

6 CHARGING.

ALL WEIGHERS ARE CHARGED USING THE SOCKET ON THE SIDE OF THE UNIT.

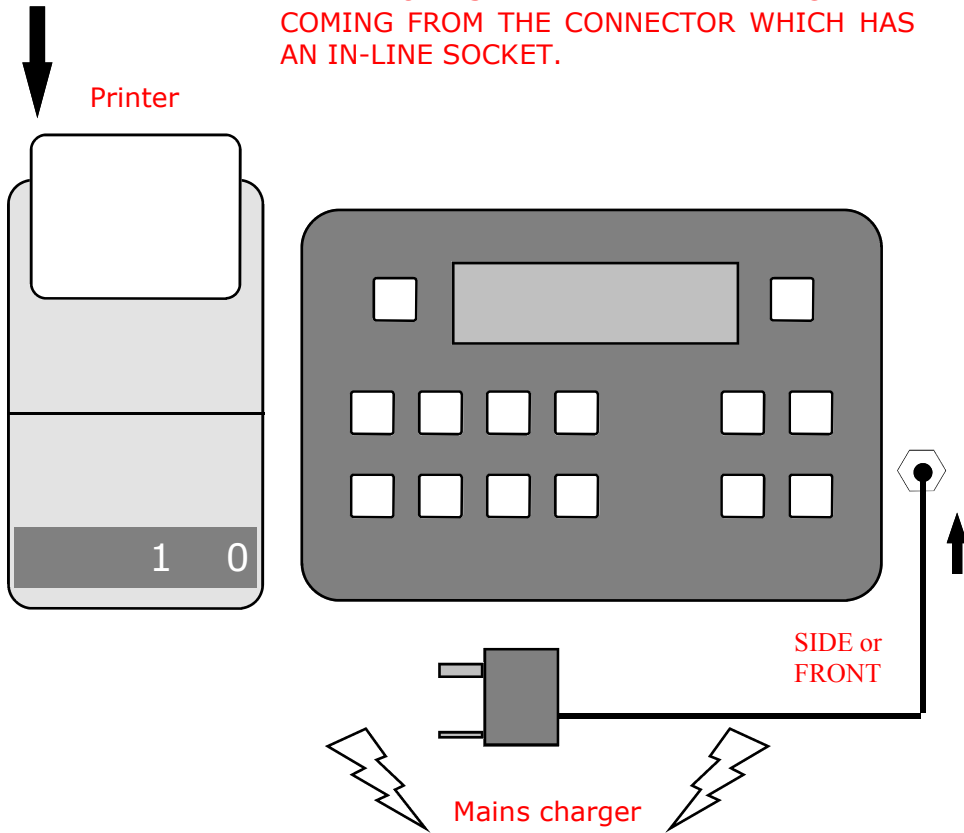
PRINTERS

OLDER PRINTERS WILL HAVE A SOCKET ON THE BACK NEXT TO THE PRINTER CABLE

NEWER UNITS WILL HAVE A FLYING LEAD COMING FROM THE CONNECTOR WHICH HAS AN IN-LINE SOCKET.

Charger socket

Printer



USER MANUAL

Weltech BW-1050

Manual Live Bird Weigher



Logo here

Version 8-1d

4 MAINTENANCE

Apart from cleaning with a damp cloth, the BW1050 requires no special maintenance. The unit cannot be immersed in liquid; disinfecting is confined to using a moist wipe towel or the unit can be enclosed in a poly-bag during use with the hook protruding.

The printer should be office based for optimum life.

The rechargeable batteries will need to be charged after 6-8 hours use. In common with all NiCad batteries a complete discharge and re-charge cycle is advised when the battery life between charges reduces to say 4 Hrs to overcome the battery memory effect. When the batteries are low on power the display will flash **BAT**.

Batteries can be removed during weighing with no loss of memory or data. (N.B. Have a spare charged battery available when in use!)

Two types of printers that have been supplied with the BW1050 kits. Up until 1998 only portable **impact** printers were used which can be identified by the three buttons on top of the unit. These printers have a ribbon inside which produces a faded print out when it is low on ink. Replacement ribbons can be purchased from Weltech.

After 1998 portable **thermal** printers were issued. The main difference being that they have a single green button on the top with a light that changes colour depending on the state of the battery. These printers do not have a printer ribbon but need to have thermal paper rolls inserted rather than normal ones. If a normal paper roll is fitted then the paper will advance but nothing will be printed. Both types of paper rolls are available from Weltech. The battery should be charged for 16 hrs before first use.

The led codes for this printer are tabulated in the back of the manual.

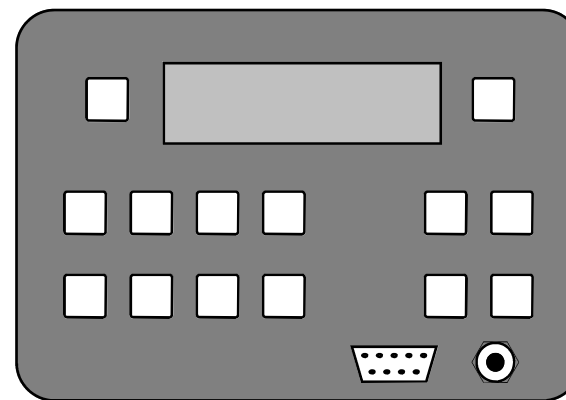
1 INTRODUCTION

The BW-1050 is designed to allow one person to weigh live poultry either individually or in groups and is ideal for all types of birds. It is totally battery operated and will weigh for up to 8 hours between charges. It can be charged from the wall charger supplied, a car charger or the batteries can be removed and charged separately without losing any data already stored.

The 1050 can store up to 2000 individual weights and place them in houses, or pens, numbered from 1-20. Information stored can only be cleared by the operator entering the **CLEAR** key sequence.

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

BW-1050 Control Panel



Note:
On current models
the charger and
printer sockets are
mounted on the
side of the
enclosure

↑ ↑
Printer/Computer Charger connection

KGS / LBS

This key has two main functions.

- 1) to toggle from pounds and ounces to kilos and grammes.
- 2) to enter the SET-UP or CALIBRATION in conjunction with the **HOLD** key.
The display shows a colon after the right hand two digits when in lbs mode.

HOLD

This key has two main functions.

- 1) to freeze the display as a weight is applied or as it is removed.
- 2) to enter the SET-UP or CALIBRATION in conjunction with the **lbs/kg** key.
The display shows flashing decimal points when in the freeze mode.

TARE

This button only has one function: to zero the display if a hanging shackle or other implement is used for weighing. It can be used at any time but care must be taken to ensure the weight of the shackle is not accepted into the memory. This can happen if the **TARE** button is not pressed quick enough once the unit is turned on.

If it is accepted then end statistics will be affected.

ENTER

The main function is to confirm actions and settings.

CALIBRATION KEY SEQUENCE



Release the keys then follow the sequence



After this key sequence, **t *.*.**** should be displayed. At this point any auxiliary device to be used in the weighing process but not to be recorded as part of the total weight can be fixed to the hook (ie hanging shackle). Now press the **TARE** key.



The display will now show **F 0.000** indicating that the shackle etc. has been tared out. Next place a known weight on the hook (approx. 90% of the unit capacity ie 9kg/45kg depending on model). Use the **INC** and **DEC** keys to make the display reading equal to the weight being used and then press **ENTER**.



The display will now show **DONE** and then go back to normal operation. The units memory should now be cleared using the key sequence:

CLEAR ENTER CLEAR

EA	No	Wgts	No	Wgts
	1	0.998	11	6.284
	2	2.001	12	7.275
	3	2.997	13	7.278
	4	2.998	14	7.279
	5	3.991	15	4.275
	6	3.995	16	3.277
	7	3.270	17	3.273
	8	3.997	18	3.280
	9	5.277	19	0.999
	10	5.227	20	2.003

HY	Band Limits	Total
	0.980 to 0.999	2
	2.000 to 2.019	2
	2.980 to 2.999	2
	3.260 to 3.279	3
	3.280 to 3.299	1
	3.980 to 3.999	3
	4.260 to 4.279	1
	5.260 to 5.279	2
	6.280 to 6.299	1
	7.260 to 7.279	3

St	Total
	20
	Average wgt:
	Deviation:
	Evenness(%):
	C.V (%):



To by-pass any setting just press ENTER
To change a setting use inc or dec

Number of stores

10=200

The maximum number of weighings that can be recorded is 2000, which, can be split between 1 to 20 different stores or houses. Each time you press the **INC** or **DEC** key the display will change the number of stores and display the number of weights that can be recorded within that store before it becomes full. (I.e. 1=2000, 10=200) 20=100

Select House

SH Off

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

Fast/Slow Operation

butt 1

The speed of weighing can be changed from normal to a fast setting by using the **FAST/SLOW** button on the front panel. A setting of 1 enables the use of this button and 0 disables it.

Baud Rate

bAud 96

This is the speed at which data is sent and received. The BW1050 works at 9600 Baud, factory setting, and 1200 Baud. The latter is usually only used when connecting the BW1050 to a modem.

Range

rnG 4 rnG2 (50Kg)



This is a scaling factor and should not be altered as it is a factory setting for your weigher.



Did you know that if connected to an 80 column serial printer, the BW1050 will print out a graph plotting every bird weight and an evenness trend line. Added to this it will also print areas for farm details to be entered and all of the options above!

SET BANDS

This button is multifunctional and is mainly used when grading lights have been fitted. Each function is described below.



To move to the next item, press **ENTER**.

GL OFF/ON/SEP

This is a shortcut to enabling and disabling the grading lights function. There are several types of grading machines and some need an external power source to drive the lights fitted. To select the options use the **inc** and **dec** keys.

r 0.000

Once the lights have been set to **ON** or **SEP** you will need to have a reject limit. This is the limit below which the red light fitted will illuminate. To adjust this setting use the **inc** and **dec** keys.

G 0.000 (GL ON ONLY)

Now that you have a reject limit you will need a banding value. This value is used to determine the group into which the weights will go. For example, if you have a reject limit of 1.000kg and a group of 0.100kg, then the bands would show as below.

REJECT LIMIT	0 TO 0.999KG
GROUP ONE	1.001KG TO 1.099KG
GROUP TWO	1.101KG TO 1.199KG and so on..

To adjust this setting use the **inc** and **dec** keys.

SEPARATE

When **GL** is set to **SEP**, four individual limits will need to be entered. Each band is shown by the number on the left of the display and the band limit set by using the **inc** and **dec** keys. When the histogram is printed all four groups and the reject limit will be shown with the total number of birds that have been accepted into each band next to them.

t 0.000

Along with the evenness of the average weight the BW1050 can work out the evenness of the birds weighed against a target weight. This is represented here by the **t** figure. To adjust this setting use the **inc** and **dec** keys. Note if a target is not set, then nothing will be printed.

Set Filter

FIL 2

This setting filters out all movement on the 1050 to create a stable reading. The higher the value the greater the filter and the more accurate the unit becomes. However this does slow down the acceptance speed.

Set filter jump out

J 0.045



This should not be altered as it is a setting for your weigher.

Set Acceptance freeze

AF ON



This should not be altered as it is a setting for your weigher.

Set Printer type

Prnt 1

The 1050 can be set to print on a number of different printers. Your 1050 is set to print on the portable printer as supplied. (More detail in printing from the BW1050 can be found later in the manual.)

Set evenness (uniformity)

E 10

This is the limit used to calculate the evenness percentage (uniformity) of the birds. This setting can be set from 5-25%. However, 10 is a standard used throughout most countries except USA which uses 15.

High Limit

H10.100 H50.10

The loadcell fitted will either be 10kg or 50kg max load. The maximum load weight should include any shackles or other implements used during weighing.

50Kg

Low Limit

L 0.050 L0.10

This is the minimum weight the 1050 will accept in kgs. When the Auto zero is switched on, any value that is lower than the limit set will automatically be tared out. (See **Automatic Zero**)

CONTENTS

1. INTRODUCTION

2. GETTING STARTED

- 2.1 Safety Considerations
- 2.2 Calibrating your BW-1050
- 2.3 Set-up Options

3. OPERATING INSTRUCTIONS

- 3.1 Using the keypad
- 3.2 Normal Operating Procedure

4. MAINTENANCE

5. TECHNICAL INFORMATION

6. CHARGING

7. PRINTER LED CODES

5 TECHNICAL INFORMATION

POWER SUPPLY :	PP3 9V BATTERY (RECHARGEABLE)
POWER CONSUMPTION :	20mA (STANDARD BW1050)
WEIGHT :	1400 GRAMMES (approx')
DIMENSIONS :	178mmx313mm
(INC HOOK AND HANDLE)	
DATA OUPUT/INPUT VIA :	9-WAY D CONNECTOR FEMALE

The BW1050 will work with a number of peripheral devices. These include a bar-code reader, any p.c. with a serial port, serial printers and modems.

When used in **bAud 12** the BW1050 will send the auto answer command to a modem if connected direct. It will then be able to send data via the modem when the correct ASCII commands are used.

The BW1050 does not implement any handshaking. When used with any comm's programs. The port settings should be set as follows:

EMULATION :	AUTO DETECT
TERMINAL :	ANSI
CHARACTERS TYPED LOCALLY :	ECHO
BITS PER SECOND :	9600 (OR 1200)
DATA BITS :	8
PARITY :	NONE
STOP BITS :	1
FLOW CONTROL :	NONE

Some examples of the ASCII codes that can be sent are as follows:

ALL?	Sends number of weights in each store and all weights
WGT?	Sends a list of body weights
STAT?	Sends a list of body weight statistics

All commands must be in upper case.

2. GETTING STARTED

2.1 Safety Considerations

The BW-1050 is a rugged unit designed for outdoor use but should be handled with care. The unit should be cleaned with a damp cloth but under no circumstances be immersed in water.



The BW-1050 is fitted with rechargeable batteries that can be replaced with standard batteries. Under no circumstances should the 1050 be connected to the charger while non rechargeable batteries are installed as damage will result to the 1050 charging circuit.

2.2 Calibrating the BW-1050

The 1050 is calibrated by Weltech before it leaves the factory, but should it need recalibrating at any time the procedure is as follows:

The 1050 should be hanging from a secure support and turned off with nothing hanging from the hook.

Turn the 1050 on while holding down the **Kgs/Lbs** and **HOLD** keys together. The display will show **.C.A.L.**

Release the **Kgs/Lbs** and **HOLD** keys. Now by pushing the **HOLD** key the first dot on the display will go out. By pressing the **Kgs/Lbs** key the second dot will go out. Follow the same sequence until the display shows **t.***.**

By pressing the **TARE** button the display will go to **F.0000**. Put a known weight onto the hook which should be 90% of the maximum weighing capacity of the 1050.(9kg/45kg)

Next, by pressing the **inc** or **dec** keys on the key pad the reading can be adjusted to display the weight on the hook. When the two match press **ENTER**.

3.2 Normal Operating Procedure

When the BW-1050 has been set to suit the users individual requirement it is ready to start weighing.

Hang the 1050 up and turn **ON**. As data may already be stored in the memory it will need clearing. Press **CLEAR** then **ENTER**. The display will read **SURE** then press **CLEAR** again and the display will read **DONE**.

When weighing, the 1050 must be securely supported. If a holder or length of string is being used to hold the bird it can now be placed on the hook. Turn the 1050 **ON** and the display will show the weight on the hook. This can be tared out by pressing the **TARE** button. Sometimes if the weight is above the low limit setting the 1050 will accept it. This can be cleared by following the clear procedure as described above. If the same holder is always used it can be permanently tared by following the calibration procedure as described in Section 2.2.

With the 1050 reading **0.000** and the memory clear, birds can be weighed. When a bird is placed in the holder the display will show its weight. When the 1050 is happy that the weight is stable it will bleep and **A** will appear to say the weight has been accepted. This may take a second or two depending on the amount of movement of the bird. When accepted the bird can be removed and the next weighed and so on.

When weighing is complete the data can then be stored by pressing **MEMORY STORE**. The display will show **Str 1**, press **ENTER**. The display will now show **SURE**, press **MEMORY STORE** again to confirm. All the data will be stored in the first store section. You can now move to the next house or pen and follow the same procedure. **The 1050 must be turned off when moved to avoid spurious readings.**

If **SELECT HOUSE** has been set to **ON** in the set up (see sections 2.3 and 3.1) the data can be stored in the house or pen selected. When

2.3 Set up Options

The 1050 is set in the factory to a standard setting but can be changed by the user to suit his individual needs.

Most user functions are accessed directly from the front panel keys; some less frequently used options and protected settings which are vital to correct operation can be found in the SET UP.

To enter the SET UP routine, follow these steps:

With the 1050 turned off hold down the **MEMORY STORE** key and the **SET BAND** keys together and turn the 1050 **ON**. The display will show **.S.E.T.U P** press the **HOLD** key then the **Kgs/Lbs** sequentially until all the dots have disappeared. The 1050 setup can then be modified. To alter settings the **inc** and **dec** keys are used. A step by step guide is shown below.



Release the keys then follow the sequence below



Weltech manufacture a 10kg and a 50kg version. All values below apply to both except where stated and are default values.

inc ↑

This key has two main functions.

- 1) to toggle functions ON and OFF
- 2) to increase numerical values; for example the reject limit.

dec ↓

This key has two main functions.

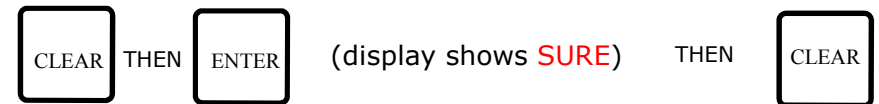
- 1) to toggle functions ON and OFF
- 2) to decrease numerical values; for example the reject limit.

CLEAR

The **CLEAR** button has two main functions.

- 1) clearing down unwanted data from the weigher before a new weighing session (see below)
- 2) exiting the **SHOW DATA** function without having to run through all the stores.

To **CLEAR** data follow the key sequence below.



All information is now cleared and permanently lost

ENTER

The main function of the **ENTER** button is to confirm actions and settings.

Decimal Point



This should not be altered as it is a factory setting for your weigher.

Set Weight Display

This setting determines whether the 1050 starts up in kgs or lbs.

IU 0 = kgs, IU 1 = lbs

Set lbs display

This setting only applies when the 1050 is set to operate in lbs.

SU 1 = ounces, SU 0 = 10ths of a lb (USA)

Grading Lights Option

When grading lights are fitted, this option needs to be switched On or SEP in order for the lights to illuminate in the correct order.

(Note that when On or SEP are selected, the histogram print-out changes.)

Last digit display

This is the increments in which the 1050 will operate Ld 1 = Single grams, Ld 5 = Five grams.

Stability Limit

This is a setting which calculates when the 1050 will accept the weight. The lower the setting the faster the acceptance but the lower the accuracy. This is a factory setting and should not be altered.



Stability Count

This setting defines the number of counts the 1050 makes within the limit setting before accepting the weight. This is a factory setting and should not be altered.



dCpt2 dCpt3 (50Kg)

IU 0

SU 1

GL Off

Ld 1

StL 04

StC 3

n 00000000

It is possible to set an eight digit farm identification number into the unit which will head the print-outs. To adjust each of the digits use the **inc** and **dec** keys and then press **ENTER** to move to the next digit. Note if an id number is not set, then nothing will be printed.

FAST/ SLOW

When the unit is being used for grading purposes it may be necessary to work at speed and this is possible by reducing the accuracy from +/- 2grms to +/- 5grms which significantly reduces the time to reach a stable reading.

Each time the button is pressed the status of the weigher will be displayed before returning to the normal display which will show an extra decimal point to the left if the unit is in fast mode.

PRINT EACH

The user can select the type of information to be printed by the **PRINT DATA** key.

When pressed once the display will show; EA ON or OFF.

When EA is turned ON the weight of each bird will be printed as it was weighed.

When pressed twice the display will show; Hy ON or OFF.

When Hy is selected ON the bird weights are put into a numerical histogram of 20 gram bands.

When pressed a third time the display will show; St On or OFF

When St is selected ON all the statistics are printed

Each one can be turned ON or OFF independently by pressing the **inc** key. The following are examples of printouts from the weighing of 20 birds.



As of version 7-5 a new function was added called **LOG Pr** This was created so data could be downloaded and saved onto a **DATAPOD** or into the **DATAPOD FILE MANAGER** software.

Hide Display

When the 1050 is in use and HD is set to **OFF**, the display will read **0.000**. When set to **ON** it will display **READY**.

Automatic Zero

When set to **ON** any weight on the 1050 which is below the low limit setting will automatically zero the display.

Set Power down

This option enables the user to set a time for the 1050 to automatically turn itself off to save power when not in use . It is set to 15 minutes.



NOTE NO INFORMATION IS LOST WHEN THE 1050 IS TURNED OFF

Divisions

The BW1050 has the ability to work out an average weight for a given multiple in a single weighing. I.e. if the **DIV** was set to 10, 10 chicks could be placed into a bucket and weighed at the same time. The BW1050 would then work out the average weight and store this as 10 birds at that weight. However, because of the nature of this type of weighing, some of the statistics will not be printed as they would be false. (The maximum number for the setting is 10.)

hd OFF

AU ON

Pd 15

div 1

3 OPERATING INSTRUCTIONS

3.1 USING THE KEYPAD

MEMORY STORE

This key is used to store weights in individual pens or houses. It can be used in two ways depending on how the **SH** is set in the main SET-UP. With **SH** off, the houses run in numerical order and advance each time. The key sequence for this is: **MEMORY STORE, ENTER, MEMORY STORE**.

With **SH** on, the user chooses which store number to put the weights into. The key sequence for this is: **MEMORY STORE** then the **inc** and **dec** keys to move to the desired store number and then press **MEMORY STORE** again. From this point all weights accepted will be placed into that store.

SHOW DATA

This key is used to display the statistics of the data in each memory store. Once pressed the display will show the data for the current store being used. It will then go back to store number one and start to toggle through the statistics automatically. If **GL=ON** then the display shows each band , indicated by a single bar in the first digit, followed by the number of readings (birds) in that band and returns to the current store display.



This can be speeded up by using the **ENTER** key.

It is also possible to jump from store to store if required. To do this wait for the display to show a store number and then press either the **inc** or **dec** keys. The display will then skip through the stores. Once the desired store number is displayed press **ENTER**.



A shortcut to exit the function without waiting for the unit to run through all the stores is to simply press **CLEAR** when a store number is shown.

PRINT DATA

This key sends the data from the machine. The type of data sent is determined by the **PRINT EACH** key.

7 PRINTER LED INDICATOR CODES

MEMORY STORE is pressed the display will show **Str 1**. To change this press the **inc** or **dec** buttons until the house you want is displayed then press **ENTER**.

To view the weighings at any time press **SHOW DATA**. Information will scroll across the display automatically or can be advanced using the **ENTER** key.

When the weighing is complete turn the 1050 **OFF**. It can now be connected to a printer or computer and turned on to download the stored data.

<u>PATTERN</u>	<u>BATTERY</u>	<u>PAPER</u>
GREEN	CHARGING	OK
GREEN/ ORANGE/ GREEN/ ORANGE	CHARGING	LOW
ORANGE	CHARGING	LOW
GREEN/ OFF/ GREEN/ OFF	RUNNING	OK
GREEN/ OFF/ ORANGE/ OFF	RUNNING	LOW
ORANGE/ OFF/ ORANGE/ OFF	RUNNING	LOW
RED/OFF/ RED/OFF	LOW	OK
RED/OFF/ ORANGE/ OFF	LOW	LOW
NO LIGHT	FLAT,OR IN SLEEP MODE	