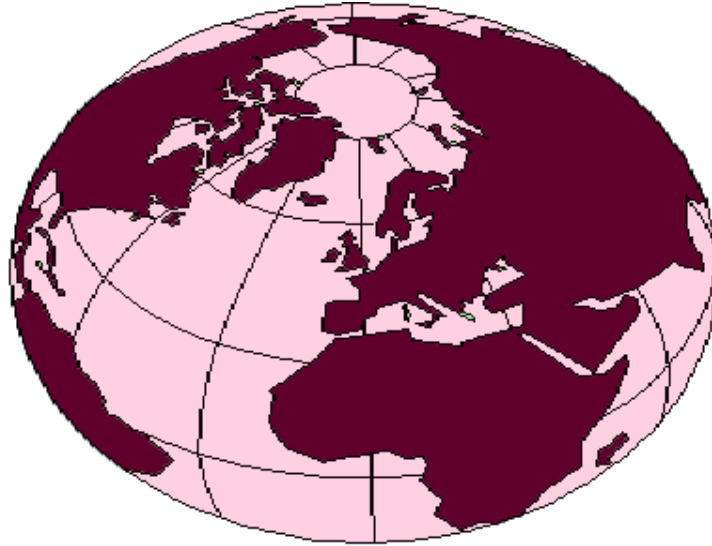


Kobell

England



Money Handling Worldwide

AF8760C Series **CURRENCY COUNTER**

USERS GUIDE

(Version 2.0 - Second Edition: May 2000)

VITAL SAFETY INFORMATION

- ALL VOLTAGES greater than 42 Volts are potentially dangerous.
- Always handle mains operated equipment with caution.
- NEVER tamper with any aspect of the machine whilst mains power is applied or connected. Do not insert or disconnect the mains plug with wet hands as you risk receiving an electric shock. Do not damage, crush, make changes, modify or tamper with the electric power cord. Avoid combined use of a single electrical outlet, or by putting more than one load on an outlet.
- DO NOT allow clothing, fingers, hair, paper clip, staples, etc., to enter the Hopper area as, if the Optical Sensor is obscured, the note feed system will be activated without warning.
- If WATER or other foreign matter should enter the machine, switch **OFF** the power immediately, disconnect the mains plug from the outlet and contact your service representative. Failure to comply could result in a possible fire, or receiving an electric shock.
- Do not operate the machine directly beneath high-intensity (spot) lighting, in direct sunlight, under cooling fans or near high-voltage sources, such as television receiving apparatus. Similarly, do not operate the machine on slopes, or places with steps, in an excessively dusty environment, near water, or where the machine could be subject to vibrations.
- Should you have any doubts, please contact your local distributor, or sales agent for clarification.

THE AUTOMATIC DUSTPROOF COVER[©]

With You In Mind . . .

Congratulations on the acquisition of your new Kobell currency counter. This machine will enable you to accurately count bank notes with speed and efficiency.

Kobell bank note counters incorporate state of the art technology including, for your personal protection, a unique **DustProof Cover**. The benefits to you of a DustProof Cover are:-

- Dust and spores that may be released into the atmosphere when counting bank notes at high speed are contained within the machine, reducing the possibility of breathing in this pollution. The DustProof Cover also reduces the 'unpleasant' smell associated with soiled bank notes.
- Counting noise is reduced by at least 5%.
- Static electricity can build up in bundles of bank notes, particularly when dry, causing 'flying' notes that end up on the floor. The DustProof Cover ensures containment inside the receiving note Stacker, regardless of condition.

DUSTPROOF COVER[©] OPERATION

- When producing small batches of bank notes, or for other reasons, you may wish to turn this feature **OFF**.
- Press the SET key until the **COVER** indication flashes. The Display Panel will show **C - - - 1**, advising you that the DustProof Cover is enabled.
- By pressing either **ARROW** key, you can change the **C - - - 1** to **C - - - 0**, which then disables the DustProof Cover function.
- Finally, pressing the red coloured **S/S** key saves your selection and stores it within the machine memory for future use. Please reverse this procedure to re-enable the DustProof Cover operation.

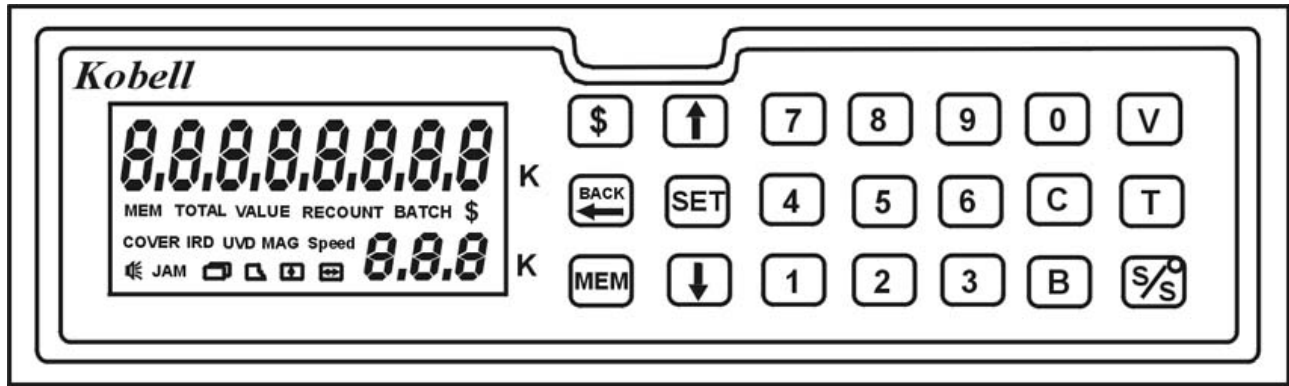
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TECHNICAL SPECIFICATION

Counting Speed	1,500 pieces/minute (High speed) 1,000 pieces/minute (Standard speed) 600 pieces/minute (Low speed)
Hopper Capacity	400 pieces (With Note Guides)
Stacker Capacity	200 pieces (Default 150 in Continuous Count)
Countable Note	
Thickness	0.05 - 0.2 mm (Range adjustable manually)
Size	110 x 55 mm - 190 x 100 mm
Counting Display	8 Digits on the larger LCD Display area
Batch Display	3 Digits on the smaller LCD Display area (Preset values and 10-key numeric keypad: 1-1000)
Remote Count Display	8 Digits on a Remote LED Display (Option)
Counting Modes	Continuous Counting Mode Batch Counting Mode Value Counting Mode Accumulation (Total) Counting Mode Automatic DustProof Mode (Selectable) Automatic, or Manual Start Mode Denomination Recognition Mode (Recognition by note size, only available in the model having '3D' capability)
Detection Modes	Double Detection Mode Width (Narrow Dimension) Detection Mode Infrared Counterfeit Detection Mode Length (Long Dimension) Detection Mode (Only available in the model having '3D' capability) UV Counterfeit Detection Mode (Only available in the model having 'UV' capability) MG Counterfeit Detection Mode (Only available in the model having 'MG' capability)
Memory Backup	Function Setting Memory Counted Number Memory
Noise Level	≤ 79 dB (A) (Operating @ High Speed)
Power Consumption	50 Watts (Operating)
Power Requirements	80 - 260 Volts AC @ 50/60Hz
Dimensions	230 x 280 x 230 mm
Ambient Temperature	0 - 40 Degrees Centigrade
Relative Humidity	30 - 75%
Weights	5.5kg (Machine Only) 6.7kg (In Specialist Transit Box)

CONTROL PANEL



DISPLAY INFORMATION

“8.8.8.8.8.8.8.8”

Counting Display - Displays the Counted Number, Amount, or the Error Code.

“8.8.8”

Batch Display - Displays the Batch Number, or the Value of the Denomination.

MEM

Glows to indicate that there are contents in the memory. Flashes to indicate that the machine is in Memory Display Mode.

TOTAL

Glows to indicate the Accumulation Counting Mode.

VALUE

Glows to indicate the Value Counting Mode.

RECOUNT

Flashes to remind you to Recount the batch when a Double Note, or Chained Note is detected.

BATCH

Glows to indicate that the Batch Display is showing a Batch Number.

\$

Glows to indicate that the Batch Display is showing the Value of the Denomination being counted.

COVER

Glows to indicate the machine is in the Automatic DustProof Mode. Flashes to indicate the Automatic DustProof Mode is in setting mode.

K

Glows when you select a Denomination which is larger than one thousand (1,000) in Value Counting Mode.

IRD

Glows to indicate that the Infrared Counterfeit Detection Mode is ON. Flashes to indicate that the Infrared Counterfeit Detection system is in setting mode, or that the IRD device has detected a suspect counterfeit note.

UVD (Only available for the Model with 'UV')

Glows to indicate that the UV (Ultraviolet) Counterfeit Detection Mode is ON. Flashes to indicate that the UV Detection is in setting mode, or that the UV sensor has detected a suspect counterfeit note.

MAG (Only available for the Model with 'MG')

Glows to indicate that the MAGnetic Ink Detection Mode is ON. Flashes to indicate that the MAG Detection is in setting mode, or that the magnetic sensor system has detected a suspect counterfeit note.

SPEED

Flashes when you are setting the Counting Speed.

**Buzzer Symbol**

Glows to indicate that the Buzzer Alarm is ON. Flashes to indicate that the Alarm Buzzer is in the setting mode.

JAM

Flashes to indicate that there is a note jammed in the document feed passage, or that the next note in the Hopper can not be fed into the note passage.

**Double Notes Symbol**

Flashes when a Double Note is detected, or when the Double Detection is in setting mode.

**Half Notes Symbol**

Flashes when a Half Note has been detected.

**Width Detection Symbol (In the Narrow Dimension)**

Flashes when an abnormally narrow dimension note is detected, or when the Width Detection system is in setting mode.

**Length Detection Symbol (In the Wide Dimension)**

(Only available for the Model with '3D')

Flashes when an abnormally wide dimension note is detected, or when the Length Detection system is in setting mode.

KEY FUNCTIONS



By pressing this key, in Value Counting Mode, you can select the default denomination value of the notes you wish to count.



By pressing this key at any time during the function setting routine, you can go back again to the previous function setting item.



By pressing this key, you can add the actual count number into the machine memory for the daily total statistics of each denomination.



By repeatedly pressing this key, you can sequentially select the function(s) you wish to set. **If you continue to press this key for 5 seconds, the machine will revert back to the factory default settings (See Page 10).**



By pressing either of these two keys, you can change the function setting(s) that you have selected.



By pressing this key, you can select the default Batch Number, or the Continuous Counting Mode.



By pressing this key, you can Clear the Counting Number, or the Batch Number, you have input. **If you keep pressing this key for 5 seconds, the Counting Data within the memory will be cleared.**



By pressing this key, you can select the Value Counting Mode. In Value Counting Mode, you can view the note numbers counted by pressing this key. **If you keep pressing this key for 5 seconds, the machine will enter into the Denomination Recognition Mode.**



By pressing this key, you can select the Accumulation Mode **ON**, or **OFF**. **If you keep pressing this key for 5 seconds in Value Counting Mode, the machine will display the Counting Data in the memory.**



By pressing this **START/STOP** key, the machine will clear any Error Code and Start operating. **If you keep pressing this key for 5 seconds, the machine will alter the Start mode from Automatic Start mode, to Manual Start mode.** A red LED will illuminate, within the key, to indicate that you are in the Manual Start condition only.

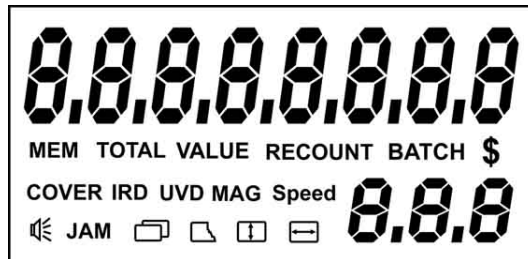


The numeric keys used for inputting your desired batch target number.

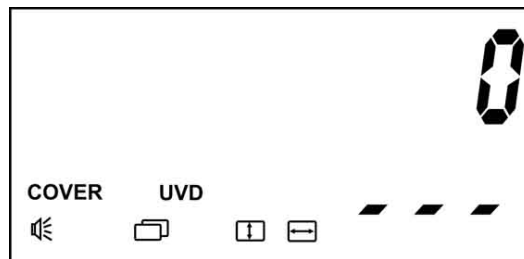
INITIAL OPERATION STEPS

CAUTION: Before you turn on the machine, please ensure you remove ALL Notes from the Hopper and Stacker areas.


Turn ON the Power Switch on the rear of the machine. The machine will enter a 'Self-Test' mode whereby the display will show:



The machine Motor systems will run for approximately 1 second and then, if correct, the Motors will stop and the display will change to show:



NOTES:

1. The 'UVD' symbol only appears on the model with 'UV'
2. The MAG symbol only appears on the model with 'MAG'
3. The  symbol only appears on the model with '3D'

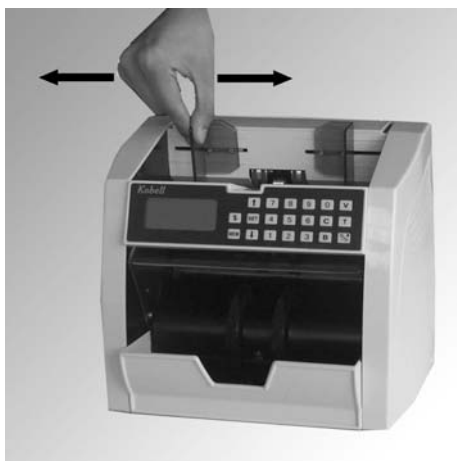
When the machine leaves the factory, the **Default Functions** are set as follows:

Automatic DustProof COVER	ON
Infrared Counterfeit Detection (IRD)	OFF
UV Counterfeit Detection (UVD)	Uv- - -2 (= Normal) (Only for the model with 'UV')
MAG netic Counterfeit Detection	OFF (Only for the model with 'MAG')
Counting Speed	1,000 pieces/minute (Standard)
Alarm Buzzer	ON
Double Detection	dd - - - A (= Automatic)
Width Detection	5 mm Accuracy
Length Detection	5 mm Accuracy (Only for the model with '3D')
Counting Mode	Continuous Counting
Accumulation Counting	OFF

If the various function settings of the machine were pre-set by the previous operator, the machine will automatically default back to these previous selections when you turn the machine back **ON**.

If you wish to change the default function setting, please see the section headed 'Function Setting' - (See Page 12).

After function setting is complete, it is vitally important to adjust the distance between the two Note Guides according to the length of the notes you will be counting. Place the notes in the Hopper, ensuring that the lower notes within the bundle are inserted firmly into the rear of the feed area. (Please see the following photographs for your guidance):



Note Guide Positioning



Inserting Notes

The machine will start counting automatically.

The machine will stop automatically under the following Conditions:

- All the notes in the Hopper have been counted.
- The machine has achieved the default stop of 150 notes in Continuous Counting mode.
- The machine count has achieved the pre-set batch quantity.
- When an error occurs - An Error Code message will be shown on the display. Please refer to the Troubleshooting 'Error Message' table at the end of this Users Guide.

In **Automatic Start** mode, when the contents of the Stack are removed, providing notes are still available in the Hopper, the machine will start counting automatically again.

In **Manual Start** mode, when the contents of Stacker are removed, providing notes are still available in the Hopper, the machine will **not** start operating until you press the **S/S** key.

FUNCTION SETTING

For the first-time user, the setting-up procedure of the AF8760C may appear quite involved. The sequences of these actions are logical however and become second nature very quickly. If at any time you feel that you need to revert to the original factory settings (As listed on Page 10), simply press the **SET** key continuously for 5 seconds.

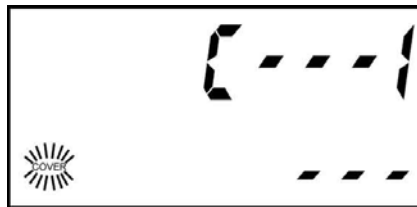
The default function settings can be changed according to the following steps:

Press the **SET** key. The individual function symbols will flash sequentially every time you press the **SET** key. At the same time, the previous function setting will be shown in the Counting Display. When the desired function symbol flashes, you can change the current setting of this function by pressing either of the two **Arrow** keys.

Please remember, you can also press the  key to return back to the previous function setting parameter.

AUTOMATIC DUSTPROOF COVER SETTING

Press the **SET** key, the display will respond in accordance with the following illustration. The Automatic DustProof Cover is shown **ON**.



You can change the Automatic DustProof Cover **ON**, or **OFF**, by pressing two **Arrow** keys. The **C - - - 1** on the display will change between **C - - - 1** and **C - - - 0**. The **1** indicates the Cover **ON** condition; the **0** indicates an **OFF** condition. After setting, you must press the **S/S** key to save your chosen setting and exit the setting mode. If you want to set another other function, press the **SET** key again. The machine will enter into the next function setting routine of IRD setting.

INFRARED COUNTERFEIT DETECTION SETTING

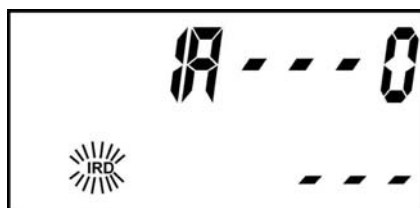
NOTES:

1. **InfraRed Counterfeit Detection (IRD)** is a new and additional counterfeit detection process incorporated into the AF8760C machine. It is usually used in conjunction with the **UltraViolet (UV)** and, if applicable, **Magnetic Ink (MAG) Counterfeit Detection Aid (CDA)** systems. Because the AF8760C series currency counter is supplied worldwide, the IRD system may not be effective on all of the wide variety of papers used for printing bank

notes around the world. Guidance on the usefulness of the IRD in your area can be obtained through your local Distributor.

2. If you experience any difficulty, turn the IRD feature **OFF** by cycling through the **SET** procedure until **IRD** appears, then change the setting from **IR - - - 1** to **IR - - - 0** instead. Please remember to 'store' your new selection by pressing the **S/S** key.
3. **If, whilst using the IRD system, a STOP occurs, the software within the AF8760C allows the 'suspect' bill to be removed and the count to be continued by pressing the S/S key, without forcing a recount from 'Zero'. The final count will not include the suspect note within the total under these conditions. When the count is re-started, the displayed total will be reduced by one, so the final total will, therefore, be without the removed 'suspect' note.**

When the machine enters into the IRD setting mode, the display will show:



Press the two **ARROW** keys to select the IRD detection system **ON**, or **OFF**. The **0** condition indicates **OFF**, the **1** condition indicates **ON**. After selecting, you must press **S/S** key to save your selection and exit the setting mode. If you want to set another function, press the **SET** key again to enter into the next function setting routine of UVD setting.

UV COUNTERFEIT DETECTION SETTING

(Only available in the model with 'UV')

NOTES:

1. The vast majority of the world's bank notes are printed on a quality of paper designed to withstand frequent handling and extend the time in circulation. This specification normally means that they are printed on a high quality, linen-based paper, which has low fluorescence characteristics. Because the majority of counterfeit bank notes are printed on poorer quality papers, which have been bleached and therefore fluoresce, UV detection is normally the most useful method of helping to find forged bills at the speed at which a currency counter operates.
2. It should be noted that these systems are provided as **Counterfeit Detection Aids (CDA) only** - They are not foolproof and are provided as a supplement to the vigilance expected of those handling and receiving currency. When a bank note being counted shows a high

level of fluorescence, the machine will 'STOP' and, if you have the Buzzer Alarm enabled; an audible tone will also be given.

3. The presence of a UV 'suspect' note will be indicated in the Display Panel of the unit (UVD). As the machine has stopped, but only because of the **possibility** of a counterfeit being present, you should then remove the last (top) note to have arrived in the Stacker area in order to make a decision on the validity of the bill by closer visual examination.
4. **As with the IRD system, the software within the AF8760C allows the 'suspect' bill to be removed and the count to be continued by pressing the S/S key, without forcing a recount from 'Zero'. The final count will not include the suspect note within the total under these conditions. When the count is re-started, the displayed total will be reduced by one, so the final total will, therefore, be without the removed 'suspect' note.**
5. Most users will find the default position of **Uv - - - 2** (Standard) to be correct for their requirements. Some experimentation using a lower, or higher setting may, in exceptional circumstances, be necessary. Your local Distributor will be able to provide guidance, if required.

When the machine enters into the UVD system feature, the display will show:



Press the two **ARROW** keys to change the default UVD detection level setting, if required. The indicated **Uv - - - 2** will now change through **Uv - - - 3**, **Uv - - - 0**, **Uv - - - 1** and **Uv - - - 2**, then recycle sequentially. The **0** indicates **OFF**, the **1** indicates a LOW detection level, the **2** indicates a STANDARD level, and the **3** indicates a HIGH detection level. After selecting the desired level, you must press the **S/S** key to save the setting and exit from the setting mode. If you wish to alter any other function, press the **SET** key to enter into the next function setting routine which is the MAGnetic Ink Counterfeit Detection setting.

MAGNETIC COUNTERFEIT DETECTION SETTING

(Only available in the model with 'MG')

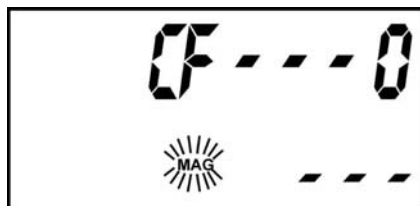
NOTES:

1. Magnetic CDA is a device that is useful in detecting forgeries only when the currency being counted is printed with magnetic ink as a security feature. (Most commonly found on USA\$'s and Italian Lira). This feature will examine specific areas of the bank note surface for the presence of a magnetic field, and where this is low, or absent, the machine will 'STOP' and, if enabled, give an audible Buzzer Alarm to indicate that a possible

forgery is present. The presence of a bill with low, or non-existent, magnetism will be indicated in the Display Panel of the AF8760C by **MAG**. As the machine has stopped only because of the **possibility** of a counterfeit being present, you should then remove the last (top) note to have arrived in the Stacker area for detailed examination.

2. **As you have read earlier, the software within the AF8760C allows the 'suspect' bill to be removed and the count to be continued by pressing the S/S key, without forcing a recount from 'Zero'. The final count will not include the suspect note within the total under these conditions. When the count is re-started, the displayed total will be reduced by one, so the final total will, therefore, be without the removed 'suspect' note.**

When the machine enters into the MAG setting routine, the display will show:



Select the MAGnetic Ink Counterfeit Detection feature **ON** by pressing the two **Arrow** keys, then you can select the differing pre-set sensitivity levels available. The **CF - - - 0** (OFF) will change to **CF - - - 1** (For bills with a high magnetic response - Recommended for use when counting USA\$'s), **CF - - - 2** (For bills with a normal magnetic response) and **CF - - - 3** (For bills with a low magnetic response), then recycle sequentially through OFF once again. After setting, you must press the **S/S** key to save your selection and exit the setting mode. Your local Distributor will be able to provide guidance, if necessary, on your individual setting requirements. If you wish to set another function, press the **SET** key to enter into the next function setting routine of Speed Setting.

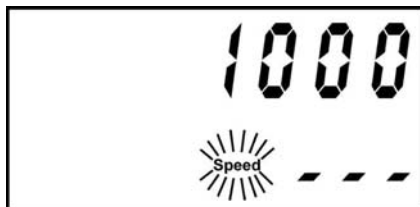
SPEED SETTING

NOTE:

It is most important to appreciate that the counting speed you select is crucial when processing bank notes, and that the speed should be varied according to condition. The simple rule is that the better the quality, the faster you can count currency, without nuisance stops.

- When the bank notes being counted are in a distressed condition, and lacking in dimensional stability, the lowest speed of **600** per minute should be selected.
- Bank notes of reasonably good 'street quality' are normally best counted at the middle setting of **1,000** per minute.
- Counting at the highest speed of **1,500** notes per minute should only be used for bank notes in new, to very good, condition.

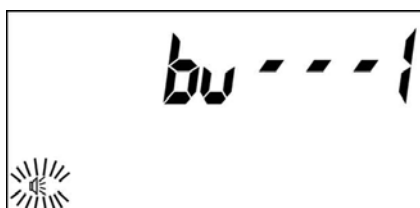
When the machine enters into the Speed setting mode, the display will show:



Press the two **ARROW** keys to change the Counting Speed; the default **1000** will cycle through **1500**, **600** and **1000** notes per minute. After selecting your desired Counting Speed, you must again press the **S/S** key to save the setting and exit the setting mode. If you wish to set another function, press the **SET** key to enter into the next function setting routine of the Buzzer Alarm setting.

BUZZER ALARM SETTING

When the machine enters into the Buzzer Alarm setting routine, the display will show:



Select the Buzzer Alarm, either **ON** or **OFF**, by pressing the two **Arrow** keys. The **1** on the display will change from **1** to **0**. The **1** indicates that the Buzzer is **ON**, the **0** indicates that the Buzzer is **OFF**. After setting, you must press the **S/S** key to save the setting and exit the setting mode. If you want to set another function, press the **SET** key, the machine will enter into the next function setting routine of Double Detection setting.

DOUBLE DETECTION SETTING

NOTES:

1. Detecting that two bank notes have passed through the machine, one on top of the other, and therefore suggesting a possible miscount, is the function of the Double Detection (DD) system. This feature operates by measuring the amount of light that penetrates each bill, as it is being counted, and compares this measurement with the known signal from a single note. If the signal is significantly reduced, the machine will STOP, an Audible Alarm will sound (if the Buzzer alarm is ON) and the display will indicate that a possible miscount has occurred. **All bills must be removed and recounted. The machine will force a recount because, by definition, the count displayed cannot be assumed as accurate.**

This also applies in the case of a suspected 'Chained' note – (Chaining is where only part of a following bank note overlaps the one being counted).

2. Correctly setting the Thickness Control Knob will eliminate unnecessary cases of these incidents - (See Page 24 - Adjustment Of The Feed Gap).
3. The DD system defaults to **dd - - - A** (AUTOMATIC) at switch-on. This is the standard setting recommended for use when the quality of the bank notes is consistent. Very dirty currency and/or where the bills being counted vary widely in their condition, are provided for by the following pre-set DD levels to enable the machine to run smoothly without frequent false, or 'nuisance' stops. These positions are **dd - - - 1** (LOW), **dd - - - 2** (STANDARD) and **dd - - - 3** (HIGH). Your local distributor will be aware of the prevailing conditions and can advise you of the optimum settings for your area, in conjunction with your own experimentation.
4. Please be aware that selecting the DD system to OFF, whilst counting bank notes, is **not** recommended. This facility is only provided to assist you to count extremely inconsistent mixed density documents, such as cheques.

When the machine enters into the Double Detection Setting, the display will show:



Press the two **Arrow** keys to sequentially change the Double Detection (DD) level. The default **dd - - - A** setting will change through **dd - - - 0** (OFF), **dd - - - 1** (LOW), **dd - - - 2** (STANDARD) and **dd - - - 3** (HIGH). The **dd - - - A** position indicates 'Automatic' Setting. After selecting the desired level, you must press **S/S** key to save the setting and exit the setting mode. If you want to set another function, press the **SET** key to enter into the next function setting routine of Width Detection Setting.

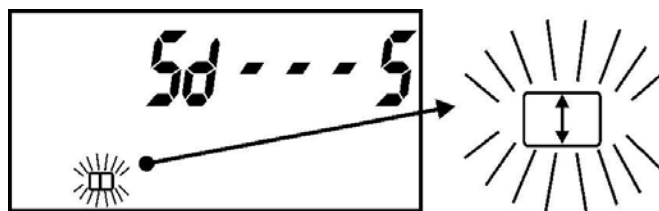
WIDTH DETECTION SETTING

NOTES:

1. The Width Detection (WD), which is a standard feature of your AF8760C currency counter, is measuring the smaller dimension of the bank note. It then compares this information with preceding bills in the present count run, in order to largely eliminate the possibility of smaller denominations being included in the count, in error. This usually happens when small notes are 'hidden' within a bundle of larger ones (Although the WD feature will also cause the machine to STOP if the bill is larger).
2. When opting to use this feature, from the **Sd - - - 0** (OFF) position, there are many available settings to choose from:- **Sd - - - 3**, **Sd - - - 4**, **Sd - - - 5**, **Sd - - - 9** and **Sd - - - 15**.

These numbers indicate the millimetre (mm) difference, in the narrow dimension size, between the denominations of your bank notes. It is important to know that you should measure the difference beforehand, and set the machine to detect to the nearest of your differential. As with any machine operating at up to 1,500 notes per minute, the less 'size' it is being asked to detect, the more difficult it is, with the resultant increase of false stops. Your local Distributor will readily provide guidance on domestic currency settings.

When the machine enters into the Narrow Dimension Width Detection Setting, the display will show:



Press the two **Arrow** keys to change the Width Detection Accuracy setting. The default **Sd - - - 5** will change sequentially through **Sd - - - 3, 4, 5, 9, 15** and **0**, where these numbers represent the accuracy in mm, i.e., **5** represent 5mm accuracy. **0** represents the Width Detection disabled. (A larger number selection equates to less nuisance STOPS). After selecting the desired accuracy, you must press the **S/S** key to save the setting and exit the setting mode. If you want to set another function, press the **SET** key to enter into the next function setting, Length Detection Setting:

LENGTH DETECTION SETTING

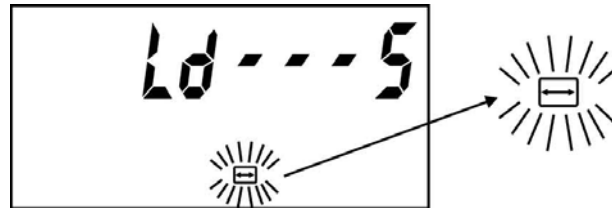
(Only available in the model with '3D')

NOTES:

1. Length Detection (LD) is an optional feature of the AF8760C. It is principally used to identify the denomination of the bank notes being counted where the particular national currency has a significant (+3 mm) difference, in length, between denominations.
2. The LD system operates along similar optical principles as the WD system, so the previous remarks regarding the use of the maximum size settings possible applies. This system will allow reasonable latitude for bent/missing bill corners, but will not ignore extreme vertical edge errors, or misalignment.
3. **Correct equidistant positioning of the Note Guides will greatly assist the machine to feed the bank notes.**

4. When mixed size documents are being counted, and the machine is NOT set to the VALUE COUNT mode, the LD must be set to Ld - - - 0 (OFF), to avoid machine STOPS.

When the machine enters the Wide Dimension Length Detection (LD) setting, the display will show:



You can press the two **Arrow** keys to change the Length Detection Accuracy. The default **Ld - - - 5** will change sequentially through values of **3, 5, 7, 9, 15** and **0**. For example, the **9** represents 9mm accuracy; the **0** represents Length Detection disabled. After selecting the desired accuracy, you must press the **S/S** key to save the setting and exit the setting mode. If you want to set another function, press the **SET** key recycle back to the first function setting, the Automatic DustProof Cover setting.

COUNTING MODE SETTING

CONTINUOUS COUNTING MODE

When the 3 digits of smaller LCD display shows ' - - - ', the machine is in the Continuous Counting mode. If you place some notes in the Hopper (Providing the machine is in Automatic Start Mode, otherwise you must press the **S/S** key as you are in the Manual Start Mode), the machine will count the notes until the Hopper is either empty, or achieves the default stop of 150 pieces, or stops whenever an Error occurs during the process.

BATCH COUNTING MODE

Press the **B** key, or any numeric key, to enter into the Batch Counting mode. In the Batch Counting Mode, the symbol **BATCH** will also glow to indicate that you are in the Batch Counting Mode. You can select any default Batch Number by repeatedly pressing the **B** key, or input your desired/random number, simply by pressing the numeric keys. By pressing **C**, the displayed batch can be cleared and the machine exit from the Batch Counting Mode back into the Continuous Counting Mode.

VALUE COUNTING MODE

By pressing the **V** key, you can select the Value Counting Mode. In Value Counting Mode, the **\$** symbol and the **VALUE** symbol will both glow. You can then select the default denomination value by repeatedly pressing the **\$** key. The selected denomination value will be shown on the small 3-digit display. In counting, the counting display will now show counted value.

When you select a denomination value that exceeds one thousand, e.g., **2000**, the small 3-digit display will show **2** and the lower **K** legend, located down and to the right of the Display LCD, will glow. If the counted value exceeds more than the available eight larger digits available, the upper **K** legend, located up and to the right of the counting display, will glow to indicate that the current unit requires to be multiplied by a factor of one thousand (1,000).

If you select the denomination value of **0.5**, the small 3-digit LCD display will actually show **0 - 5**. (The small - character is used to represent the decimal point). If you use this specific feature, the display counted value resultant will be modified and shown, for example, as either *******-5**, or *******-0**.

After counting, if you wish to display the count number of notes, press the **V** key. The counted number will be shown on the counting display. If you wish to exit from Value Counting Mode, press the **V** key again. The **\$** symbol will be OFF, to indicate that the machine has exited from the Value Counting Mode.

MIXED COUNTING MODE

(Only available for the model with '3D')

When you enter into the Value Counting Mode, the first default Denomination Value is shown as **000**, the machine is then in the Mixed Counting Mode. In this mode, you can count various note sizes and denominations together. After counting a bundle of mixed denomination of bills, the total value will be shown on the counting display. If you have used the 0.5 value denomination, the counted value will be shown like *******-5**, or *******-0**. By repeatedly pressing either of the two **ARROW** keys, the display will show the numbers of each denomination note that the machine has identified.

Please note, when using the AF8760C '3D' version to carry out Value Counting of mixed denomination bank notes, (NOT a piece count), should a Counterfeit Detection Aid system be activated, the notes will have to be recounted.

When mixed sized documents are being counted, and the machine is NOT set to the VALUE COUNT mode, the LD must be set to Ld - - - 0 (OFF) to avoid machine stops.

ACCUMULATION COUNTING MODE

By pressing the **T** key, you can select the Accumulation Mode ON, or OFF. When the machine is in the Accumulation Mode, the **TOTAL** symbol will glow and the counting number, or value, will be accumulated on the last counted number, or value.

DENOMINATION RECOGNITION MODE

(Only available for the Model with '3D')

The AF8760C '3D' has the Denomination Recognition Counting Mode however, when you use the machine for the first time, you must teach the unit to recognize that a particular note surface area directly relates to a specific value.

NOTES:

1. Please note that the machine will be unable to differentiate between different note values if the physical size of these bills is the same.
2. If the note size you want the machine to recognize is **already** similar to a bank note previously stored anywhere within the memory, the display will show, for example, **dS - - - 5**. The actual number indicated refers to the note denomination of the same size in the memory.
3. If you wish to CLEAR a denomination previously stored in the machine; press and hold the **C** key for 5 seconds. It is recommended that you carry out this procedure before re-programming for denomination values.

Please follow these simple steps to undertake the denomination recognition teaching process. This is best accomplished by using 'street-quality', rather than new bills, but avoiding bills with significant corner damage, etc:

1. Put 10+ pieces, of each denomination bank note that you wish the machine to recognize, in like ascending piles, ready for your use, starting with the lowest denomination value.
2. Press the **V** key to enter into the Value Counting Mode - The display will change to show the **VALUE**, **\$** and the **000** symbols.
3. Press and hold the **V** key for five (5) seconds - Both the **VALUE** and **\$** symbols will now slowly flash in unison and the **000** display will change to **1** – This indicates that the machine has entered the Denomination Recognition Mode.
4. Using the **\$** key, sequentially select the specific individual currency denomination value you want the machine to learn first.
5. Place the 10+ pieces, of the selected denomination value, into the Hopper. The machine will start counting automatically.
6. After counting, if the machine has successfully memorized the size of this particular note, a short Beep will be generated by the Buzzer Alarm, the **\$** symbol will stop flashing and both the selected denomination number and the **VALUE** legends will flash simultaneously. If any errors occur during recognition, the machine will not memorize the size of this particular note, the display will show the corresponding Error Message and the **\$** and **RECOUNT** symbols will flash. Please remove the pile of bank notes in the Stacker, search the pile and remove any abnormal note(s) from the bundle. Place the remaining notes back into the Hopper again and repeat the recognition process until the machine successfully memorizes the size of this particular note.

7. Using the **\$** key, select the next denomination pile for memorizing. Put the next corresponding 10+ notes into the Hopper, and repeat Steps 5 and 6 once again.
8. Continue to repeat the above procedure until all your bank note denominations are held within the machine memory system.
9. Once you have fully programmed the machine for your domestic currency, you can confirm that each denomination has been memorized by carrying out this simple procedure. Press the **V** key, a short Alarm Beep is heard - The machine is now in Mixed Denomination Count Mode with the LCD Display showing **\$** and **000**.
10. Selecting a single note from each separate denomination pile, one at a time, individually place each single bill in the Hopper. If you have been successful, as the machine accepts and feeds each of the different bills through, the LCD Display will respond with the correct and individual value for each of these denominations.
11. After the machine has memorized the value of each denomination, press the **V** key twice to exit from this mode.

MEMORY FUNCTION

To assist the user with statistical recording purposes, a Memory function is incorporated within our machine. The following memory areas are available for your use:

Denomination memory #1 for \$ 0.5	_____
Denomination memory #2 for \$ 1	_____
Denomination memory #3 for \$ 5	_____
Denomination memory #4 for \$ 10	_____
Denomination memory #5 for \$ 20	_____
Denomination memory #6 for \$ 25	_____
Denomination memory #7 for \$ 50	_____
Denomination memory #8 for \$ 100	_____
Denomination memory #9 for \$ 200	_____
Denomination memory #10 for \$ 250	_____
Denomination memory #11 for \$ 500	_____
Denomination memory #12 for \$ 1K (1000)	_____
Counting Number memory #13 (000)	

For recording the memorized counting number in Continuous Counting Mode and Batch Counting Mode.

NOTE:

If the above default denominations values have been changed by you, or your Distributor, please record the new value in the clear space on the right hand side of this page. If the memory area spills over, the display will show **E**.

In both the Value Counting Mode and the Mixed Counting Mode, if the memory area spills over and the last three digits of the displayed value are **000**, then the **K** legend multiplier beside the counting display will glow to replace these three digits.

In Value Counting Mode, after counting, by pressing the **MEM** key, the counted number will be accumulated in the corresponding memory. There will be a short delay as this function is accomplished, followed by a single Beep from the Alarm Buzzer. Then the number on the counting display will change to be **0**.

In Continuous Counting Mode, or Batch Counting Mode, by pressing the **MEM** key, the counted number will be accumulated into the memory #13.

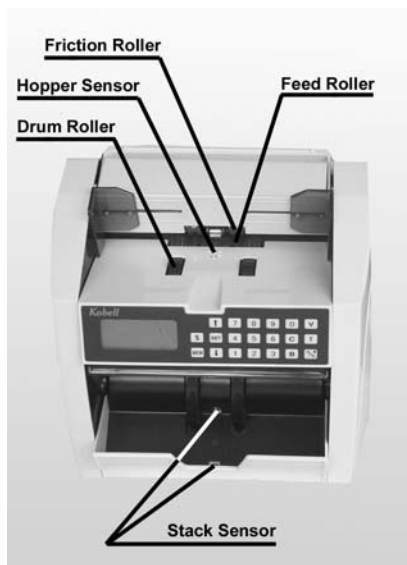
If you wish to display the number in memory, press the **T** key for five (5) seconds and the **MEM** symbol will flash to indicate that the machine is in the memory display mode. The Alarm Buzzer will emit a short Beep. The counting display will show the memorized counting number for the first denomination, the batch display will show the denomination value. By pressing either of the two **Arrow** keys, you can sequentially select to display the next memorized counting number of each denomination; a **tll** (= TOTAL) display feature is also available. By pressing any other key, the machine will exit from memory display mode.

If you want to clear all the data within the memory, press the **C** key for more than five (5) seconds. There will be a short delay whilst this function is actioned - A short Beep from the Alarm Buzzer will be heard and the **MEM** symbol will disappear; thus indicating that all the data in all the memory locations has been cleared. If you turn the power OFF and ON again, the **MEM** symbol will not glow, despite if there is any data within the memory system.

MAINTENANCE ROUTINES

Please maintain the machine via this simple **daily** procedure:

1. Turn the Main Power Switch OFF and disconnect the Mains Power Cord from the rear of the machine.
2. Using the brush provided, clean the central Hopper Sensor, the two Stack Sensors, Hopper area and the Stacker area. The photograph below shows the location of these devices:
3. Fit the protective Dust Cover provided over the machine.

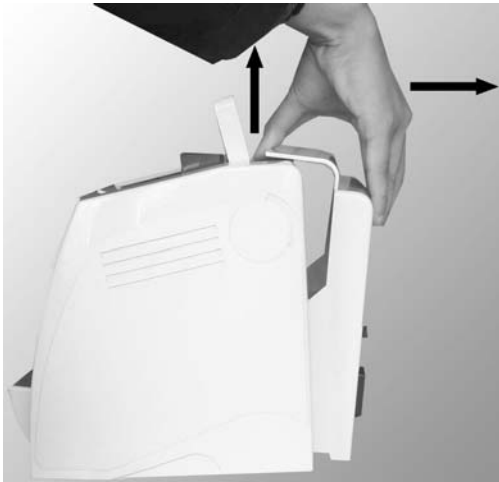


Additionally, please maintain the machine using this relatively simple **monthly** routine:

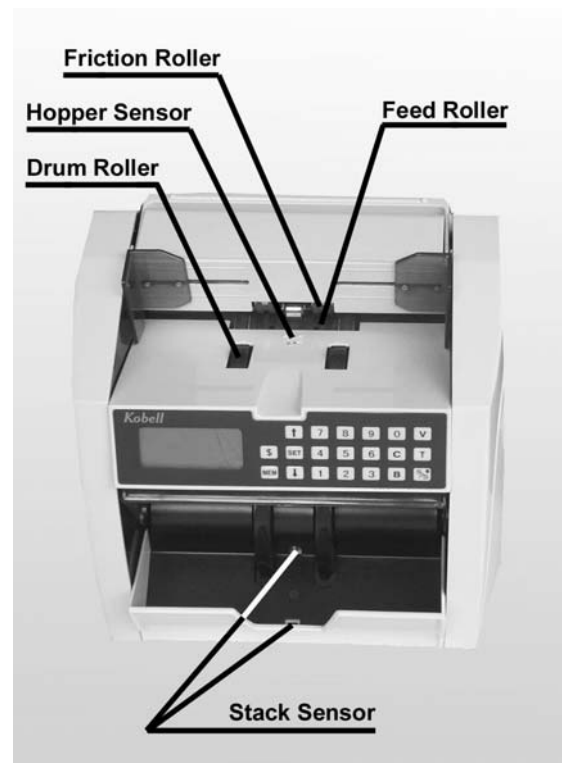
1. Turn the Main Power Switch OFF and disconnect the Mains Power Cord from the rear of the machine.
2. Open the Rear Cover by pulling the front edge upwards and then allowing the Cover to relax rearwards (See first photograph below).
3. Using a piece of clean, lint-free cloth and an approved non-toxic solvent fluid, carefully clean the surfaces of the following parts which are identified in the remaining photographs below. **Do not allow any fluid to come in contact with ANY electrical parts.**

Friction Rollers, Transfer Rollers, Feed Rollers, Drum Rollers, Stacker Sensor, Central Hopper Sensor and the Outer Plastic Covers.

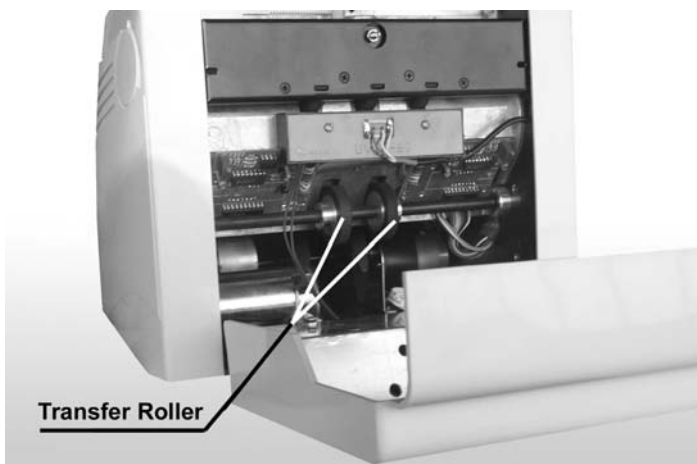
4. Refit the Rear Cover to the machine.



Opening The Rear Cover



Remaining Component Locations



Transfer Rollers - Location

ADJUSTMENT OF THE FEED GAP

The correct Feed Gap setting of the Central Feed Roller assemblies is vitally important to the smooth functioning of the machine. After extremely long-term usage, the urethane components of both the Feed Roller and the Friction Roller may be subject to natural wear. Under this condition, the Feed Gap may become too wide and, as a result, Error Codes will be generated and note feeding will become erratic.





To check and adjust the Feed Gap to counteract this simple wear condition, please use the following procedure, in conjunction with the photograph below:

1. Open the Rear Cover.
2. Manually insert a genuine bank note into the Feed Gap and pull it rearwards, if you did not feel any resistance whilst removing the note, this indicates the gap is too wide. If you feel the resistance is very strong, it indicates the Feed Gap is too narrow. (When the machine leaves our factory, the initial setting of the Thickness Dial is **2**).
3. If the Feed Gap is found to be too wide, please adjust the Thickness Knob counter-clockwise to slowly reduce the Feed Gap until the proper slipping-resistance is achieved with your bank note.
4. If the Feed Gap is found to be too narrow, please adjust the Thickness Knob clockwise to increase the feed gap until the proper slipping-resistance is achieved with your bank note.



Should the machine develop a technical problem, please contact your local Distributor, or Service Agent, for assistance.

TROUBLESHOOTING

<u>FLASHING SYMBOL</u>	<u>CAUSE</u>	<u>REMEDY</u>
RECOUNT	Double note(s) or chained note(s) detected. Unrecognized note detected in Mixed Counting Mode.	Remove the double/chained note(s) and count again. Remove the unrecognized note and count again.
JAM	Incorrect Feed Gap setting. There is a jammed note in the feed passage.	Adjust the Feed Gap for the correct setting. Remove the jammed note by pressing the S/S key.
E-1	Dirty Optical Sensor(s).	Thoroughly clean ALL Optical Sensors.
	A partial, or folded note, has been detected. Notes in the Hopper are misaligned.	Remove the partial, or folded note, and press the S/S key to continue counting. Realign the notes in the Hopper.
	Abnormal width note(s) have been detected.	Remove the abnormal note(s). Press the S/S key to continue the count.
	Double, or overlapping notes, have been detected. Incorrect Feed Gap setting. Incorrect Double Detection level setting.	Take out all the notes from the Stacker, remove the double/overlapped note from the bundle, and put the bundle back into the Hopper to recount. Adjust Feed Gap to proper setting. Adjust the Manual Double Detection levels according to the note characteristics of ink and thickness properties.
	Abnormal length notes have been detected.	Remove the abnormal note(s). Press the S/S key to continue the count.
UVD	A suspect counterfeit note has been detected by the ultraviolet detection sensor. Incorrect UV light sensitivity setting.	Remove the suspected counterfeit note and press the S/S key to continue the count. Adjust the UV detection level according to the note characteristics.
MAG	A suspect counterfeit note has been detected by the MAGnetic sensor system.	Remove the suspected counterfeit note and press the S/S key to continue the count. Adjust the MAG detection level according to the note characteristics.
IRD	A suspect counterfeit note has been detected by Infrared sensor system.	Remove the suspected counterfeit note and press the S/S key to continue the count.
'E' Displayed	The memory has overflowed.	Clear the memory by pressing the C key for 5 seconds.

*** In the interests of our ongoing policy of continual product improvement, specifications are subject to change without prior notice. ***