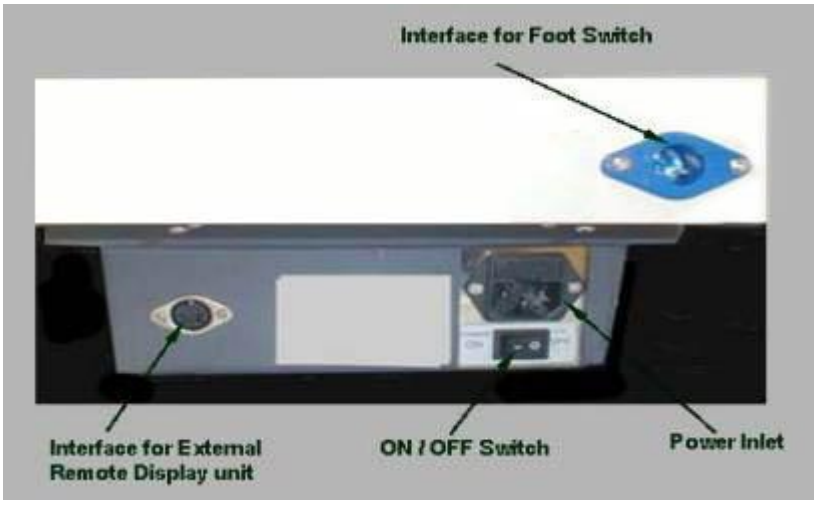
This chapter provides start-to-finish instructions for processing coins with Coin counter.

Powering Up and Down

To Power Up To power up, press the power Switch ON. The power switch is located at the back of the machine. If the machine is in normal condition, the LED displays will show "0" (Zero) and the machine is ready for normal counting.

To Power Down To power down, press the power Switch OFF. The power switch is located at the back of the machine.

Figure 5



Powering Up and Down

Current Operating State

When you power up the machine, the operating state includes the following as standard:

- Normal counting mode
- Count display show "0" (Zero)
- Batch display shows "0" (Zero)

Error Code during power up process

If error codes are displayed during the check out process, please correct them with reference to [**Error Codes and Action],** Page 13.

Control Panel Operation

Control Panel

There are 4 function keys, 4 numeric keys and [**START / STOP**] key on the control panel.

Function Keys

There are 4 function keys on the control panel – [**ADD/STORE**], [**COUNT/BATCH**], [**CLEAR**], [**RD**].

Numeric Keys

There are 4 numeric keys on the Control Panel. These numeric keys are [**+1000**], [**+100**], [**+10**], [**+1**]. These numeric keys are used for setting variable batch number from 1 to 99999.

START/ STOP

To start or stop the machine.
To resume counting after an interruption or from an error counting.

CLEAR

[**CLEAR**] key is used for clearing results from the LED display during piece counting and Batch counting.

RD

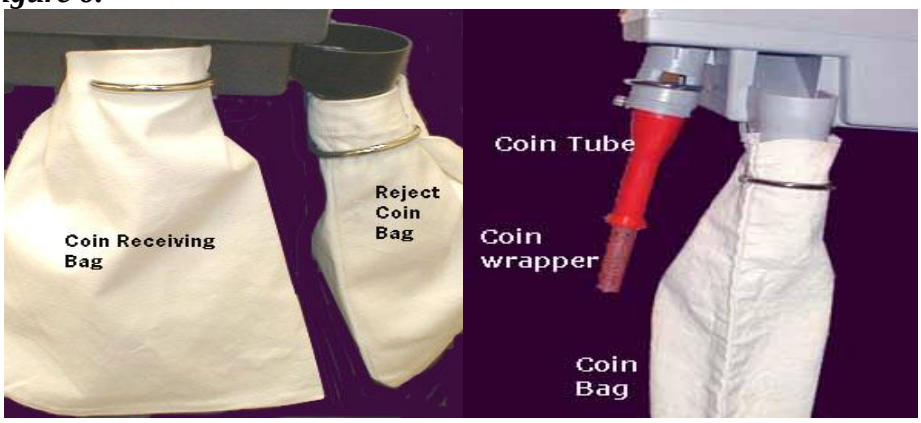
[**RD**] key is used to recall total number of coins counted since the unit is powered up.

Preparations for counting

Coin Receiving Bag & Tube

Attach a coin-receiving bag with coin bag holder securely. Coin receiving bag must be attached securely and tightly so that the bag does not become detached by the weight of the coins. In case of wrapping coins, attach a coin tube with coin receiving bag holder as picture shown and Screw tightly.

Figure 6:



In case a receptacle is used to receive coins, use a fairly deep receptacle so that coins will not jump out or overflow.

Coin Reject Cup Or Bag

Attach a coin reject cup at the reject chute. Because non-selected coins discharged from the reject, it is recommended to use a coin bag if large number of mixed coins to be processed. In this case, attach a coin bag with reject bag holder. At this time, please also make sure that coin-receiving bag is securely tight (***Figure 6***).

Foot Switch

Foot Switch is an optional accessory for coin counter. If it is available, connect the foot switch cable to proper interface shown in ***Figure 5.*** Place the foot switch under the desk or a place where it is easily accessible by your feet. By pressing foot switch, machine resumes counting during batch counting or normal counting process.

External Remote Display Unit

External Remote Display unit is an optional accessory for Coin Counter. External Remote Display unit is usually used for verifying counting results. If this accessory is available, connect the attached cable to the proper interface shown in ***Figure 5***. Place the remote display unit on the desk or next to the machine.

Preparations for counting

Thickness Knob Switch the thickness knob to proper position, set proper position according to counting coin

Setting Such as (Euro)

Position	Coin denomination
50C	50 Cent
E	EUR 1, 2
20C	20 Cent
10C	10 Cent
C	5, 2, 1 Cent

Diameter Knob Switch the diameter knob to proper position, set proper position according to counting coin

Setting Such as (Euro)

Position	Coin denomination
E2	EUR2
50C	50 Cent
E1	EURO 1
20C	20 Cent
5C	5 Cent
10C	10 Cent
2C	2 Cent
1C	1 Cent

Note: When counting mixed coins, first set the diameter and thickness knob to the largest diameter coin. ***Always start counting from the largest diameter coins to the smallest diameter coins.***

Operating Procedure

Normal Counting Press [**COUNT/BATCH**] key to select normal counting mode. The indicator light on the key lit and indicates the activation of this function. ***Caution: coin counters must not run over one hour continuously.***

One Denomination*:*

Select Diameter & Thickness knob position according to the coins to be Processed. Place coins into the conveyor belt and press [**START/STOP**] key to start counting. Coins are transported to coin hopper and process at high speed and discharged to the coin bag or coin receptacle. When no coins to be counted, machine stops automatically after 5 seconds.
Press [**START/STOP**] to stop the operation at any time.

Mixed Denomination:

Select Diameter & Thickness knob position according to the largest coin denomination to be processed. Place coins into the conveyor belt and coins are transported to coin hopper for processing automatically. Press [**START/STOP**] key to start counting. Largest coins are counted and discharged to the coin receiving bag or receptacle. All other coins are discharged through the reject and received by reject coin bag or cup.

Repeat the process until all denomination coins are counted. When no coins to be counted, machine stops automatically after 5 seconds. Press [**START/STOP**] to stop the operation at any time.

NOTE: If too many coins are placed into the hopper at one time, coins may fall out of the hopper by the rotation of the hopper.

Add

To accumulate counting results, press [**ADD/STORE**] key once. The indicator lamp on the key lit and ensures the activation of this function. Machine will automatically accumulate every coins are being counted. Release [**ADD/STORE**] key to deactivate this function**.**

Store

This machine allows user to view the last counting result. To view the last counting result on the Count Display, follow the steps below:

- Press [**ADD/STORE**] key. The indicator light on the key lit ensuring the activation.
- Press [**RD**] key. Last counting results will display on the Count Display, such as: [C.....XXXX]

Operating Procedure

Batch Setting

User can count a bag of coins having a pre-set batch number from from 1 to 9999 using 4 numeric keys on the control panel. Pre-Set Batch number is displayed on the Batch display.

Press [**COUNT/BATCH**] key on the control panel until the lamp on the key is off and batch display shows "**P**".

Use 4 numeric keys [**+1000**], [**+100**], [**+10**], & [**+1**] to select any batch number. For example, to achieve batch number 1000, press [**+1000**] key once. The Batch Display will show 1000.

Batch Display

P	**1000**

After selection of batch number, press [**START/STOP**] to start counting and the machine stops automatically when the counting number reached to the batch number. Resume counting next batch by pressing [**START/STOP**] key.

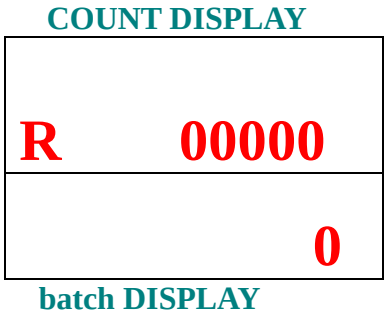
During batch counting, you can also accumulate batch-counting results by pressing [**ADD/STORE**] key.

Press [**CLEAR**] & [**+1**] key simultaneously to clear the batch number from the display. Selection of batch number must be done before you start counting.

Memory Recall

This machine allows user to view total numbers of coins counted since the machine powered up. To view the total counting result on the Count Display, follow the steps below:

- The indicator light on the [**ADD/STORE**] is off ensuring the deactivation of the function.
- Press [**RD**] key. Last counting results will display on the Count Display, such as: [**R.....xxxxx**]
- Press [**CLEAR**] to clear all counting results from the memory.



Error Codes and Action

When powering up the coin counter or during counting, a series of error messages may appear on the display.

Error Code	Meaning	Action
Eb0	Coin Jamming error. Coins are jammed near the counting sensor.	1. Open side cover and remove jammed coins. 2. Close side covers and Press [**CLEAR**] key to clear error message. 3. Press [**START/STOP**] to resume counting.
Ec0	Stop State. A Coin is passing through the sensor without counting / registering.	1. Press [**CLEAR**]. 2. Press [**START/STOP**]
E04	Side cover is not closed tightly or open.	Close side cover tightly.

5. Maintaining the Coin Counter

This chapter described how to take care of the coin counter, including inside and outside dust cleaning and maintenance.

Warning! The main power must be off and unplug the Power Cord from the main socket.

Inside Dust Cleaning

This machine has many parts and is complicated in structure. As it is a product integrating photo-electronic device engineering into a complete product, the dust removal and cleaning procedure must be carried out regularly by a professional service technician.

Adhering to a specific cleaning schedule helps to keep the machine running optimally. It is recommended to have regular maintenance once in every 6 months by an authorized service technician.

Outside Cleaning

Clean the external body surface as often as needed, using a soft cloth dampened with mild detergent. Never use harsh abrasives and chemical solvents as these will mark the finish. When machine is not in use, cover the machine with external dust cover provided with this machine.

Repair

Repairs to this coin counter should ***only*** be made by our authorized Service technician.

6. Troubleshooting

This chapter provides steps for resolving some problems that may occur during operation. A list of possible conditions or failures are addressed with possible causes followed by proper course of action.

Condition	Possible causes	Action
Abnormal condition after powering up the machine	-Unit is plugged into wrong voltage area. -Power Fuse is burnt -Power Supply Board fuse is burnt.	- Connect with proper voltage. - Replace power fuse. - Contact a service technician.
Coin jamming	- Improper adjustment of diameter and thickness knob position.	- Adjust diameter and thickness knob according to coin denomination.
Coins rotate inside the hopper, but do not discharge.	- Improper adjustment of thickness knob	- Adjust thickness knob to the next largest thickness position.
Motor does not rotate	- Loose socket connection between the power supply switch and the motor - Damaged or broken Connection wire	- Contact an authorized repair technician.
Inaccurate counting results	- Loose socket connection between photoelectrical counter and microprocessor. - Dirty coin counting sensor	- Contact an authorized repair technician. - Clean counting sensor.