



Weltech International Limited

BW-2050 Manual



Picture is of BW-2050 Full kit

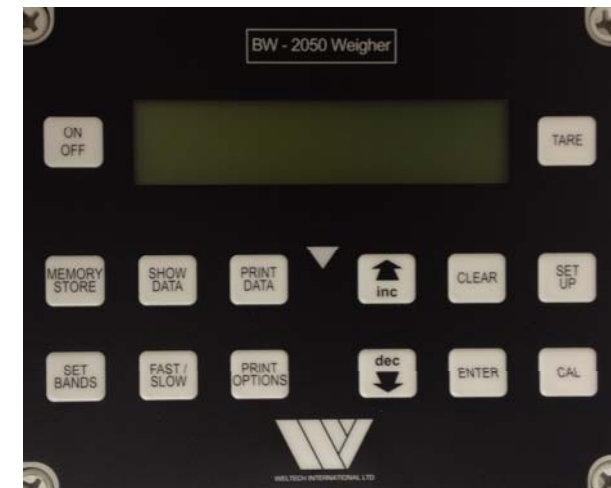
INTRODUCTION

The BW-2050 has been designed to give the operator complete flexibility for manual live bird weighing. The BW-2050 is battery operated and will weigh for up to 15 hours between recharging and will retain all weights even when the battery is flat.

- The BW-2050 can store up to 5000 bird weights.
- Weights can be placed into 1-50 separate stores.
- All information is stored until the **CLEAR** sequence has been completed.

The maximum weight the unit can weigh is 10kgs (22lbs) for the chicken version and 50kgs (110lbs) for the turkey weigher.

BW-2050 Control Panel



Printer, Computer and USB (optional) ports are on the side

CALIBRATION

The BW-2050 is calibrated by Weltech before it leaves the factory. Should you need to calibrate the weigher or set a fixed tare weight if using a shackle then follow the instructions below.

TO CALIBRATE THE WEIGHER

Have the weigher switched off with no shackle on. Hold down the **CAL** key and turn on the weigher. When **WELTECH SETUP** is displayed release the **CAL** key. The display will show **CALIBRATION** with 5.000 KGS flashing below. You can adjust the calibration weight up and down using the **INC** and **DEC** keys to set the calibration weight to the exact weight of your calibration weight. Press the **ENTER** key once the weight is set. The display will show **CALIBRATE NOW? [SETUP]=YES**. Press the **SETUP** key and the display will flash up **CALIBRATING ZERO** and then the display will show **PLACE THE WEIGHT**. Hang on your calibration weight and the display will show **CALIBRATION SCALING** and then **SAVING NEW SETTINGS**. You can then check the calibration by weighing your calibration weight.

TO TARE THE SHACKLE

Make sure the display shows 0.000 KGS if not press **TARE**. Power off the weigher and attach the shackle. Power on the weigher and press the **TARE** key. The weigher will tare out the shackle weight and show 0.000 KGS. This tared weight will stay in the weigher until another tare is done.

SETUP OPTIONS

To reset the weigher back to Factory settings hold the **MEMORY STORE** button and turn on. The display will show **WELTECH SET UP** until the button is released, when the button is released **FACTORY RESET** will be displayed, press **ENTER** to change settings. The display will show **DISPLAY STYLE**, it can be set to metric or USA by pressing the **INC** arrow, when set press **ENTER**, The display will show **WEIGHT RANGE** and **CHICKEN** will flash, push **ENTER**. The display will now show **FULL FEATURES** and **ON** will flash, press **ENTER**. **HOUR** will then show on the display and the correct time can now be set by using the **INC** or **DEC** arrows. Once the correct hours have been set press **ENTER**, the correct minutes, day, month and year can be set the same way. When completed the display will show **ARE YOU SURE**, follow the instructions on the display and it will show **INITIALIZING** followed by **SAVING NEW SETTINGS**.

The display will then revert to normal.

THE WEIGHER WILL NOW NEED CALIBRATING.

See page 2

OPERATOR SETTINGS

Factory settings

To set operator settings hold the **SET UP** button down and turn **ON**, the display will show **WELTECH SET UP** when the button is released **DATA STORES** will be displayed, by pressing the **INC** or **DEC** arrows the number of houses or pens data is to be stored in can be set, 1x5000 to 100x50, when set press **ENTER**.

100x50

SELECT STORE

ON

This function allows the user to select the house or pen in which the bird weights are to be stored. If turned off the weighings will be stored in numerical order.

ENABLE BUTTONS

ON

Allows full usage of the front panel

BLUETOOTH RATE

9600 BAUD

Not an available option.

PRINTER RATE

9600 BAUD

This is the speed the data is sent to the printer and can be changed using the **INC** or **DEC** buttons. Baud rate for serial port.

BLUETOOTH H/SHK

OFF

Not an available option.

PRINTER H/SHK

OFF

This is not used with our printer.

PRINTER LINEFEED

ON

Sends line feed to printer after a new line

PRINTER DELAY

0.1 SECS

This is the delay time from pressing the print data button to the actual print function.

WEIGHT RANGE

Chicken or Turkey

To be set to the weight capacity of the BW-2050 10kgs for chickens, 50kgs for Turkeys.

WEIGHT UNITS

KGS

This option allows the operator to select the measurement of weight to be used kgs, grms, lbs.

BACKLIGHT

TIMED

This option allows for the display back light to be turned off, on or on for a 30 second period.

GRADE LAMPS

OFF

When the weigher has grading lights fitted this is ON when using the grading lights.

DIGIT CLAMP

1

Displays Filter (if weight filter is enabled)

STABILITY	10
Repetitions within stability jump limit. Do not alter.	
STABILITY JUMP	5
Variation in ADC count considered stable do not alter.	
WEIGHT FILTER	3
Filters out movement on the weigher	
FILTER JUMP	0
Filters out excessive sharp movements on the weigher	
WEIGHT FREEZE	ON
Shows accepted weight until ready	
EVENNESS	10%
Percentage above and below average for statistics	
HIGH LIMIT	9.999
Upper acceptance limit	
LOW LIMIT	0.050
Lower acceptance limit	

HIDE DISPLAY	OFF
Hides the weight when ready	
AUTO ZERO FILTER	6
Drives the display towards zero at low weights Do not alter.	
VOLTAGE FILTER	6
Battery voltage filter steepness Do not alter.	
DIVISIONS	1
Where a number of birds are being weighed together the program can be set to divide by the number of birds to give an average	
DEVIATION METHOD	WELTECH
Universal standards (Weltech) Bernard Matthews standard	
FAST MODE	OFF
Selects the speed the weigher starts up in.	
LANGUAGE	ENGLISH
Selects the language the weigher starts up in. (English, Spanish, French or Portuguese)	

POWER DOWN

15 MINS

If the unit has not been used it will automatically turn off after the pre set time.

To exit and or store new settings press **ENTER** and then **CLEAR**. You do not have to go through all the set up.

DURING NORMAL OPERATION THE SET UP BUTTON CAN BE USED TO ENTER THE TIME AND DATE, UNIT OF MEASUREMENT AND TO SET A TARGET WEIGHT.

A TARGET WEIGHT CAN BE SET BY PUSHING THE **INC** OR **DEC** KEYS. THE WEIGHER WILL ON COMPLETION OF THE WEIGHINGS GIVE A % EVENNESS FIGURE NOT ONLY AGAINST THE AVERAGE WEIGHT BUT ALSO AGAINST THE SET TARGET .

OPERATING INSTRUCTIONS

Turn the weigher on by pressing the **ON** button.

To clear data already stored in the weigher press **CLEAR**, the display will then ask you to press **ENTER** after this the display will then ask you to confirm by pressing **SET UP**, to escape press **CLEAR**. Data will remain in the memory until cleared.

The display will then show :

STORE 1 Battery charge indicator. Time



Battery indicator will flash when being charged

Select the house the weights are to be stored in by pressing **MEMORY STORE**, press the **INC** or **DEC** arrow to select the house or pen number. Press **MEMORY STORE** or **ENTER**, the store number will then be displayed. Weighing can now begin.

Place a bird into the shackle, when the weight has been accepted the red triangle will come on and the display will light up (if back light has been programmed) the display will show **ACCEPTED** and the weight.



BEFORE MOVING THE WEIGHER TURN IT OFF

The same procedure is repeated for each house or pen that is to be weighed.

SHOW DATA

To see weights in any particular house at any time press **SHOW DATA** then by pressing the **INC** or **DEC** arrows the house number to be checked can be selected. Press Enter and the display will show :

- Total number of birds weighed
- Average weight
- Deviation
- Evenness
- CV

PRINT OPTIONS

Data to be printed can be selected by pressing the **PRINT OPTIONS** key, the display will show **PRINT EVERY BIRD** and flash **ON**, to turn this option on or off press the **INC** or **DEC** arrow then **ENTER**. The display will then show **PRINT HISTORGRAM ON** to turn on or off press the **INC** or **DEC** arrow, when selected press **ENTER**. The display will show **PRINT SUMMARY** which can be turned on or off by the **INC** or **DEC** arrows, when selected press **ENTER**. The display will show **PRINT GROUP** where you can select if you want stores grouping together. The display will show **WRITE TO USB** to turn on and off press the **INC** or **DEC** keys.

WRITE TO USB is an option and can only be used if the weigher has a USB socket. If the USB output is on the RS232 printer output will not work.

USING THE USB STICK SOCKET

Select the **WRITE TO USB** under the print options as seen on page 10. Turn on the **WRITE TO USB** using the **INC** or **DEC** key and put in the USB stick. Press the **PRINT DATA** key and the display will show **WRITING TO USB**. When the weigher has finished the display will flash up **FILE WRITTEN OK** and the display will go back to the standard weighing display. The USB stick can now be removed and used on a computer.

If there is no USB stick in the weigher when you try to write to the USB the display will show **WRITING TO USB** followed by **NO STICK FOUND**. If the USB stick is faulty or removed before the file is written the display will show **WRITING TO USB** followed by **ERROR WRITING**.

SET BANDS

If three grading lights are fitted. Press set bands, **GRADE LAMPS ON** or **Off** will be displayed, select **On** by using the **INC** or **DEC** keys and press **ENTER**. **REJECT LIMIT** will be displayed, to increase or decrease the amount press the **INC** or **DEC** keys when set press **ENTER**. **BAND WIDTH** will be displayed, to increase or decrease press the **INC** or **DEC** keys, when set press **ENTER**. The system is then set. Any weight under the reject limit one lamp will come on, the other lamps will come on as per the band width setting.

If the software is version 2.50 or higher then you can view how many birds are in each band by pressing the **SHOW DATA** key followed by pressing the **SET BANDS** key. You can then step through the bands by pressing the **INC** and **DEC** keys.

If five grading lights are fitted. You can turn on the **GRADING LAMPS** as above and have the same **BAND WIDTH** for each band or you can select **SEP**. If you select **SEP** then you can set different **BAND WIDTHS** for each band.

PRINTER OUTPUT

STATISTICS ON

The printout will show:

- The date and time weighing was started and finished
- Data for each store
- Total weighed
- Average weight
- Deviation
- Evenness
- CV
- Target weight (if set)
- Evenness of target

EACH ON

The printout will print the weight of every bird weighed in order.

HYSTORGRAM ON

The printout will show all the birds weighed in 20 gram bands.

WELTECH INTERNATIONAL			
BW-2050 2.50		*3333	
STATISTICS			
Current Data (1)			
Total			12
Average	KGS		2.749
Deviation	KGS		1.479
Evenness	%		25.0
C.V.	%		53.8
From	12-MAR-12	15.58	
To	12-MAR-12	16:06	
No.	Wgts	Ident	
1	5.000		
2	5.000		
3	4.999		
4	1.000		
5	0.999		
6	1.000		
7	1.999		
8	1.998		
9	1.999		
10	2.999		
11	3.000		
12	3.000		
Band	Limits	Total	
0.980	To 1.000	1	
1.000	To 1.020	2	
1.980	To 2.000	3	
2.980	To 3.000	1	
3.000	To 3.020	2	
4.980	To 5.000	1	
5.000	To 5.020	2	
Printed 12-MAR-12 16:11			

CHARGING

The charging socket and Serial RS232 output connector is situated on the side of the weigher.

In the centre of the display is the battery charge indicator.

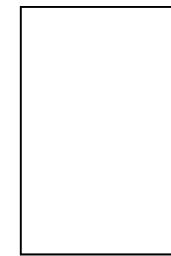
When fully charged the box will go completely black and as the weigher is used the box will start to go clear. This is only a rough guide based on the battery voltage and does not show how much capacity is in the batteries.



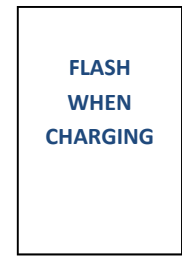
Battery Full



Battery 50%



Battery Empty



Battery indicator will flash when being charged

If the battery should go flat while weighing a **LOW BATTERY** warning will flash in the display and the weigher will eventually turn off. Data already stored in the weigher will remain in memory even if the unit automatically turns off.

To recharge the batteries fully, leave on charge over night.

To check the battery voltage or charging voltage. Hold the **SET UP** button down and turn **ON**, the display will show **WELTECH SET UP** then **DATA STORES**, press **CLEAR** and then the **INC** key. If the **INC** or **DEC** key is pushed the display will show the date, time and battery charge. By pushing the **DEC** key while the weigher is on mains charge the display will show the charging rate from the charger.

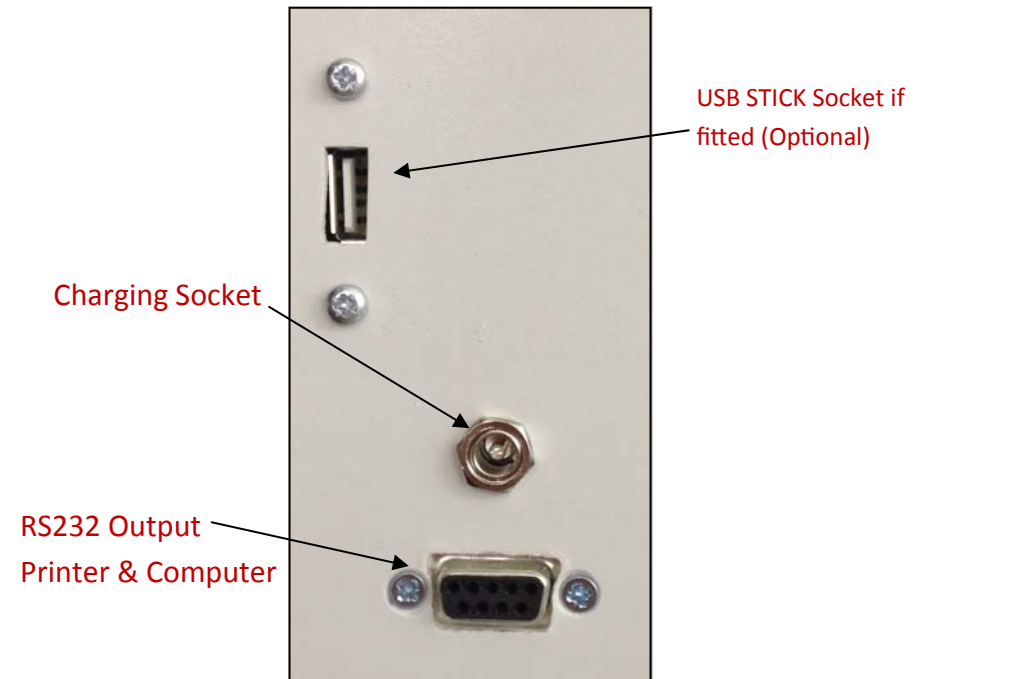
KEY PAD



ON OFF	Turns unit ON and OFF	CLEAR	Clear data stored
TARE	Tares weight	SET UP	Engineers settings
MEMORY STORE	Stores data	SET BANDS	Set grading bands or target weights
SHOW DATA	Displays data	FAST/SLOW	Selects between fast or slow weighing
PRINT DATA	Prints data	PRINT OPTIONS	Set type of printout. Statistics, Histogram, Each.
INC	Increase settings	ENTER	Enters data into store/ command
DEC	Decrease settings	CAL	Sets zero, tare and calibration

PC OPERATION

A PC may be connected to the RS232 connector to output the data. Once the computer is connected and the software is ready to accept data, then press the **PRINT DATA** to output the data.



Communication Settings	
Bits per second	9600
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None

REMOTE COMMANDS

The following commands are accepted at the serial port.

ID?	Send id message
ALL?	Send vertical every bird list for current store
WGT?	Send current weight
DATA?	Send summary report for current store
HYST?	Send histogram for current report
TARG?	Send target weight
TARG,nnnn	Set target weight
DUMP?	Send all weights
STATS	Send a statistics summary
SER?	Send serial number
EACH	Turns on the each bird print
EAOFF	Turns off the each bird print
HYON	Turns on the histogram print
HYOFF	Turns off histogram print
STON	Turns on statistic print
STOFF	Turns off the statistic print
UP	Send bird dump in binary Data Pod format
DATE?	Send the date ddmmyy
TIME?	Send the time hhmm
DATE,ddmmyy	Set the date ddmmyy
TIME,hhmm	Set the time hhmm
CLEAR	Clear memory
PRINT	Print standard reports
SETTS	Print settings report
RESET	Restart the processor
OFF	Power down

USING THE USB

Turn weigher on and open **PRINT OPTIONS**, and make sure **WRITE TO USB** is on.

Plug USB stick into port (Shown on page 15) and press **PRINT DATA**. Once the file is written **FILE WRITTEN OK** will appear on the screen, the data is now downloaded. Remove the USB stick from the weigher and plug into your computer.

Go to **MY COMPUTER** and open **USB DISK FILES**. Now select all the files and right click, a small dropdown menu should appear with the option **OPEN WITH..** now select **CHOOSE DEFAULT PROGRAM** and select **MICROSOFT EXCEL**.

Or

Open Microsoft Excel. Select **FILE** in the top left corner and then click **OPEN**. It will now open a small window, click on **MY COMPUTER** and select the **USB DISK** icon. Select all the files you want to see and then click open. (You selected multiple files by holding down **CTRL** and clicking each file)

SAFTEY CONSIDERATIONS

The BW-2050 is a rugged unit designed for outdoor use but it should be handled with care.

The unit can be cleaned with a damp cloth but under no circumstances be immersed in water.

Carrying the unit by the hook may cause damage to the loadcell and stop you from weighing.

This unit is fitted with rechargeable batteries and will last for 3-4 years.

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Weltech International Limited

**Weltech International Limited
manufacture the BW-2050 to the highest
specification and our aim is to continue
to improve its operation and reliability
and give our customers a product that
suits their requirements.**

SERVICE.

For service and repairs contact your local agent.

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