DIGITAL SCALES ™

DigiWeigh

DWP-98D Dual scale

User's Guide

PLEASE READ THIS MANUAL VERY CAREFULLY BEFORE ATTEMPT TO OPERATE THE INSTRUMENT

Specifications subject to change without prior notice

CONTENTS

1. INSTALLATION

Because of metrological legislation, installation/some metrological parameter settings are limited to be done by authorized personnel only. Do not attempt to change any of the built-in metrological parameters. Contact your dealer for more information and technical assistance.

CAUTION:
The instrument is legal for trade only when it is sealed (and/or stamped) and bearing a serial number. Do not attempt to break the seal (or stamp) affixed to the instrument or remove the serial number. Contact your dealer for more information and after sales service.

To ensure performance accuracy, do not use the instrument in where or when the environment condition falls beyond as those listed on **SPECIFICATIONS**.

Do not attempt to open the instrument, no user serviceable parts inside.

2. SPECIFICATIONS

2.1 GENERAL SPECIFICATIONS

DWP-98D Series(resolution 1:60000; unit :kg,lb,g)

Model#	DWP-98CCHD	DWP-98CBHD
Max Capacity	6kg	15kg
Readability	0.1g	0.2g

Common Specification

Stabilization time	2 second typical
Operating temperature	0°C - 40°C / 32°F - 104°F
Power supply	220~240V AC (110V optional) 50/60Hz built-in rechargeable battery 6V4AH.
Display	3 windows 6 digits 0. 8'LCD display. and 11 status indication
Zero range	0mV~8mV
Housing	ABS housing and Stainless steel pan(230*290mm)
ADC	$\Sigma - \Delta$
External Resolution	1/60000
PLU	100
Interface	RS-232 Output(second RS232 and RS485 optional)

3. KEYS, DISPLAY AND CONNECTIONS

1	2	3	SAMPLE	@WT
4	5	6	MR	M+
7	8	9	PLU	RECALL
.	0	CE	TARE	ZERO
①/②	UNIT	CHECK	#SET	ON/OFF

1.ON/OFF
Power on /off the indicator

2. UNIT PIECE WEIGHT SET KEY (@WT)
Press this key to confirm the unit piece weight entered by numeric keys.

3. WEIGHT UNIT KEY
Press this key to shift among various weight units.

4. M+ KEY
Press this key to accumulate the current quantity to memory
Press this key to print out the result
Press this key as next parameter when setting

5. MR KEY
Press this key to read the accumulate result

6. TARE KEY
Press this key to tare off the weight of a container.
Press this key to enter parameter setting when count down
        or confirm and save parameter when setting;

Press this key to confirm the preset-tare by numeric keys

7 SAMPLE QUANTITY SET KEY
Press this key to confirm the sample size (pieces) entered by numeric keys.

8. CHECK KEY
Press this key to set upper & lower quantity check limit and to trigger the quantity check mode.

9. ZERO KEY
Press this key to set weight displayed to zero when an empty scale has drifted away from a true zero reading.

10. CE KEY
Press this key to clear value entered.

11. NUMERIC KEYS
Numeric keys 0 ~ 9 and decimal key.

12. ①/② KEY
To convert the two channels for main and extend platform
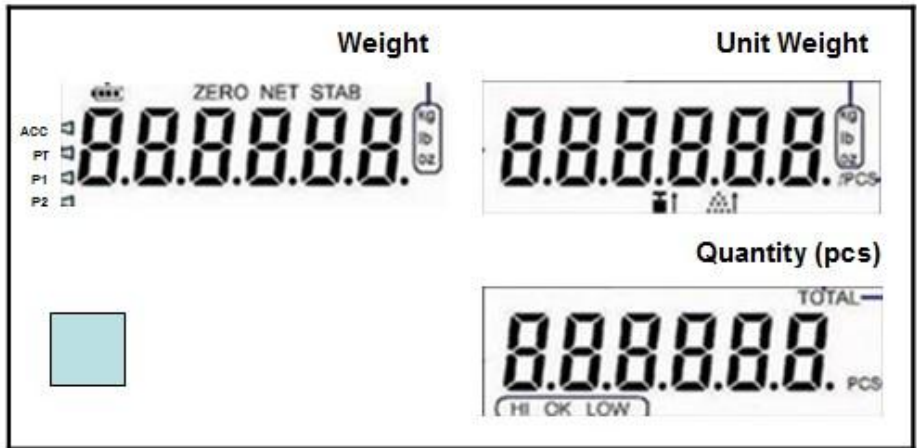
13. #SET KEY
Press [SET] to get quick setting parameter

14.PLU KEY
Press this key to store the unit weight (100 unit weight can be stored by press 0-9 numeric keys.)

15.RECALL KEY
Press this key to recall the unit weight as stored before

16. BATTERY POWER / LEVEL INDICATOR
This indicator appears to show:-
- The instrument is running on the built-in rechargeable battery,
- It shows the remaining battery level.

17. ZERO INDICATOR
Visible when instrument at true zero weight status.

18 .NET INDICATOR
Visible when tare function is in effect. The weight being shown on **Weight Panel** is net weight.

19. STABLE INDICATOR
Visible when weight reading is stable.

20. WEIGHT UNIT INDICATOR
kg = kilogram, g = gram, lb = pound

21. ARROW INDICATION
Acc=appear when with accumulate result in store
PT =appear after preset tare
P1 =appear when main platform used as current
P2 =appear when extend platform used as current

22. UNIT PIECE WEIGHT INDICATOR   /pcs

The value left to it is the unit piece weight. This indicator remains visible during normal operation status.

23. INSUFFICIENT SAMPLE WEIGHT CARNING INDICATOR

Visible when total weight of the sample size is below satisfactory level. If possible, increase the sample quantity unit this indicator disappears.

24. INSUFFICIENT UNIT PIECE WEIGHT CARNING INDICATOR

Visible when the unit piece weight of the sample is below satisfactory level. If possible, increase the sample quantity.

25. QUANTITY INDICATOR   (pcs)

The value left to it is the quantity of the current transaction. This indicator remains visible during normal operation status.

26. QUANTITY CHECK RESULT INDICATORS

- HI = Quantity is higher than the HI limit set.
- OK = Quantity is in between than the low and HI limits set.
- LO = Quantity is lower than the LO limit set.

A. WEIGHT PANEL

Weight value is shown here.

B. UNIT PIECE WEIGHT PANEL

Unit piece weight is shown here.

C. QUANTITY PANEL

Quantity value is shown here.

D. BUBBLE LEVEL

Refer to this bubble to obtain a horizontal position for the instrument.

E. DC JACK INPUT

External power adaptor is plugged in here right below the scale

F. RS232 COMPORT

9 pin (DB9) RS232 interface output for connection with computer and other peripherals.

Pin2=RX   Pin3=TX   Pin5=GND

G. SECONDLY PLATFORM CONNECTION

LOAD CELL CONNECTOR PIN #	ASSIGNMENT
1	EXCITATION +ve
2	EXCITATION -ve
3	Shield
4	SIGNAL -ve
5	SIGNAL +ve

9 Pin RS232 Connector

1 EXCITATION –
6 EXCITATION +
8 SIGNAL –
9 SIGNAL +

4. GETTING STARTED

In order to obtain accurate weighing and counting result, the instrument must be placed on a strong and level surface horizontally.

Avoid using the instrument in environment where excessive wind flow, vibration and extreme temperature change exist.

The instrument should be installed from any sources of excessive electrical noise. For full EMC or for RFI immunity, termination of cable shields and correct grounding of the instrument is essential.

General warning: -
- **The instrument is not an explosion proof device.**
- **The instrument is not a water proof device.**
- **Do not open the instrument, no user serviceable parts inside. Always contact your dealer for service.**
- **The instrument not to be subject to shock, excessive vibration or extremes of temperature (before or after installation).**

4.1 BUILT-IN RECHARGEABLE BATTERY

The instrument is equipped with a built-in rechargeable battery. Before first time use, recharge it for at least 8 hours to ensure the best battery performance.

4.2 POWER ADAPTOR

Before plugging in the power adaptor, check and make sure the input voltage of the adaptor matches with output voltage of the electricity outlet. If not, contact your dealer immediately.

4.3 CONNECTING OTHER DEVICES

Always turn the instrument off before making any connections or disconnections with external devices.

4.3.1. Connecting with a Computer or Mini printer
4.3.2. Connecting secondly platform

5. INITIAL SETUP
5.1 INTERNAL SETTINGS
Preferred application parameters can be checked or set through internal functions. Refer to **5.4** for internal function description and setting procedures.

5.2 HOW TO ENTER AND SELECT INTERNAL FUNCTION
Follow the below steps to enter and select desired parameter of an internal function.

  a. Turn the instrument off and on again
  b. Press **[TARE]** during countdown,
  c. The instrument displays **RS232**
  d. Hit **[RECALL]** to go to **CAL** then hit **[TARE]**
  e. Enter password when **P----** appears **"0000"**
  f.   "The instrument is now in internal function,

5.3 KEY FUNCTION DURING INTERNAL FUNCTION SETTING
  ●   **[TARE]** = Enter, save and return,
  ●   **[M+]** = Quit without saving,
  ●   **[CHECK]** = Go next,
  ●   **[RECALL]** = Go previous,
  ●   **[CE]** = Clear,

5.4. Parameters setting
Main and extend platforms share the paramter setting from RS232 to Filter.
Calibration parameters are set seperately

FUNCTION SHOWN	TO CHECK AND SET	PARAMETERS/NOTE DEFAULT=**				
	Port 1 RS232 (RS485 optional) below parameter is same of port 1 and 2;Port 2 RS232(only will work if optional)					
	Serial Mode (Set Output Mode)	**PC (Computer) (NOTE A)	manual (Printer) (NOTE B)	AUTO1 (NOTE C)	AUTO2 (NOTE D)	CMD (NOTE E)
	Baud(Set Baud Rate)	1200	2400	4800	**9600	19200
		38400	57600	115200		
	NOTE A:-if PC (output to computer) is selected,set also →protocal→int					
	protocal	*1	2	3	4	
	→int=time delay interval between each data transmission.4 parameters are available for selection					
	0=max transmission speed					
	**0.5=0.5 second time delay interval between each transmission					
	1.0=1.0second time delay interval between each transmission					
	1.5=1.5second time delay interval between each transmission					
RS232	NOTE B:-If Manual(output to printer),set also →ACC→Stable→Print From→print format→Copy					
	→Copy=number of copy to be printed.8 parameter are available					
	Copy 1=Send 1 copy					
	**Copy 2=2 copies					
	…					
	Copy 8=Send 8 copies					
	→Stab Cont=Stable Control					
	OFF(data is sent to printer when <print> is pressed)					
	**ON(Output to printer is sent only when weight is stable)					
	→Printer Form=Minimum weight to be printed 21 parameters are available:					
	0d(Minimum weight to be printed disabled					
	1d(no printout if weight is below 1d)					
	…					
	20d(no printout if weight is below 20d)					

Refer to SPECIFICATIONS for d value or contact your dealer for more information.

	→Format	format 1=print in Horizontal format; format 2=print in Vertical format		
		Only when format 2,scale can print out the accumulate result		
	→ACC MODE	on		**off
		on= Accumulate and print at the same time .		
		off= only print without accumulate		
	NOTE C:If AUTO1 is selected, send out sigal once automaticly when weight is put on scale and quantity is shown. NOTE D:If AUTO2 is selected, send out sigal once automaticly when weight is moved away from scale NOTE E:If CMD is selected , allow PC to send out command to indicator,contact your dealer for COMMAND if need			
	If two ports set to manual(printer),only port 1 will work			
ADCnt	Internal Code	Press<TARE> to zero the offsetvalue and to observe the span value of exact load added		
TIME	Time	To change time,enter a new time through numeric keys then press <TARE>		HH/MM/SS
DATE	Date Format &Date Value	To change date,enter a new value through numeric keys then press <TARE>		
		** DD/MM/YY	YY/MM/DD	MM/DD/YY
BK	backlight Mode	select 1 to 9 (9 is most brightness)		
POWER	Auto Power Off Time(Minutes)	**OFF		1 / 2 / 5 / 10 / 15
Key bP	Keypad Buzzer	OFF		**ON
	Instrument remains powered on when powered by extern power adapter			
CHK bP	check buzzer mode	**in	out	off
	in=buzzer when weighing value is within range out=buzzer when weighing value is out of range off=buzzer disable			
UNIT	kg	g		Lb
	Press <TARE> to shift every unit ON or OFF when weighing status			
Filter	filter speed	select 1 to 6(1 for bad working enviroment where vibration,wind flow, 6 for good working enviroment where wind and vibration have no affect)		
CAL	calibration parameter setting	restricted functions which may request a password or hardware key to access. These functions are usually for dealer and authorized personnel only and all settings these functions are monitored and recorded. Do not change any setting of these functions. Set below calibration parameters seperately for original and extend platform.		

To access below function,either:
1) short circuit the enable pins of the ADJ located on main board with a jumper,or
2) enter a correct passward when"P ---" appears

C-Unit	Calibration Weight Unit	**kg	lb			
	After changing calibration weight unit, Re-calibration after changing weight unit					
DESC	Decimal point	0	0.0	0.00	0.000	0.0000
CAPA	Capacity	Set max capacity of scale				
Inc	devision	Set scale devision				
Auto-Z	Auto zero tracking speed	0.25 / **0.5 / 1 / 1.5 / 2 / 2.5 / 3.0 / off (d/sec)				
P-Zero	initial Zero Range(%)	1 / 2 / 5 / **10 / 20 / 50 / 100 / off				
K-Zero	Manual Zero Range(%)	1 / **2 / 4 / 5 / 10 / 20				
Filter	filter speed	select 1 to 6(1 for bad working enviroment where vibration,wind flow, 6 for good working enviroment where wind and vibration have no affect)				
G1	Gravity Factor of Calibration Place	**9.7940	●For advance dealers only			
G2	Gravity Factor of Calibration Place	**9.7940	●●Voided if recalibrated			
Linear	Linearity Compensation On/Off	ON	OFF	ON=Enable OFF=Disable NOTE: If only use U-CAL , make sure set Linear as off		
U-CAL	User Calibration	Suggested Calibration load > 50% of Max				
L-CAL	linearity Calibration	It is used to create new Linearity compensation co-efficient. Before calibration,Set Linear=ON, and then complete all calibration steps for zero,LD1 and LD2. Suggested Calibration Load: Ld1=1/3 of Max Ld2=Max				
M-tare	repeated tare	Mode 1	**Mode 2	Mode 1=repeated tare unavailable Mode 2=repeated tare available		
Count	calibration parameter setting way	count	will increase count number when power on indicator			
		jump	need jumper to set calibration parameter			
PASS	password setting	Enter new password for calibration parameter setting				
Reset	reset parameters	Reset all parameterd to initial				

6. INSTRUCTION FOR USE

6.1 POWER ON /OFF

Press on/off key for 2 seconds on panel, instrument is on and displays: -

  a.   software and revision number and capacity of instrument,
  b.   countdown process starts
  c.   all LCD segments,

  After that, the instrument is ready for operation.

  d. the Arrow P1 or P2 will show which is the current platform

Press on/off key for 2 seconds when the scale is on and in weighing status to switch off the scale

6.2 START WEIGHING

  a.   If zero weight cannot be obtained when unloaded, press **[ZERO]**.
       After **[ZERO]** is pressed, **Zero Indicator** appears.
       Refer to **SPECIFICATIONS** for maximum zero range,
  b.   Always place an object onto platter gently. Excessive force applied to platter may cause damages to the weight sensor inside instrument,
  c.   Weight of the object is displayed on thus unit automatically,
  d.   It is a good practice to remove all loads from platter after weighing. It will prolong the life of the weight sensor inside instrument.

6.3 ABOUT WEIGHT UNIT CONVERSION

The instrument supports conversion among weight units. Press **[UNIT]** to shift between kg, g and lb.

To enable or disable a particular weight unit, set it ON or OFF respectively in internal Unit.

The weight unit being employed before power off will be employed when turned on again.

Note: Select the suitable unit before counting function. Can not change unit during counting function.

6.4 TARE OFF THE WEIGHT OF A CONTAINER[1]

Tare function is used to temporarily set the instrument to zero (such as cancelling the weight of a box or a container) in order to get the net weight result

6.4.1 Enable / Disable Repeat (Multiple) Tare

Depends on internal function setting, repeated (multiple) tare operation may be enable (**Mode 2**) or disabled (**Mode 1**). Contact your dealer for more information.

When repeat (multiple) tare is enabled: -
1. the instrument will permit multiple tare operations provided that both of the below requirements are fulfilled: -
    - The tare operation does not permit a reduction of the value of the tare;
    - The tare effect can only be cancelled when there is no load on the platter.
2. tare effect can only be cancelled when container is removed and gross weight is zero.

6.4.2 Manual Tare

When a container is used, follow the below steps to tare the weight of the container off to get a net weight result.
a. Remove all loads from platter,
b. Make sure that the **Zero Indicator** is on. If not, press **[ZERO]** to set weight reading to zero,
c. Place container on platter,
d. Press **[TARE]**,
e. **Net Indicator** appears to indicate tare is in effect and weight reading is net weight.
f. To cancel tare effect, remove all loads and container from platter and press **[TARE]** ,

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[1] The tare weight is deducted from the weighing capacity (Max), reducing the maximum weight that can be displayed.

g. **Net Indicator** disappears. Tare effect has been removed and weight reading is gross weight.

6.4.3 Preset Tare

This feature enables the user to manually enter the tare weight. During normal operation, enter the pre-determined tare weight through numeric keys then press **[TARE]**. This pre-determined tare value will be deducted. Arrow for pre-set tare will be shown.

To cancel the preset tare effect, remove all loads from platter then press **[TARE]**. Press **[ZERO]** ,then Arrow for pre-set tare will be disappear

NOTE: -Manual tare is enable when preset tare is in effect. Manual tare will cancel the effect of preset tare.

6.5 QUANTITY COUNTING

Quantity counting starts with determining the unit piece weight either by keyboard entry or sampling process.

6.5.1 Entering Unit Piece Weight [2]

This method is used where unit piece weight is known and is highly standardized.

- a. Refer to **6.2** to **6.4** for zero, selecting preferred weight unit and tare operation,
- b. Enter the unit piece weight and press **[@WT].** The unit piece weight is now displayed on the **Unit Piece Weight Panel**.
- c. Place a load on the platter. The weight of the load is displayed on the **Weight Panel** and the quantity is displayed on the **Quantity Panel**.
- d. To enter new unit piece weight, repeat step **b** above.

6.5.2 Sampling Process

This method is used where unit piece weight is unknown or the weight of individual piece is not highly standardized.

[2] When the individual unit piece weight is not standardized, it is strongly recommended that counting procedures as described in **6.5.2** should be employed.

a. Refer to **6.2** and **6.4** for zero, selecting preferred weight unit and tare operation,
b. Place a sample size with known quantity on platter
c. Enter the quantity of the sample through the numeric keypad and confirm by pressing **[SAMPLE]**.
d. The instrument will automatically determine the unit piece weight and display it on the **Unit Piece Weight Panel**[3].
e. Step by step add more load onto the platter (or remove part of the load from the platter),
f. The latest Weight, unit piece weight and total quantity would be displayed on the corresponding panels,
g. To start a new sampling, repeated step **a** to **d** above.

6.5.2 Sampling process between main and extend platform

With a remote weighing base or platform that can be any size .Can switch between the two scales: Counting sample on light capacity unit and switch to heavier capacity base when larger quantities are required.

This method is used where unit piece weight is unknown or the weight of individual piece is not highly standardized.
a. Refer to **6.2** and **6.4** for zero, selecting preferred weight unit and tare operation on the light capacity platform(make sure the arrow point to current platform)
b. Place a sample size with known quantity on platter
c. Enter the quantity of the sample through the numeric keypad and confirm by pressing **[SAMPLE]**.
d. The instrument will automatically determine the unit piece weight and display it on the **Unit Piece Weight Panel**
e. Press the ［①/②**]** to switch arrow to larger platform; Now this platform will be the current platform for quantity counting
f. Step by step add load onto the larger platform
g. The latest Weight, unit piece weight and total quantity would be

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[3] At this point, sampling process is completed and **Auto Piece Weight Enhancement Function** comes into effect.

displayed on the corresponding panels,
To start a new sampling, repeated step **a** to **f** above

6.7 MEMORY ACCUMULATION FUNCTION
6.7.1 To Accumulate a Transaction to Memory

a. When quantity is being displayed on **Quantity Panel**, press **[M+]** to and accumulate data of current transaction to memory,
b. The instrument: -
   - displays "**ACC n**" on **Quantity Panel.   ACC** denotes data has been accumulated to memory. Arrow point to **ACC** is shown.
     n donates the number of transactions which have been accumulated to memory.
   - displays total accumulated value (total weight and total quantity) on **Total weight panel and Unit Weight Panel.**
   - output transaction printout(s) through the RS232 comport. The instrument returns to normal operation status after 2 seconds if the RS232 setting is manual and ACC is on
c. Repeat **a** for subsequent transactions

6.7.2 Memory Recall and Clearance
a. Remove all loads from platter,
b. Press **[MR]** to recall total accumulated weight from memory,
c. The instrument displays: -
   Display "**ACC n**" on **Quantity Panel.   ACC** denotes data has been accumulated to memory. Arrow point to **ACC** is shown; **n** donates the number of transactions which have been accumulated to memory. Displays total accumulated value (total weight and total quantity) on **Total weight panel and Unit Weight Panel.**
e. Press **[M+]** to print out the accumulate result if the RS232 setting is manual and format=2
d. At this point: -
   - Press **[ZERO]** to quit or,
   - Press **[CE]** to clear memory, then **[ZERO]** to return to normal operation status.

6.8 QUANTITY CHECK FUNCTION[4]

6.8.1 To Enter High and Lo Quantity Limits

The instrument is equipped with quantity check function. Follow the below steps to trigger checkweighing mode: -

a. During normal operation, press **[CHECK]**.
b. The instrument displays **High Limit** and current HI limit value is displayed on **Quantity Panel**.
c. Press **[TARE]** to accept or enter a new HI limit through the numeric keys and then press **[TARE]** to confirm,
d. The instrument then displays **Lo Limit** and current LO limit value is displayed on **Quantity Panel**.
e. Press **[TARE]** to accept or enter a new LO limit through the numeric keys and then press **[TARE]** to confirm,

Hints: -

1. For normal comparison, set both HI and LO limits,
2. To check only if result is lower or equal to LO (result ≤ LO), set HI limit = 0,
3. To check only if result is higher or equal to HI (result ≥ HI), set LO limit = 0,
4. To check if result is equal to a specified value, set both HI limit and LO limit = the specified value

6.8.2 Visual and Audio Quantity Check Signals

6.8.2.1   **Visual signal**: - Quantity check result is displayed by one of the **Check Result Indicators** located on **Quantity Panel.**

6.8.2.2.   **Audio signal**: - depends on setting of internal function F5, audio signal can be triggered when result is = within range, out of range or turned off.

6.8.3 To Quit Checkweighing Mode

To quit checkweighing mode, set both HI and LO limits to zero.

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[4] Quantity check function will not function when weight reading is less than 20d.

6.9. Quick setting

Press [SET] to get quick setting parameter ,Press **[TARE]** to enter and **[M+] and [RECALL] to shift :**

PARA, including time, date, back light, auto power off , key beep, unit ,

CHECK , setting checking beep mode, same as mentioned in 5.4

RS232, setting RS232 parameter , same as mentioned in 5.4

RECHARGE setting : To check the currency when charging(mA)

Count : 1) calibration count value; **2)**parameter set count value,

Quit setting by press [ZERO]

Quit Count info need by press [ZERO] for 5 seconds

7. RS232 DATA OUTPUT

Data output parameters are fixed as below: -

- Data Bit = 8
- Parity = None
- Stop Bit = 1

There are 2 data output modes (PC and Prt) are available[5]. PC is for communication with computer and other peripherals which accepts and processes continuous data communication. Prt (printer) is for transmission to printer or other peripherals which accept only single or manual data transmission.

Baud rate has to be set before proceeding to other settings.

7.1 PC (COMPUTER) MODE

Weight status and data are sent under the PC (Computer) Mode). Data is transmitted in ASCII code. Data format is listed on below table.

DATA BIT	DESCRIPTION
1~2	**MOTION STATUS** US = UNSTABLE ST = STABLE
3	**COMMA SEPARATION**
4~5	**NET/GROSS** NT = NET WEIGHT GS = GROSS WEIGHT
6	**SIGN** (Sign of weight reading) Positive = space. Negative = minus (-)
7~13	**WEIGHT VALUE** 7-character string containing the current weight including location of decimal point. If there is no decimal point, then the first character is a

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[5]   Refer to **5. INITIAL SETUP** for setting information

	space.
14	**COMMA SEPARATION**
15~16	**UNIT** **kg = kilogram** **g_= gram (_ = blank space)** **lb = pound**
17	**Cr**
18	**LF**

7.2 PRT (PRINTER) MODE
7.2.1 Printing Current Transaction
A standard printout as will be sent through the RS232 Comport when **[M+]**is pressed. Refer to **Standard Printout Sample** on next page for description.

Number of copies sent = the number of copy set in internal function Refer to **5 INITIAL SETUP** for more information. If extra copies are needed, press **[M+]** again.

7.2.2 Printing the Totalized Accumulated Result
Follow the below steps for to print the totalized accumulated result: -
   a.   Remove all loads from platter,
   b.   If zero weight reading cannot be obtained when unloaded, press **[ZERO]**
   c.   **Press [MR]** then followed by **[M+]**, The below data and format will be sent,

Refer to **Totalized Accumulated Printout Sample** on next page for description.

Format=1

DATE	TIME	No.	COUNT	TARE	NET	TOTAL	UNIT.W
01-01-2001	00:00:10	7 A	10 P	0.0000kg	0.2001kg	10P	20.0052 g
01-01-2001	00:00:20	8 B	56 P	0.00kg	1.12kg	66P	20.0052 g

A and B stand for the data is from which platform

Format-=2

Standard Printout Sample	**Description**

TIME 12:08:57 DATE 07.08.2010 No. 0 NET 4.000kg UNIT WT. 0.5 g Q'ty PCS HIGH 5000PCS LOW 4500PCS HIGHER THAN LIMIT	1. Time of printing, 2. Date of printing, 3. M+ sequent number 4. Net weight, 5. Unit piece weight, 6. Quantity, 7. One blank line, 8. One blank line, 9. HI limit set[**] 10. LO limit set[**] 11. Quantity Check result

Totalized   Accumulated

Printout Sample	**Description**

TIME 13:48:23 DATE 07.08.2010 No. 4 TOTAL 14997PCS	1. Time of printing, 2. Date of printing, 3. Total No. of transaction 4. Total accumulated quantity

8. BATTERY POWER AND RECHARGING

Remaining battery power of the built-in rechargeable battery is displayed on the **BATTERY POWER / LEVEL INDICATOR.**

8.1 SYMBOLS AND REMAINING POWER: -

Full Battery: ≥ 6.3V;
2 Blocks: ≥6.0V;
1 Block: ≥5.7V
Frame only: ＜5.7V

8.2 BATTERY OPERATION TIME

Depends on the battery condition, a fully charge new rechargeable battery will usually give (when connect to one 350 ohm load cell): -
- Around 70 hours of continuous operation with backlight is highest
- Around 200 hours of continuous operation without backlight.

8.3 RECHARGE BATTERY

When ⊏▢▢▢⊐ appears, (when battery is less than 5.7V), it means the built-in rechargeable battery is at low voltage status. It is recommended to recharge as soon as possible.

To protect the built-in rechargeable battery, this instrument will power off automatically when battery voltage is at extremely low level (when battery is at around 5.4V). If this is the case, do not attempt to power this instrument on. Recharge this instrument immediately. Fail in doing so may cause unrecoverable damage to the built-in rechargeable battery.

Battery charging status is shown on LCD **CHARGE STATUS INDICATOR**:

⊏▢▢▢⊐

When charge , the status is shift of 1 block,2 block ,3 block and only frame Battery recharge is possible while operating. Overcharge protection circuit is built inside to prevent battery damages caused by overcharge.

Heat will be generated during recharging and it is normal to feel minor heat at front housing of this instrument.

9. ERROR CODES

Error Code No.	Description
Err 1	Time value error
Err 2	Date value error
Err 3	Logic error. LO limit is higher than HI limit (and HI is not = 0)
Err 4	Not sense the loadcell signal
Err 5	Exceed maximum power on zero range
Err 6	Exceed maximum manual zero range
Err 7	Tare operation error
Err 8	Offset out of range / unstable during power on
--oL--	Overload (Gross weight is more than Max plus 9d)

10. DAILY CARE AND MAINTENANCE

- Clean the instrument with a soft, damp cloth. If necessary, use a mild detergent in water,
- Do not use any harsh, abrasive material, acetone, volatile solvent, thinner or alcohol for cleaning,
- Verify the accuracy of this unit periodically. Re-calibrate this unit if necessary. In some countries, calibration requires authorized / qualified agent. Contact your dealer for more information,
- Store this unit in a dry and clean place,
- Recharge battery before and every 2 months during long time storage.