## ARPEEE

## ミSUZ○Hへアア \＆ARPEGE

## SC－350／SC－360 Coin Counters User＇s Guide



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## Contents

General Information. ..... 1
Declaration of Conformity .....  1
FCC Standard ..... 1
Environmental Compliance .....  1
WEEE Directive ..... 1
Responsibility ..... 1
Safety Precautions. ..... 2
Installation ..... 3
Positional References ..... 3
Warning Labels ..... 3
Machine Label. ..... 4
Introduction ..... 5
Software Version ..... 5
Accessories ..... 5
Machine Part Terminology ..... 6
Control Panel ..... 7
Memory ..... 7
Delay function ..... 7
Operation ..... 8
Modes of Operation ..... 8
Continuous counting ..... 8
Batch counting. ..... 8
Getting Started ..... 9
Continuous Counting ..... 9
Add to memory ..... 9
View memory ..... 9
Clear memory ..... 9
Reset ..... 9
Batch Counting ..... 10
Setting a Temporary Batch Stop ..... 10
Changing the Fixed Batch Stops ..... 11
Clearing a Blocked Coin Exit ..... 11
By-passing Automatic Stop Function ..... 12
Servicing Interval. ..... 12
How to Count Tokens up to 38 mm ..... 12
Troubleshooting ..... 14
Blank Display/Machine Does Not Start ..... 14
Display Goes Blank ..... 14
Motor Stops ..... 14
Maintenance ..... 15
Exchanging the Out-feed Belt ..... 15
Cleaning ..... 15
Cleaning the coin track .....  15
Cleaning the out-feed belt. ..... 16
Technical Data ..... 17

## General Information

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This publication, or parts thereof, may not be reproduced in any form whatsoever other than for the purchaser's personal use without the express permission of SUZOHAPP.

## Declaration of Conformity

We declare under our sole responsibility that the product in this manual is in conformity with the following standards or other normative documents:

- EN 60 950-1:2006 + A11
- EN 61 000-6-1:2007
- EN 61 000-6-3:2007
following the provisions of Directive:
- Low voltage Directive 2006/95/EC;
- EMC Directive 2004/108/EC.


## FCC Standard

FCC Part 15 (2008): Radio frequency device, subpart B: Unintentional radiators. Class B equipment.

## Environmental Compliance



## WEEE Directive

Waste Electrical and Electronic Equipment Directive 2002/96/EC.

Equipment marked with this symbol must be treated separately and in accordance with any local legislation requiring proper treatment, recovery and recycling of used electrical and electronic equipment.

## Note!

If the equipment contains batteries or accumulators, dispose of these separately according to local requirements.

Contact your SUZOHAPP representative for further details.

## Responsibility

The supplier of the equipment accepts no responsibility for injury or damage to personnel or equipment, if the equipment is altered in any way or used in a manner for which it was not intended at the time of delivery.
If the conditions for use of the equipment are changed, the supplier must be contacted or the declaration of conformity is invalidated.

## Safety Precautions

This guide contains hazard information which must be read by all users. The hazard information is presented as a warning, as follows:

## WARNING!

## Risk of personal injury!

Warnings indicate a potential hazard to the health and safety of users. The warning symbols appear at their points of application in this guide. Always refer to this section for information about the risk and how to avoid it.

## Caution!

Cautions indicate a hazard to the machine, but not a danger to personnel. They clearly state the nature of the hazard and how to avoid it. They appear at their points of application in this guide.

## WARNING!

## Risk of electric shock!

Lethal voltages exist i the machine when connected to mains power. Make sure you disconnect the power cord
 before cleaning or servicing the machine.

## WARNING!

## Risk of electric shock!

The machine is of metal construction and must therefore always be earthed to the supply. Ensure that

## WARNING!

## Risk of jamming!

This machine contains moving parts and sharp edges. Always be careful. Do not touch the components inside the machine while it is running.

WARNING!

## Risk of tipping!

During bagging, do not exceed the weight stated on the label on the coin outlet, see "Warning Labels" on page 3.

## WARNING!

## Risk of impaired hearing!

Use ear protectors while the machine is running.

## Installation

## WARNING!

Risk of electric shock!
Follow the safety Precautions.

## WARNING!

## Risk of tipping!

Follow the safety Precautions.
The machine must be installed by an authorised
SUZOHAPP representative.

## Caution!

The machine must be protected by a fuse or a circuit breaker in the electrical circuit.

## Caution!

Electrostatic discharge (ESD) may damage the electronic components. All electronic circuit boards in the machine are sensitive to ESD.
Please also note the following when installing the machine:

$$
\begin{array}{ll}
\text { - Operating temperature } & 15-35^{\circ} \mathrm{C}\left(59-95^{\circ} \mathrm{F}\right) \\
\text { - Operating humidity } & 30-80 \% \mathrm{RH}
\end{array}
$$

Do not place the machine close to any radiators. Make sure there is free space around the machine to allow the air to circulate.
The socket-outlet shall be installed near the equipment and shall be easily accessible.
If the plug on the supply lead to the machine has a fuse, make sure it has the correct rating in amps.
Connect the machine directly to the Building Electrical Supply. Do not use any mains extension lead.

Although this machine has been tested and complies with the national and international standards/regulations, it is recommended that no equipment which generates a high level of electromagnetic interference (EMI) or vibration is placed close to the machine.

## Positional References

Unless stated otherwise, positions and directions such as left, right, upper, lower, rear, clockwise and counter-clockwise are given with respect to the machine when viewed from the front.

## Warning Labels

## 4 WARNING

THE MACHINE MAY ONLY BE CONNECTED TO SOCKET WITH A PROPER EARTH CONNECTION. DOUBLE-POLE/NEUTRAL FUSING. REPLACE ONLY WITH FUSE OF SAME TYPE AND RATING RECOMMENDED BY SCAN COIN.


## Machine Label

The label below is an example of the information available on the machine.


* See "Environmental Compliance" on page 1.


## Introduction

The SC-350/360 are universal, compact desktop machines for counting coins and tokens.

SC-350 has a manual coin tray, SC-360 has an automatic one.

Place the coins to be counted in the coin tray. Set the diameter selector and the thickness selector to the desired position. See "Technical Data" on page 17 for min./ max coin diameter and thickness.

After a minor adjustment, the machine can count tokens with a diameter up to 38 mm , see "How to Count Tokens up to 38 mm " on page 12 .
After being counted the coins appear at the coin outlet where they can be put into either bags or tubes, depending on the type
 of attachment fitted to the machine.

Any rejected coins are routed to the reject cup.
Press the keys on the control panel to select the various modes of operation.
The machine is equipped with a serial interface, it can be controlled from a computer. This means that the machine could be used as a dispenser.

## Software Version

This User's Guide relates to software version 4.03.

## Accessories

For information about the accessories available, please contact your SUZOHAPP representative.

## Machine Part Terminology



## Control Panel



| Key | Function |
| :--- | :--- |
| Start/Stop | Starts and stops the machine. |
| Q | Quantity. Selects and/or displays fixed batch stops <br> or a temporary batch stop. Adjusts the temporary <br> batch stop. |
| ACC | Memory. Adds the number of coins counted to <br> the memory and resets the display to zero. |
| B | Accumulator. Shows the contents of the memory. <br> the last reset or the last completed batch stop. |
| C | Clear. Resets the display. |

The six digit display can show numbers up to around four billion. In the case of numbers over 999,999 , the display automatically alternates between the upper and lower groups of digits. For example 15009456 is shown as " 15 " and " 009456 ".


## Note!

The decimal point on the far right is lit up when the upper group of digits is shown.

## Memory

The memory retains the data contained in the registers even when the machine is switched Off. The contents of the memory can be reset.

The green indicator above ACC is lit up if anything is stored in the memory.

## Delay function

All keys affecting the contents of a register, such as memory and resetting the number of coins counted, have a built-in time delay to prevent from human error.

## Operation

## WARNING! <br> Risk of jamming! <br> Follow the safety Precautions.

## Modes of Operation

The SC-350/360 has two modes of operation, continuous counting and batch counting.

## Continuous counting

The machine counts the coins and the display is continuously updated with the number of coins counted.
The green indicator above Start/Stop is lit up during operation.

- If the green indicator flashes, the inspection cover is open.
- The green indicator stops flashing when the inspection cover is closed. It is possible to restart the machine.

If no coin passes the coin sensor for five seconds, the rotating disc stops and automatically reverses slightly before restarting. If no coin passes during the next five seconds the disc stops automatically.
This happens because:

- there are either no more coins to count, or
- the flow of coins has been blocked.

This function can be turned off (see "By-passing Automatic Stop Function" on page 12).

## Batch counting

The machine counts the coins up to a fixed batch stop and then stops. There are seven fixed batch stops: 20, 40, 50, 1,000, 2,000, 4,000 and 5,000 .

In addition to these there is a temporary batch stop which can be set between 5 and $1,000,000$. The temporary batch stop can be used if there is no suitable fixed batch stop.

The fixed batch stops can be changed, see "Changing the Fixed Batch Stops" on page 11.

The green indicator above $\mathbf{Q}$ is lit when the machine is set for counting a fixed quantity, a batch stop. When the green indicator flashes, a full batch has been counted, that is the batch stop has been reached.

## Getting Started

a) Connect the power cord.
b) Switch On the machine.
c) The digit " 8 " will appear momentarily in all positions on the display as a digit test.

After this the display shows the amount of coins counted since the machine was last reset. The machine is now ready for use.


## Continuous Counting

WARNING! Risk of tipping!
Follow the safety Precautions.
a) Repeatedly press $\mathbf{Q}$ until the green indicator goes out.
b) Set the diameter selector (a) and the thickness selector (b) to their desired positions.
c) Put the coins into the coin tray.

d) Press Start/Stop.

The machine starts counting and the display is continually updated with the number of coins counted.
e) To stop the machine, press Start/Stop.

## Add to memory

Press $\mathbf{M}$ to add the number of coins counted to the memory when counting is finished.

The display resets to zero and the green indicator above ACC is lit, indicating that something is stored in memory.

## View memory

Press and hold ACC to view the contents of the memory.

## Clear memory

Press $\mathbf{C}$ while holding down ACC to clear the contents of the memory.

## Reset

Press $\mathbf{C}$ to reset the display.

## Note!

During the counting operation, check for rejected coins and put any valid coins back into the coin tray.

## Batch Counting

## WARNING!

## Risk of tipping!

Follow the safety Precautions.
a) Press $\mathbf{Q}$ several times to display the seven fixed batch stops one after another.
b) Select batch stop and hold down $\mathbf{Q}$.

The display shows the selected batch stop number on the left and the batch stop quantity on the right, see also "Modes of Operation" on page 8.
The indicator above $\mathbf{Q}$ is also lit, showing that the machine is set for batch counting.
c) Press $\mathbf{B}$ to check that the partial batch register reads zero before starting.
If not, press $\mathbf{B}$ and $\mathbf{C}$ together to reset the register.
d) Press Start/Stop.

The machine starts counting and stops when the batch stop is reached. The indicator above $\mathbf{Q}$ flashes when a full batch is reached. When the machine is restarted, this register is automatically set to zero.

- If there are more coins to count, press Start/Stop to continue counting.
- If the last batch count is incomplete, shown by the indicator above Q not flashing, press B to show the number of coins
in the bag (partial batch register). Press B and C together to set the partial batch register to zero.
e) During counting check for rejected coins and put any valid coins back into the coin tray.
f) To exit batch counting, press $\mathbf{Q}$ several times until the indicator above $\mathbf{Q}$ is not lit.


## Setting a Temporary Batch Stop

a) Press and hold $\mathbf{Q}$ while selecting batch stop with M, ACC, B and C.
Each key changes the digit right above it ( $\mathbf{M}$ is used for two digits). The figure " 9 " appears at the far left of the display, showing that you are using a temporary batch stop.

b) Release $\mathbf{Q}$. The machine is now ready to count the temporary batch.
c) Proceed to count the batch as described in "Batch Counting" on page 10 , steps 2 to 8 .

## Note!

This temporary batch stop is not kept in the memory when another batch stop is selected.

## Changing the Fixed Batch Stops

a) Switch the machine On while holding down $\mathbf{Q}$.
b) When the display stops showing a row of " 8 ", release $\mathbf{Q}$.


The machine is now ready for programming. The figure to the left of the display is the fixed batch stop number (1-7) and the other figures the batch stop quantity.
c) Press $\mathbf{Q}$ several times until the display shows the desired batch stop number.
d) Press $\mathbf{M}, \mathbf{A C C}, \mathbf{B}$ or $\mathbf{C}$ to change the fixed batch stop setting. Each key changes the digit right above it ( $\mathbf{M}$ is used for two digits).
e) To change another fixed batch stop return to step d.
f) When all the required fixed batch stops have been changed, press Start/Stop until the digit on the far left disappears.

## Note!

All of the fixed batch stops are now in the memory and will remain there even when the machine is switched Off.

Clearing a Blocked Coin Exit
WARNING!
Risk of electric shock!
Follow the safety Precautions.
If an oversized coin blocks the exit from the coin tray:
a) Open the inspection cover.
b) Raise the thickness guide block (a) and the feed mechanism (b).

c) Remove the coin that blocks the exit from the rotating disc.
d) Replace the thickness guide block and the feed mechanism.
e) Close the inspection cover.
f) Press Start/Stop to continue counting.

## By-passing Automatic Stop Function

a) Hold down $\mathbf{C}$ while switching the machine On.

The display reads "St0P 0", indicating that the automatic stop function is switched off.
b) If you want to switch on the automatic stop function again, switch off the machine and repeat step1.

The display will now read "St0P 1", indicating that the automatic stop function has been switched back on.

## Servicing Interval

This function is usually disabled.
When the machine is due for service, there are two possibilities:

- The decimal point at the far left of the display flashes. You can continue counting.
- A service message, "Call for service", is displayed when you switch on the machine. To acknowledge the message, press $\mathbf{C}$. The decimal point at the far left of the display will start flashing. You can continue counting.

Service should be performed by your SUZOHAPP representative.

## Note!

After a pre-set number of coins, the service message can no longer be acknowledged. Contact your SUZOHAPP representative.

How to Count Tokens up to 38 mm WARNING!

## Risk of electric shock!

Follow the safety Precautions.
a) Set the diameter selector (a) in position $\mathbf{1 4} \mathbf{~ m m}$ (min.).
b) Open the inspection cover.
c) Raise the feed unit (b).

d) Remove the cover plate (c).

e) Hold on to (d) while executing item 6 below.
f) Remove the screw (e) and turn (f) one half of a turn ( $180^{\circ}$ ), to the position shown. Tighten the screw.
g) Release (d).

h) Replace the cover plate.
i) Lower the feed unit.
j) Close the inspection cover.
k) Set the diameter selector to $\mathbf{3 4} \mathbf{~ m m}$ (max.) and test run some tokens.

## Troubleshooting

## WARNING! <br> Risk of electric shock! <br> Follow the safety Precautions.

## Blank Display/Machine Does Not Start

If the display is blank when the machine is switched On, check the power cord. If the power cord is properly connected but the machine still does not work, contact your SUZOHAPP representative.

## Display Goes Blank

The power supply for the electronic unit has an automatic thermal cut-off function which is activated if the power supply is overloaded.

Switch the machine Off and allow it to cool off for 15-20 minutes (depending on room temperature) to reach normal operating temperature.

## Motor Stops

## Note!

The inspection cover must be closed in order to start the machine.
The motor has an automatic thermal cut-off function which is activated if the motor winding overheats.
Switch the machine Off and allow it to cool off for 15-20 minutes (depending on room temperature) to reach normal operating temperature.
If the motor is often overheated, contact your SUZOHAPP representative.

## Maintenance

## WARNING!

Risk of electric shock!
Follow the safety Precautions.

## Caution!

Do not attempt to oil or lubricate any parts in the machine. All bearings are pre-lubricated and will be damaged if any lubricant is added.

## Exchanging the Out-feed Belt

a) Set the diameter selector (a) to $\mathbf{3 4} \mathbf{~ m m}$ (max.).
b) Open the inspection cover.
c) Raise the feed mechanism (b) and the out-feed belt (c).

d) Remove the old out-feed belt and exchange it for a new one.
e) Replace the feed mechanism and the out-feed belt.
f) Close the inspection cover.
g) Reset the diameter selector to the desired position.

## Cleaning

## Caution!

Only use cleaning materials and implements which do not scratch

Clean the machine daily to prevent from accumulation of dirt, since this may cause too many coins to be rejected.
Wipe the coin detector with a soft brush or a soft cloth.
Use a vacuum cleaner to remove dust from the rotating disc.

## Cleaning the coin track

Clean the coin track at regular intervals to ensure high counting performance.
a) Open the inspection cover.
b) Raise the feed mechanism (b) to get to the coin track.
c) Raise the thickness guide block (a).

d) Clean the coin track with a brush, or the plastic scraper provided with the machine.
e) Fit the thickness guide block and the feed mechanism.
f) Close the inspection cover.

## Cleaning the out-feed belt

The out-feed belt may require cleaning from time to time.
a) Remove the belt, see "Exchanging the Out-feed Belt" on page 15.
b) Clean the belt with a paper towel soaked in alcohol or other mild degreaser.
c) Fit the feed mechansim and the out-feed belt.
d) Close the inspection cover.

## Technical Data


SC-360 ..... 019360-00x
Frequency
0.50 A
SC-360
100 W
SC-360 ..... 120 W
Batch range ..... 5-1,000,000

## Dimensions

Width. . . . . . . . . . . . . . . . . . . . . . . . . . . 295 mm (11.6")
Depth. . . . . . . . . . . . . . . . . . . . . . . . . . . 480 mm (18.9")
Height SC-350 . . . . . . . . . . . . . . . . . . . . . 250 mm (9.8")
Height SC-360 . . . . . . . . . . . . . . . . . . . . 380 mm (15.0")
Weight
SC-350 . . . . . . . . . . . . . . . . . . . . . . . . . . $17.5 \mathrm{~kg}(38.6 \mathrm{lbs})$
SC-360 . . . . . . . . . . . . . . . . . . . . . . $19.5 \mathrm{~kg}(43.0 \mathrm{lbs})$

Noise level (during operation) $81 \mathrm{~dB}(\mathrm{~A})$

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