



Care about money



speed



counterfeit detection



operation ease



design



support



quality

Designed by Cassida Corporation, USA
Made in Korea

Cassida 85

Caring about your money



USER MANUAL

CASSIDA 85 PROFESSIONAL CURRENCY COUNTER

This manual contains important information on safety measures and operational features. Please read it carefully before operating your currency counter, and keep it for future reference.

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1. INTRODUCTION

1.1 About the Cassida 85

Thank you for choosing the Cassida 85 currency counter. We hope you enjoy using it.

The Cassida 85's uniquely engineered mechanism boasts unprecedented ease and precision of counting, even with old, ragged bills. Steel roller shafts and sturdy parts allow this machine to tackle heavy-duty tasks on an everyday basis.

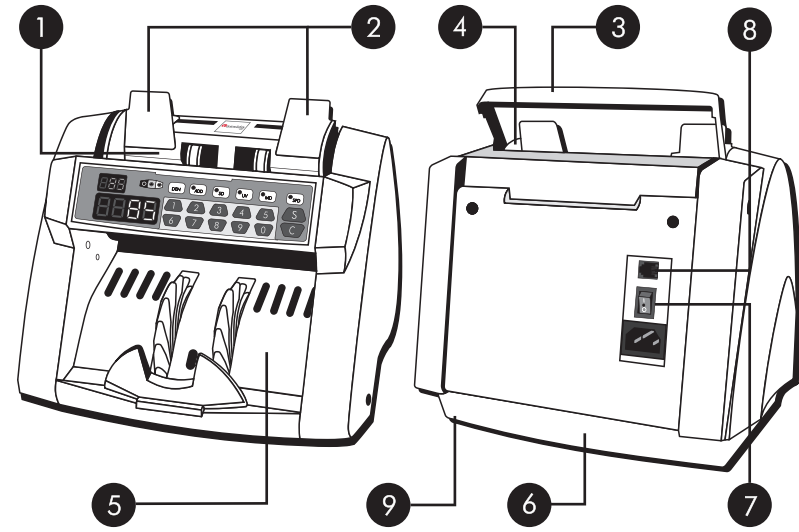
A digital mechanism, optional counterfeit detection systems and a user-friendly interface make this currency counter an invaluable tool in everyday money processing tasks.

With a built-in self-checking system and advanced software, the Cassida 85 is truly a "smart" assistant you can rely upon in any type of cash intensive environment.

1.2 Box Contents

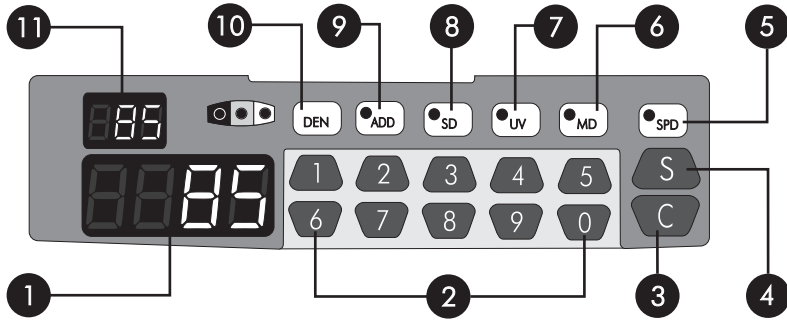
- Cassida 85 PROFESSIONAL CURRENCY COUNTER
- AC power cord
- Maintenance kit (optional)
 - Cleaning brush
 - Dust Cover
- User manual
- Pair of hopper extenders
- Remote display (optional)
- Dust collector (optional)

1.3 Front and rear views



- | | |
|------------------------------|---|
| 1. Hopper | Bills to be counted are placed here |
| 2. Hopper guides | To be adjusted for bill width |
| 3. Retractable handle | Used for carrying the machine |
| 4. Feed gap adjustment | Adjusts for different bill thicknesses |
| 5. Stacker | Receives and holds counted bills |
| 6. Dust removing fan | Located on bottom of machine |
| 7. Power switch | Turns machine on or off |
| 8. Remote display port | Used to connect optional remote display |
| 9. Dust collector (optional) | Removable base with dust filters |

1.4 Control panel



| Item | Name | Function |
|------|----------------------------------|---|
| 1 | Large display | Shows number of counted notes. |
| 2 | Numeric keypad | Used to enter batch quantities. |
| 3 | Clear | Clear errors. |
| 4 | Start/Stop | Stops or restarts operation of the machine. |
| 5 | Speed | Used to select one of three counting speeds. SPD1 (low), SPD2 (medium) or SPD3 (high). |
| 6 | Magnetic detection (optional) | Turns Magnetic counterfeit detection on or off. |
| 7 | Ultraviolet detection (optional) | Turns Ultraviolet counterfeit detection on or off. |
| 8 | Size detection (optional) | Turns note size detection on or off. |
| 9 | Add | Turns Add mode on or off. |
| 10 | Density | Sets note density for proper double note detection. Three different density settings are available. |
| 11 | Small display | Shows the programmed batch quantity. |

1.5 Specifications

| | |
|---------------------------------|--|
| Dimensions | 275mm (w) x 233mm (h) x 253mm (d) 10.83" (w) x 9.17" (h) x 9.96" (d) |
| Weight | 5.3 Kg (11.7 lbs) |
| Small display | 3-digit LED |
| Large display | 4-digit LED |
| Hopper capacity – no extender | 500 new bills (250 used bills) |
| Hopper capacity – with extender | 1000 new bills (500 used bills) |
| Stacker capacity | 300 new bills, 200 used bills |
| Size of countable note | Width: 50mm to 100mm (1.9" to 3.97") Length: 100mm to 181mm (3.9" to 7.1") Thickness 0.06mm to 0.12mm (.0024" to .0047") |
| Batch range | 0-999 |
| Counting speed | Low speed – 900 bills/minute Medium speed – 1200 bills/minute High speed – 1500 bills/minute |
| Counterfeit detection | Ultraviolet (optional) Magnetic (optional) |
| Feed system | Friction roller |
| Ambient temperature | 0° - 40°C (32°F - 104°F) |
| Operating humidity | 40% - 90% |
| Input power | 100-240 VAC, 50/60 Hz |
| Power consumption | < 40 watts |


1.6 Important safety notes

When using this unit, basic safety precautions should always be observed, including the following:

- Do not use this unit in areas where it may be exposed to water or any other liquids.
- **Only** use the power cord supplied with the machine. Plug the power cord into a properly grounded wall outlet. Do not remove the ground pin from the power cord. Failure to properly ground the machine can result in severe injury or fire.
- Make certain the unit is installed on a flat surface. Do not operate the machine in areas with high temperature, humidity or smoke, as these conditions may prevent proper operation.
- This unit is designed for indoor use in a ventilated environment. Keep the machine away from direct sunlight and strong magnetic fields. These could interfere with the counterfeit detection sensors.
- When not using the unit for an extended period of time, disconnect the power cord from the wall outlet.
- Unplug the unit from the wall outlet before cleaning. Use a damp cloth or specifically designed maintenance accessories such as a Cassida air duster, soft bristle brush, or Cassida CleanBill Pro cleaning cards.
- To avoid the risk of electrical shock, do not disassemble this unit. Disassembly will expose you to dangerous voltages and other safety risks. Incorrect reassembly can cause electrical shock when the appliance is subsequently used.
- Take the unit to a qualified technician when service or repair is required. Do not try to replace any parts yourself.

2. GETTING STARTED

2.1 Powering up

After ensuring the hopper and stacker are empty, turn the power switch ON. After a short self-check, £5£ 9000 will be displayed. The large screen will then show , indicating the machine is ready. The small screen will display a batch quantity of 100. To clear the batch quantity, press the “0” numeric key.

2.2 Loading the hopper

It is important to load the hopper correctly in order to avoid jams and to ensure proper operating speed of the machine.

Adjust the hopper brackets to a size slightly wider (2-3mm on each side) than the width of the bills in the stack (all US dollar denominations are the same size). This will help you correctly place the bills in the hopper, and will ensure smooth bill feeding.

Check for any torn or badly worn bills before loading the hopper. Damp bills should not be loaded. Folded or curled bills should be straightened before loading. Ensure no foreign objects (such as rubber bands, adhesive tape or paper clips) are present in the bill stack.

Ensure the bill stack is squared. Place the stack on the hopper platform using both hands to ensure the bills do not shift.

3. OPERATING MODES

3.1 Auto and Manual start modes

The Cassida 85 is shipped with the Auto start mode enabled. In the Auto mode, bill counting will automatically begin when bills are placed in the hopper. The Cassida 85 can also be configured to start manually. In this mode, counting begins when the “S” button is pressed. See section 5.1 for instructions on switching to Manual Start mode.

3.2 Count mode

After the machine is turned on, it defaults to the batch mode, with a batch quantity of 100. To deactivate Batch mode, press the numeric “0” key until 0 is shown in the small display.

To count bills, place them in the hopper (see section 2.2 “Loading the hopper”). The machine will start counting the bills automatically, and will move the bills from the hopper to the stacker as it counts them.

The machine will stop counting when the hopper is completely emptied. The counted number of bills will be displayed on the large screen. The large screen will clear itself of the previous count when the stacker is emptied and a new count is started.

Additional bills may be placed in the hopper without emptying the stacker. Please ensure the stacker does not accumulate more bills than it can hold (approximately 300 new bills or 200 old bills), as this will cause jamming, and may lead to a motor failure.

3.3 Batch mode

If you were previously in add mode, please deactivate it first by pressing the “ADD” button so the “ADD” indicator is not lit. To switch to batch mode, enter the desired batch quantity using the numeric keypad. The entered batch quantity will be displayed on the small screen. You may clear a batch quantity at any time by pressing the “0” numeric key repeatedly until 0 is shown on the small display.

The machine will start counting automatically once bills are placed in the hopper. As soon as the machine counts the desired batch quantity, it will stop and emit a confirmation beep. The large screen will show the number of bills in the stacker. When the stacker is emptied, the machine will automatically start counting the next preset batch quantity.

If the number of counted bills in the stacker does not reach the preset batch quantity, the large screen will display the actual number of bills counted to alert you that the batch is incomplete. A Batch Incomplete alert message may be displayed if enabled by the user. See section 5.5 for details. To complete the batch, place additional bills in the hopper. The machine will automatically count the required number of bills to complete the batch.

Changing the desired batch quantity while batching:

To change the batch quantity, wait until the machine finishes its current count. Enter the new batch quantity using the numeric keypad. The large display will display 0 and the small display will show the newly entered batch quantity.

IMPORTANT: Please be sure to empty the stacker before starting the new batch.

The machine will automatically start counting to the newly set batch quantity once the stacker is emptied.

3.4 Add mode

In this mode, the machine enables you to count multiple stacks of bills while keeping track of the total number of bills counted.

To switch to add mode, press the “ADD” button. The “ADD” indicator will be lit, showing this mode is active.

Place the bills in the hopper. The machine will start counting automatically. The machine will stop when the hopper is empty. The total number of bills counted will be displayed on the large screen. The small display will show the number of bills counted since the stacker was last emptied.

Empty the stacker, and refill the hopper. The machine will continue counting, adding the new count to the total count, showing this total on the large display.

To continue adding without emptying the stacker, just refill the hopper. The machine will continue counting, adding the new stack of bills to the partially full stacker. Please ensure you do not accumulate more bills than the stacker can hold (approximately 300 new bills or 200 old bills), as this will cause jamming, or could lead to a motor failure.

To reset the total count, press the “ADD” button twice.

Smart counterfeit/irregular note detection in add mode allows you to continue operation without losing the total count. When the machine stops with a counterfeit or irregular note error, simply remove all bills from the stacker. The machine will not add them to the total count.

3.5 Add + Batch mode

This mode allows you to batch the desired quantity of bills, and monitor the running total at the same time.

To activate this mode, first program the desired batch quantity (see section 3.3). Then press the “ADD” button. The “ADD” indicator will be lit.

The machine will start adding beginning with the next count. The total number of bills counted will be shown on the large display. The last batch count will be shown on the small display.

To reset the count on the large display, press the “ADD” button twice. To change the batch quantity, simply enter a new batch quantity using the numeric keypad.

4. DETECTION FEATURES

4.1 Counterfeit note detection

UV counterfeit detection (optional):

The UV mode checks for counterfeit bills using ultraviolet sensors. Press the “UV” button to activate counterfeit detection. The “UV” indicator will be lit while this feature is enabled.

The machine will beep and stop counting when a counterfeit note is detected, and a blinking F_c message will be displayed on the small screen. The large screen will alternately blink F_c and a number. The number indicates the total number of good bills counted before the UV counterfeit was detected.

To continue counting, remove the suspicious bill, which will be the last one in the stacker, and press the “S” button. The machine will start counting again, and will not add the counterfeit bill to the count. This feature allows you to continue operation without losing count, and is especially time saving in the add mode.

MD magnetic counterfeit detection (optional):

Magnetic counterfeit detection uses special sensors to check for the presence of magnetic ink. Press the “MD” button to activate the Magnetic counterfeit detection. The “MD” indicator will be lit while this feature is enabled.

The machine will beep and stop counting when a counterfeit note is detected, and a blinking cF message will be displayed on the small screen. The large screen will alternately blink cF and a number. The number indicates the number of good bills counted before the MG counterfeit was detected.

To continue counting, remove the suspicious bill, which will be the last one in the stacker, and press the “S” button. The machine will start counting again, and will not add the counterfeit bill to the count. This feature allows you to continue operation without losing count, and is especially timesaving in the add mode.

Please note that the 85 series counters, like all other counters with integrated detectors present on the market, cannot guarantee a counted bill to be genuine or counterfeit. There are several reasons a genuine bill may be recognized as counterfeit, or vice versa. Possible reasons include: direct sunlight exposure, worn bills, excessively dirty bills, or highly advanced counterfeiting techniques used to produce the bill. Separate equipment may be required to definitively determine whether or not a bill is counterfeit.

4.2 Double note detection

Bills may stick to each other due to excessive dirt, folding, or various other reasons. The Cassida 85 uses infrared light (IR) based technology to determine when two bills are stuck together. This feature is automatically activated in all modes for your convenience.

The machine will start beeping, and stop counting when a double bill is detected. A blinking *db* message will be displayed on the small screen. The large screen will alternately blink *db* and a number. The number indicates the total number of good bills counted before the double bill was detected.

To continue counting, remove all bills from the stacker and place them on the hopper for recounting. If false *db* errors are consistently seen, please see section 5.3 for instructions on adjusting the note density setting.

4.3 Half note detection

The Cassida 85 incorporates infrared light (IR) sensors that notify users if a half note passes through the counting mechanism. This feature is activated automatically in all modes for your convenience.

The machine will start beeping, and stop counting when a half note is detected. A blinking *HF* message will be displayed on the small screen. The large screen will alternately blink *HF* and a number. The number indicates the total number of good bills counted before the half note was detected.

To continue counting, remove the half note, which will be the last one in the stacker, and press the “S” button. The machine will start counting again, and will not add the half note to the count.

4.4 Chain note detection

The Cassida 85 utilizes a self-checking system that alerts you in rare cases when several notes pass through the counting mechanism at once. This feature is activated automatically in all modes for your convenience.

The machine will start beeping, and stop counting when a chain note is detected. A blinking *CHN* message will be displayed on the small screen. The large screen will alternately blink *CHN* and a number. The number indicates the total number of good bills counted before the chain note was detected.

To continue counting, remove all bills from the stacker and place them on the hopper for recounting.

5. USER CONFIGURATION OPTIONS

5.1 Auto/Manual Start Mode configuration

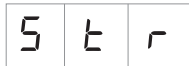
In the Auto mode, bill counting will automatically begin when bills are placed in the hopper. The Cassida 85 can also be configured to start manually. In this mode, counting begins when the “S” button is pressed.

To change the Start Mode configuration, perform the following:

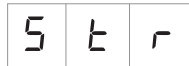
- Press and hold the numeric “9” key for approximately 3 seconds until *U5r* is shown on the large and small displays.

- Press the “1” key to enter the Auto/Manual setup screen. The numeric “1” key may be pressed again to change the Start Mode. The display will change each time the “1” key is pressed, indicating which mode is selected.

(small display)



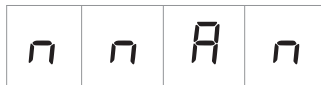
(small display)



(large display)

**Auto start**

(large display)

**Manual start**

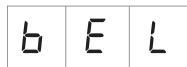
- When the desired Start Mode is displayed, press the “C” button to exit.

5.2 Beeper volume level adjustment

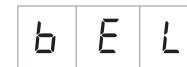
The beeper level may be set to three different levels; high, low or off. To configure the beeper level, perform the following:

- Press and hold the numeric “9” key for approximately 3 seconds until *U5r* is shown on the large and small displays.
- Press the “2” key to enter the Beeper level setup screen. The numeric “2” key may be pressed repeatedly to select the desired sound level. The display will change each time the “2” key is pressed, indicating which mode is selected.
- When the desired Beeper sound level is displayed, press the “C” button to exit.

(small display)



(small display)



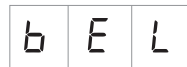
(large display)

**Low volume**

(large display)

**High volume**

(small display)



(large display)

**Beeper off**

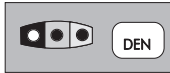
5.3 Changing note density setting

The Cassida 85 has three user-selectable note density settings. For US currency, the default medium density setting is appropriate. If non-US currency is being counted, the density setting may need to be changed. This is due to the different types of paper and ink used in non-US bills.

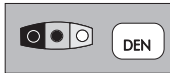
The following guidelines may be used for adjusting the note density:

- If consistent false *db* errors are experienced, increase the density level by pressing the “DEN” button until the left-hand density LED is lit.
- If the Cassida 85 cannot detect double notes, or if the machine consistently undercounts, decrease the density level by pressing the “DEN” button until the right hand density LED is lit.
- If you wish to turn off the double note detection feature completely, repeatedly press the “DEN” button until no LED’s are lit.

High density



Low density



5.4 Changing the speed setting

The Cassida 85 has three user-selectable speed settings. Speed settings may be changed at any time.

Press the “SPD” button repeatedly until the desired speed is shown in the large display. The selectable speeds are:

- *SPd1* 900 bills/minute
- *SPd2* 1200 bills/minute
- *SPd3* 1500 bills/minute

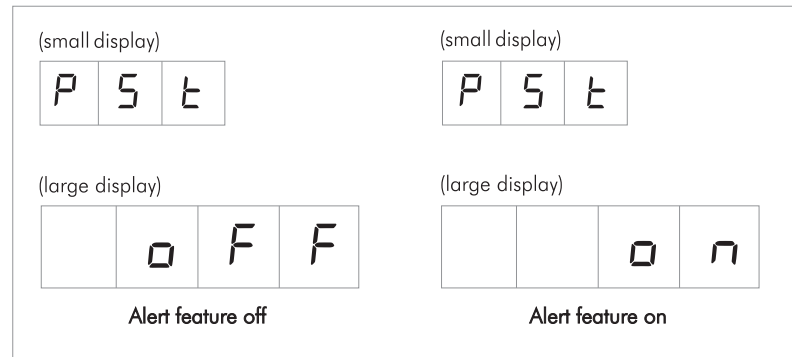
5.5 Enabling “Batch Incomplete” alert

The Batch Incomplete feature may be used in the batch mode to alert the user when the hopper is emptied before a batch quantity has been completed.

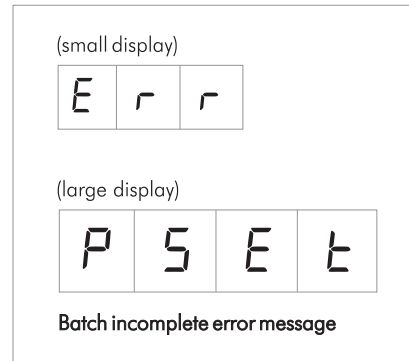
To enable the Batch Incomplete alert:

- Press and hold the “9” button on the keypad approximately three seconds until *U5r* is displayed.

- Press the “3” button to select the Batch Incomplete configuration screen. Pressing the “3” button will toggle the setting to either ON or OFF. The user displays will show one of the following, depending on whether the alert feature is ON or OFF.



With the Batch Incomplete alert turned on, when the hopper is emptied before a batch has completed an error message will be shown on the user display, along with an audible alarm. The error message will alternate with a display of the partial batch count.



5.6 Installing hopper extenders

The hopper extenders may be installed to increase the capacity of the input bill hopper. The extenders are a friction clip design that requires no tools for installation. The illustration at the right shows the Cassida 85 with the extenders installed.



6. MAINTENANCE AND TROUBLESHOOTING

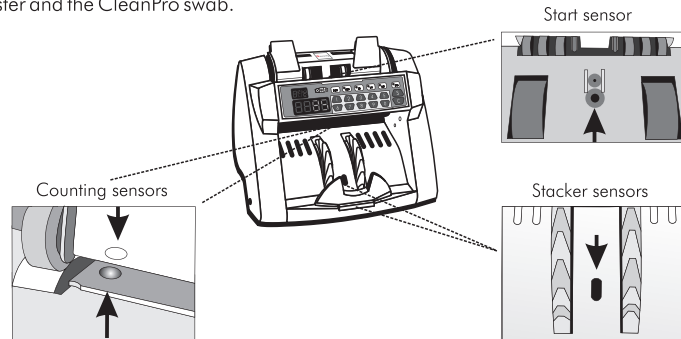
6.1 Daily maintenance

Cassida recommends cleaning the sensors and the pathway after every one hour of continuous operation. Tools you will need:

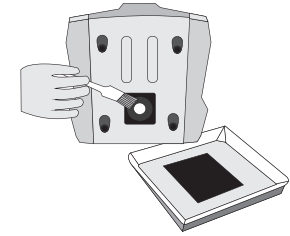
- Cassida air duster
- CleanBill Pro cleaning card
- CleanPro cleaning swab
- Soft bristle brush

Before cleaning, ensure the Cassida 85 is turned off and unplugged.

Clean the Start sensor, the Stacker sensor and the Counting sensors with a Cassida air duster and the CleanPro swab.



Clean the exhaust fan (located on the bottom of the unit) with a soft bristle brush and a Cassida air duster. If the optional dust collector is installed, it should also be removed and cleaned.



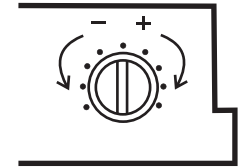
Clean the entire feeding mechanism to remove debris and dirt. Run a CleanBill Pro cleaning card to clean internal rubber rollers. For hard-to-reach places, use a CleanPro swab.

6.2 Feed gap adjustment

Over the course of time, as the rubber components in the bill transport wear, the feed gap will need to be adjusted. Adjustments may also be necessary if non-US currencies are being counted.

Use the following guidelines to properly adjust the feed gap:

- If multiple bills are being pulled through the feed mechanism (which will usually cause a *dB* or *cHn* error), decrease the feed gap by turning the adjuster slightly counterclockwise.
- If the bill feed speed is too slow, and the feed mechanism sounds like it is working too hard, increase the feed gap by turning the adjuster slightly clockwise.



6.3 Error codes

| Error code | Cause | Corrective action |
|--------------------|-------------------------------|---|
| <i>cF</i> (option) | Suspected MD counterfeit note | Remove the last bill from the stacker and press the "S" button to continue counting. The suspect bill will not be added to the count. |

| Error code | Cause | Corrective action |
|--------------------|--|---|
| <i>cHn</i> | Improper bill feeding detected, caused by bills not being properly separated | Remove all bills from the stacker and recount them. Check for damaged or torn bills before loading hopper. Recurrent <i>cHn</i> errors could indicate feed gap is too wide (see section 6.2). |
| <i>db</i> | Double note | Two notes stuck together. Remove all notes from the stacker and recount them. Recurrent <i>db</i> errors could indicate feed gap is too wide (see section 6.2). Recurrent false <i>db</i> errors could indicate note density requires adjustment (see section 5.3). |
| <i>EncO</i> | Encoder sensor failure | Possible drive belt failure. Contact your local dealer. |
| <i>End</i> | Stacker sensor blocked | Bills remaining in stacker. Remove bills. Foreign material obscuring sensor. Clean sensor. |
| <i>Fc</i> (option) | Suspected UV counterfeit note | Remove the last bill from the stacker and press the "S" button to continue counting. The suspect bill will not be added to the count. |
| <i>HF</i> | Half note detected | Remove half note from stacker and press the "S" button to continue counting. The bill in question will not be added to the count. |
| <i>LEFL</i> | Left count sensor blocked | Check for foreign material obscuring sensor. Clean sensor. |
| <i>JRN</i> | Jammed bills | Remove jammed bills from bill feed mechanism. Check for damaged or torn bills before loading hopper. Recurrent jams could indicate feed gap is too wide (see section 6.2). |

| Error code | Cause | Corrective action |
|--------------------|----------------------------|---|
| <i>rHL</i> | Right count sensor blocked | Check for foreign material obscuring sensor. Clean sensor. |
| <i>5d</i> (option) | Different denomination | Bill size falls outside the nominal parameters. Remove the last bill from the stacker and press the "S" button to continue counting. The suspect bill will not be added to the count. |
| <i>5H</i> | Short note | Detected bill width is too narrow. Remove the last bill from the stacker and press the "S" button to continue counting. The suspect bill will not be added to the count. |
| <i>5Er</i> | Start sensor blocked | Check for foreign material obscuring sensor. Clean sensor. |

6.4 Troubleshooting

| Symptoms | Corrective action |
|---|---|
| Bills not feeding smoothly | Badly worn or torn bills. Bills not loaded correctly - see section 2.2. Feed gap too narrow – see section 6.2. Dirty feed rollers – run a CleanBill Pro cleaning card through the machine. |
| Recurrent <i>db</i> or <i>cHn</i> errors – multiple notes being pulled through bill transport | Feed gap too wide – see section 6.2. |
| Recurrent <i>db</i> errors – bills are feeding correctly | Density setting should be adjusted for the currency being counted (see section 5.3). |

| Symptoms | Corrective action |
|---|--|
| Abnormal sound | Foreign material (adhesive tape, paper clips) may be present in the feed mechanism or on the rollers. Check and remove any foreign material. |
| Undercounting | Note density setting may need to be decreased for the currency being counted (see section 5.3). |
| Counting does not start automatically when notes are placed in the hopper | Machine may be configured for Manual start mode (see section 5.1). If an error message was previously displayed, press the "C" button to clear the error. |

6.5 Warranty

All Cassida products are warranted for a period of one year from the date of purchase from Cassida Corporation. In most cases, the malfunction of the machine can be resolved by cleaning the unit. Please refer to section 6.1 "Daily maintenance" for guidelines.

Coverage:

The warranty covers defects in materials and workmanship. It does not cover maintenance and cleaning (cleaning parts or sensors of dust, replacing parts such as rubber rollers, rubber mats rubber belts, etc. that are worn out by a natural cycle of work).

Shipping:

Warranty does not cover shipping cost to or from Cassida Corporation.

6.6 Contact information

Technical Support contact information:
email: technicalsupport@cassidausa.com
phone: 1-888-800-0303
<http://cassidausa.com>