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Warranty

CONTECH INSTRUMENTS LTD warranties all its products against defects in material and workmanship for a period of one year, subject to terms and conditions stated below and as further modified by warranty Amendment, in each product instruction manual.

1. Warranty period will commence from the date of shipment from CONTECH to the original buyer.

2. All warranty repairs are normally done at our factory in Mumbai and our decision about faulty materials or workmanship will be final. The instrument should be sent in the original packing to our factory at the address given below. Postage/Airfreight charges both ways are to be borne by the customer.

3. If any of our product is produced by any other than our engineers or our authorised representatives, this warranty will become null and void and CONTECH will be relieved of all responsibilities as to the service and operation of the said product.

4. This warranty will not be applicable to :
   a) Shipping damage or damages incurred while products are in transit.
   b) Correction of operational problems arising out of environmental conditions beyond our control.
   c) Maintenance necessitated by customer neglect, misuse, improper operation of the instrument or equipment.
   d) Work necessitated by damages from war, accident, fire, flood, electrical failure, vandalism or any other causes.
   e) Repairs due to customers failure to perform any routine maintenance prescribed in the instruction manual.

(The routine inspection of calibration and other parameters should be done periodically by the user)

5. CONTECH shall not be liable for any consequential damages nor labour loss or expense directly or indirectly arising from use of its products.

6. Amendments, assumed corollaries or statements contrary to the terms of this warranty shall not be binding on us unless they are put in writing and approved by us.

7. Any disputes arising out of usage of this products will be subject to Mumbai jurisdiction.

8. For warranty service, contact your local dealer or contact us on the below address.

   Tel.: +91 22-2761 1176 / 77 / 78 / 79 / 80, 2761 8431, 6139 3000 Fax:+91 22-2761 8421
   E-mail: sales@contechindia.in / info@contechindia.in
   Website: www.contechindia.com

   Factory: Plot No. EL-221 TTC Indl. Area, MIDC (Electronic Zone), Mhape, Navi Mumbai-400 710.
   Tel.: +91 22-6194 4000 Fax: +91 22-2761 8377

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Product: ____________________  Purchase Ref.: ____________________
Model No.: ____________________  Invoice No.: ____________________
Sr. No.: ____________________  Date: ____________________

Dealer’s Name & Address: ____________________
INTRODUCTION

Contech CAH-CBB Series weighing balances use Electro magnetic force compensation technique to measure precisely the weight of an object. The following features enable the user to suit these balances for variety of applications.

Features:

* Multiple weighing units, Gram, Carat, Tola, Pound, Grains, GSM, % weighing
* Piece counting facility, up to 25 different types.
* Storage of weights in memory and printing, up to 100 weights.
* Power saving mode.
* Bi-directional RS232 interface to interface with computers and printers.
* Selectable baud rate.
* Set point facility up to 2 limits.
* Auto Power off.
* Optional Peak Hold facility.
* Date and time facility.
* Multiple Print options with Sr. no., Date, Time and weight in Horizontal/Vertical mode.
* Automatic zero tracking.
* Density determination option.
* Optional Battery backup facility.
* GSM computation
* % weighing & Calibration.
* Weight slip printing option.

INSTALLATION

1. Unpacking:
Unpack the balance. Save the packing container for future use.

2. Electrical requirements:
The balance requires very stable power. It works on 230V AC supply with PROPER EARTHING. The power outlet used for the balance should not be shared with any other devices which draws current in inconsistent manner like Airconditioner or refrigerator etc.

3. Environmental requirements:
For best results, the balance should be placed on a level surface which is free from drafts. It should not be exposed to direct sunlight or radiated heat. The balance should not be subjected to sudden ambient temperature changes. Table used for balance should be sturdy and should not transmit vibration from other equipments and free from the movement of people. No vibration producing equipment should be operated on the same platform balance

START UP

CAH-CBB Series

Power is supplied to the scale through a 4 pin Switch mode power supply supplied along with the balance. Connect the 4 pin SMPS to the balance to a 4 pin round male connector provided at the rear panel of the balance. Insert the connector and rotate the external cover to make the connection firm and proper. Connect the 4 pin SMPS to a proper AC mains outlet with proper Earthing.
1) KEYBOARD DESCRIPTION:
- To setting balance display on or off.
- Used for setting various parameters.
- Changing functions/parameters.
- Changing functions/parameters.
- To select a parameter/data.
- Auto calibration.
- Printing information through serial port.
- Tares the balance.

2) CHANGING WEIGHING UNITS:
Press \( \uparrow \) OR \( \downarrow \) key, balance will show the next enabled weighing unit say \( \text{Carat} \). And carat will be selected.
Use \( \uparrow \) OR \( \downarrow \) keys to change between the enabled weighing units.

Note that all weighing functions except the basic weighing unit need to be enabled using setup functions. Refer section on setup for more details. Please note that some of the weighing functions in the balance may be illegal in some countries. They should not be made available to the end user.

3) FOR CHANGING DATE, TIME AND SERIAL NO:
Press \( \text{SET UP} \) key, the balance will show \( \text{SET UP} \). And immediately press \( \downarrow \) key, balance will show \( \text{DATE} \) \( \ddot{1} \) \( \dddot{2} \) (if the current date is 12)
where 12 is the current date. Press \( \text{ENTER} \) key.
Use \( \uparrow \) to make it 0 or use \( \downarrow \) and \( \uparrow \) keys to change date and press \( \text{ENTER} \) key to store the date.
Press \( \text{SET UP} \) key to skip date entry.
The balance will display \( \dddot{1} \) \( \ddot{0} \) (if the current month is 10). Press \( \text{ENTER} \) key.
where 10 is the current month. Use \( \text{SET UP} \) to make it 0 or use \( \uparrow \) and \( \downarrow \) keys to change month and press \( \text{ENTER} \) key to store the month.
Press \( \text{SET UP} \) key to skip month entry.
The balance will display \( \text{Yr} \) \( \dddot{0} \) (if the current year is 06)
Press \( \text{ENTER} \) key.
Where 06 is the current year. Use \( \text{SET UP} \) to make it 0 or use \( \uparrow \) and \( \downarrow \) keys to change year and press \( \text{ENTER} \) key to store the year. Press \( \text{SET UP} \) key to skip year entry.
4. Print Option:
These balances can be attached to a serial printer for your printing needs. Print out can be programmed to suit most of the printing requirements. Note that the printer should have a serial port and baud rate of the balance and printer should be same. 2 baud rates are available are. 2400 and 4800.

Press \( \text{PRINT} \) key to print weight through the serial port.

Printing option and patterns are controlled by 4 SETUP parameters.

They are:

a) **Print:** There are 4 options

i) **Single** - Press \( \text{PRINT} \) key to start printing weight and other details programmed as per (b), (c) and (d) below.

ii) **Serial** - Printing is initiated when the weight kept on the pan becomes stable.

iii) **All** - All the displayed weights are printed along with other details programmed as per (b), (c) below.

iv) **Store** - To print weights stored in memory along with details programmed as per (b) & (c) below.

b) **Printer format.** 6 printout formats are available.

i) **Pr F-1** - Only weight.

ii) **Pr F-2** - Serial no and weight.

iii) **Pr F-3** - Serial no, Date and weight.

iv) **Pr F-4** - Serial no., Time and weight.

v) **Pr F-5** - Serial no., Date, Time and weight.

vi) **Pr F-6** - Weight slip printing.
c) **P-TYPE** Print type (Horizontal or Vertical)

i) **P-Type 1** – Horizontal
   Details will be printed horizontally.
   Sr.No. Date Time Weight
   001 12.05.2002 13:25:00 23.54 g
   002 12.05.2002 13:27:05 23.23 g

ii) **P-Type 2** – Vertical
   Details will be printed vertically in a slip form.
   For ex.
   Sr.No. : 001
   Date   : 12.05.2002
   Time   : 13:25:00
   Weight : 24.45 g

Set the above parameters (a) to (c) to your requirements and effect printing. These parameters are available in SETUP functions.

---

5) **BI-DIRECTIONAL RS232-INTERFACE.**

Bi-directional RS-232 interface is provided in these balances to communicate with devices like computer, printer etc. The interface is provided through a nine pin D-type connector provided at the rear side of the balance. Connections are as below.

- Pin 2 – RXD – Receive Data
- Pin 3 - TXD – Transmit Data
- Pin 7 – Ground.

The serial data transmitted and received are in standard ASCII mode (+/- 15V) - ASYNCHRONOUS, 8 BITS, NO PARITY, 1 STOP BIT.

Baud rate : 2400 OR 4800 SELECTABLE.

The data format for weight output is

\[<+/->WWWWWW.WWb <bg/Ct> <CR><LF> \text{(15 characters)}\]

where WWWWWW.WW is the weight
- b – blank space - 20 hex
- CR- Carriage Return – 0D hex
- LF – Line feed - 0A hex

for example, weight 85.12 g will be sent as

\[+000085.12b\text{b}\text{CR}\text{LF}\]

where b=black(20H), CR=carriage return (0Dh)
LF=line feed (0A H)

The balance could be controlled by an external device like computer with the following commands.

- **Z** - Tares the balance.

- **W#** - Number of times, the weight data is to be transmitted through the serial port.
  - # can be any number from 1-9.
6. STORAGE OF WEIGHTS IN MEMORY:
Upto 100 weights can be stored in memory and recalled if required. The balance also computes the total weight of all the weights in memory. To use this option, set ACCU function to ON in SETUP functions.

a) Clear weights in memory.
Press ENTER key, the balance will display  
Press key immediately, balance will display  
Press key, balance will display  
Press key to clear the memory.
Weights in memory and total weight will be cleared.

b) Storing weight in memory.
Remove all the weights from the pan and make the weight zero by pressing key.
Keep the sample on the pan and wait till the count becomes stable.
Press ENTER key, the balance will display  
Press key immediately, balance will display  
Press key to store the weight in memory.
Press key to quit mode.

9

10

c) Recalling weights from memory.
Press ENTER key, the balance will display  
Press key immediately, balance will display  
Press key, balance will display (displays the sample no.) followed by (displays the weight)
Press key to store the weight in memory.
Press and keys to see all sample weight data.

After the balance displays the last weight data, it will display Total count and total number of samples.

If STAT function is enabled (See SETUP function) then the balance displays (Average weight)
Press key, balance displays (Maximum weight)
Press key, balance displays (Minimum weight)
Press key, balance displays (Standard deviation)
Press key, balance displays (Coefficient of Variation)

While viewing the above, Press key to print all the results on a serial printer. Sample printout will appear as below.
### BALANCE OPERATIONS & FUNCTIONS

(Scroll PRINT option to " " in SETUP)

<table>
<thead>
<tr>
<th>Sr. no.</th>
<th>DATE</th>
<th>TIME</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12.10.04</td>
<td>13:30:20</td>
<td>12.56 g</td>
</tr>
<tr>
<td>2</td>
<td>12.10.04</td>
<td>13:31:05</td>
<td>12.50 g</td>
</tr>
<tr>
<td>3</td>
<td>12.10.04</td>
<td>13:31:25</td>
<td>13.40 g</td>
</tr>
<tr>
<td>4</td>
<td>12.10.04</td>
<td>13:31:50</td>
<td>12.90 g</td>
</tr>
<tr>
<td>5</td>
<td>12.10.04</td>
<td>13:32:05</td>
<td>12.03 g</td>
</tr>
<tr>
<td>6</td>
<td>12.10.04</td>
<td>13:32:40</td>
<td>12.30 g</td>
</tr>
<tr>
<td>7</td>
<td>12.10.04</td>
<td>13:32:55</td>
<td>12.56 g</td>
</tr>
<tr>
<td>8</td>
<td>12.10.04</td>
<td>13:33:20</td>
<td>13.00 g</td>
</tr>
<tr>
<td>9</td>
<td>12.10.04</td>
<td>13:33:55</td>
<td>11.95 g</td>
</tr>
<tr>
<td>10</td>
<td>12.10.04</td>
<td>13:34:30</td>
<td>12.50 g</td>
</tr>
</tbody>
</table>

| TOTAL   | 125.70 g |
| AVERAGE | 12.57 g  |
| MAXIMUM | 13.40 g  |
| MINIMUM | 11.95 g  |
| STD. DEV. | 0.439 |
| C.V.    | 3.50%    |

### 7) POWER SAVING MODE

Power saving mode feature will further enhance the battery backup time by switching off the display whenever the weight displayed is zero. The balance will come out of Power saving mode when the displayed weight is not zero.

To enable this feature, refer SETUP mode.

### 8) PEAK HOLD MODE

Peak hold feature will enable the balance to hold the display to the maximum weight (Peak weight) displayed. When used in this mode, the balance will be continuously displaying the maximum or peak weight measured by the balance, even after the weight is removed from the pan. This feature is optional.

For using this mode, this function should be enabled in the SETUP mode.

For putting the balance into PEAK HOLD mode,

Press **SET** and **HOLD** keys simultaneously. The balance will show **-PER-**

Press **SET** and **HOLD** keys to exit peak hold mode, the balance will display **nor**
9) PIECE COUNTING MODE

Contech CAH-CBB series balances can be used for piece counting purposes also. Piece calibration of 25 items can be stored in memory. Accuracy of piece counting depends on the uniformity in weight of the items and the sample size used for piece calibration. Better the weight uniformity and more the sample size, better will be the accuracy.

Use SETUP function to select proper piece counting mode before using. There is an option to select 1, 10, 25 or none piece counting modes. See relevant section in SETUP functions for more details.

Selection of piece counting memory (item)

Press  or  keys till the balance displays

Press  or  keys to change between different piece counting memory

Piece Calibration

Select proper piece counting memory as mentioned above.

Make the Weight read zero by pressing the  key. Weight of any container/bags used should also be made zero by pressing  key.

Keep known number of pieces on the pan.

Press  key, the balance will display

PC      xxxx

10) OPERATING IN SIMPLE TARE MODE:

In SIMPLE mode, balance can be operated in its simplest mode. In this mode,

Press  to make the weight zero.

All other functions will be disabled
11) SET POINT FACILITY
This facility enables the user to set up to 2 weights for comparison with the
current weights to activate different events. This feature is controlled by 3
SETUP functions.

1. FILL - Make it FILL-on
2. SET-PL - Make it SET-1, SET-2 for 1 or 2 Set Points
3. F-TYPE - Make it F-TYPE 1 or F-TYPE 2 for event
swapping depending on the requirement.

For setting weights, Press SETUP key, and
immediately followed by key.
the balance will show
and followed by XXXX.XX
Where XXXX.XX is the current set limit - 1. Use and keys to change the limit.
To discard changes, Press & keys simultaneously or
Press key to save.
The balance will show
FILL-2 (If fill option is on and limit is set to SET-2 )
For some time and will display XXXX.XX
Where XXXX.XX is the current set limit. Use and keys to change the limit.
To discard changes, Press & keys simultaneously or
Press key to save.
12) DENSITY DETERMINATION OF SOLIDS
This is an optional feature, valid only if this facility is available in the product supplied. Balance calculates the density of solids based on Archimedes principle and displays it. The sample is weighed in both Air & Water and the balance calculates the density. There is a provision for entering the water temperature, so that necessary correction is applied for calculating density.

There are 2 types of density measurements.

1. Normal mode

\[
D = \frac{\text{Weight in Air}}{\text{Weight in Air} - \text{Weight in Liquid}} \times DL \times DW
\]

D – Density
DL – liquid density (Programmable)
DW – Density of Water at measuring temperature. (If water is used)

For DW, Water temperature is programmable from 10 to 50 deg.C

DL is also programmable.

If DL is set to 1.0000 then water temperature correction will be applied.
If DL is set to a value other than 1.000 then water temperature correction will not be applied.

For example: Weight in Air = 8.323g, Weight in water = 6.222g
Water temperature = 25deg. Liquid density = 1.0000

Density = 3.9497 g/cc

2. SETTING WATER TEMPERATURE

Measure the temperature of water with a good thermometer. Set the temperature value in the balance by the following.

Press \( \text{SET UP} \) key, the balance will show \( \text{SET UP} \) and immediately press \( \text{key} \)

If date/time or limit functions are enabled balance goes through those entries.

Press \( \text{keys} \) repeatedly till the balance displays

\[
\text{xxx}
\]

where \( \text{xx} \) is the currently stored temperature in memory.

Use \( \text{and} \) keys to change the temperature and Press \( \text{key} \) to save.

Note that maximum temperature cannot be more than 50 deg.

3. SETTING DENSITY OF LIQUID

Press \( \text{SET UP} \) key, the balance will show \( \text{SET UP} \) and immediately press \( \text{key} \)

\[
\text{x.xxxx}
\]

where \( \text{x.xxxx} \) is the currently stored density.

Use \( \text{and} \) keys to change the density and Press \( \text{key} \) to save.

NOTE: IF THE DENSITY OF THE LIQUID IS PROGRAMMED VALUE OTHER THAN 1.0000 THEN WATER TEMPERATURE CORRECTION WILL NOT BE PERFORMED.
IF DENSITY OF LIQUID IS 1.0000 THEN DENSITY WILL BE CORRECTED FOR WATER TEMPERATURE.
4. DENSITY TESTING
Keep the sample on the upper pan of balance, wait for the weight display to become stable.
Press \[ \text{SETUP} \] key followed by \[ \text{ENTER} \] key. The balance will display \[ \text{wt}_{\text{in Air}} \] and the weight (Weight in Air) will be stored in memory.
Remove the sample from the upper pan and keep the same sample on the lower pan immersed in water. Wait for the weight display to become stable.
Press \[ \text{SETUP} \] key followed by \[ \text{SETUP} \] key. The balance will display \[ \text{wt}_{\text{in Water}} \] and the weight (Weight in water) will be stored in memory.
The balance now calculates the density and displays it.
\[
d = \frac{\text{wt}_{\text{in Air}} - \text{wt}_{\text{in Water}}}{\text{volume of water}}
\]
Use \[ \text{up} \] and \[ \text{down} \] keys to change the unit.
For eg.
Balance will display cotton count directly.
It is also possible to analyse the samples for consistency using statistical method.
For using statistical method, enable the \[ \text{Stat} \] and \[ \text{ACCU} \] options in \[ \text{SETUP} \] functions. Also set the PRINT option to \[ \text{Stor-E} \]
For beginning the tests, clear the memory by the following.
Press \[ \text{STAT} \] followed by \[ \text{CLR} \] key.
Press \[ \text{STAT} \] key while balance is displaying density to print the results.
For example
WT. IN WATER : 122.56 g
WT. IN AIR : 115.35 g
DISP. VOLUME : 7.21 g
DENSITY : 16.998 g/cc
Keep the sample on the pan and wait till the count becomes stable.

Press \[<\text{key}>\] key, the balance will display \[\text{----------}\]
Press \[<\text{key}>\] key immediately, balance will display \[\text{StorE}\]
Press \[<\text{key}>\] key to store the count in memory.

Store all the counts in memory with above procedure. For viewing sample data and other statistical details, do the following.

Press \[<\text{key}>\] key, the balance will display \[\text{----------}\]
Press \[<\text{key}>\] key immediately, balance will display \[\text{----------}\]
Press \[<\text{key}>\] and \[<\text{key}>\] keys to see all sample data. After the balance displays the last data, it will display \[\text{Total count}\] and total number of samples. Then it displays

\[
\begin{align*}
\text{AU} & \quad \text{xxx.xx} & \text{(Average count)} \\
\text{Min} & \quad \text{xxx.xx} & \text{(Minimum count)} \\
\text{Max} & \quad \text{xxx.xx} & \text{(Maximum count)} \\
\text{SD} & \quad \text{xxx.xx} & \text{(Standard deviation)} \\
CU & \quad \text{xxx.xx} & \text{(Coefficient of Variation)}
\end{align*}
\]

While viewing the above, Press \[<\text{key}>\] key to print all the results on a serial printer.

<table>
<thead>
<tr>
<th>Sr.no.</th>
<th>COUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12.56 CC</td>
</tr>
<tr>
<td>2</td>
<td>12.50 CC</td>
</tr>
<tr>
<td>3</td>
<td>13.40 CC</td>
</tr>
<tr>
<td>4</td>
<td>12.90 CC</td>
</tr>
<tr>
<td>5</td>
<td>12.03 CC</td>
</tr>
<tr>
<td>6</td>
<td>12.30 CC</td>
</tr>
<tr>
<td>7</td>
<td>12.56 CC</td>
</tr>
<tr>
<td>8</td>
<td>13.00 CC</td>
</tr>
<tr>
<td>9</td>
<td>11.95 CC</td>
</tr>
<tr>
<td>10</td>
<td>12.50 CC</td>
</tr>
</tbody>
</table>

14) GSM APPLICATION
CAH-CBB series balances can be used to determine GSM (Grams per Sq.meter). The following description is valid only if this feature is available in the balance and enabled. The balance displays directly the GSM value of fabric or paper of specified area. Enable GSM feature in the SETUP functions. 5 pre-programmed area (rectangular or round) are available in the balance. Standard areas are:

1. 5 X 5 cm  
2. 10 X 10 cm  
3. 20 X 20 cm  
4. 25 X 20 cm  
5. 25 X 25 cm

Select GSM mode:

Use \[<\text{key}>\] and \[<\text{key}>\] keys to change till the balance displays \(-g5-\)
Balance now enters GSM mode.

For changing the area, Press \[<\text{key}>\] key, the balance displays \[\text{----------}\]
Press \[<\text{key}>\] key immediately, balance displays \[\text{xx.xx}\]
Repeat the procedure till desired area is selected.

15) PERCENTAGE WEIGHING
Selection of percentage weighing mode.

Press \[<\text{key}>\] or \[<\text{key}>\] keys till the balance displays \[\text{PErC}\]
PERCENTAGE weighing function is used to determine % weight gain/loss. Any weight within the capacity can be set to be 100%. The balance displays the weight gain/loss in % of the original weight. This function must be enabled using SETUP function. This feature is very useful in determining % loss/gain in moisture in food/tea/pharmaceutical industries.

For eg. Keep a 25g weight on the pan.

Press \[<\text{key}>\] key, the balance calibrates 25g as 100% and displays 100.0

After this any change in weight on the pan will be indicated as % of original weight(25g), till the balance is calibrated for 100% with another weight.
### BALANCE OPERATIONS & FUNCTIONS

**ENTERING SETUP MODE**

Switch Off the balance.

Switch on the machine keeping the **SET UP** key pressed. Do not release this key until the balance displays `FACT`

And subsequently displays `FACTe`

For changing between the menu mentioned above

Press **SET UP** or **Up** or **Down** keys

For selecting the menu, Press **ENTER** key.

For changing the parameters, Press **Up** or **Down** key and Press **ENTER** to save.

Press **SET UP** to quit setup mode.

***PLEASE NOTE THAT SOME FUNCTIONS IN THE BALANCE MAY NOT BE LEGAL IN SOME PLACES. THESE FUNCTIONS SHOULD NOT BE MADE AVAILABLE TO THE END USER. THESE UNITS CAN BE SWITCHED OFF BY PROGRAMMING.***

### SETUP FUNCTIONS

**SETUP functions control the basic operation of the balance. There are 29 parameters, which can be set by the user to suit the requirements. The following are the parameters.**

<table>
<thead>
<tr>
<th>MENU NAME</th>
<th>FUNCTION</th>
<th>OPTIONS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>FACT</td>
<td></td>
<td>To select factory set parameters.</td>
</tr>
<tr>
<td>2.</td>
<td>Part5</td>
<td>Part-1</td>
<td>To select single piece counting memory.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Part-10</td>
<td>To select 10 piece counting memory.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Part-25</td>
<td>To select 25 piece counting memory.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No Part</td>
<td>To disable piece counting.</td>
</tr>
<tr>
<td>3.</td>
<td>Baud</td>
<td>bd2400</td>
<td>To select 2400 baud rate.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>bd4800</td>
<td>To select 4800 baud rate.</td>
</tr>
<tr>
<td>4.</td>
<td>Print</td>
<td>Single</td>
<td>Send stable weight through serial port.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>when key is pressed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stb</td>
<td>Send weight through serial port.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ALL</td>
<td>Every time balance reading becomes stable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>StorE</td>
<td>Send weight continuously.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Send stored weights through serial port.</td>
</tr>
<tr>
<td>5.</td>
<td>Auto-O</td>
<td>A-0</td>
<td>Autozero disabled.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A-1</td>
<td>Autozero to half accuracy of balance.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A-2</td>
<td>Autozero to full accuracy of balance.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A-3</td>
<td>Autozero to twice the accuracy of balance.</td>
</tr>
<tr>
<td>6.</td>
<td>ACCU</td>
<td>Ac-no</td>
<td>Weight storage disabled.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ac-yes</td>
<td>Weight storage enabled.</td>
</tr>
<tr>
<td>7.</td>
<td>FILL</td>
<td>Fl-off</td>
<td>Fill mode disabled.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fl-on</td>
<td>Fill mode enabled.</td>
</tr>
</tbody>
</table>
16) AUTOCALIBRATION WITH STANDARD WEIGHTS
CAH-CBB Series balances can be calibrated for weight with standard mass. Balances can be calibrated with 100g, 200g, 500g and 1000g weights depending on the models.

Models upto 1kg can be calibrated with 100g, 200g, 500g, 1000g weights
Models upto 600g can be calibrated with 100g, 200g, 500g weights
Models upto 350g can be calibrated with 100g, 200g weights
Models upto 220g can be calibrated with 100g, 200g weights
Models upto 125g can be calibrated with 50g, 100g weight.

Enable calibration function in SETUP mode before attempting to calibrate the balance. (Refer SETUP functions for more details). This function should not be made available to the end user, if there is any restriction in usage of this function.

CALIBRATING THE BALANCE
Use only good calibrated weights for performing auto calibration. Press key to make the weight read zero.

Keep the standard mass on the pan and wait for it to become stable.
Press key.
Balance will display And will subsequently display CRL donE
For setting balance calibration back to default factory setting,
Press key and immediately press key.
Balance will display Balance weight calibration will now be restored to factory settings.

17) WEIGHT SLIP PRINTING
In this mode, the balance prints weight with date, time and details of the articles like gold/silver/diamond.

To use this mode, set PRINT option to PrF-6 in SETUP mode.

To select the item, Press key followed immediately by key, the balance will display goLd-
to select item gold or press key followed immediately by key, the balance will display SiL-
to select item Silver or press key followed immediately by key, the balance will display diA-
to select diamond.

Set Date and time as given earlier in the manual (Refer to section on Changing date, time, Sr.no.)

Press key to print the slip. A sample printout will appear as below.

XYZ Co.
ADDRESS
ADDRESS
Sr.No : 23
Date : 11.09.2006
Item : GOLD
Weight : 11.250g
Charges : Rs. _____/-
Thank You. Visit again
### SETUP FUNCTIONS

<table>
<thead>
<tr>
<th>Function</th>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Auto calibration</td>
<td>CAL-On</td>
<td>Auto calibration enabled</td>
</tr>
<tr>
<td>9. Pound weighing</td>
<td>Pnd-On</td>
<td>Pound weighing enabled</td>
</tr>
<tr>
<td>10. Carat weighing</td>
<td>Crt-On</td>
<td>Carat weighing enabled</td>
</tr>
<tr>
<td>11. Tola weighing</td>
<td>Tol-On</td>
<td>Tola weighing enabled</td>
</tr>
<tr>
<td>12. Grain weighing</td>
<td>GrAn-On</td>
<td>Grain mode enabled</td>
</tr>
<tr>
<td>13. % weighing</td>
<td>Perc-On</td>
<td>% mode enabled</td>
</tr>
<tr>
<td>14. GSM</td>
<td>GSM-On</td>
<td>GSM mode enabled</td>
</tr>
<tr>
<td>15. Power saving mode</td>
<td>PwrOn</td>
<td>Power saving mode enabled</td>
</tr>
<tr>
<td>16. Peak hold mode</td>
<td>PHF-On</td>
<td>Peak hold mode enabled</td>
</tr>
</tbody>
</table>

### SETUP FUNCTIONS

<table>
<thead>
<tr>
<th>Function</th>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. Third decimal mode</td>
<td>3d-On</td>
<td>Third decimal mode enabled</td>
</tr>
<tr>
<td>18. Title printing</td>
<td>TLE-On</td>
<td>Title printing enabled</td>
</tr>
<tr>
<td>19. Select printing mode</td>
<td>P-type 2</td>
<td>Horizontal Printing mode</td>
</tr>
<tr>
<td>20. Select print formats</td>
<td>Pr-F 6</td>
<td>Weight slip Printing</td>
</tr>
<tr>
<td>21. Select set point mode</td>
<td>SET-2</td>
<td>2 set points.</td>
</tr>
<tr>
<td>22. Select set point type</td>
<td>F-type 2</td>
<td>-ve Logic outputs for fill application</td>
</tr>
<tr>
<td>23. Density mode</td>
<td>dEnS-On</td>
<td>Density mode on.</td>
</tr>
<tr>
<td>25. Statistical report mode</td>
<td>StAt-On</td>
<td>Statistical report on.</td>
</tr>
</tbody>
</table>
### SETUP FUNCTIONS

**Factory default parameters.**

<table>
<thead>
<tr>
<th>Function</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PB-l-5</td>
<td>PB-l-1</td>
<td>To select single piece counting memory</td>
</tr>
<tr>
<td>bRad</td>
<td>bRad-0</td>
<td>To select 4800 baud rate</td>
</tr>
<tr>
<td>Prnt</td>
<td>Single</td>
<td>Send stable weight through serial port</td>
</tr>
<tr>
<td>Auto-z</td>
<td>A-1</td>
<td>Autozero to half accuracy of balance</td>
</tr>
<tr>
<td>ACDU</td>
<td>ACDU-0</td>
<td>Weight storage disabled</td>
</tr>
<tr>
<td>FILL</td>
<td>FL-off</td>
<td>Fill mode disabled</td>
</tr>
<tr>
<td>CAL</td>
<td>CAL-off</td>
<td>Autocalibration disabled</td>
</tr>
<tr>
<td>Pound</td>
<td>Pnd-off</td>
<td>Pound weighing disabled</td>
</tr>
<tr>
<td>Crt-Ab</td>
<td>Crt-FF</td>
<td>Carat weighing disabled</td>
</tr>
<tr>
<td>tolR</td>
<td>tolR-0</td>
<td>Tola weighing disabled</td>
</tr>
<tr>
<td>gRn</td>
<td>gRn-off</td>
<td>Grain mode disabled</td>
</tr>
<tr>
<td>%</td>
<td>%C-off</td>
<td>% mode disabled</td>
</tr>
<tr>
<td>GSn</td>
<td>GSn-off</td>
<td>GSM disabled</td>
</tr>
<tr>
<td>PSn</td>
<td>PSn-off</td>
<td>Power saving mode disabled</td>
</tr>
<tr>
<td>P-Hold</td>
<td>P-H-off</td>
<td>Peak hold mode disabled</td>
</tr>
<tr>
<td>3d-Sci</td>
<td>3d-FF</td>
<td>Third decimal mode disabled</td>
</tr>
<tr>
<td>E-PTE</td>
<td>E-PTE 1</td>
<td>Title printing disabled</td>
</tr>
<tr>
<td>P-PPD</td>
<td>P-PPD 1</td>
<td>Horizontal Printing mode</td>
</tr>
<tr>
<td>Pr-F1</td>
<td>Pr-F1</td>
<td>Only weight</td>
</tr>
<tr>
<td>SEL UP</td>
<td>SEL</td>
<td>Single set point</td>
</tr>
<tr>
<td>F-PPD</td>
<td>F-PPD</td>
<td>+ve Logic outputs for fill application</td>
</tr>
<tr>
<td>Count</td>
<td>Count-off</td>
<td>Textile counts off</td>
</tr>
<tr>
<td>dEntYPE</td>
<td>dEntYPE</td>
<td>Density type 1</td>
</tr>
<tr>
<td>St-Ac</td>
<td>St-Ac-off</td>
<td>Statistical reports off</td>
</tr>
</tbody>
</table>