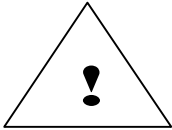## Preface

Thank you for purchasing the ZZap CS20 coin counter and sorter. The CS20 makes manual counting and sorting a thing of the past. As you relax, the CS20 will count and sort your coins fast and accurately while displaying the total value counted on its large LED display. At the end of the cycle the CS20 will automatically stop and report the total quantity counted per denomination.

Contents

1. Safety instructions

Read the safety instructions before operating the ZZap CS20 in order to avoid personal injury and damage to the machine.

⚠	• Do not put foreign coins/objects in the hopper. • Before carrying out maintenance, make sure the machine is switched off and the plug is disconnected from the power supply. • Do not put fingers inside the hopper or coin channels when the machine is turned on. • Do not drop metal objects or flammable materials inside the machine. • Do not operate the machine when the back cover is open. • Switch off the machine after use. • Disconnect the power supply if the machine is expected to be out of service for extended periods of time. • Do not operate the machine in high temperatures or humid/damp conditions. • Do not operate the machine with wet hands. • Follow all the warnings and instructions marked on the machine (if applicable). • Ensure that the mains power supply is compatible with the machine. • Disconnect the power supply before moving the machine. • Replace the fuse if it has blown: open the cover of the fuse holder, discard the blown fuse and replace it with a new fuse of the same type and rating.

2. Introduction

2.1 Features

- Counts up to 220 coins per minute.
- Batch and add function.
- Reports total value and quantity per denomination.
- Automatic stop function.
- Counts all denominations.

2.2 Package contents

The package includes the following:
- CS20 coin counter and sorter.
- 8 coin trays.
- Power lead.
- User manual.

3. Exterior features

Hopper

Control panel

Cover

Coin tray

On/off switch

Fuse (underneath machine)

4. Operating instructions

4.1 Counting and sorting

1) Place the machine on a level surface.
2) Turn on the machine at the on/off switch.
3) Remove any foreign coins/objects then put the coins in the hopper.
4) Press the "START/STOP" button to start counting. Press the "START/STOP" button again to stop counting.
5) The total value counted will be displayed on the screen.
6) To display the counting result for each coin denomination, press the "REPORT" button when counting is complete. Press the "C" button to exit report mode.

4.2 Batch counting

1) Place the machine on a level surface.
2) Turn on the machine at the on/off switch.
3) Set a batch quantity for each coin denomination:
    a. Press the "SET" button to select a coin denomination (shown on the left hand side of the display).
    b. Press the "BATCH", "+" and "-" button to set a batch quantity between 0 and 999 (shown on the right hand side of the display).
4) To start counting, put the coins in the hopper and press the "START/STOP" button.
5) Press the "START/STOP" button at any time to stop counting.
6) When a batch has been counted the CS20 will automatically stop and emit a "beep" sound. The applicable denomination and its batch quantity will be displayed.
7) Remove the coins from the applicable coin tray and press the "START/STOP" button to continue batch counting.

Note I: If the batch quantity is set to 0 the CS20 will continue to count the applicable denomination unless the "START/STOP" button is pressed or if no coins are counted within 20 seconds.

Note II: To set all the batch quantities to 0: press and hold the "-" button for 7 seconds until "C" appears on the left hand side of the display.

Note III: The current batch settings will be remembered when the CS20 is next switched on.

5. Maintenance and general use

Before cleaning/maintaining the machine, make sure the CS20 is switched off and the plug is disconnected from the power supply. Periodically clean the machine with a cloth to remove dust and dirt. In the event of a coin jam see section 5.1 and 5.2. If the coin jam is still not resolved:

1) Switch off the machine and disconnect the power supply.
2) Unscrew and remove the 3 screws near the bottom of the cover.
3) Remove the cover and remove any jammed coins.

5.1 Removing foreign coins/objects from inside the machine

Foreign coins/objects will cause the machine to jam and may damage the machine. To remove foreign coins/objects from inside the machine, make sure the CS20 is switched off and the plug is disconnected from the power supply, open the back cover and remove the foreign coins/objects. Also remove dust and dirt where possible.
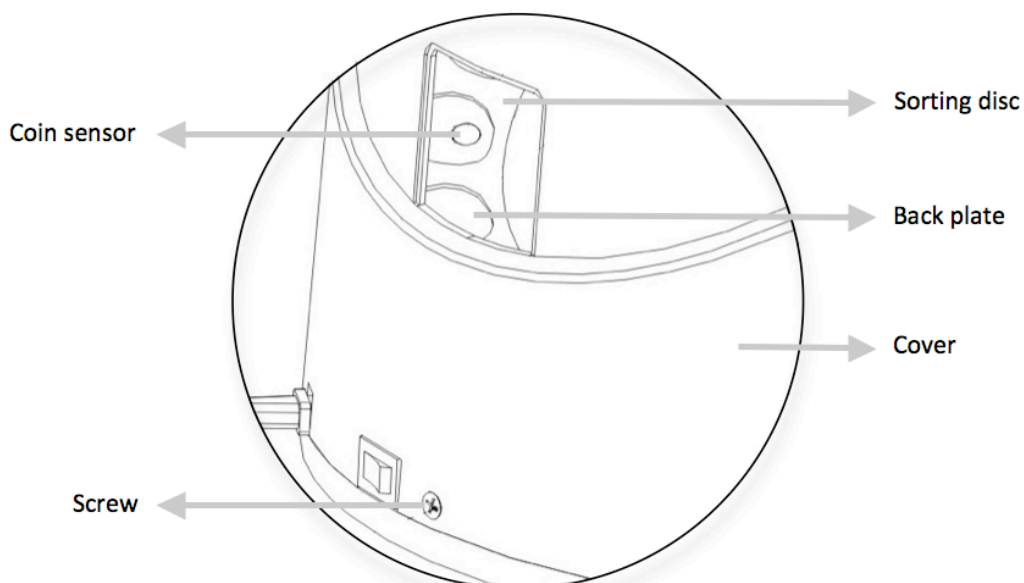
5.2 Removing jammed coins from a coin channel

Coins may become jammed in a coin channel. To remove jammed coins, make sure the CS20 is switched off and the plug is disconnected from the power supply. Use a finger to push up through the coin channel in order to release any jammed coins, as shown below.

Coin channel

5.3 Error messages

When the CS20 is turned on it will undergo a self-test. If the CS20 detects a fault it will display one of the following error messages:

EA: This means the coin sensor is impeded. To unblock the coin sensor: turn off the machine and disconnect the power supply, then open up the back cover. Turn the sorting disc by hand until you can see the coin sensor in the top left corner, as shown below. Remove any dust or dirt on the sensor.

Coin sensor

Sorting disc

Back plate

Cover

Screw

In the event that "EA" is often displayed, it may be necessary to clean the inside of the machine:
1) Switch off the machine and disconnect the power supply.
2) Unscrew and remove the 3 screws near the bottom of the cover.
3) Remove the cover and clean the coin sensor, sorting disc and back plate with a brush or cloth. Remove foreign coins/objects.

E1-E8: This means a counting sensor is impeded. There are 2 counting sensors located at the top of each coin channel. E1 indicates the coin channel with the smallest diameter is impeded; E8 has the largest coin channel diameter.

To unblock the counting sensors: remove any coins that have become jammed in the coin channel, see 5.2 and clean both counting sensors with a brush or cloth.

E9: This means the speed sensor is impeded. To unblock the speed sensor follow the steps below:
1) Switch off the machine and disconnect the power supply.
2) Unscrew and remove the 3 screws near the bottom of the cover.
3) Remove the cover and clean the speed sensor with a soft cloth. The speed sensor is located on the right hand side, just above the sorting disc.

6. Specifications

- Operating temperature range: 0 ~ 40°C.
- Operating humidity range: 30 ~ 80%.
- Hopper capacity: Max. 500 coins.
- Coin tray capacity: Max. 300 coins.
- Denomination display: 3 digit LED
- Counting number display: 4 digit LED
- Power source: AC220-240V/50Hz or AC110V/60Hz
- Power consumption: <20W
- Dimensions: 345 x 306 x 260 mm
- Net weight: 3.2 KG
- Counting speed: Max. 220 coins/minute

If the machine has a fault that you are unable to resolve, please contact your local ZZap dealer.

Products are subject to change without further notice.