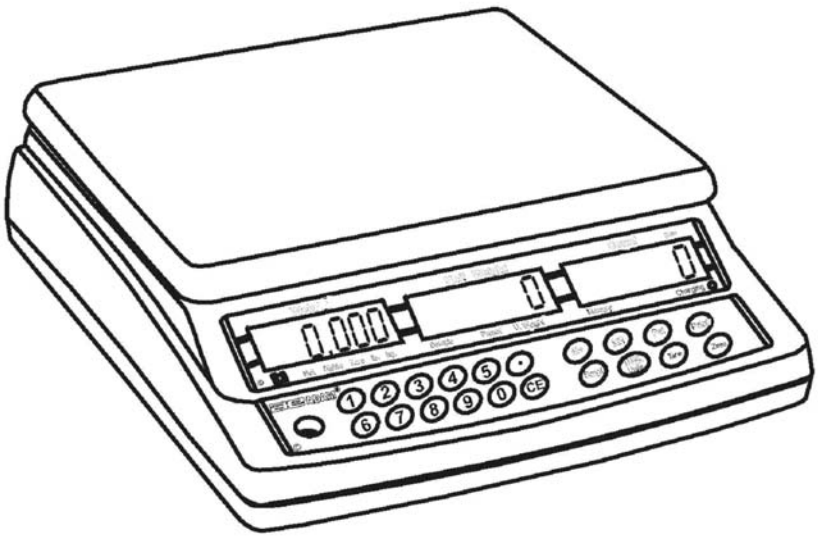
Adam Equipment

CC EU
Coin Count Scale

Software revision 3.75

Includes change to the way the bag keys are used to account for a small (Bag1) and large (Bag2) weight and using more than one bag at a time.



Easy Reference:

Model name of the scale:	
Serial number of the unit:	
Software revision number (Displayed when power is first turned on):	
Date of Purchase:	
Name of the supplier and place:	

CONTENTS

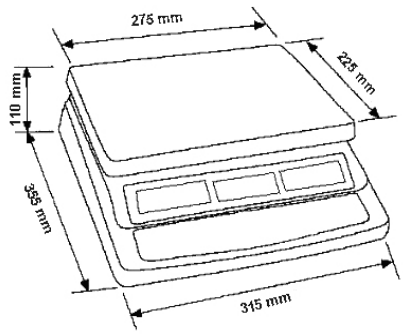
P.N. 9659, Revision C, February 2017

1.0 INTRODUCTION

The CC Coin Counting Scale provides accurate, fast and versatile method of counting coins and determining the value of a group of coins. It can also be used to count tokens with a weight that is determined by the user.

1.1 FEATURES

CCEU-20



- **Weighing**
- **Automatic tare**
- **Coin/token Counting**
- **Memory Accumulation**

- Stainless steel weighing platform
- Level indicator with adjustable leveling feet
- Colour coded, sealed, keypad
- Large liquid crystal displays (LCD)
- Displays for **Denomination**, **Quantity** and **TOTAL** value
- Battery operated for portability
- 50+ hours battery life when fully charged
- The scales can be upgraded when new coins are released
- Tokens can be counted
- Standard bi-directional RS-232 , optional USB interface
- Date and time printed
- Select Euro or Sterling Denominations

2.0 SET UP

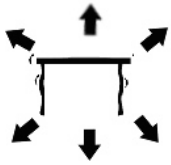
2.1 LOCATING AND PROTECTING YOUR SCALE

In order to keep your balance functioning at its best we suggest that you do the following:

Avoid extremes of temperature. Do not place in direct sunlight or near air conditioning vents.

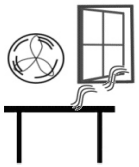
Make sure the scale is located on a strong table and free from vibration.

Avoid unstable power sources. Do not operate near large users of electricity such as welding equipment or large motors. Do not let the balance battery go flat – if you are not using it for a long time you should charge the battery up periodically to make sure the battery dose not lose its charge.

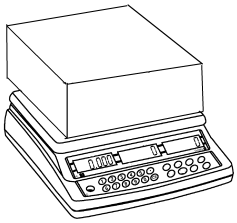


Keep free from vibration. Do not place near heavy or vibrating machinery.

Avoid high humidity that might cause condensation, and keep away from direct contact with water.

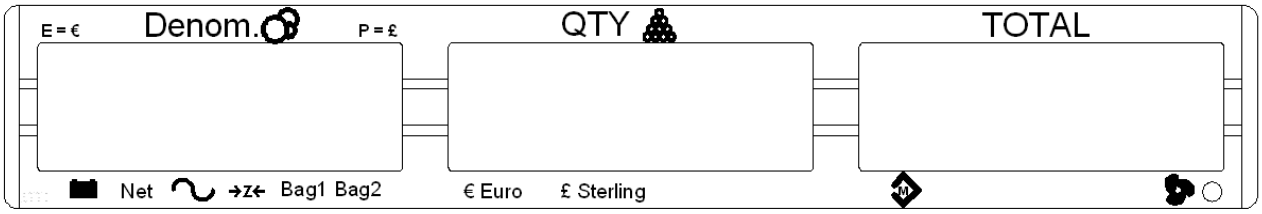


Do not place near open windows, air-conditioning vents or fans that may cause a draught and unstable readings.



Keep the scales clean, and do not stack material on the scale / balance when it is not in use.

2.2 DISPLAY WINDOWS



The **Denomination** window shows the current denomination that has been selected, an arrow will indicate when the scale is at zero (**ZERO**) and when the weight is stable (**STAB**) or if the scale has been tared (**Net**) and is displaying a net weight. An arrow will show if a bag weight has been selected.

EURO or STERLING Display

The left most digit will show a symbol for Euro (**E**) when selected. For example:

E 0.50

When the scale has been changed to show Sterling coins the coin value will shift to the left digits and the Pounds Sterling symbol (**P**) will be on the right digit.

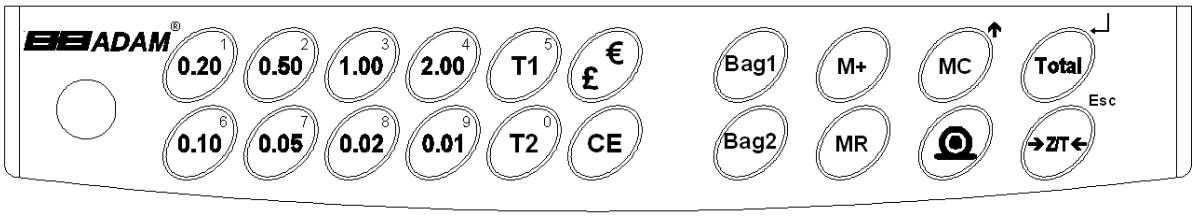
0.50 P

The **QTY** (**Quantity)** window displays the number of coins counted. An arrow will show whether the weight of Euro style coins **(€ Euro**) or Sterling style coins (**£ Sterling**) was used to count them.

The **TOTAL** window shows the value of the coins counted. An arrow will also indicate when a value has been stored in memory (**MEMORY**).

2.3 KEY DESCRIPTIONS

The keypad has 20 keys. Other keypads may be used for different countries or applications.



The following are used for parameter entry:

	Function
[Total]↵	↵, ENTER for completing an entry
[MC]↑	↑, move to the next parameter
[→Z/T←]Esc	Esc, Escape back to normal operation

Other Keys are:

[0.01] up to **[2.00]** and **[T1]** & **[T2]** keys	Select the denomination of coins or tokens to be counted.
[0] to **[9]** keys	Numeric keys to set values during special applications.
[CE]	Used to clear a coin denomination.
[€ / £]	Toggles between using Euro and Pound Sterling coin weights when determining the quantity and value of coins on the scale. An arrow in the **Quantity** window and an "E" or "P" in the denomination display indicates the selection. See section 2.4.
[Bag1] or [Bag2]	Will perform a preset tare of a weight stored for these keys. If the scale has had container already stored then the preset weight of the bag will be added to the previously stored value. i.e. if a container of 500g was tared and the **[Bag1]** key is pressed (stored weight of 10g) the tare value will be 510g.
[M+]	Enters a new entry into memory. The memory will accumulate up to 99 entries. Tokens cannot be added to memory with coins. If nothing is in memory then tokens can be added but an error would be shown if both tokens and coins are added to memory.
[MR]	Recalls the separate entries from memory.
[Total]↵	Recalls the total value stored in memory

[MC]↟	Clears the memory. If **[MR]** has been used to recall the individual samples stored, then **[MC]↟** can be used to clear them from memory. **[MC]↟** will erase the complete contents of the memory only when the total is displayed (irrespective of whether **[Total /↵]** or **[MR]** is pressed when the final total is displayed).
 **[Print]**	Print and display a complete record of all data stored in memory.
[➔Z/T←] Esc	When the weight on the scale is within ±2% of the zero at power on, pressing **[➔Z/T←]**Esc will set the scale to zero. If it is outside this range then the Tare function will set the display to zero. Once tared, any item placed in the container, the scale will display the Net weight only. When setting parameters pressing **[➔Z/T←]**Esc **will r**esumes normal operation without changes.

2.4 SELECT EURO OR STERLING COINS

- If the scale has been set to allow a change in the coins set used, (see section 6.11), the scale can be set to either count Euro Coins or Sterling Coins. The coins cannot be mixed. Therefore the scale must be set at power on to count one type or the other.

- During power on the displays will show the coin type currently selected. To change the coin type press the **[€/£]** key while the coin type is shown. The Type of coin will be changed and the display will show the coin type selected.

- If the scale has been set to only count one type of coin pressing the **[€/£]** key will be ignored.

- During normal operation the **[€/£]** key will have no effect.

2.5 BATTERY CHARGING

- The scale has an internal rechargeable lead acid battery. This battery will allow more than 50 hours of operation when fully charged or less if the backlight is on.

- The **Denomination** display will show an arrow above the battery symbol when the battery needs to be re-charged. The battery should be charged as soon as possible. There is approximately 1/2 hour service still available when the indicator first appears. If the battery is not recharged in this time the power to the scale will be turned off to protect the battery from getting damaged.

2.6 BACKLIGHT OPERATION

- The LCD display has a backlight that operates automatically. To maximise the battery life it may be necessary to turn the backlight off.

- Hold the **[Print]** key for 4 seconds to enter the backlight control mode. Use the **[MC]↑** key to change the setting for the backlight to OFF, ON (set to on for full time) or AUTO (set to on only when there is a weight on the scale).

2.7 TEMPORARY WEIGHT DISPLAY

- Press and hold the **[CE]** key for 4 seconds for the display to change the weight in the **Denomination** window.

- Pressing any key except the **[→Z/T←]** Esc and **[CE]** keys will have no effect to the operation. Pressing **[→Z/T←]** Esc will operate as a Tare function and **[CE]** will return the scale to normal operation.

2.8 SETTING DATE AND TIME

The Real Time Clock (RTC) is used only for the RS-232 output. The Date and Time can be set as required. The scale will keep the clock running even when the power is off.

Setting up the clock

- Press and hold the **[CE]** key when power is first turned on, release the key when the revision is displayed. The initial displays show the current date and time set.

" **rtC** " "**11,14,06**" "**16,41,35**"

- Press the **[CE]** key to change the date and time. The display will show the current time format, "**H-m-S**".

- Enter the time using the numeric keys using a 24 hour clock format, 3:41PM is "**154100**".

- Press the **[Total]**↵ key to accept the time. The display will show the current date format.

- Press the **[MC]↑** key to change the date format. Available formats are:

  "**Y-m-d**" year, month, day
  "**m-d-Y**" month, day, year
  "**d-m-Y**" day, month, year

- Press the **[Total]**↵ key to accept the chosen format and then enter the date in this format.

- Press the **[Total]**↵ key to accept the date or press **[CE]** to clear the current date and enter a new date using the numeric keys.

An error code will be shown if the time **(Err 1)** or the date (**Err 2)** is not the permissible values. For example, 34th day of a month is an invalid entry.

3.0 BASIC OPERATION

3.1 ZEROING THE DISPLAY

- Press the **[➔Z/T🡐]**^{Esc} key to set the zero point from which all other weighing is measured. This will normally be done only when the platform is empty. A new zero is set if the scale is already within ±2% of the original zero at power on.

- When the zero point is obtained the **Denomination** display will show an arrow above the zero symbol (**ZERO**). This indicates the scale is at the zero condition.

- The scale has an automatic re-zeroing function to account for minor drifting or accumulation of material on the platform. However you may need to press **[➔Z/T🡐]**^{Esc} to re-zero the scale whenever a small amount of weight is shown even though the platform is empty.

3.2 TARING

- Taring is used to eliminate the weight of a container so that only the net weight is displayed.

- Zero the scale by pressing **[➔Z/T🡐]**^{Esc} if necessary. The zero indicator will be on.

- Place an empty container on the platform, a value for its weight will be displayed.

- Press **[➔Z/T🡐]**^{Esc} to zero the scale. The weight is stored as the tare value. An arrow above the "**Net**" will be on.

- When both the product and container are removed the **Quantity** and **TOTAL** display will show bars "- - - - -" as the weight is below zero.

- If a different container is to be used, remove this negative tare value by pressing the **[➔Z/T🡐]**^{Esc} key once more.

- Any time the weight is negative, only bars will be shown in the **QTY** and **TOTAL** display "- - - - - ".

3.3 BAG WEIGHT TARING

- The scale can be set to automatically tare the weight of bags the coins are held in. The weight of 2 different bags can be stored in memory and recalled by the user when required.

- If necessary first tare the scale by pressing the **[➔Z/T🡐]**^{Esc} key. If a bag is used press either the **[Bag1]** or **[Bag2]** key. The weight associated with the bag key will be entered so the scale will use only the weight of the contents of the bag for determining the count and value of the contents.

- So if a bag of coins is placed on the scale, the weight of the bag will be deducted from the total weight, and only the weight of the coins will be used to determine the number of coins.

- The bag tare will remain active until the **[➔Z/T🡐]**^{Esc} key is pressed or a different preset bag weight is selected.

3.3.1 Storing new bag weights

- To store a new bag weight press and hold the [Bag1] or [Bag2] key for 4 seconds. The display will show the current bag weight stored for the key.

" BAg 1 " " 12.4" "g "

- Press the [CE] key to reset the value desired.

" BAg 1 " " 0.0" "g "

- Use the numeric keys to enter a new unit weight. The numeric keys are shown with small numbers in the corner of the keys.

“ BAg 1 ”	“ 6.7”	“g ”

- Press the **[Total]**↵ key to store the value and return to normal operation. “**SAVE**” will be displayed briefly. Pressing the **[➔Z/T←]**^{Esc} key at any time will return to normal operation without any changes being made.

- If a weight of 0.00g is stored the bag weight function is disabled.

- The allowed range of bag weights is 0.0g to 999.9g.

3.4 COIN COUNTING

- To count coins simply place the coins in the container and press the key corresponding to the value of the coin. The displays will immediately show the denomination selected in the **Denomination** window, the number of coins in the **Quantity** window and the value of the coins in the **TOTAL** window.

- The Scale determines the weight of the coins and divided the weight by the average weight for the denomination selected. This determines the Quantity of coins. The total value is the quantity multiplied by the denomination.

- It is necessary to set an average weight into memory before either of the token keys **[T1]** or **[T2]** can be used. See Sections 5.1 and 5.2 for more details.

3.5 MEMORY ACCUMULATIONS

- When the coins have been counted it is possible to store the results of this sample into memory by pressing **[M+]**.

- The displays will show a number corresponding to the item number in memory (**Denomination** display "≡1≡") and the total quantity of coins counted in memory (**Quantity** display) and the total value of coins that have been stored into memory (**TOTAL** display).

For Example:

" 0.20"	" 285"	" 57.00"

Press **[M+]**

" ≡1≡ "	" 285"	" 57.00"

After 2 seconds the scale will return to normal operation. Put next batch of coins on the scale, select denomination **[R1]**

“ 1.00”	“ 108”	“ 108.00”

Press **[M+]**

“ ≡2≡ ”	“ 393”	“ 165.00”

After 2 seconds the scale will return to normal operation. Put next batch of coins, select denomination **[10c]**

“ 0.10”	“ 105”	“ 10.50”

Press **[M+]**

“ ≡3≡ ”	“ 498”	“ 175.50”

- After 2 seconds the scale will return to normal operation. The weight on the scale must return to zero before another value is allowed to be stored into memory.

NOTE: Tokens cannot be added to memory as they do not have a value associated with them.

- If tokens are to be added to memory with coins, an error message will be displayed:

“ ErrOr ”	“ TYPE”	“ ”

After that the scale will return to normal operation.

3.6 MEMORY RECALL

- Pressing the **[MR]** key will allow you to view each set of data stored into the memory.
- The first time **[MR]** is pressed the first set of data is shown with **Denomination** window showing " ≡ 1 ≡" for 1 second followed by the **Denomination**, **Quantity** and **TOTAL** windows showing the quantity and value for this first item.

" ≡1≡ "	" "	" "

for 1 second and then

" 0.20"	" 285"	" 57.00"

- Pressing **[MR]** again will show the second set of data.

" ≡2≡ "	" "	" "

for 1 second and then

" 1.00"	" 108"	" 108.00"

- Continue to press **[MR]** until the total values from the memory are shown:

" ≡3≡ "	" Total"	" 175.50"

After 2 seconds the scale will return to normal operation.

- If **[MC]↑** is pressed when the total is shown-

" ≡3≡ "	" 498"	" 175.50"

as in the above example,

all data in the memory will be erased. The displays will show Zero and it will return to normal weighing after 2 seconds.

4.0 SERIAL INTERFACE

The CCEU is supplied with a RS-232 bi-directional interface and a USB serial interface as an option. Both interfaces send and receive identical information. See samples below.

Specifications:

RS-232 output of weighing data, optional USB Interface ASCII code Adjustable Baud rate, 600, 1200, 2400, 4800, 9600 and 19200 baud 8 data bits No Parity

Connector:

RS-232		USB
9 pin D-subminiature socket Pin 3 Output Pin 2 Input Pin 5 Signal Ground		Standard Type B USB connector

A driver to allow a simple connection from the USB interface to a PC is available on the Adam Equipment web site.

4.1 PRINTING

The scale will output data when the following keys are pressed.

[M+] outputs the current record at the same time as the results are stored in the memory. See Section 3.4.

A display produced as shown in the previous example is as follows:

“ 0.20”	“ 285”	“ 57.00”

Press **[M+]**

“ ≡1≡ ”	“ 285”	“ 57.00”

Printed record shows as follows:

```
Date:       2011/07/05
Time:         12:23:15
Record               1
Bag 1 (6.7g)
Denomination      0.20
Quantity           285
Value       €     57.00
```

The bag weight is listed only if the Bag 1 or Bag2 key was pressed and the stored value was greater than 0.0g. The weight is brackets is from the stored bag weight.

Any time the **[Total]**↵ key is pressed the current totals held in memory are printed. After the 2nd weighing in the previous sample, the printed record shows as follows:

```
. . . . . .
Date:       2011/07/05
Time:         12:23:15
Total
Quantity           498
Total
Value       €   175.50
```

The **[MC]↟** key is active when the total values are displayed. If **[MC]↟** is pressed the memory will be cleared.

After 2 seconds the scale will return to normal operation.

The **[Print]** key will record a list of all sets of data stored in the memory and the total amounts. For the sample above, the printed record is:

```
Date:       2011/07/05
Time:         12:23:15


Record             1
Bag 1 (6.7g)
Denomination   0.20
Quantity      285
Value    €    57.00

Record             2
Bag 2 (14.2g)
Denomination   1.00
Quantity      108
Value    €   108.00

Record             3
Denomination   0.10
Quantity        105
Value    €    10.50

. . . . . .
Total
Quantity        498
Total
Value    €   175.50
```

Shows examples of a bag weight being used (record 1 & 2), or not used (record 3) in each of the samples.

4.2 INPUT COMMANDS

The following commands duplicate the functions of keys. All commands are terminated by carriage return/line feed.

Z	Same as **[➔Z/T🡐]**^{Esc} key. Zeros the display.
M+	Same as **[M+]** key.
P	Same as **[Print]** key.
T	Same as **[Total]**↵ key.
MC	Clears memory.

The following are for the factory to set new denominations and coin weights. The format is to send the key number, followed by the denomination and the Euro coin weight and then the Sterling coin weight.

Examples-

K01,1.00,3.995,11.971<cr><lf>	1.00 key (assume key 01),

With denomination 1.00, weight of Euro coin =3.995g, weight of Sterling coin=11.971g.

K07,0.20,4.489,2.505<cr><lf>	0.20 key (assume key7),

With denomination 0.20, weight of Euro coin =4.489g, and weight of Sterling coin = 2.505.

K10,T2,1.234,2.456<cr><lf>	Token 3 key (assume key10),

With of a token, number 3, weight of new token = 1.234g and weight of old token = 2.456g.

Key numbers are the same as the numeric entry values shown on the keys, the 10th key (marked T2) will be key number 10.

The command to store a weight for the bag weights is

BAG1, 3.9<cr><lf>

Will send the weight of 3.9 grams for bag 1.

5.0 PARAMETERS

5.1 SETTING COIN WEIGHT

There are 8 coins and 2 tokens available for the user. Other versions of this scale may use other combinations. See the Secured Parameters Section (6.0) for details on how this can be changed. Each coin has a weight associated with the Euro style or the Sterling style.

The initial values set for the coins are:

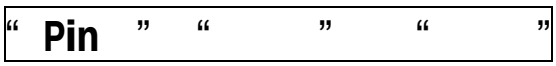
Coin Denomination	€ (Wt1)	£ (Wt2)
Token1 , T1	0.000	0.000
Token2 , T2	0.000	0.000
0.01	2.30	3.56
0.02	3.06	7.12
0.05	3.92	3.25
0.10	4.10	6.50
0.20	5.74	5.00
0.50	7.80	8.00
1.00	7.50	8.75
2.00	8.50	12.00

5.1.1 Procedure

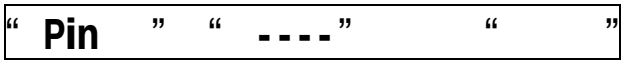
To enter this section of the program you will need the access code number. It may be that your manager has changed the default access code number to another number. The default access code is 0000.

A restore code 4455 will set all coin weights as in the above table.

- Press and hold the **[€/£]** key and then apply power. Hold the key down until the display shows:

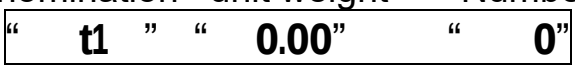


Enter the access code (4 numbers) using the numeric keypad. A "**-**" will be displayed for each number.



- Press the **[Total]**↵ key. If the access code number was correct it will advance to the unit weight setting parameter, otherwise it will return the scale to counting. The first value displayed is the first token value. The displays show:

denomination unit weight Number of coins in the small bag



- To select another denomination press the key for that denomination. To select either the Euro or Sterling style press the **[€ / £]** key. Note the arrow in the **Quantity** window.

For example the 0.10 (10) key will show:

Unit weight is 4.100 grams if the Euro style is selected or 6.500 grams for the Sterling style.

- Press the **[Total]**↵ key to reset the values desired. The unit weight will change to 0.000 and flash.

“ **0.10**”	“ **0.000**”	“ **0.00**”

- Use the numeric keys to enter a new unit weight. The numeric keys are shown with small numbers in the corner of the keys.

“ **0.10**”	“ **4.150**”	“ **0.00**”

- Press **[Total]**↵ to store the new weight value. “**SAVE**” will be displayed briefly.

- Repeat the procedure for any other changes necessary.

- If a printer is connected press the **[MR]** key to list of all the denominations and their values.

- At any time press the **[➔Z/T🡐]**^{Esc} key to escape the function.

5.2 DETERMINING NEW COIN, TOKEN OR BAG WEIGHTS

The following procedure is used to determine the average weight of coins, tokens or bags. This can be used to verify the coin weight stored in memory and to set new weights for tokens.

5.2.1 Procedure

- Before beginning have a representative sample of the coins, tokens or bags to be used. You should have a minimum of 100 coins or as many bags as possible, as the larger the number of samples the more accurate the average weight will be.

- Set the scale to show weight temporarily by pressing the **[CE]** key for 4 seconds. The weight will be displayed until **[CE]** or any other key except **[➔Z/T🡐]**^{Esc} is pressed to return to normal operation. The **[➔Z/T🡐]**^{Esc} key will continue to function as normal to zero the display.

- Verify the scale calibration by placing a known weight on the platform.

- If the scale is not accurate (±1g) it must be re-calibrated before proceeding. See Section 5.4.3 for calibration details.

- Place the items to be weighed on the scale. If they are in a container it will be necessary to Tare the weight of the container so the **Quantity** display shows zero before placing the items in the container.

- The **Denomination** display will show the weight of the samples.

- Determine the average weight by dividing the total weight by the number of items in the sample.

- It is then necessary to enter this value (rounded to 3 places: x.xxx) into memory as above. For example 12883g for 2000 tokens is an average of 6.4415 grams, Enter 6.442 grams.

5.3 SECURED FEATURES

The CCEU Coin Counting scale has a number of functions that can only be accessed by a qualified user.

Two levels of security are available. For the first level of security, a user password is required to allow the access to change the piece weight for the different denominations of coins. See Section 5.1.

The second level of security will allow more functions to be set. See section 6.0.

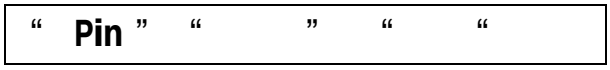
The first level of functions includes:

F1	Baud Rate
F2	Parity
F3	Sleep
F4	Calibration
F5	Access Code Number Setting
F6	Language

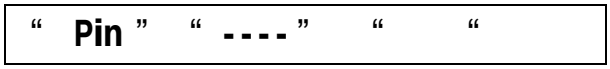
5.4 WEIGHING PARAMETER FUNCTIONS

The following functions control the weighing system in the scale. To set these functions, follow the procedure-

- Turn the scale on while holding the **[Total]**↵ key down and then release the key.



- Enter the default access code "0000".



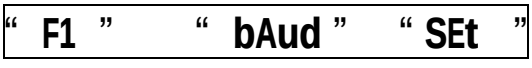
- Press the **[Total]**↵ key. The first function is **F1** Baud Rate Setting.

- Press the **[MC]**↑ key to advance to each of the other functions or **[→Z/T←]**Esc to return to normal operation after running a self-test.

5.4.1 F1- Baud Rate Setting

To change the baud rate used with the serial interface, follow this procedure.

- When the display is showing:



- Press the **[Total]**↵ key.

Current baud rate

- For setting a new baud rate use the **[MC]**↟ key to cycle through the options which are 600, 1200, 2400, 4800 and 9600.

New baud rate

- Press **[➔Z/T←]**Esc to escape without changes before it is stored or press the **[Total]**↵ key to confirm and store the new value.

- To move to the next function press **[MC]**↟

- Or press **[➔Z/T←]**Esc to return to normal operation.

5.4.2 **F2**- PARITY

To change parity used with the serial interface, follow this procedure.

- When the display is showing:

“ F2 ”	“ ParitY ”	“ SEt ”

- Press the **[Total]**↵ key.

“ F2 ”	“ ParitY ”	“ n 8 1 ”

Current parity, None, 8 data bits, 1 stop bit

- For a new parity setting, use the **[MC]**↑ key to cycle through the following options:

n81	Parity = None, 8 data bits and 1 stop bit.
E71	Parity = Even, 7 data bits and 1 stop bit.
o81	Parity = Odd, 7 data bits and 1 stop bit.

“ F2 ”	“ ParitY ”	“ E 7 1 ”

- Press **[→Z/T←]**Esc to escape without changes before it is stored or press the **[Total]**↵ key to confirm and store the new value.

“ F2 ”	“ ParitY ”	“ SEt ”

- Press **[MC]↑** to advance to the next functions

“ F3 ”	“ SLEEP ”	“SEt ”

- Or press **[➔Z/T🡐]**Esc to return to normal operation.

5.4.3 **F3**- SLEEP

The scale can be set to turn off automatically if it is not being used. The time can be from 1 to 10 minutes, or disabled. To change the time, follow this procedure.

- When the display is showing:

“ F3 ”	“ SLEEP ”	“ SEt ”

- Press the **[Total]**↵ key.

“ F3 ”	“ SLEEP ”“	1 ”

Current setting, 1 minute

- For a new value, use the **[MC]↑** key to cycle through the options, 1, 5 or 10 minutes, 0 will disable the automatic turn off function.
- Press **[➔Z/T🡐]**Esc to escape without changes before it is stored or press the **[Total]**↵ key to confirm and store the new value.

“ F4 ”	“ CAL ”	“ SEt ”

5.4.4 **F4**- Weight Calibration

To calibrate the scales it is necessary to have a weight suitable to the capacity of the scale. It should have a mass near to the capacity of the scale, without exceeding it. For example use 20kg mass to calibrate the CCEU. The calibration weight should be accurate to assure accuracy of all weighing. Weights of OIML Class M1 or better should be used. Other values of mass can be used, see below.

The user calibration must verify the calibration is within 10% of this calibration. This prevents calibration with no weight on the scale or with grossly wrong weights.

- When the display is showing:

" F4 "	" CAL "	" SEt "

- Press the **[Total]**↵ key. The display will show the following:

" CAL "	" 0.000 "	" 12345"

The number in the TOTAL window is the number of internal counts representing the zero weight, from the analog to digital converter within the scale.

- Make sure no other weights are on the scale. Press the **[Total]**↵ key to set the zero point. The display will show:

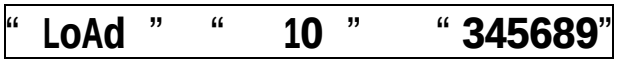
" LoAd "	" 20"	" KiLoS"

- If a different mass is required from the one shown press the **[CE]** key to clear the value, then enter the value of the calibration mass, i.e. 10 kilograms.

- The display will show:

" LoAd "	" 10"	" KiLoS"

- Place the calibration weight on the scale.
- Press the **[Total]**↵ key to show the ADC values for this weight.



- Press the **[Total]**↵ key to show the ADC values for this weight. The display will then show:

- After few seconds it will show the next function.

- Remove the weight from the scale.

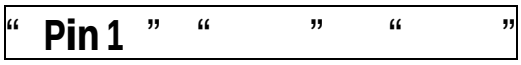
If **[➔Z/T🡐]**^{Esc} is pressed during calibration return to normal operation without doing the calibration.

5.4.5 **F5**- Access Code Number

To change the user access code number used to enter the section of the program for changing coin weights (see Section 5.2) follow this procedure. This parameter can only be accessed by skipping the F3 Calibration function by using the **[MC]🡅** key.

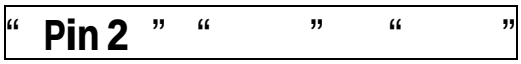
- When the display is showing:

- Press the **[Total]**↵ key. The display will show:



Enter the new access code

- press the **[Total]**↵ key to confirm and store the value, The scale will ask you to repeat the number again for security.



Enter the new access code

- Press **[➔Z/T←]**[Esc] to escape without changes before it is stored or press the **[Total]**↵ key to confirm and store the value.

- To return to normal operation press the **[➔Z/T←]**[Esc] key.

5.4.6 **F6**- Language

The scale can be set to print results in English, German, French or Spanish. To change the language, follow this procedure.

- When the display is showing:

- Press the **[Total]**↵ key.

Current setting, English

- For a new setting , use the **[MC]↑** key to cycle through the options:

  ENG = English
  DEU = German
  FRA = French
  ESP = Spanish

- Press **[➔Z/T←]**^{Esc} to escape without changes before it is stored or press the **[Total]**↵ key to confirm and store the new value.

“ F1 ”	“ baud ”	“ SEt ”

- Press **[➔Z/T←]**^{Esc} to return to normal operation.

6.0 SECURE PARAMETERS

6.1 SETTING UP SECURED PARAMETERS

The following parameters can only be accessed when the service access code 9999 is used.

Turn the scale on while holding the **[Total]**↵ key down and then release the key.

Key in the Service Access Code as described in section 5.1.1.

The first function shown is **F1**, the Baud Rate Setting.

“ F1 ”	“ bAud ”	“ SEt ”

This procedure gives access to the following parameters:

F1 Baud Rate Setting

F2 Parity setting

F3 Sleep

F4 Weight Calibration

F5 Access Code Number Setting

F6 Language

These parameters are set as in section 5.4.

F7 Enable the **[€/£]** key function.

F8 Denomination Setting

F9 Linearity Calibration

F10 Factory Calibration Values

These parameters are only accessible when the service access code is used.

See Section 5.4 for details of Functions F1 to F6.

6.1.1 F7- ENABLE EURO / STERLING CHANGE USING THE [€/£] KEY

The scale can be set to permanently use only Euro or Sterling coins. Disabling the function of the **[€/£]** key as described in section 2.4.

- When the display is showing:

" F7 "	" COIn "	" SEt "

- Press the **[Total]**↵ key.

" F7 "	" COIn "	" USEr "

Current setting, User select, **[€/£]** key enabled.

- For a new value, use the **[MC]↑** key to cycle through the options: Select User, Euro or Ster (Sterling)

- Press **[→Z/T←]**^{Esc} to escape without changes before it is stored or press the **[Total]**↵ key to confirm and store the new value.

" F8 "	" dEm "	" Set "

6.1.2 F8- Denomination Values

The denomination keys for Europe have values pre-assigned, from 0.01 to 2.00. Plus the 2 token keys can be reassigned also. In total 10 keys can be used for denominations or tokens. This procedure will allow you to change the denomination values associated with each key. It may be necessary to change keypad designs for other denominations.

- When the display is showing:

“ F8 ”	“ dEM ”	“ SEt ”

Press the **[Total]**↵ key. The display will show the decimal point position:

“ Point ”	“AddES”	“ 0.00 ”

Decimal point current position,

Press the **[MC]**↑ key. To select either 0.00, 0.0 or 0

- Press **[Total]**↵ to set the decimal point.

- The displays will show:

“ F8 ”	“ dEM ”	“ kEy ”

- Press the denomination key to be set. Use the keys for the tokens or for the denominations as needed.
  The displays will show:

“ F8 ”	“ K01 ”	“ 0.20 ”

Where the K01 is the key number for the key being used. The display also shows the denomination currently selected.

“ F8 ”	“ K08 ”	“ 0.02 ”

For example the number 8 key has a value of 0.02.

- To enter a new value for this key position use the numeric keys and press **[Total]**↵ to save the new value.
- To set a key position for a token press the **[MC]↟** to set T1, T2 etc. up to T8.
- The display will show “**SAVE**” and then display:

“ F8 ”	“ dEM ”	“ kEy ”

You can select another key if necessary.

When all changes have been made press the **[➔Z/T←]**^{Esc} key to return to the parameters. Press **[MC]↟** to advance to the next parameter.

6.1.3 **F9**- Linearity Calibration

The display will show:

“ F9”	“LinEr”	“ SEt ”

The linearity of the scale is set by calibrating with 2 masses, 1/2capacity (10kg) and full capacity (20kg).

- Press the **[Total]**↵ key to enter this function.

- The display will show the following:

“ CAL ”	“ 0.000 ”	“ 12345”

The number in the TOTAL window is the number of internal counts representing the zero weight, from the analog to digital converter within the scale.

- Make sure no other weights are on the scale. Press the **[Total]**↵ key to set the zero point. The display will show:

“ LoAd 1 ”	“ 10”	“ 23456”

- Place 10kg mass on the scale and then press the **[Total]**↵ key

- The display will then show:

“ LoAd ”	“ 20”	“ 23456”

- Place 20kg mass on the scale and then press the **[Total]**↵ key

- The display will then show:

“ SPAN ”	“ PASS ”	“ ”

- After few seconds it will show the next function.

“ F10 ”	“ FACt ”	“ SEt ”

6.1.4 **F10**- Factory Calibration Value

This calibration is stored in a separate location from the user calibration (F4). If a scale has been disrupted it is possible to recall this calibration in order to have a scale that has the original calibration restored.

This calibration can be done at any time without checking for being within 10% of the previous factory calibrations. This value will also overwrite the user calibration value as set in F3. When the user calibration is performed the results must agree within 10% of the factory calibration. This prevents calibration with no weight on the scale or with grossly wrong weights.

- When the display is showing:

“ F10 ”	“FACt”	“ Set ”

  Press the **[Total]**↵ key. The display will show:

“ 0.000 ”	“ ”	“xxxxxx”

- Make sure no other weights are on the scale.

- Press the **[Total]**↵ key.

- The displays will show the calibration weight required, equal to the full scale capacity.

“20.000 ”	“ ”	“xxxxxx”

- Place the weight on the scale. When the scale is stable Press the **[Total]**↵ key.

- The display will then show:

“ SPAN ” “ PASS ” “ ”

- The scale will return to the Function menu.

- Press **[➔Z/T←]**^{Esc} to return to normal operation or **[MC]**↑ to select a different function.

6.2 OTHER SETTINGS

6.2.1 Restore Factory Calibration

- To restore this calibration value it is necessary to do a simple procedure. Press and hold the **[CE]** key down for 3 seconds to put the scale into a weighing display.

- Press the **[Total]**↵ key, the scale will beep. The Factory Calibration will be restored to the balance.

6.2.2 Shortcut to Calibration without using Functions

- Switch on the power, display shows software rev, coin set, count down. Press **[MC]↟** during any of this procedure. The scale will to calibrate the scale without entering the function menu press and immediately go to the calibration function.

- The display will show the following:

“ CAL ” “ 0.000 ” “ 12345”

- Proceed with calibration as normal. See section 5.4.4. When completed the scale will return to normal operation. You cannot proceed to any other functions from this entry point.

7.0 ERROR MESSAGES

When power is first applied to the scale the software does a self check and then verifies the voltages from the load cell are acceptable. The display will show error messages if the voltage is not within certain limits. If these error messages appear contact your supplier for assistance.

ERROR CODE	DESCRIPTION	POSSIBLE CAUSES
Err 1	Error setting a date	Trying to set a date that is not realistic.
Err 2	Error setting time	Trying to set a time that is not realistic.
Err 4	Initial Zero is greater than allowed (typically 4% of the maximum capacity) when power is turned on or when the **[➔Z/T🡐]**^{Esc} key is pressed,	Weight is on the pan when turning the scale on. Excessive weight on the pan when zeroing the scale. Improper calibration of the scale. Damaged load cell. Damaged Electronics.
Err tYPE	Tokens are not allowed to be added to memory.	Shown when trying to add tokens to accumulation memory.
SPAn FAIL HI **SPAn FAIL Lo**	Calibration Error	Will show Hi or Lo if the calibration mass is too large or small to allow correct calibration.
FAIL	Password failed	Password was not correct.

8.0 SPECIFICATIONS

	CC_EUROPE
Capacity, Max =	20 kg
d=	1g
	NOTE: Weight is not displayed except in the special test program
Tare Range	-20 kg
Working Temperature	0ºC to 40ºC
Platform	225 x 275mm
Overall	315 x 355 x 110mm
Battery Life	50+ hours typical*
Power	230 VAC, 50/60 Hz., 10 watts
Net Weight	4.1 kg

*Battery Life is less when the optional backlight is used

WARRANTY INFORMATION

Adam Equipment offers Limited Warranty (Parts and Labour) for the components failed due to defects in materials or workmanship. Warranty starts from the date of delivery.

During the warranty period, should any repairs be necessary, the purchaser must inform its supplier or Adam Equipment Company. The company or its authorised Technician reserves the right to repair or replace the components at any of its workshops depending on the severity of the problems. However, any freight involved in sending the faulty units or parts to the service centre should be borne by the purchaser.

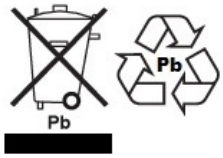
The warranty will cease to operate if the equipment is not returned in the original packaging and with correct documentation for a claim to be processed. All claims are at the sole discretion of Adam Equipment.

This warranty does not cover equipment where defects or poor performance is due to misuse, accidental damage, exposure to radioactive or corrosive materials, negligence, faulty installation, unauthorised modifications or attempted repair or failure to observe the requirements and recommendations as given in this User Manual. Additionally rechargeable batteries (where supplied) are not covered under warranty.

Repairs carried out under the warranty does not extend the warranty period. Components removed during the warranty repairs become the company property.

The statutory right of the purchaser is not affected by this warranty. The terms of this warranty is governed by the UK law. For complete details on Warranty Information, see the terms and conditions of sale available on our web-site.

WEEE 2012/19/EU



This device may not be disposed of in domestic waste. This also applies to countries outside the EU, per their specific requirements. Disposal of batteries (if fitted) must conform to local laws and restrictions.
Cet appareil ne peut être éliminé avec les déchets ménagers. L'élimination de la batterie doit être effectuée conformément aux lois et restrictions locales.
Dieses Gerät nicht mit dem Hausmüll entsorgt.
Dispositivo no puede ser desechado junto con los residuos domésticos
Dispositivo non può essere smaltito nei rifiuti domestici.

FCC / IC CLASS A DIGITAL DEVICE EMC VERIFICATION STATEMENT

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules and Canadian ICES-003/NMB-003 regulation. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CALIFORNIA PROPOSITION 65 - MANDATORY STATEMENT

WARNING: This product includes a sealed lead-acid battery which contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Adam Equipment products have been tested with, and are always supplied with mains power adaptors which meet all legal requirements for the intended country or region of operation, including electrical safety, interference and energy efficiency. As we often update adaptor products to meet changing legislation it is not possible to refer to the exact model in this manual. Please contact us if you need specifications or safety information for your particular item. Do not attempt to connect or use an adaptor not supplied by us.

ADAM EQUIPMENT is an ISO 9001:2008 certified global company with more than 40 years' experience in the production and sale of electronic weighing equipment.

Adam products are predominantly designed for the Laboratory, Educational, Health and Fitness, Retail and Industrial Segments. The product range can be described as follows:

-Analytical and Precision Laboratory Balances
-Compact and Portable Balances
-High Capacity Balances
-Moisture analysers / balances
-Mechanical Scales
-Counting Scales
-Digital Weighing/Check-weighing Scales
-High performance Platform Scales
-Crane scales
-Mechanical and Digital Electronic Health and Fitness Scales
-Retail Scales for Price computing

For a complete listing of all Adam products visit our website at **www.adamequipment.com**

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