Adam Equipment

Weighing Indicators

GK-S INDICATOR

(P.N.30566 16940, Revision A2, July 2024)

software：V1.03 & above

Easy Reference:

Model name of the indicator:	
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

1. INTRODUCTION

Thank you for purchasing GK-S high-precision weighing indicator, which has rapid response, high sensitivity and good strength, and is an ideal choice for all kinds of industrial weighing and laboratory weighing.

Features：

- GK-S has powerful functions such as parts counting, check counting, percentage, check-weigh, accumulation, accumulation statistics and automatic range tracking.
- GK-S cumulative statistics function can store up to 100 groups of weighing data. And can count the total times of weighing, the total weight of all data, average value, maximum value, minimum value, and the difference between maximum and minimum value.
- GK-S adopts a 6-bit 40mm ultra-large font LCD screen, and various symbols, units and range tracking bars are also displayed on the display screen. Numbers are clearly visible in all kinds of bright light environments.
- GK-S has white, green, red, blue and amber high brightness backlights. In the check-weigh function mode, the user can quickly judge whether the weight is low, ok or high by the color of the backlight.
- GK-S has a rocker reset switch with a waterproof rubber protective cap at the rear.
- GK-S has a sealed keypad with color coded buttons, and the key operation is clear at a glance.
- GK-S is supplied with a DB9 male RS232 two-way communication interface and a built-in clock.
- GK-S has a strong ABS housing, which is suitable for various industrial environments.

2. SPECIFICATIONS

INPUT SECTION	
Load Cells	Up to 4 , 350 ohm load cells Minimum 87 ohms, maximum 1120 ohms
Connection	6 wires 2 excitation, 2 sense, 2 signal
Excitation	5Vdc
Sensitivity	0.06uv/d
Linearity	0.01% FS
Zero Range	0- 10mv
Signal range	0-40mv
ADC Sensitivity	Approximately 0.01 µv/ADC count
DIGITAL SECTION	
Maximum Range	Typically 1kg – 30000kg
Divisions	Up to 80,000
Weigh units	kg / g / lb / oz / lb:oz
Stabilisation Time	2 Seconds typical
Operating Temperature	-10°C - 40°C 14°F - 104°F
Power supply	DC 12V 800ma
Battery	Internal rechargeable battery (OPTIONAL)
Calibration	Automatic External
Display	6 digits LCD digital displays with capacity tracker and symbols for units
Indicator Housing	ABS Plastic
Overall Dimensions (wxdxh)	260 x 170 x 115mm 10.2” x 6.7” x 4.5”
Net Weight	0.75kg
function	Weighing、parts counting、check counting、percentage、check weighing、accumulation、accumulation statistics
interface	DB9 male, RS-232 bi-directional interface English, French, Spanish and German selectable text.

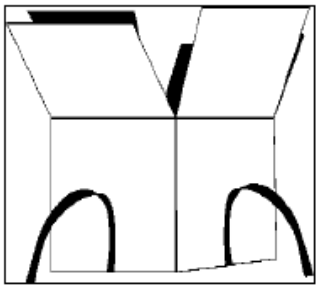
3. INSTALLATION

The GK-S indicator must be connected to a load cell platform and calibrated as necessary to match the platform and user requirements.

The users application and the technical specifications of the platform or load cell will determine the necessary configuration.

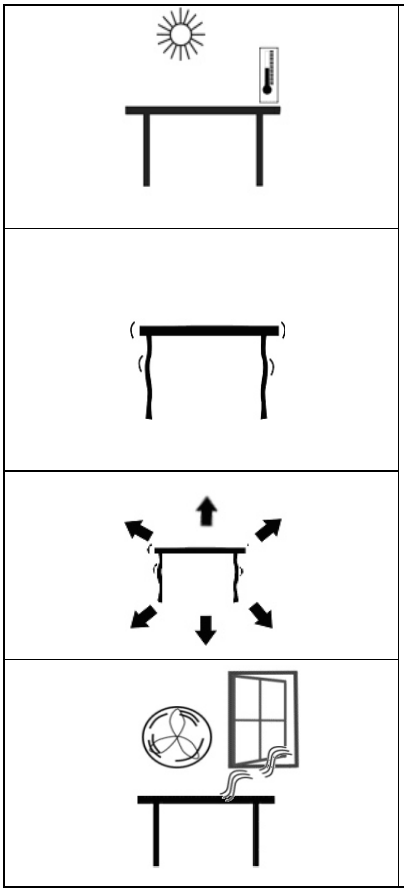
3.1 UNPACKING

Take the indicator out of the packing box slightly, The box contains all the parts used by the indicator.



- Power adaptor
- Wall bracket
- Two sets of expansion bolts and screws

3.2 LOCATING



- The scales should not be placed in a location that will reduce the accuracy.
- Avoid extremes of temperature. Do not place in direct sunlight or near air conditioning vents.
- Avoid unsuitable tables. The table or floor must be rigid and not vibrate.
- Avoid unstable power sources. Do not use near large users of electricity such as welding equipment or large motors.
- Do not place near vibrating machinery.
- Avoid high humidity that might cause condensation. Avoid direct contact with water. Do not spray or immerse the scales in water.
- Avoid air movement such as from fans or opening doors. Do not place near open windows or air-conditioning vents.
- Keep the scales clean. Do not stack material on the scales when they are not in use.

3.3 CONNECTION

This indicator must be connected to a load cell platform and calibrated as necessary to match the platform and user requirements.
The GK-S has a connector configured for a 6 wire load cell. Connect the load cells/platform to the indicator as shown below. The cable length should be as short as possible, using a large size wire to minimise errors due to resistance in the leads.

Figure 1A shows the connections to a 6-wire load cell. Figure 1B shows a preferred method to attach a 4-wire load cell, using a 6 conductor cable to go from the indicator to the platform or load cell where it connects to the 4 wires from the load cells. The Excitation and sense wires are connected together near the load cell.
For less exacting applications you can connect the excitation to the sense at the connector.

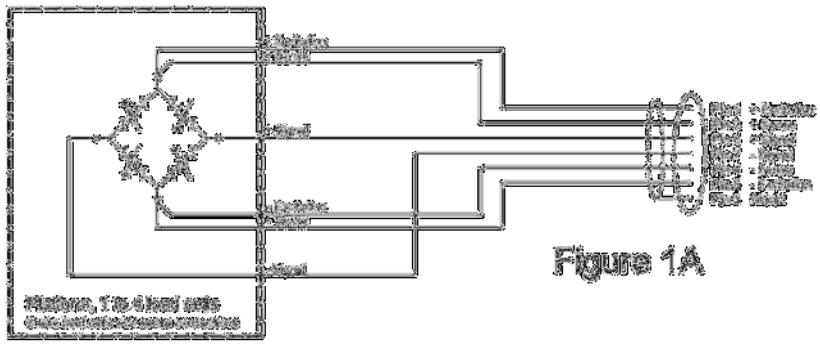


Figure 1A

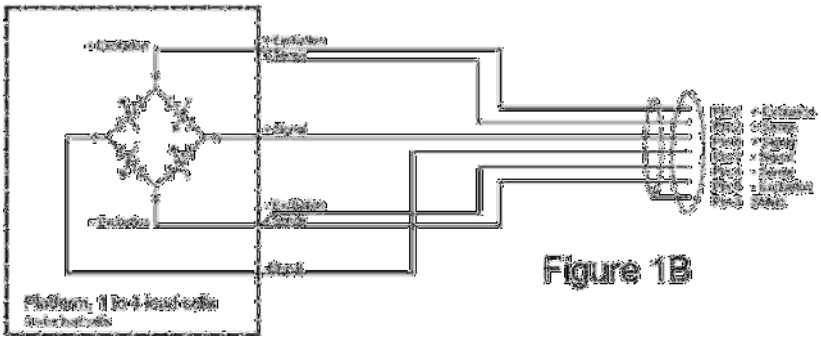


Figure 1B

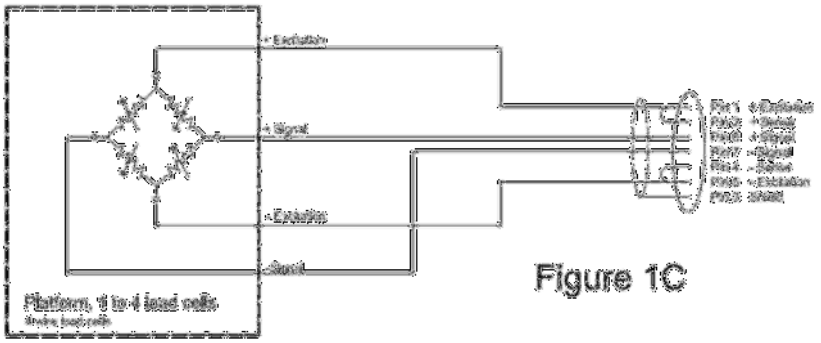


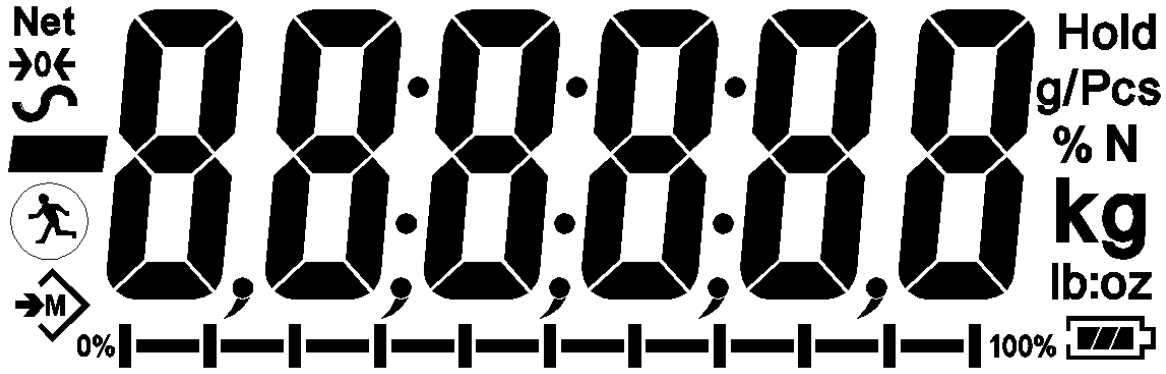
Figure 1C

4. KEYPAD

keypad	primary function	secondary function
	Sets the zero point for all subsequent weighing. The display shows zero.	Escape from any setup menus
	Tares the indicator and stores the current weight in memory as a tare value, subtracts the tare value from the weight and shows the results. This is the net weight.	Move the active/flashing digit to the right when setting values for Parameters.
	● Selects the weighing unit to be displayed from those which are enabled ● Press and hold to enter the setup menu, and set the date, time, backlight, automatic shutdown, checkweigher buzzer, unit and other parameters.	● Allows the weight, single weight and count to be seen when parts counting or to change from weight to % in percent weighing. ● Press to scroll down the menu and decrease the flashing digits when entering the number.
	● Press the cycle to select the weighing mode (counting, percentage, weighing). ● Press and hold to enter check weigh mode, then you can perform the check weigh operation.	● Press to scroll up the menu and increase the flashing digits when entering the number.
	● Press to send the scale results to the computer or printer ● Press and hold to enter the print Settings menu, set the print mode cumulative baud rate, parity check print language product ID user ID format, etc.	● In setting mode, press to confirm the parameters ● If accumulation is turned on, press in the 0-bit state to retrieve the accumulated data stored in the product

5. DISPLAY

GK-S indicator has a 40mm LCD screen with superb large font, which can display some or all of the following :



→0←	The display is at Zero
S	The scale is Stable Net weight- The scale has been tared
kg / **lb**	Symbols shown for the units
	Capacity Tracker- A bar graph indicating the proportion of the scale capacity being used by the weight on the pan
bAt LO or	Low battery
%	The scale is in Percent weighing mode
pcs	The scale is in Parts counting mode
→M	Accumulated data is stored in the indicator.
	With an internal rechargeable battery, the battery charge is displayed, and the more black bars, the more sufficient the battery charge.

6.REGULAR OPERATION

6.1 POWER ON/OFF

There is a rocker reset switch with a waterproof rubber protective cap at the rear of the indicator.

Power on：

- When the adapter is plugged in, press the switch and the product will be turned on.
- When the internal battery is used and the adapter is not plugged in, press and hold the switch 2s and the product will be turned on.

Power off：

- When the adapter is plugged in, press the switch and the product will be turned off. The screen backlight will be turned off and there will be time to display it.
- When the internal battery is used and the adapter is not plugged in, press and hold the switch 2s and the product will be turned off. There is no display on the screen.

6.2 ZEROING THE DISPLAY

Zero the indicator by pressing [Zero]. the product can still be weighed at full range after zeroing,

6.3 TARE

Press [Tare/↵] to remove the tare value when weighing. Weight that can be weighed after tared = full range-tare weight. Tare weight will be stored.

6.4 PRINT

Press the **PRINT** in the weighing interface to sending the results to the printer or computer.

7. CALIBRATON

- GK-S weighing indicator can select weights in kg or lb units for weight calibration, and the weight unit during calibration depends on the unit used by the user when weighing.
- Press and hold **UNIT/FUNC** when weighing, until **Date** is shown on the display.
- Using the buttons **MODE ↑** or **UNIT ↓** , scroll through to the menu, **CAL** will be shown on the display.
- Press **PRINT↵** to confirm to calibration menu, **UNLoA** is shown on the display.
- Press **PRINT↵** to calibrate the zero point, Make sure there is no item on the pan.
- The weight of the calibration weight will be displayed **XXXXXX$_{kg}$**
- Press **MODE ↑** or **UNIT ↓** to change the numerical values, **T→** is to move the flashing digital position. Input the weight of the calibration weight you need, then press **PRINT↵** to confirm.
- The weight of the calibration weight will be displayed, put the weight of the corresponding weight on the pan, and then press the **PRINT↵** to complete the weight calibration.

8.WEIGHING

8.1 PARTS COUNTING

- Press **MODE** to enter mode menu when in weighing state，press **MODE↑** or **UNIT↓** to find **Parts** ,and after two seconds, **PC 10** will be displayed, Then press **MODE↑** to select the required number of samples..
- Place the corresponding number of parts on the pan，press **PRINT↵** to confirm，the sampling is now complete, Then you can place the parts on the pan, and the number of the parts will be displayed.
- In counting mode, Press **UNIT** in turn to cycle through individual weight/total weight/number of parts.
- Press **MODE** return to normal weighing.

8.2 PERCENT WEIGHING

- Press **MODE** to enter mode menu when in weighing state，press **MODE↑** or **UNIT↓** to find **PEr** ,and after two seconds, **PEr100** will be displayed.
- Place the percent weight sample required by the user on the pan，press **PRINT↵** to confirm，now the sampling is now complete, Then you can place the items on the pan, and the percent weighing will be displayed.
- In percent weighing mode，press **UNIT** in turn to cycle to switch weight and percent weighing.
- Press **MODE** to return to normal weighing.

8.3 NORMAL WEIGHING MODE

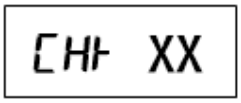
- In the mode menu，press **↑** or **↓** to find **WEiHt** ,then press **↵** to go to the normal weighing interface.

8.4 CHECK-WEIGHING

GK-S weighing indicator has super backlight function, and users can judge the different states of weighing samples by different colors. The user can set the buzzer sound (off by default). See Chapter 9.5 for the setting method.

- Below the limit amber
- Between the limit green
- Above the high limit red

8.4.1 CHECK-WEIGHING

- Press and hold MODE/CHK in weighing mode，until 

is displayed.
- Press ↑ or ↓ to turn the check-weighing function on, and then press ↵.
- 

Will be displayed first, After 1 second, the amber light comes on and the number flashes , press **MODE↑** or **UNIT↓** to change the numerical values， **T→** is to move the flashing digital position to enter the lower limit of your sample, press↵ to confirm.
- 

will be displayed, After 1 second, the red light comes on and the number flashes, press **MODE↑** or **UNIT↓** to change the numerical values, **T→is** to move the flashing digital position, to enter the high limit of your sample. press **PRINT↵** to confirm.
- Now the setting is complete，Users can quickly judge the weight range of the sample according to the color and buzz of the background light.

8.4.2 PERCENTAGE CHECK

In percent weighing mode，Set the percentage values of the lower limit and the upper limit according to the method in 8.4.1.

8.4.3 CHECK-COUNTING

In the count weighing mode, just set the number of parts with lower limit and upper limit according to the method in 8.4.1.

9. PARAMETER SETTINGS

In the parameter setting interface, the user can return to the weighing interface by pressing the **→0←** once or more after adjusting the parameters

9.1 DATE SETTING

- Press and hold **UNIT/FUNC** in weighing model to enter setup menu，until

  dAtE is displayed.

- Press **PRINT↵** to enter the date menu.

- Press **MODE↑** or **UNIT↓** to select the date format required by the user.

Display	Description
YY.MM.dd	Year month day
MM.dd.yy	Month day year
dd.mm.yy	Day month year

- Press **PRINT↵** to confirm, and the number corresponding to the date format will be displayed. Press **MODE↑** or **UNIT↓** to change the numerical values, **T→** is to move the flashing digital position to enter the date. Press the **PRINT↵** to confirm.

9.2 TIME SETTING

- Press and hold **UNIT/FUNC** in weighing interface to enter settings menu（ Skip this step if you have entered the setup menu）.

- Press **MODE↑** or **UNIT↓** until Time is displayed.

- Press **PRINT↵** to confirm to enter the time menu, Time will be displayed. Press **MODE↑** or **UNIT↓** to change the numerical value, **T→** is to move the flashing digital position to enter the time. Press the **PRINT↵** to confirm .

9.3 BACKLIGHT SETTING

- Press and hold **UNIT/FUNC** in weighing interface to enter setup menu（ Skip this step if you have entered the setup menu）.

Press **MODE↑** or **UNIT↓** until bl is displayed.

- Press **PRINT↵** to confirm to enter the backlight setting menu.

- Press **MODE↑** or **UNIT↓** to select the backlight state required by the user.

Display	Description
on	Always on
auto	automatic，Auto-turn off the backlight 6 seconds after stabilization in weighing mode.
off	Always off

- Press **PRINT↵** to confirm after adjustment.

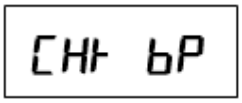
9.4 AUTO POWER-OFF

- Press and hold **UNIT/FUNC** in weighing interface to enter setup menu（ Skip this step if you have entered the setup menu）.
- Press **MODE↑** or **UNIT↓** until **Power** is displayed.
- Press **PRINT↵** to confirm to enter auto power off setting.
- Press **MODE↑** or **UNIT↓** to select the auto power off required by the user.

DISPLAY	DESCRPITION
off 0	No auto power-off
off 1	Auto power-off after 1 minute without operation.
off 5	Auto power-off after 5 minutes without operation.
off 10	Auto power-off after 10 minutes without operation.

- Press **PRINT↵** to confirm after adjustment.

9.5 CHECK THE BEEP SETTING OF WEIGHING BUZZER

- Press and hold **UNIT/FUNC** in weighing interface to enter setup menu（ Skip this step if you have entered the setup menu）.
- Press **MODE↑** or **UNIT↓** until  is displayed.
- Press **PRINT↵** to confirm the setting of the prompt tone of the weighing buzzer.
- Press **MODE↑** or **UNIT↓** to select the a prompt tone of the weighing buzzer required by the user.

Display	Description
off	Turn off the check weighing buzzer.
in	Upper and lower limits are audible within the range.
out	An out-of-range tone

- Press **PRINT↵** to confirm after adjustment.

9.6 UNIT SWITCH SETTING

This menu can help users turn on commonly used weighing units and turn off unused weighing units. It is more convenient for users to switch weighing units in the weighing interface.

- Press and hold **UNIT/FUNC** to setup menu when in weighing interface，until **Unit** is displayed.
- Press **PRINT↵** to confirm to enter the unit switch setting menu. Press **MODE↑** or **UNIT↓** to turn on or off a weighing unit after entering the menu, press **PRINT↵** to confirm the change and enter the next unit setting.
- Unit menu list

unit	menu	Description
kg	Un on	Kg unit on
	Un off	Kg unit off
g(This menu is not available for a large range)	Un on	g unit on
	Un off	g unit off
lb	Un on	lb unit on
	Un off	lb unit off
oz	Un on	OZ unit on
	Un off	OZ unit oFF
lb:oz	Un on	lb：OZ unit on
	Un off	lb：OZ unit oFF

- After setting all unit switches, the product will be returned to Un it
- Press **→0←** to return to weighing interface, the parameter setting is now complete。

10. RS232 COMMUNICATION INTERFACE

GK-S indicator is supplied with bidirectional RS232 interface as standard. The data can be output to a printer or a computer, and the weighing indicator can be controlled by the computer.

10.1 PROTOCOL AND INTERFACE

Default Specifications:

RS-232 output of weighing data ASCII code 4800 Baud (user selectable) 8 data bits No Parity（user selectable）

Connector:

9 pin d-sub miniature socket Pin 3 TXD Pin 2 RXD Pin 5 GND

The indicator can be set to print text in English, French, Spanish or German. See the RS-232 parameters section for details.

10.2 TEXT OUTPUT FORMAT

10.2.1 SINGLE FORMAT

- In weighing mode, the scale outputs the following contents：

```
0.395 kg  <cr><lf>
```

- In counting mode, the scale Output the following contents:

```
    10pcs    <cr><lf>
```

- In percentage mode, output the following contents:

```
    9.20 %  <cr><lf>
```

10.2.2 FORMAT 1

- In weighing mode, output the following contents:

```
No              1      <cr><lf>
Gross Wt    0.036 kg   <cr><lf>
                       <cr><lf>
                       <cr><lf>
```

It is available if AC on Gross Wt.(or Net wt.)

- In counting model, output the following contents：

```
No              2          <cr><lf>
Net  Wt     0.358 kg       <cr><lf>
Net  Wt   35.8060 g/pcs    <cr><lf>
PCS            10pcs       <cr><lf>
                           <cr><lf>
                           <cr><lf>
```

It is available if AC on Net wt.(or Gross Wt.)
Net wt.(or Gross Wt.)

- In percentage mode, output the following contents:

```
No              2          <cr><lf>
Net  Wt     10.09 %        <cr><lf>
                           <cr><lf>
                           <cr><lf>
```

It is available if AC on Net wt.(or Gross Wt.)

10.2.3 FORMAT 2

- In weighing mode, output the following contents:

```
                      <cr><lf>
                      <cr><lf>
DATE  26/07/2023      <cr><lf>
TIME  17:44:45        <cr><lf>
<cr><lf>
Scale ID   12345      <cr><lf>
User ID    54321      <cr><lf>
                      <cr><lf>
No             1      <cr><lf>      It is available if AC on
Net  Wt    0.036 kg   <cr><lf>      Net wt.(or Gross Wt.)
                      <cr><lf>
                      <cr><lf>
```

- In counting model, output the following contents：

```
                       <cr><lf>
                       <cr><lf>
DATE  27/07/2023        <cr><lf>
TIME  10:32:57          <cr><lf>
                       <cr><lf>
Scale ID   00000        <cr><lf>
User ID    00000        <cr><lf>
                       <cr><lf>
No             1        <cr><lf>     It is available if AC on
Net  Wt    0.036 kg     <cr><lf>     Net wt.(or Gross Wt.)
Net  Wt  3.56494 g/pcs  <cr><lf>     Net wt.(or Gross Wt.)
PCS           10pcs     <cr><lf>
                       <cr><lf>
                       <cr><lf>
```

-

- In percentage mode, output the following contents:

```
                          <cr><lf>
                          <cr><lf>
DATE  27/07/2023           <cr><lf>
TIME  12:07:59             <cr><lf>
                          <cr><lf>
Scale ID   00000           <cr><lf>
User ID    00000           <cr><lf>
                          <cr><lf>
No              3          <cr><lf>      It is available if AC on
Net  Wt    719.2  %       <cr><lf>       Net wt.(or Gross Wt.)
                          <cr><lf>
                          <cr><lf>
```

10.2.3 FORMAT 3

- In weighing mode, output the following contents:

```
                          <cr><lf>
                          <cr><lf>
DATE  27/07/2023          <cr><lf>
TIME  13:51:28            <cr><lf>
                          <cr><lf>
Scale ID   00000          <cr><lf>
User ID    00000          <cr><lf>
                          <cr><lf>
No              1         <cr><lf>        It is available if AC on
Net  Wt    0.315 kg       <cr><lf>
Tare Wt    0.773 kg       <cr><lf>
Gross Wt   1.088 kg       <cr><lf>
                          <cr><lf>
                          <cr><lf>
```

- In counting model, output the following contents：

```
                              <cr><lf>
                              <cr><lf>
DATE  27/07/2023              <cr><lf>
TIME  13:59:53                <cr><lf>
                              <cr><lf>
Scale ID   00000              <cr><lf>
User ID    00000              <cr><lf>
<cr><lf>
No             5              <cr><lf>    It is available if AC on
Net  Wt    0.340 kg           <cr><lf>
Net  Wt  16.2542 g/pcs        <cr><lf>
PCS           21pcs           <cr><lf>
Tare Wt    0.773 kg           <cr><lf>
Gross Wt   1.113 kg           <cr><lf>
                              <cr><lf>
                              <cr><lf>
```

- In percentage mode, output the following contents:

```
                            <cr><lf>
                            <cr><lf>
DATE  27/07/2023            <cr><lf>
TIME  14:05:57              <cr><lf>
                            <cr><lf>
Scale ID   00000            <cr><lf>
User ID    00000            <cr><lf>
                            <cr><lf>
No             1            <cr><lf>    It is available if AC on
Net  Wt   115.15  %          <cr><lf>
Tare Wt    0.773 kg         <cr><lf>
Gross Wt   1.169 kg         <cr><lf>
                            <cr><lf>
                            <cr><lf>
```

-

10.2.4 ACCMULATIVE DATA OUTPUT FORMAT STORED INTERNALLY

- In weighing mode, the following contents are output in different formats

Single format：

```
                          <cr><lf>
DATE  27/07/2023           <cr><lf>
TIME  14:34:23             <cr><lf>
                          <cr><lf>
Scale ID   00000           <cr><lf>
User ID    00000           <cr><lf>
                          <cr><lf>
------------------         <cr><lf>
Total                      <cr><lf>
No            10           <cr><lf>
Total Wt   9.850 kg        <cr><lf>
                          <cr><lf>
                          <cr><lf>
```

format 1

```
Total         10   9.850 kg   <cr><lf>
```

format 2

```
                           <cr><lf>
DATE  27/07/2023           <cr><lf>
TIME  14:55:43             <cr><lf>
                           <cr><lf>
Scale ID   00000           <cr><lf>
User ID    00000           <cr><lf>
                           <cr><lf>
------------------         <cr><lf>
Total                      <cr><lf>
No            10           <cr><lf>
Min        0.036 kg        <cr><lf>
Max        2.606 kg        <cr><lf>
Average    0.985 kg        <cr><lf>
Total Wt   9.850 kg        <cr><lf>
                           <cr><lf>
                           <cr><lf>
```

format 3

```
                          <cr><lf>
DATE  27/07/2023          <cr><lf>
TIME  15:02:13            <cr><lf>
                          <cr><lf>
Scale ID   00000          <cr><lf>
User ID    00000          <cr><lf>
                          <cr><lf>
------------------        <cr><lf>
Total                     <cr><lf>
No             1          <cr><lf>
Weight     0.395 kg       <cr><lf>
No             2          <cr><lf>
Weight     0.389 kg       <cr><lf>
No             3          <cr><lf>
Weight     0.394 kg       <cr><lf>
No             4          <cr><lf>
Weight     2.606 kg       <cr><lf>
No             5          <cr><lf>
Weight     2.606 kg       <cr><lf>
No             6          <cr><lf>
Weight     0.036 kg       <cr><lf>
No             7          <cr><lf>
Weight     0.155 kg       <cr><lf>
No             8          <cr><lf>
Weight     2.606 kg       <cr><lf>
No             9          <cr><lf>
Weight     0.417 kg       <cr><lf>
No            10          <cr><lf>
Weight     0.246 kg       <cr><lf>
                          <cr><lf>
------------------        <cr><lf>
No            10          <cr><lf>
Min        0.036 kg       <cr><lf>
Max        2.606 kg       <cr><lf>
Average    0.985 kg       <cr><lf>
Total Wt   9.850 kg       <cr><lf>
                          <cr><lf>
                          <cr><lf>
```

- In the counting mode, the following contents are output in different formats respectively.

Single format

```
                          <cr><lf>
DATE  27/07/2023          <cr><lf>
TIME  15:26:25            <cr><lf>
                          <cr><lf>
Scale ID   00000          <cr><lf>
User ID    00000          <cr><lf>
                          <cr><lf>
------------------        <cr><lf>
Total                     <cr><lf>
No             6          <cr><lf>
Total Wt   1.123 kg       <cr><lf>
PCS           86          <cr><lf>
                          <cr><lf>
                          <cr><lf>
```

format 1

```
Total          6   1.123 kg      86pcs   <cr><lf>
```

format 2

```
                          <cr><lf>
DATE  27/07/2023          <cr><lf>
TIME  15:35:56            <cr><lf>
                          <cr><lf>
Scale ID   00000          <cr><lf>
User ID    00000          <cr><lf>
                          <cr><lf>
------------------        <cr><lf>
Total                     <cr><lf>
No             6          <cr><lf>
Min           10pcs       <cr><lf>
Max           30pcs       <cr><lf>
Average       14pcs       <cr><lf>
Total Wt   1.123 kg       <cr><lf>
PCS           86          <cr><lf>
                          <cr><lf>
                          <cr><lf>
```

format 3

```
                              <cr><lf>
DATE  27/07/2023              <cr><lf>
TIME  15:43:15                <cr><lf>
                              <cr><lf>
Scale ID   00000              <cr><lf>
User ID    00000              <cr><lf>
                              <cr><lf>
------------------            <cr><lf>
Total                         <cr><lf>
No             1              <cr><lf>
Weight        10pcs           <cr><lf>
No             2              <cr><lf>
Weight        10pcs           <cr><lf>
No             3              <cr><lf>
Weight        30pcs           <cr><lf>
No             4              <cr><lf>
Weight        10pcs           <cr><lf>
No             5              <cr><lf>
Weight        16pcs           <cr><lf>
No             6              <cr><lf>
Weight        10pcs           <cr><lf>
                              <cr><lf>
------------------            <cr><lf>
No             6              <cr><lf>
Min           10pcs           <cr><lf>
Max           30pcs           <cr><lf>
Average       14pcs           <cr><lf>
Total Wt   1.123 kg            <cr><lf>
PCS           86              <cr><lf>
                             <cr><lf>
                             <cr><lf>
```

- In percentage mode, enter the following contents in different formats.

Single format

```
                          <cr><lf>
DATE  27/07/2023          <cr><lf>
TIME  17:25:52            <cr><lf>
                          <cr><lf>
Scale ID   00000          <cr><lf>
User ID    00000          <cr><lf>
                          <cr><lf>
------------------        <cr><lf>
Total                     <cr><lf>
No             7          <cr><lf>
Total Wt   2.110 kg       <cr><lf>
PERCENT   535.30%         <cr><lf>
                          <cr><lf>
                          <cr><lf>
```

format 1

```
Total          7   2.040 kg  517.27%   <cr><lf>
```

format 2

```
                           <cr><lf>
DATE  27/07/2023           <cr><lf>
TIME  17:39:43             <cr><lf>
                           <cr><lf>
Scale ID   00000           <cr><lf>
User ID    00000           <cr><lf>
                           <cr><lf>
------------------         <cr><lf>
Total                      <cr><lf>
No             7           <cr><lf>
Min         33.21 %        <cr><lf>
Max        132.84 %        <cr><lf>
Average     73.90 %        <cr><lf>
Total Wt   2.040 kg        <cr><lf>
PERCENT   517.27%          <cr><lf>
                            <cr><lf>
                            <cr><lf>
```

format 3

```
                              <cr><lf>
DATE  27/07/2023              <cr><lf>
TIME  17:44:51                <cr><lf>
                              <cr><lf>
Scale ID   00000              <cr><lf>
User ID    00000              <cr><lf>
                              <cr><lf>
------------------            <cr><lf>
Total                         <cr><lf>
No             1              <cr><lf>
Weight     82.55 %            <cr><lf>
No             2              <cr><lf>
Weight     99.53 %            <cr><lf>
No             3              <cr><lf>
Weight     33.21 %            <cr><lf>
No             4              <cr><lf>
Weight     53.39 %            <cr><lf>
No             5              <cr><lf>
Weight    132.84 %            <cr><lf>
No             6              <cr><lf>
Weight     33.27 %            <cr><lf>
No             7              <cr><lf>
Weight     82.48 %            <cr><lf>
                              <cr><lf>
------------------            <cr><lf>
No             7              <cr><lf>
Min        33.21 %            <cr><lf>
Max       132.84 %            <cr><lf>
Average    73.90 %            <cr><lf>
Total Wt   2.040 kg           <cr><lf>
PERCENT   517.27%             <cr><lf>
                               <cr><lf>
                               <cr><lf>
```

10.2.5 NOTE:

1. The accumulated total will not be sent to the RS-232 when the continuous print is turned on.

2. The continuous print will only be for the current weight and the display data.

3. In other languages the format is the same but the text will be in the language selected.

4. When the scale is in the Lb:oz weighing unit the RS-232 output will only show pounds. 10lb:8oz will be printed as 10.5 lb.

Description	ENGLISH	FRENCH	GERMAN	SPANISH
Net weight	Net Wt.	Pds Net	Net-Gew	Pso Net
Weight per unit counted	Unit Wt.	Pds unit	Gew/Einh	Pso/Unid
Number of items counted	Pcs	Pcs	Stck.	Piezas
Number of weighing added to subtotals	No.	Nb.	Anzhl	Num.
Total weight and count printed	Total	Total	Gesamt	Total
Print date	Date	Date	Datum	Fecha
Print time	Time	Heure	Zeit	Hora
Scale ID number	Scale ID	Bal ID	Waagen ID	Bal ID
User ID Number	User ID	Util ID	Nutzer ID	Usuario ID

10.3 INPUT COMMANDS FORMAT

The indicator can be controlled with the following commands. Press the [Enter] key of the PC after each command.

T<cr><lf>	Tares the indicator to display the net weight. This is the same as pressing [Tare].
Z<cr><lf>	Sets the zero point for all subsequent weighing. The display shows zero.
P<cr><lf>	Prints the results to a PC or printer using the RS-232 interface. It also adds the value to the accumulation memory if the accumulation function is not set to automatic.

11. COMMUNICATION PARAMETER SETTING

- In weighing mode, Press and hold **PRINT↵** to confirm to enter communication parameter setup menu.
- Adjust the communication parameters ,you need according to the following menu

（press **PRINT↵** to confirm to enter menu or confirm the changed parameter. **MODE↑** or **UNIT** to scroll through the menu or adjust the parameter, change the numerical values when entering a number，**T→** is to move flashing digital position）.

menu	parameter selection		
P Mode	**ManuaL**	manual output	**ACC on**
Data output mode	**Auto**	Auto output	**ACC off**
	Cont	continuous output	
	oFF	Turn off data output	
baud	**b 2400**		
Baud rate	**b 4800**		
	b 9600		
	b19200		
	b38400		
parity	**none**	No parity	
Parity	**even**	Even parity	
	odd	Odd parity	
LAnG	**ENGLIS**	English	
	FRENCH	French	
	SPAN	Spanish	
	GERMAN	German	
s-id	**000000**		
u-id	**000000**		
Format	**single**	Single format	
	for 1	Format 1	
	for 2	Format 2	

For 3 Format 3

Refer to Chapter 10.2 for the output content and introduction of each format.

12.CALL AND OPERATION OF ACCUMULATED DATA

When the accumulation function of the indicator is turned on, 100 groups of accumulated data can be stored in it, and it has powerful statistical function. You can count the times of accumulation, the total weight, average value, maximum value, minimum value, and the difference between maximum and minimum value of all data.

- Press **PRINT** to enter the Cumulative data statistics interface when in zero point.

  ACC XX(XX stands for accumulation times) will be displayed first, and then jump to the digital interface. Use different backlight colors to represent different statistical values, Press the **MODE↑** to cycle through different statistical values. See the table below for the statistical values represented by backlight colors:

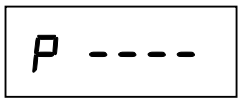
white	Total weight
amber	minimum value
red	maximum value
blue	The difference between the maximum and the minimum
green	Average value

- Press **PRINT** to output the accumulated data to a computer or printer (See Chapter 10.2.4 for the data format)

- Press **→0←** to clear all the accumulated data before

- Press **→T** to exit the statistics interface .

13. DEALER PARAMETER SETTING

- Press the →0← during the self-test,  will be displayed.
- Enter the password 0000. （Press **MODE↑** or **UNIT↓** to change the numerical values when entering a number **,T→** is to move the flashing digital position）
- Press **PRINT¿** to confirm, the product will enter the dealer menu, and set the dealer parameters according to the following menu.
- After entering the dealer menu. Press **PRINT↵** to confirm to enter the menu or confirm the changed parameters. Press **MODE↑** or **UNIT↓** to scroll through the menu or adjust the parameters, adjust the value when entering the number, and press **T→** to move the flashing digital position.

CAL （calibration）	**UNLOAD**	(zero calibration)	**XXKG**	(calibrating weight)
adcnt （module）				
Auto-z （automatic re-zeroing）	0.5d			
	1.0d			
	1.5d			
	2.0d			
	2.5d			
	3.0d			
	0ff			
P-Zero （zeroing range on start-up）	1 %			
	2 %			
	5 %			
	10 %	(default)		
	20 %			
	50 %			
	100 %			
K-Zero （Keypad zero range）	1 %			
	2 %			
	4 %	(default)		
	5 %			
	10 %			
	20 %			
Filter	**Sloy**			
	fast			
	mid			
G 1（Factory gravity value）	This gravity value generally does not need to be set, and the gravity value set after calibration will be invalid			
G2（Location gravity value）				

13. FACTORY MENU

- Press the →0← during the self-test, P ---- will be displayed.
- Enter the password 1946（Press **MODE↑** or **UNIT↓** to change the numerical values when entering a number ,press T→ to move the flashing digital position）.
- Press **PRINT¿** to confirm , the product will enter the factory menu, The menus are displayed as follows：

adcnt	module
Capa	Range and readability
Auto-z	Auto-zero
p-zeRo	Zeroing range on start-up
t-2Ero	Keypad zero range
FiLER	filter
G1	Gravity value of calibration site
G2	Location gravity value
Linear	Linear calibration
m-taRE	Manual tare
dot	Decimal display mode
reset	formatting

13. 1 ANALOG-TO-DIGITAL

Analog-to-digital (AD) is the numerical value displayed after the sensor's electrical signal is directly converted by the AD chip, and the working condition of the loadcell can be quickly judged through the analog-to-digital signal. The modulus range is 0-1 million. The heavier the loading weight, the greater the value, and the modulus at no load must be greater than 0.

- The first menu after entering the factory menu , **ADcn t** will be displayed.
- Press **PRINT¿** to confirm to enter the module menu, and the module will be displayed automatically.
- Press **PRINT¿** to confirm after checking the modulus.

13.2 RANGE AND RESOLUTION SETTING

- When entering the factory menu, Press **MODE↑** or **UNIT↓** to scroll through the menu until **CAPA** is displayed.
- Press **PRINT¿** to enter the menu, The interface for selecting weight unit will be displayed, press **MODE↑** or **UNIT↓** to select kg or Lb to set range and resolution according you needs, press **PRINT¿** to confirm.
- The interface for selecting product decimal places will be displayed, The user can press the **MODE↑** or **UNIT↓** to select one of the following parameters.

P 0	No readings after decimal point.
P 0.0	Display to 1 decimal place
P 0.00	Display to 2 decimal places
P 0.000	Display to 3 decimal places
P0.0000	Display to 4 decimal places

- Press **PRINT¿** to confirm, after **CAPA** 1 second, the screen will display and jump to the range digital input interface, Press **MODE↑** or **UNIT↓** to change the numerical values, **T→** to move the flashing digital position to input the desired range ,Pay attention to the position of the decimal point when inputting the range. For example, the range is 30kg with 3 decimal places, and the range should be 30.000 instead of 0.0030.

- Press PRINT¿ to confirm, the minimum score interface will be displayed. press MODE↑ or UNIT↓ to select the minimum score interface according you needs.
- Press PRINT¿ to confirm, The Range and resolution setting is now complete.

13.3 SET AUTOMATIC RETURN TO ZERO

- Press MODE↑ or UNIT↓ to scroll through the menu until AUTO- is displayed after entering the factory menu.
- Press PRINT¿ to enter the auto-zero setting menu, press the MODE↑ or the UNIT↓ to select one of the following parameters, and then press PRINT¿ to confirm.

0.5d	Automatic return to zero within 0.5 division value of zero weight.
1.0d	Automatic return to zero within 1 division value of zero weight.
1.5d	Automatic return to zero within 1.5 division values of zero weight.
2.0d	Automatic return to zero within 2 division values of zero weight.
2.5d	Automatic return to zero within 2.5 division values of zero weight.
3.0d	Automatic return to zero within 3 division values of zero weight.
OFF	Turn off automatic zero return, and the product will not automatically return to zero.

13.4 ZERO RANGE SETTING ON START-UP

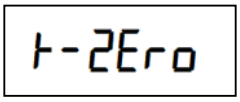
- Press MODE↑ or UNIT↓ to scroll through the menu until P-ZEro is Displayed after entering the factory menu

- Press PRINT¿ to confirm to enter the setting menu of boot zero range , press the MODE↑ or the UNIT↓ to select one of the following parameters, and then press PRINT¿ to confirm.

1 %	Weight on the pan less than 1% returns to zero when the product is turned on.
2 %	Weight on the pan less than 2% returns to zero when the product is turned on.
5 %	Weight on the pan less than 5% returns to zero when the product is turned on.
10 %	Weight on the pan less than 10% returns to zero when the product is turned on（default）
20 %	Weight on the pan less than 20% returns to zero when the product is turned on.
50 %	Weight on the pan less than 50% returns to zero when the product is turned on.
100 %	Weight on the pan less than 0% returns to zero when the product is turned on.
OFF	Turn off the boot to zero, If there is any change in the zero position. The product will not display 0 when it is turned on.

The above percentage represents the percentage of full-scale weight in the last calibration, and the zero position is the zero position in the last calibration. This parameter can prevent the product from not displaying 0 when the zero position changes.

13.5 KEYPAD ZERO RANGE SETTING

- Press **MODE↑** or **UNIT↓** to scroll through the menu until  is displayed after entering the factory menu.
- Press **PRINT¿** to enter the setting menu of the zero key, press **MODE↑** or **UNIT↓** to select one of the following parameters, press **PRINT¿** to confirm.

1 %	Zero range of the zero key is within 1% of the range.
2 %	Zero range of the zero key is within 2% of the range.
4 %	Zero range of the zero key is within 4% of the range.
5 %	Zero range of the zero key is within 5% of the range.（default）
10 %	Zero range of the zero key is within 10% of the range.

20 %	Zero range of the zero key is within 20% of the range.

13.6 FILTER PARAMETER SETTING

The filter parameters of the product are set according to the user's using environment. The worse the environment, the slower the filter setting and the longer the product stability time.

- Press **MODE↑** or **UNIT↓** to scroll through the menu until **FiLER** is displayed
- Press **PRINT¿** to enter the filter parameter setting menu, press the **MODE↑** or **UNIT↓** to select one of the following parameters, and then press **PRINT¿** to confirm.

SLoy	slow
mid	middle
fast	fast

13.7G1/G2 GRAVITY VALUE SETTING

The gravity value in the G1/G2 menu does not need to be set by the user, and this menu can help reduce product errors after calibration in the factory and sending to different gravity zone locations. Gravity parameter value will be invalid after user calibration, The factory gravity zone setup must be performed as follows:

- First, set the gravity values in G1 and G2 to be consistent with the current calibration.
- Calibrate the product after setting it up.
- Change the gravity value in G2 to the gravity value of the destination.

13.8 LINEAR CALIBRATION

when the user buys the indicator and connects it to the scale he needs, he must carry out linear calibration, the weights used in linear calibration must conform to the accuracy of the user's scale.

To change the value ,press **MODE↑** or**UNIT↓**, press **T→** is to move the flashing digital position.

- Press **MODE↑** or **UNIT↓** after entering the factory menu, Scroll through the menu until **Linear** is displayed.
- Press **PRINT↵** to go to Linear calibration menu, **UnLoa** will be displayed.
- Remove all items on the pan, Press **PRINT↵** to calibrate the zero position of the product.
- "LOAD 1" is displayed, will jump to the weight input interface after 1 second. Enter the first linear point calibration weight, and the weight is generally 1/3 or 1/2 of the range. Press the **PRINT↵** to confirm after input.
- Put the Weight of prompt weight on the scale and press the **PRINT↵** to confirm the calibration of the first linear point. Then the screen will display LOAD 2, and after 1 second, it will jump to the weight input interface. the second linear point calibration weight is input, and the weight is generally 2/3 of the range or full range. Press the **PRINT↵** to confirm after input.
- Put the Weight of prompt weight on the scale and press the **PRINT↵** to confirm the calibration of the second linear point. If the calibration is successful, the screen will display PASS, and then the product will be restarted and then returned to the weighing interface. At this time, the linear calibration is over.

13.9 MANUAL TARE SETTING

This parameter can set the switch of manual tare. When manual tare is turned off, the product will not be tared when the tare key is pressed, and this parameter is turned on by default

- Press **MODE↑** or **UNIT↓** after entering factory menu, scroll through until **M-taRE** Is displayed.
- Press **PRINT¿** to confirm to enter the filter parameter setting menu, press the **MODE↑** or **UNIT↓** to select one of the following parameters, and then press **PRINT¿** to confirm.

Tr on	Manual tare on
Tr OFF	Manual tare off

13.10 DECIMAL POINT DISPLAY MODE SETTING

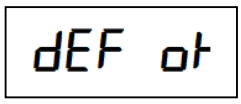
The decimal point display mode can be set as comma ","or dot "."

- After entering the factory menu, press MODE↑ UNIT↓ to scroll through the menu until **Dot** is displayed.
- Press **PRINT↵** to confirm to enter the filter parameter setting menu, press **MODE↑** or **UNIT↓** to select one of the following parameters, and then press the **PRINT↵** to confirm.

dot	Displayed as dots “.”
Comma	Display as comma “, ”

13.11 FORMATTING

This menu can format all user settings, calibration data, etc. and restore to the original factory parameters.

- After entering the factory menu, press the **MODE↑** or **UNIT↓** to scroll through the menu until **rESET** is displayed.
- Press **PRINT↵** to confirm to enter the format menu, and press **MODE↑** or **UNIT↓** to adjust the parameters to 
- Press the **PRINT↵** to confirm, The product formatting is now complete.

14. FAILURE CODE

Failure code	Possible causes	Suggestions
ERR 1	Time setting error	Set the correct time, with the hours not exceeding 24 and the minutes and seconds not exceeding 60
Err 2	Date setting error	Set the correct date, the month cannot exceed 12, and the day cannot exceed 31.
	Error in setting the weight of linear calibration weight	Set the correct linear calibration weight value, generally the first point is 1/3 or 1/2 of the range. The weight of the second linear point is 2/3 of the range or full range.
Err 4	Zero is out of range	• There is a heavy item on the scale when it is turned on. • The zero position has changed, and the weight calibration is carried out in dealer mode.
ERR 6	ADC error	• Check whether the connection between the indicator and the scale is normal • Load cell could be damaged • The AD chip of PCB is damaged
ERR 7	Percentage sampling error	Sample percentage according to the manual.
Err 9	Error in setting the upper and lower limits of check-weigh function	Set the correct upper and lower limits according to the manual, and the lower limit must be smaller than the upper limit.
Unstab	Unstable reading	• Check whether the environment is normal • Check whether the operating voltage is too low. • The contact of indicator loadcell connector is not very good • There is interference inside the loadcell • AD chip is damaged

FAIL L	The calibration weight is too small	The calibrated weight should be greater than 1/3 of the measuring range and consistent with the set weight of the calibrated weight. The calibrated weight should be greater than 1/3 of the measuring range and consistent with the set weight of the calibrated weight.
FAIL H	The calibration weight is too large	The calibrated weight shall not exceed the full scale and be consistent with the set weight of the calibrated weight.
ADD ER	Internal storage is full	Clear the accumulated data inside the product.

15. 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 center 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.

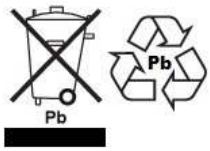
This product may include a rechargeable battery that is designed to be removed and replaced by the user. Adam Equipment warrants that it will provide a replacement battery if the battery manifests a defect in materials or workmanship during the initial period of use of the product in which the battery is installed.

As with all batteries, the maximum capacity of any battery included in the product will decrease with time or use, and battery cycle life will vary depending on product model, configuration, features, use, and power management settings. A decrease in maximum battery capacity or battery cycle life is not a defect in materials or workmanship, and is not covered by this Limited 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.

CE EU Declaration of Conformity

2014/30/EU, Electro Magnetic Compatibility Directive	**EN IEC 61326-1:2021**, Electrical Equipment for Measurement, Control and Laboratory Use – EMC requirements – Part 1: general requirements.
2014/35/EU, Low Voltage Directive	**EN 61010-1:2010/A1:2019/AC:2019-04**, Safety requirements for measurement, control and laboratory use – Part 1: General requirements. **EN IEC 62368-1:2020,** Audio/video, information, and communication technology equipment - Part 1: Safety requirements
2015/863/EU, RoHS 3, on the Restriction of the use of certain hazardous substances in electrical and electronic equipment (recast)	**EN IEC 63000: 2018**, Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
2014/31/EU, Non-automatic Weighing Equipment Directive *	**BS EN 45501:2015, OIML R76-1 (2006)**
2006/42/EC, Machinery Directive	**EN ISO 12100:2010**, Safety of machinery — General principles for design — Risk assessment and risk reduction
FCC Rules (applicable for Adam Box, CB Balance Series)	**47 CFR Part15, Subpart B:2016**

* Applies only to certified non-automatic weighing instruments designated by **..M** suffix and which have legal metrology marks applied

Module B – See instrument type approval certificate for details of the issuing Notified Body.

Module D – Approved by RISE Research Institutes of Sweden AB | Certification (NB 0402), Box 857, 50115 Boras, Sweden

ADAM EQUIPMENT is an ISO 9001:2015 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
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