Preface

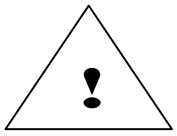
The NC30 is simply the best banknote counter in this price range. The NC30 has one of the fastest counting speeds of any other banknote counter and verifies each and every banknote with its advanced 5-fold counterfeit detection. It also features a high capacity, easy-to-use top-loading hopper.

The NC30 has the ability to count your banknotes into batches, add different batches together and detect rogue denominations within your stack.

Contents

1. Safety instructions

Please read the safety instructions before operating the ZZap NC30 to avoid personal injury and damage to the machine.



- Before turning on the machine, make sure there are no objects obstructing the rollers or stacker impeller.
- Do not put your fingers, clothes, hair etc., near the moving parts of the machine.
- The unit should be connected to a power supply through the power cable provided.
- Before carrying out maintenance, switch off the machine and disconnect the power supply.
- Switch off the machine if the machine is not in use.
- Disconnect the power supply if the machine is expected to be out of service for extended periods of time.
- Press the buttons with your fingers. Do not press the buttons with a pencil, stylus etc.
- If one of the following events occur, disconnect the power supply and contact your local ZZap dealer.
  a) If the power cable/socket is damaged.
  c) If the machines casing is damaged.
  d) If the machines performance noticeably degrades.
- Disconnect the power supply before moving the machine.
- Do not drop objects or flammable materials inside the unit.
- If the machine is exposed to low temperatures for prolonged periods of time then it must be kept at room temperature for approximately two hours before operating the machine.
- Do not disassemble the machine.
- Do not expose the machine to water or other liquids.
- Do not operate the machine in high temperatures or humid conditions.
- Do not overload the power socket.
- Ensure that the mains power supply is compatible with the machine. An incorrect supply voltage could cause a potential fire hazard.
- Do not pull on the power cable when disconnecting the power supply. Instead, grip the plug.
- Do not place heavy objects on the power cable.

2. Introduction

2.1 Features

- Counts 1,900 banknotes per minute
- 5-fold counterfeit detection
- Batch and adding functions
- Automatic or manual start
- Counts all currencies
- Top loading hopper

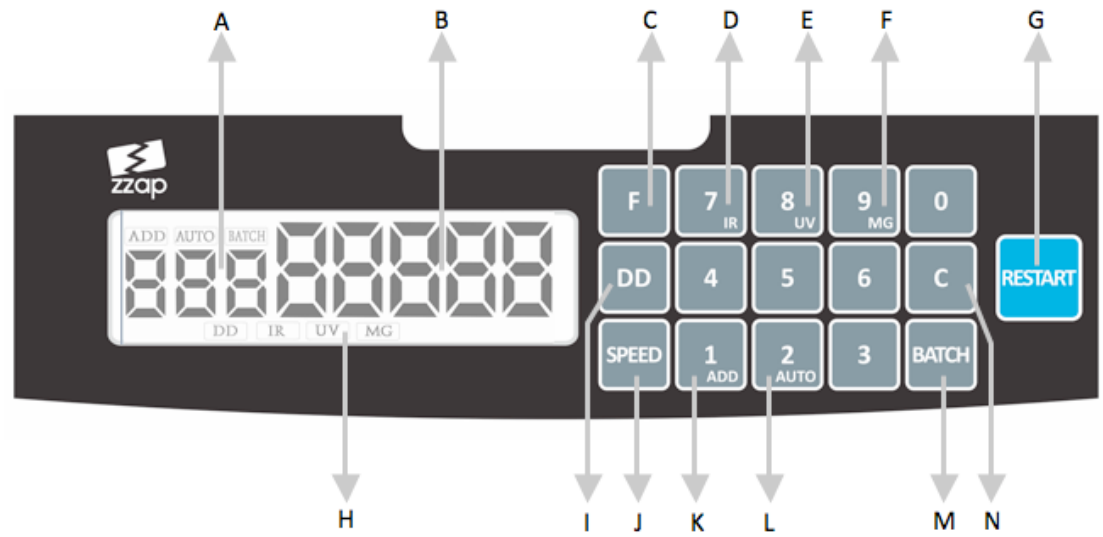
2.2 Package contents

The package includes the following:

- ZZap NC30 banknote counter
- User manual
- Power cable
- External display
- Cleaning brush
- Spare fuse

2.3 Exterior features

2.4 Control panel



A. Batch number display
B. Counting result display
C. Function button
D. IR: Thickness detection button
E. UV: Ultraviolet light detection button
F. MG: Magnetic detection button
G. Restart button
H. Function indicators
I. Width detection button
J. Speed setting button
K. ADD: Accumulative counting button
L. AUTO: Automatic/manual start button
M. Batch counting button
N. Clear button

3. Operating instructions

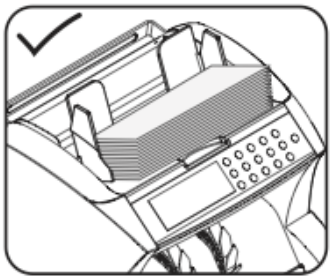
3.1 Turning the machine on/off

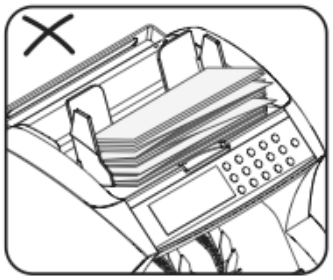
Insert the power cable into the power socket, located at the back of the machine. Insert the plug into the mains power supply. Switch on the NC30 using the power switch. The NC30 will run a self-test. If the test is successful, the screen will display ‘0’ which means the NC30 is ready for use. If an error code is displayed refer to “4.1 Error codes and solutions”.

3.2 Counting

Before counting:

- Remove seriously contaminated banknotes.
- Remove damaged banknotes.
- Remove objects such as paper clips, pieces of paper etc., from the banknotes.
- Straighten out bended or folded banknotes.
- If you are counting new banknotes there is a risk the banknotes may stick together. Bend and flex the stack of banknotes before placing them in the hopper.
- If the banknotes need to be aligned: enable manual start, place the banknotes in the hopper and use the hopper guides and your hands to align the banknotes as shown below.





Place the banknotes in the centre of the hopper. The NC30 will start counting automatically or the “RESTART” button will need to be pressed, see “3.3 Automatic or manual start”. The quantity of banknotes counted will be displayed in the counting result display. If a counterfeit or different denomination is detected the NC30 will stop counting automatically, the alarm will sound and an error code will be displayed. Detection error codes are listed in section ‘4.1 Error codes and solutions’.

3.3 Automatic or manual start

If automatic start is enabled the NC30 will start counting automatically. If manual start is enabled the “RESTART” button will need to be pressed to start counting. To enable/disable automatic/manual start; press the “F” button. While “CF SET” is displayed, press the “AUTO” button. If “AUTO” is displayed on the screen, automatic start is enabled. If “AUTO” is **not** displayed on the screen, manual start is enabled.

3.4 Detections

The NC30 has 4 detections that can be enabled/disabled:

MG detection: Detects counterfeit banknotes through magnetic detection.
UV detection: Detects counterfeit banknotes through ultraviolet detection.
IR detection: Detects counterfeit, folded, damaged or attached banknotes through thickness detection.
DD detection: Detects different denominations through width detection (default width detection is >5mm).

To enable or disable a detection; press the “F” button. While “CF SET” is displayed, press the applicable detection button (UV, MG, IR or DD). If the detection is enabled the corresponding function indicator will be displayed on the screen. If the corresponding function indicator is not displayed, the detection is disabled.

To adjust the sensitivity of a detection hold the down the applicable detection button for 3 seconds. The counting result display will show the current sensitivity level. Press the 0-9 buttons to enter the desired sensitivity level from 0 to 9. The higher the number, the higher the sensitivity. The optimum sensitivity depends on the currency been counted. Press the “RESTART” button to save and exit.

3.5 Accumulative counting

Accumulative counting allows you to add different batches of banknotes together. The counting result will be added to the previous counting result. When the banknotes are taken from the stacker, the batch number display will display the accumulated counting result.

To enable or disable accumulative counting; press the “F” button. While “CF SET” is displayed, press the “ADD” button. If accumulative counting is enabled the “ADD” function indicator will be displayed on the screen. If accumulative counting is disabled the “ADD” function indicator will not be displayed on the screen.

3.6 Batch counting

To batch count your banknotes press the "BATCH" button; 10 will be displayed in the batch number display, this means the NC30 will count batches of 10. Each time you press the "BATCH" button 10, 20, 25, 50 and 100 will be displayed in the batch number display. Alternatively press the numbers 0-9 on the control panel to enter the desired batch number. The batch number can be between 1 and 999. Once a batch number has been set, place the banknotes in the hopper and the NC30 will start counting (automatic start) or press the “RESTART” button (manual start) to start counting. The NC30 will automatically stop counting when it has counted a batch. To continue counting another batch, simply remove the batch of banknotes from the stacker or press the “RESTART” button. If there are not enough banknotes in the hopper and the NC30 counts less than the batch number; the counting result will flash on the screen.

3.7 Speed setting

The NC30 has 4 speed settings: 600, 1000, 1200 and 1900 banknotes/minute. Repeatedly press the “SPEED” button until the desired speed setting is displayed. Wait for 3 seconds until the speed setting disappears; the new speed will then be set. New, crisp banknotes can be counted at higher speeds however it is recommended that older, more worn banknotes be counted at lower speeds to avoid tearing.

3.8 Adjusting the banknote feed

When counting errors occur (i.e. “E8” and “E9”), the banknote feed adjustment screw may need to be adjusted in order to optimise the banknote feed. The banknote feed adjustment screw is very sensitive; make only minor adjustments.

- When the banknotes are not being fed into the machine smoothly, increase the clearance between the hopper and roller; use a coin to turn the screw in a clockwise direction.
- When the machine stops and displays the message “E8” and “E9”, decrease the clearance between the hopper and roller; use a coin to turn the screw in an anti-clockwise direction.

4. Error codes

If an error occurs the NC30 will automatically stop, sound its alarm and display an error code on the screen. Errors usually occur because a sensor is impeded by either banknotes or dust. Use a brush or a soft cloth to clean the dust off the sensors and remove any jammed banknotes. Make sure the guidelines in “3.2 Counting” are followed.

4.1 Error codes and solutions

Error code	Cause	Solution
E1	Ultraviolet light detection has detected a counterfeit banknote	1. Check/remove the last banknote on the stacker. Press the ‘RESTART’ button to continue counting. 2. Lower the UV sensitivity if necessary.
E2	Magnetic detection has detected a counterfeit banknote	1. Check/remove the last banknote on the stacker. Press the ‘RESTART’ button to continue counting. 2. Lower the MG sensitivity if necessary.
E6	Width detection has detected a different denomination or an incomplete banknote	1. Check the denomination of the last 2 banknotes on the stacker and check if they are damaged. 2. Press restart. Then recount the banknotes. 3. Make sure the guidelines in “3.2 Counting” are followed.
E61		
E7	Half-note detection has detected an incomplete/torn banknote	1. Take the last banknote from the stacker and make sure that it is not damaged. Check that the size of the banknote is correct in comparison to the other banknotes. 2. Press the “RESTART” button. 3. Recount the banknotes.

E8	Thickness detection has detected a counterfeit, folded, damaged or attached banknote	1. Check the last banknote from the stacker and make sure that it is not counterfeit, folded, damaged or attached to another banknote. 2. Press the “RESTART” button. 3. Recount the banknotes. • If this error frequently occurs: a) Adjust the banknote feed with the banknote feed adjustment screw (see “3.8 Adjusting the banknote feed”). b) Clean the counting sensors.
E9	Two banknotes have been fed into the machine simultaneously	1. Take the last banknote from the stacker and make sure that it is not damaged or attached to another banknote. 2. Press the “RESTART” button. 3. Recount the banknotes. • If this error frequently occurs: a) Adjust the banknote feed with the banknote feed adjustment screw (see “3.8 Adjusting the banknote feed”). b) Clean the counting sensors.
E10	A banknote(s) is jammed inside the machine	1. Remove jammed banknote(s). If there is difficulty removing the jammed banknotes, turn the rollers by hand. 2. Press the “RESTART” button. 3. Take the banknotes from the stacker and recount them. **While removing jammed banknotes make sure the NC30 is switched off and the plug is disconnected from the power supply. Care should be taken, to prevent fingers being caught in-between the rollers.**
E14	Stacker sensor impeded	1. Remove any banknotes from the stacker. 2. Clean the stacker sensor. 3. Press the “RESTART” button. 4. Recount the banknotes.
E15	The speed sensor is impeded or it is malfunctioning	1. Clean or replace the sensor
E16	The right counting sensor is impeded or malfunctioning	1. Clean or replace the sensor
E17	The left counting sensor is impeded or malfunctioning	1. Clean or replace the sensor

5. Maintenance and general use

It is recommended to clean the machine on a monthly basis. Before cleaning the machine, make sure the NC30 is switched OFF and the plug is disconnected from the power supply. Do not use chemicals to clean the machine.

- Clean the hopper and stacker using a dry brush or lint free soft cloth.
- Clean the hopper start/stop sensor using a dry brush or lint free soft cloth.
- Clean the stacker start/stop sensor and the stacker start/stop receiving sensor (directly opposite the stacker start/stop sensor) using a dry brush or lint free soft cloth.
- Clean the sensors located directily below the rollers near the stacker impeller using a dry brush.
- If necessary use a small amount of alcohol based cleaner with a lint free soft cloth to clean the surface of the sensors.
- Clean the exterior of the machine with a soft lint free cloth to remove dust & dirt.
- Do not position the NC30 near strong light sources or under direct sunlight.
- Do not position the NC30 near magnetic material.

6. Specifications

- Dimensions: 242 x 275 x 245 mm
- Net weight: 5 KG
- Counting speed: 1900, 1200, 1000, 600 banknotes/minute
- Banknote size range: 50 x 110 ～ 90 x 186 mm
- Hopper capacity: 350 banknotes
- Stacker capacity: 200 banknotes
- Power supply: AC100V-60Hz or AC240V-50Hz
- Power consumption: ≤75W
- Display type: LCD

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.