

GBC/GFC Series

(P.N. 3056610587, Revision B3, November 2011)

Software Rev 2.18 and up

Easy Reference:

Model name of the indicator/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:	

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2.0 INTRODUCTION

- The **GBC/GFC** series provides accurate, fast and versatile parts counting scales.
- There are 2 types of scales within the **GBC/GFC** series: **GBC/GFC** scales are kilogram/gram scales and the **GBC/GFC-a** scales are changeable from pounds to kilograms if the user requires it. The scales have the same functions except that **GBC/GFC-a** scales have the ability to toggle between the weighing units.
- All scales are supplied with a RS-232 bi-directional interface and real time clock (RTC).
- The **GBC/GFC** has a sealed keypad with colour coded membrane switches and there is a large, easy to read liquid crystal type display (LCD). The LCD is supplied with a backlight.
- The **GBC/GFC** include automatic zero tracking, audible alarm for pre-set counts, automatic tare, pre-set tare, an accumulation facility that allows the count to be stored and recalled as an accumulated total.

SPECIFICATIONS

GBC Models

Model #	GBC 16	GBC 32	GBC 60	GBC 35a	GBC 70a	GBC 130a
Maximum Capacity	16kg	32kg	60kg	16kg/35lb	32kg/70lb	60kg/130lb
Readability	0.5g	1g	2g	0.5g/0.001lb	1g/0.002lb	2g/0.005lb
Repeatability (Std Dev)	0.5g	1g	2g	0.5g/0.001lb	1g/0.002lb	2g/0.005lb
Linearity \pm	1g	2g	4g	1g/0.002lb	2g/0.004lb	4g/0.01lb
Units of Measure	Kilograms and Grams. Pounds for GBC XXa units					
Stabilization Time	2-3 Secs					
Operating Temperature	-10°C to +40°C / +14°F to +104°F					
Power Supply	230VAC 50/60Hz. in Europe, Asia and South Africa. 12vDC 800mA UL/CSA adapter for USA					
Calibration	External					
Calibration Mass	User Selectable					
Display	Backlit Green display 25mm with capacity tracker					
Balance Housing	Cast aluminium base, Pantone cool grey painted base, stainless steel grade 304 Top pan, ABS Cool grey indicator housing					
Pan Size	300mm x 400mm x 50mm / 12" x 15.7" x 2"					
Overall Dimensions (w x d x h)	300mmx 520mm x 660mm / 11.8" x 20.5" x 26"					
Net Weight	7.6kg / 16.8 Lb					
Features	Weighing/Counting/Checkweighing with LED lights/Percentage/Hold function/RS232					

GFC Models



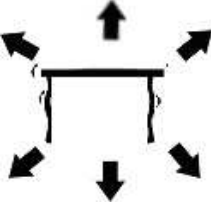
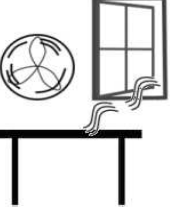
Model #	GFC 75	GFC150	GFC 300	GFC 165a	GFC 330a	GFC 660a
Maximum Capacity	75kg	150kg	300kg	75kg / 165lb	150kg / 330lb	300kg / 660lb
Readability	5g	10g	20g	5g / 0.01lb	10g / 0.02lb	20g / 0.05lb
Repeatability (Std Dev)	5g	10g	20g	5g / 0.01lb	10g / 0.02lb	20g / 0.05lb
Linearity \pm	10g	20g	40g	10g / 0.02lb	20g / 0.04lb	40g / 0.1lb
Units of Measure	Kilograms and Grams. Pounds for GFC XXa units					
Stabilization Time	2-3 Secs					
Operating Temperature	-10°C to +40°C / +14°F to +104°F					
Power Supply	230VAC 50/60Hz. in Europe, Asia and South Africa. 12vDC 800mA UL/CSA adapter for USA					
Calibration	External					
Calibration Mass	User Selectable					
Display	Backlit Green display 25mm with capacity tracker					
Balance Housing	Cast aluminum base, Pantone cool grey painted base, stainless steel grade 304 Top pan, ABS Cool grey indicator housing					
Pan Size	400mm x 500mm x 65mm/ 15.7" x 19.7" x 2.6"					
Overall Dimensions (w x d x h)	400mmx 620mm x 860mm / 15.7" x 24.4" x 33.9"					
Net Weight	12.5kg / 27.6 Lb					
Features	Weighing/Counting/Checkweighing with LED lights/Percentage/Hold function/RS232					

3.0 INSTALLATION

3.1 UNPACKING

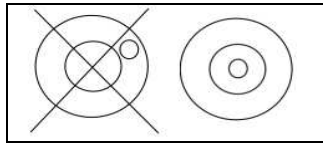
The user's application and the technical specifications of the platform or load cell will determine the necessary configuration.

3.2 LOCATING

	<ul style="list-style-type: none">• 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.
	<ul style="list-style-type: none">• 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.
	<ul style="list-style-type: none">• 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.
	<ul style="list-style-type: none">• Keep the scales clean. Do not stack material on the scales when they are not in use.

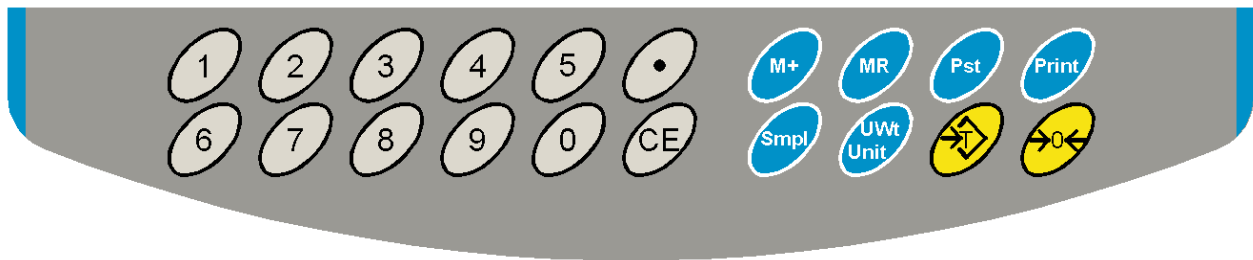
3.3 SETTING UP THE SCALES

- The pillar is attached to the base using a bracket that must be attached to the base frame first using the 4 bolts supplied. The pillar is secured to the bracket using 2 sets of screws. The cable from the base to the indicator module is run through the tube and taken out through the plastic support at the top. Excess cable can be stored within the tube.
- The **GBC/GFC** Series comes with a stainless steel platform packed separately. Place the platform in the base.
- Level the scale by adjusting the four feet. If the scale rocks re-adjust the feet.



- Attach the indicator module to the pillar by sliding it over the bracket with the flanges engaged in the grooves on the base. Attach the cable from the base to the connector on the rear of the indicator.
- Attach the power to the indicator. Press the **[On/Off]** key which is at the rear of the indicator. The software revision number will be displayed followed by a self-test showing all digits before the zero is displayed along with the unit of weight that was selected last.

4.0 KEY DESCRIPTIONS

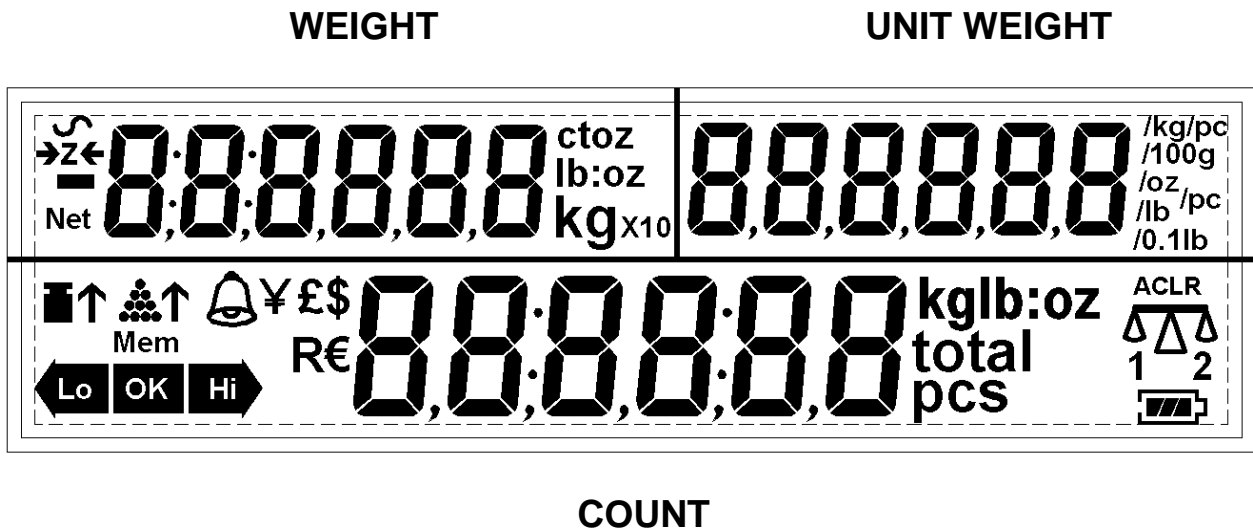


Keys	Functions
[0-9, .]	Numeric entry keys, used to manually enter a value for tare weights, unit weight, and sample size.
[CE]	Used to clear the unit weight or an erroneous entry.
[M+]	Add the current count to the accumulator. Up to 99 values or full capacity of the weight display can be added. Also prints the displayed values when Auto print is switched off.
[MR]	To recall the accumulated memory.
[Pst]	To set the upper limit for the number of items counted. When this upper limit is exceeded the scale will sound the beeper.
[Print]	To print the weight/ unit weight and count to a PC or printer using the RS-232 interface. Print the totals from memory when [MR] is pressed first.
[Smpl]	Used to input the number of items in a sample.
[U.Wt./Units]	Used to enter the weight of a sample manually. Select the weighing unit when the “Unit Weight” display is at zero if enabled.
[Tare]	Tares the scale. 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. Entering a value using the keypad will store that as the tare value.
[Zero]	Sets the zero point for all subsequent weighing to show zero.

5.0 DISPLAYS

The scales have three sections. These are “Weight”, “Unit Weight” and “Count”.

The LCD design is:




5.1 WEIGHT DISPLAY

It has 6-digit display to indicate the weight on the scale.

Net Weight Display, **"Net"**

Stability indicator,  symbol

Zero indicator,  symbol

The weighing unit: **kg, lb**




5.2 UNIT WEIGHT DISPLAY

This display will show the unit weight of a sample. This value is either input by the user or computed by the scale. The unit of measurement is grams if grams if kilograms is selected for the weighing unit, or pounds if pounds is selected.

5.3 COUNT DISPLAY

This display will show the number of items on the scale or the value of the accumulated count. See the next section on OPERATION.

5.4 OTHER SYMBOLS

- The  symbol, when there is insufficient number of samples to accurately determine the count.
- When the unit weight is not large enough to determine an accurate count, the  symbol will be on.
- In both cases the scale continues to operate and the indications are to alert the user for a potential problem.
- If a preset count has been stored the  symbol will be on.
- A low battery symbol will turn on if the battery should be recharged.
- The **Lo, OK, Hi** symbols will be used when the preset count has been set.
- The symbol **“Mem”** will be seen when the internal memory has a record of previous weighings stored in it.

6.0 OPERATION

NOTE: GBC/GFC-a Scales only

SETTING THE WEIGHING UNIT, lb or kg

The scale will turn on displaying the last weighing unit selected, either kilograms or pounds. To change the weighing unit press the [**U. Wt./Units**] key when the “**Unit Weight**” display shows zero. If necessary press the [**CE**] key to clear the unit weight before changing.

6.1 ZEROING THE DISPLAY

- You can press the [**Zero**] key at any time to set the zero point from which all other weighing and counting is measured. This will usually be necessary only when the platform is empty. When the zero point is obtained the “**Weight**” display will show the indicator for zero, “>**Z**<”.
- 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 [**Zero**] to re-zero the scale if small amounts of weight are still shown when the platform is empty.

6.2 TARING

- Zero the scale by pressing the [**Zero**] key if necessary. The indicator “>**Z**<” will be ON.
- Place a container on the platform and its weight will be displayed.
- Press [**Tare**] to tare the scale. The weight that was displayed is stored as the tare value which is subtracted from the display, leaving zero on the display. The indicators “**Net**” and “>**Z**<” will be ON.
- As a product is added only the weight of the product will be shown. The scale could be tared a second time if another type of product was to be added to the first one. Again only the weight that is added after taring will be displayed.
- When the container is removed a negative value will be shown. If the scale was tared just before removing the container, this value is the gross weight of the container plus all products those were removed. The indicator “>**Z**<” will also be ON because the platform is back to the same condition as it was when the [**Zero**] key was pressed last.

6.2.1 Preset Tare

- The user can enter a preset tare value if the display is at zero or gross weight. Enter the value for preset tare using the keypad, then press the **[Tare]** key to set the preset zero value.
- If the display was at zero the weight will show a negative value equal to the preset tare value entered and the “**Net**” indicator will be on.

6.3 PARTS COUNTING

6.3.1 Setting Unit Weight

In order to do parts counting it is necessary to know the average weight of the items to be counted. This can be done by weighing a known number of the items and letting the scale determine the average unit weight or by manually inputting a known unit weight using the keypad.

A. Weighing a sample to determine the Unit Weight

To determine the average weight of the items to be counted, you will need to place a known quantity of the items on the scale and then to key in the number of items being weighed. The scale will then divide the total weight by the number of items and display the average unit weight. Press **[CE]** anytime to clear the unit weight.

- Zero the scale by pressing the **[Zero]** key if necessary. If a container is to be used, place the container on the scale and tare by pressing **[Tare]** as discussed earlier.
- Place a known quantity of items on the scale. After the weight display is stable, enter the quantity of items using the numeric keys and then press the **[Smpl]** key.
- The number of units will be displayed on the "**Count**" display and the computed average weight will be shown on the "**Unit Weight**" display.
- As more items are added to the scale, the weight and the quantity will increase.
- If a quantity which is smaller than the sample is placed on the scale, then the scale will automatically enhance the Unit Weight by re-calculating it. To lock the Unit Weight and avoid re-sampling, press **[U. Wt./Units]**.
- If the scale is not stable, the calculation will not be completed. If the weight is below zero, the “**Count**” display will show negative count.

B. Entering a known Unit Weight

- If the unit weight is already known then it is possible to enter that value using the keypad.
- Enter the value of the unit weight in grams, using the numeric keys followed by pressing the **[U. Wt./Units]** key. The "**Unit Weight**" display will show the value as it was entered.
- The sample is then added to the scale and the weight will be displayed as well as the quantity, based on the unit weight.

6.3.2 Counting more parts

- After the unit weight has been determined or entered, it is possible to use the scale for parts counting. The scale can be tared to account for the container weight as discussed in the earlier section.
- After the scale is tared the items to be counted are added and the "**Count**" display will show the number of items, computed using the total weight and the unit weight.
- It is possible to increase the accuracy of the unit weight at any time during the counting process by entering the count displayed and then pressing the **[Smpl]** key. You must be certain that the quantity displayed matches the quantity on the platform before pressing the key. The unit weight can be adjusted based upon a larger sample quantity. This will give greater accuracy when counting larger sample sizes.

6.3.3 Check-counting

- Check-counting is a procedure to cause an alarm to sound when the number of items counted on the scale meets or exceeds a number stored in the memory by using the **[Pst]** key.
- The value to be stored is entered from the keyboard. Enter the numeric value to be stored using the numeric keys. Then press the **[Pst]** key to store the value.
- To clear the value from the memory and thereby turn off the check-counting feature, enter the value "0" and press **[Pst]**.
- During counting if the count is below the setpoint the "**Lo**" indicator will be on, if it is equal to the set point the "**OK**" indicator will be on and if it is above the limit the "**Hi**" indicator will be on.

6.3.4 Manually Accumulated Totals

- The values (weight and count) shown on the display can be added to the values in the memory by pressing the **[M+]** key. The "**Weight**" display will show the total weight, the "**Count**" display will show the total accumulated count and the "**Unit Weight**" display shows the number of times, the items have been added to the memory for accumulation. The values will be displayed for 2 seconds before returning to normal. If the accumulated number exceeds 6 digits the display will show "**diSPeR**", the count is still being stored correctly and the RS232 printout will still show the correct values.
- The "**Mem**" symbol will be on when there are values stored in the accumulation memory.
- The scale must return to zero or a negative number, before another sample can be added to the memory.
- More products can then be added and the **[M+]** key to be pressed again. This can continue for up to 99 entries or until the capacity of the "**Weight**" display is exceeded. When the weight exceeds 6 digits the display will show "**diSPeR**".
- To observe the total stored value, press the **[MR]** key. The total will be displayed for 2 seconds.
- To clear the memory- first press **[MR]** to recall the totals from memory and then press the **[CE]** key to clear all values from the memory.

6.3.6 Automatic Accumulated Totals

- The scale can be set to automatically accumulate totals when a weight is placed on the scale. This eliminates the need to press the **[M+]** key to store values into the memory. However the **[M+]** key is still active and can be pressed to store the values immediately. In this case the values will not be stored when the scale returns to zero.
- See the Section 9.0 on RS-232 Interface for details on how to enable Automatic Accumulation.

7.0 USER PARAMETERS

The parameters are set to customise the scale to suit the weighing applications. You need to enter a secure menu by entering a password when requested.

- Press **[Tare]** once, during the initial counting of the display after the power is turned on.
- The “**Weight**” display will show “**Pin** ” requesting for the password number.
- The default password is “**0000**” but other numbers can be set using the parameter menus. Press the **[0]** key four times.
- Press the **[Tare]** key.
- There are 3 functions that can be cycled through using the **[U. Wt./Units]** key. The Weight window will show the parameter number and the Unit Price window will show the word describing the function.
- The first parameter is “**F1**” “**CAL**”. (See section 8.0 for details)
- To enter into Calibration function, press the **[Tare]** key.
- To exit a parameter, press the **[Zero]** key.
- To select the second parameter press the **[U. Wt./Units]** key.

SETTING OF PIN

- Display will show **"F2" "Pin"**. This parameter allows setting of a new password number. The default password is **"0000"**.
- Press **[Tare]**. The **"Weight"** display will show **"Pin 1"**.
- Enter the new password number. The **"Unit Weight"** display will show dashes. Press **[Tare]**.
- The **"Weight"** display will change to **"Pin 2"**, Enter the password again and press **[Tare]**.
- The display will show **"done"** to show the new password has been accepted and will return to the menu. Record the new password in a secured place.
- To exit a parameter, press the **[Zero]** key.

ENABLE WEIGHING UNITS

- Display will show **"F3" "Unit"**. This parameter allows weighing units to be enabled or disabled. If enabled the weighing units will change when the **[U.Wt./Unit]** key is pressed. See section 6.0.
- To enter this function press the **[Tare]** key.
- The display will show the first weighing unit and if it is currently On or Off. Press the **[U.Wt./Unit]** key to change the setting and then press the **[Tare]** key to go to the next weighing unit. The weighing units selected will depend upon the model and the capacity of the scales. See Section 12.2, Service Parameters.
- Press the **[Zero]** key to return to the weighing mode.

8.0 CALIBRATION

- The **GBC/GFC** scales are calibrated using metric weights and **GBC/GFC-a** scales are calibrated using metric or pound weights depending on the unit in use before calibration. See the Service parameters section for more information.
- The scale will display a value of the weight to be used for calibration, this value is the last weight used for calibration. You can enter a different value, if desired.
- For entering Calibration, see section 7.0 Parameters
- When **"F1" "CAL"** is displayed, press **[Tare]**.
- The display will then show **"unLoAd"** to request all weight be removed from the platform.
- Press the **[Tare]** key to set the zero point.
- The displays will then show the calibration weight suggested, the value is shown as an integer number, it is not possible to have fractions of a kilogram or pound. For example:

LoAd	00004
KiLoS	

- Place the calibration weight on the platform. If the calibration weight is different from the value shown, Press **[CE]** to clear the current value then enter the correct value.
- Press **[Tare]** to calibrate.
- When calibration is done the display will show **"SPAn" "PASS"**.
- Remove the weight. The scale will return to normal weighing.
- If an error message **"SPAn" "FAIL"** is displayed, then repeat the process.
- After calibration, the scale should be checked whether the calibration is correct. If necessary, repeat calibration.

NOTE: **GBC/GFC-a** scales will have the lb or kg indicator on, to show the unit of the weight requested. If the scale was in pounds before starting the calibration, the weights requested will be in pound values or if the scale was weighing in kilograms then metric weights will be requested.

9.0 RS-232 INTERFACE

The **GBC/GFC** Series are supplied with a RS-232 bi-directional interface. The scale when connected to a printer or computer through the RS-232 interface, outputs the weight, unit weight and count.

Specifications:

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

Connector:

9 pin D-subminiature socket
Pin 3 Output
Pin 2 Input
Pin 5 Signal Ground

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

All lines end with line feed <lf>, and carriage return <cr>characters.

Data Format-Normal Output:

```
<lf><cr>
<lf><cr>
DATE          12/09/2006
TIME          14:56
<lf><cr>
GROSS Wt      1.234 Kg      Net Wt. if net weight is displayed
Unit Wt.      123 g        Kg or g for metric weights and lb for pounds.
Pcs           10 pcs
<lf><cr>
<lf><cr>
                Includes 2 line feeds with carriage return
                at beginning and end of the form
```

Data Format- Memory Recall Print:

```
<lf><cr>
DATE          12/09/2006
TIME          14:56
<lf><cr>
-----
TOTAL
No.           5
Wt.           1.234 Kg
Pcs           10 pcs
<lf><cr>
                Includes 1 line feed
-----
<lf><cr>
                2 line feeds, carriage return
<lf><cr>
```

Data Format- Continuous Print:

ST,GS,	0.9080 kg	
U.W.	0.90798 g/pcs	
PCS	1000 pcs	
<lf><cr>		Includes 2 line feeds with carriage return between sets of data
<lf><cr>		

In other languages the format is the same but the text will be in the language selected. See Section 9.2

Description	ENGLISH	FRENCH	GERMAN	SPANISH
Print gross weight	Gross Wt	Pds Brut	Brut-Gew	Pso Brut
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 weighings 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

9.1 INPUT COMMANDS FORMAT

The scale can be controlled with the following commands. The commands must be sent in upper case letters, i.e. "T" not "t". Press the Enter key of the PC after each command.

T<cr><lf>	Tares the scale to display the net weight. This is the same as pressing [Tare] key.
Z<cr><lf>	Sets the zero point for all subsequent weighing. The display shows zero. Same as pressing the [Zero] key.
P<cr><lf>	Prints the weight, unit weight and totals same as pressing the [Print] key.
R<cr><lf>	Recall and Print, Same as if first the [MR] key and then the [Print] key is pressed. Will display the current accumulated memory and print the total results.
C<cr><lf>	Same as pressing [MR] first and then the [CE] key to erase the current memory.

9.2 RS-232 SETUP

The RS-232 interface uses parameters set by the user for language, baud rate and date format.

Press and hold the **[Print]** key for 4 seconds to access the parameters.

Press **[U. Wt./Units]** to scroll through the options and **[Tare]** to confirm the change and then advance to the next parameter.

When a parameter is entered by pressing **[Tare]**, the displays will guide you through the parameter selected and the options available.

The parameters and their functions are:

Displays			Options	Functions
Weight	Unit Weight	Count		
Port	on		On off	Enable or disable the RS-232 interface.
9600	bPS		600 1200 2400 4800 9600 19200	Set baud rate.
Print	mAn		Cont to PC Print Auto Print mAn	Select printing options for continuous printing, print automatically or printing manually.
AC	mAn		AC Auto AC mAn AC off	Select the operation of accumulating automatically, manually or turned off.
LANg		ENGLiS	ENGLiS FrEnCH GErMAN SPAniS	Select Language for printing.

The scale will perform the following functions depending on the Accumulation and Print settings:

	ACCUMULATION FUNCTIONS		
PRINT FUNCTIONS	AC Auto	AC mAn	AC off
Print Auto	Accumulate and print automatically	Print automatically ; Accumulate and print when [M+] is pressed	Print automatically, [M+] key has no function
Print mAn	Automatically Accumulate but not print, Print only when [Print] key pressed	Accumulate and print when [M+] or [Print] is pressed	Print when [Print] key is pressed, [M+] key has no function
Cont to PC	Print continuously and accumulate automatically when stable , [Print] key no function	Print continuously and accumulate when [M+] is pressed, [Print] key no function	Print continuously , [M+] and [Print] key have no function

9.3 REAL TIME CLOCK SETUP

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 for 4 seconds, release when the date and time 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 in the format, “H-m-S”.

“timE” “H-m-S” “142929” or if no time has been set show **“000000”**

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

“timE” “H-m-S” “154100” new time overwrites the old

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

“dAtE” “y-m-d”

- Press the [U.Wt./Unit] 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 [Tare] key to accept the chosen format and then enter the date in this format.

“dAtE” “m-d-y” “051209” note current date is in current format, will show 000000 if no date has been set.

- Press the [Tare] key to accept the date.

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.

9.4 AUTO SLEEP FUNCTION

This function may be enabled or disabled by the user. If enabled, when the scale is not used for some time (as pre-set by the user under this function) it automatically switches off. To set this parameter-

- Press and hold the [**Zero**] key for 4 seconds, release when the display shows **"SLEEP mode"**.
- Press [**U/Wt/Unit**] key to scroll through the auto sleep values.
 - "0"** Auto sleep mode disabled
 - "1"** Auto sleep after 1 minute
 - "5"** Auto sleep after 5 minutes
 - "10"** Auto sleep after 10 minutes
- Press [**Tare**] to set the value. The scale returns to zero.

10.0 BATTERY AND BACKLIGHT OPERATION

10.1 BATTERY

- The scales can be operated from the battery, if desired. The battery life is approximately 70 hours.
- When the battery needs charging the battery symbol will appear to be empty. The battery should be charged as possible. Once the **"LO BAT"** message is shown the scale will still operate for about 10 minutes after which it will automatically switch off to protect the battery.
- To charge the battery, simply apply power to the scale. The scale does not need to be turned on.
- The battery should be charged for at least 12 hours for full capacity.
- Just above the **"Unit Weight"** display is an LED to indicate the status of battery charging. When the scale is plugged into the mains power, the internal battery will be charged. If the LED is green the battery is fully charged. If it is red, the battery is nearly discharged and yellow indicates the battery should be charged longer, preferably overnight.
- If the battery has not been used properly or it is used for a number of years it may eventually fail to hold a full charge. If the battery life becomes unacceptable then contact your supplier.

10.2 BACKLIGHT FOR LCD

- The backlight of the LCD can be set to be-
 “1”: ON at all the time,
 “2”: ON only when a weight is placed on the scale or
 “3”: Turned off.
- To set the backlight press and hold **[Pst]** key for 4 seconds.
- The weight display will show **“EL xx”** where xx is the current setting for the backlight.

Press **[U. Wt./Units]** to scroll through the options.

“EL on”	Sets the backlight to be on at all times.
“EL Au”	Sets the backlight to operate automatically when a weight is placed on the scale or a key is pressed.
“EL OFF”	Sets the backlight to be off.

Press the **[Tare]** key to store the value or press the **[Zero]** key to escape from this setting and return to weighing.

11.0 ERROR CODES

During the initial power-on testing or during operation, the scale may show an error message. The meaning of the error messages is described below.

If an error message is shown, repeat the step that caused the message, turning the balance on, carry out the calibration or other functions. If the error message is still shown contact your dealer for further support.

ERROR CODE	DESCRIPTION	POSSIBLE CAUSES
Err 1	Time input error.	Tried to set an illegal time, i.e. 26hours
Err 2	Date input error	Tried to set an illegal date, i.e. 36th day
Err 4	Initial Zero is greater than allowed (typically 4% of the maximum capacity) when power is turned on or when the [Zero] 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 6	A/D count is not correct when turning the scale on.	Platform is not installed. Damaged Load cell. Damaged Electronics.
diSPeR	Shows when a number is too large tot fit the display	The accumulated totals for weight or count exceed 999999. The data on RS232 is still shown accurately

12.0 SERVICE PARAMETERS

12.1 USING "0000" TO ENTER THE CALIBRATION PARAMETER

- Press the **[Tare]** key during the display counting when turned on. The display will ask for a code number, "**Pin** " on the Weight Display.
- Enter the number **0000** when "**Pin** " is displayed and then press **[Tare]**. If another PIN number has been previously stored enter that number instead.
- The displays will show the first parameters, called "**F1**" "**CAL**".
- To select another parameter press the **[U.Wt./Units]** key to advance through the parameters.
- Press the **[Tare]** key to enter a parameter.
- To exit a parameter, press the **[Zero]** key.
- The Weight window will show the parameter number and the Unit Price and Count windows will show the word describing the function.
- When a parameter is entered by pressing the **[Tare]** key, the displays will guide you through the parameter selected and the options available.

The parameters available are:

"F1"	"CAL"	To enter the Calibration
"F2"	"Pin"	To set a new Pin number for access
"F3"	"Unit"	Enable Weighing Units

12.1.1 F1 -CALIBRATION

To enter the calibration parameter, press the **[Tare]** key when **“F1” “CAL”** is displayed. The scale should be calibrated using a mass of approximately 2/3 Maximum to Maximum. If the scale has been calibrated previously the value will be stored. Details of calibration are given in section 8.0 .

12.1.2 F2 –PIN

- To enter this parameter, press the **[Tare]** key when **“F2” “Pin”** is shown.
- The **“Weight”** display will show **“Pin 1”**
- Enter the new password. The **“Unit Weight”** display will show dashes. Press **[Tare]**.
- The **“Weight”** display will change to **“Pin 2”**, Enter the password again and press **[Tare]**.
- The display will show **“done”** indicating the new password has been accepted and will return to the menu. **“F3” “Unit”** is shown.
- Record the new password in a secured place.
- Press **[Zero]** to return to weighing.

12.1.3 F3 –Unit

- To enter this parameter, press the **[Tare]** key when **“F3” “unit”** is shown.
- This parameter allows the user to enable or disable the weighing units available in his scales.
- To enter this parameter, press the **[Tare]** key when **“F3” “Unit”** is shown.
- The display will show the first available weighing unit and if it is On or Off.
- Press the **[U.Wt./Units]** key to change the value. Press **[Tare]** to accept the displayed setting and go to the next unit.
- Press the **[Zero]** key to return to the menus. Press the **[Zero]** key again to return to normal weighing.

13.0 REPLACEMENT PARTS AND ACCESSORIES

If you need to order any spare parts and accessories, contact your supplier or Adam Equipment. A partial list of such items is as follows-

- **Main Power cord**
- **Power supply (GFB/GFC-a)**
- **Replacement Battery**
- **Stainless steel Pan**
- **In use cover**
- **Printer**

14.0 SERVICE INFORMATION

This manual covers the details of operation. If you have a problem with the scale that is not directly addressed by this manual then contact your supplier for assistance. In order to provide further assistance, the supplier will need the following information which should be kept ready:

A. Details of your company

- Name of your company:
- Contact person's name:
- Contact telephone, e-mail,
fax or any other methods:

B. Details of the unit purchased

(This part of information should always be available for any future correspondence. We suggest you to fill in this form as soon as the unit is received and keep a print-out in your record for ready reference.)

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

C. Brief description of the problem

Include any recent history of the unit. For example:

- Has it been working since it's delivered
- Has it been in contact with water
- Damaged from a fire
- Electrical Storms in the area
- Dropped on the floor, etc.

15.0 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.



Manufacturer's Declaration of Conformity

This product has been manufactured in accordance with the harmonised European standards, following the provisions of the below stated directives:

Electro Magnetic Compatibility Directive 2004/108/EC

Low Voltage Directive 2006/95/EC

Adam Equipment Co. Ltd.
Bond Avenue, Denbigh East
Milton Keynes, MK1 1SW
United Kingdom

FCC COMPLIANCE

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. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. The 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.

Shielded interconnect cables must be employed with this equipment to insure compliance with the pertinent RF emission limits governing this device.

Changes or modifications not expressly approved by Adam Equipment could void the user's authority to operate the equipment.

WEEE COMPLIANCE



Sealed Lead Acid
Battery
Must be recycled
Properly

Any Electrical or Electronic Equipment (EEE) component or assembly of parts intended to be incorporated into EEE devices as defined by European Directive 2002/95/EEC must be recycled or disposed using techniques that do not introduce hazardous substances harmful to our health or the environment as listed in Directive 2002/95/EC or amending legislation. Battery disposal in Landfill Sites is more regulated since July 2002 by regulation 9 of the Landfill (England and Wales) Regulations 2002 and Hazardous Waste Regulations 2005. Battery recycling has become topical and the Waste Electrical and Electronic Equipment (WEEE) Regulations are set to impose targets for recycling.

ADAM EQUIPMENT is an ISO 9001:2008 certified global company with more than 35 years experience in the production and sale of electronic weighing equipment.

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

- Analytical and Precision 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
- Medical 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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