



Orthoptic Digital Handset Crane Scale

Model: DWP-C2XW

User Manual

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Clear tare

In the state of "Tare" (with the tare light on"), press the button "Tare On/Off" or the "button" on the remote, tare clearance and it will show the gross weight, and quit "tare" ("Tare" indication light off)

Remarks: This feature is only for immediately peeled, no such function for delay peeled.

2.3 Check (Look back) the past 18 weighing records

The green button at the front panel of the scale is for checking. Press once for the latest display. (Showing LSt-1 for one second and the value for 4 seconds) twice for second latest display, and so on. It will show max 18 records at one time by pressing the button. It returns to weighing status 5 seconds after checking the record.

In the state of "checking", press "Tare On/off" to quit "checking weight value" immediately and return to the weighing status.

If the modified dimensionless parameters, the decimal point location parameters, and after calibration, is automatically cleared to see the number of parameters.

2.4 Production Time:

The boot reset self-test before the end, if the [ON] button according to the self-diagnosis display after the production date, until the key release. Such as the November 3th, 2008 production, showed 08.11.03 (first 2 figures for years; the middle 2 figures for month; last 2 figures for date).

2.5 Overload times display

The parameters of the factory is 0, the maximum display value of 255 times (overload more than 255 times display 255). Empty after each overload when the scale parameter +1. Each power-up from the MCU's internal EEPROM read

Power reset the self-test, if the [View] button pressing, it shows the number of overload until the key release

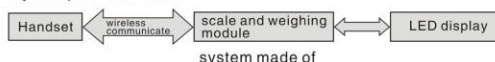
2.6 Low battery alarm

Scale battery < 10%, off automatic (Except self-test when turn on), to prevent battery discharge.

10% ≤ Scale battery < 15%, display flashing (Except self-test when turn on), to remind charge on time.

§ 1 General Introduction

This handset direct-viewing digital crane scale is combined by scale body, weighing module and handset. Additional, can match with 1.2" super bright digital screen (or LCD) with 5 digits. The wireless communication module in the handset have to be keep same frequency with the weighing module. The Specification and Calibration can be setup with handset. Advanced compassed circuit and unique data processor make this crane scale a real accurate, convenient and reliable weighing equipment used in the warehouse, dock, plant and lifting occasions etc. The system picture as follow:



1.1 Scale characters

- ◆ Accuracy Class: National Scale Standard Grade 3
- ◆ Low power design with auto power saving, 100 hours continuous use after charging.
- ◆ Over-discharging protection circuit protects the battery from life shortening or damage caused by over-discharging.
- ◆ Percentage of battery capacity display at startup and shutdown helps good knowledge of the battery and in-time charge.
- ◆ High compassed, high reliability
- ◆ Power-saving mode and auto turn off function (Optional)
- ◆ Tare, hold, and accumulation functions
- ◆ Stable weighing, which will not be effected by shaking
- ◆ Convenient wireless remote can be operated within 20 meters for zeroing, record checking and shutdown
- ◆ High heat insulation and anti erosion versions are available

1.2 Working condition

1. Applicable temperature range: -10°C ~ +40°C
2. Relative Humidity: ≤90% RH
3. Display: 5 digits super bright 1.2" LED digital tube (or LCD), letter height 40mm
4. New advanced high precision SCM with extremely strong magnetic resistant function and reliable steady weighing.
5. Gravity correction function makes it suitable for all over the world.
6. Safe over-lifting: 150% F.S
7. Damaging over-lifting: 200% F.S
8. Steady reading: < 5 seconds
9. Precision: Grade III
10. Zeroing range: ≤4% F.S
11. Tare range: 4% ~ 100% F.S

Power supply: ① Scale power, 6V rechargeable lead battery, capacity 4.5Ah
② power of handset: 3pcs normal rechargeable battery.

Transfer distance of wireless signal: more than 150ms
Startup and shutdown, LED display shows battery level of scale body (percentage shown). Handset LCD display show the power remaining (battery symbol 1), remaining battery indication of the scale body power (battery symbol 2) The remaining charge indicator, can keep abreast of the remaining battery power in order to select the appropriate charging time.

§ 2 Handset

Low-power design handset, with LCD display, the battery recharges. Handset only save the device number settings, all other parameters are stored in the weighing module.

1. Membrane keyboard



2. LCD Display



3. Operation

3.1 Switch On/Off

a) Startup

In shutdown mode, press [ON] button, you can hear the buzzer "beep" long calls out (last 300ms), then boot. switch on and release the button when the display shows on. It first shows "UE1.0" of the copyright and self-check (showing figures 9-0) in one second. (With decimal point, tare/stability lights flashing on), then it shows the battery capacity percentage as "pbt85", then it enters into zero reformat, showing "-----" (it will not show if the reformatting has been completed after self-check). By the end of Zeroing it shows "0" or "0.0", entering into weighing status

Shutdown

On switch-on regime, press button [Tare on/off] in the front panel or [→0←] on the remote for one second, showing tAr-9, release the button and press again to display the battery capacity like [pbt85], then release the button to automatically cut off power supply.

If the power Saving function on (can set up by handset), then the scale power off automatic when get the signal from the handset.

Energy saving mode and auto shutdown

Energy saving mode

① When the weighing is continually stable or at Zero status for 25 seconds, it enters into power saving mode, automatically reduce display brightness. When weighing changes it automatically returns to normal weighing display

② When the weighing is continually stable or at Zero status for 15 minutes, it enters into power saving mode, each digit on display shows "—" one by one. When button or weighing changes it automatically returns to normal weighing display

Auto shutdown

Not operating the handset then after 30 minutes continual steady weight, it will automatically cut off the power and shutdown.

2.2 Tare (Zero)

A). Tare (Zero)

In the "Tare" off state, life the goods and press the "Tare On/off" button or the [→0←] on the remote, the scale will remove the weight and display will only show "0" or "0.0"

① If the weight is $\leq 4\%$ F.S, Zero it (whatever the weighing is stable or not), it shows "0" and the "Tare" light off

② If the weight is $> 4\%$ F.S and the weighing is stable then tare it, shows "Zero" and press "Tare". If the weighing is not stable then nothing needs to be done.

B) 9 seconds to automatically tare delay

When power on state, press "Tare On/Off" button for one second, showing "tAr-9", and release the button; reduce value by 1 per second speed display. If the weighing is not stable, it will show "-----" for waiting; When it becomes stable, it will tare automatically, and shows "Zero" with the "Tare" indicating light on (if the weight $\leq 10\%$ or 2% F.S, Zero it and it will show "0" with "Tare" indicating light off). If the display value reduces by 1 per second showing "tar-x", press "Tare On" /off" button, it will start measuring the voltage and showing the value, and shutdown automatically by releasing the button

Define of the electrical outlet as follow

1.Cn1: 2 core recharge outlet

2	1
6ND	+7.8V

2.CN2:2 core battery outlet

1	2
+6V	6ND

3.CN3:2 core function key outlet

2	1
6ND	red key

4.CN4:2core function key outlet

2	1
6ND	Green key

5.CN5:8 core function key outlet

1	2	3	4	5	6	7	8
6ND	VCC	P32	P33	P35	P34	P12	P11

6.CN:6:6 core function outlet(1,2 with "charge"light,3,4 with "tare" light, 5,6 with "stable" light

1	2	3	4	5	6
Red light(-)	Red light(+)	Red light(-)	Red light(+)	green(-)	Green(+)

7.CN7:6 core function outlet(1,2 with "holding"light,3,4 with "kg" light,5, 6 with "pound" light

1	2	3	4	5	6
Red light(-)	Red light(+)	Red light(-)	Red light(+)	green(-)	Green(+)

Note : when use, rechargeable power supply should be plugged into CN1, battery power supply should be plugged into CN2. (this batter also supply the power for weighing module). Charge light L1 light when charging.

2.operation manual

2.1 Power on and off

Startup

Under "OFF" situation, press "Tare On/Off" on the front panel, switch on and release the button when the display shows on. It first shows "UEr6.0" of the copyright and self-check (showing figures 9-0) in one second. (With decimal point, tare/stability lights flashing on), then it shows the battery capacity percentage as "pbt85", then it enters into zero reformat, showing "-----" (it will not show if the reformatting has been completed after self-check). By the end of Zeroing it shows "0" or "0.0", entering into weighing status.

Have to press "Tare On/Off" on the front panel to Startup! Release the button after the the display lights.

Production Time: The boot reset self-test before the end, if the [ON] button according to the self-diagnosis display after the production date, until the key release. Such as the May 8, 2011 production, showed 11.0 5.0 8 (first 2 figures for years ; the middle 2 figures for month; last 2 figures for date).

b)Shutdown

- ① In boot mode, press [OFF] button for 1 second, then shut down.
- ② Handset did not receiving the response signal within 5 minutes, then automatically shut down.
- ③ Handset weighing no change, and no button operation, automatic shutdown after 30 minutes
- ④ When the handset battery voltage measured is less than 3.4V, the automatic shutdown.

In shutdown, the buzzer sound 2, LCD display OFF. If the "power-saving feature is turned" off when the handset will also make the weighing module shutdown.

3.2Maintaining and lifting the weight display

Press button (H) to hold the display which won't change when real weight changes. Press (H) again to life the display, enters into normal weighing process.

3.3 Zero

- ① If weight $\leq 4\%$ F.S, weighing is stable, then zero key workable, display "0" or "0.0".
- ② If weight $> 4\%$ F.S, then zero key unworkable, display no change.

3.4 Tare

a) Tare

In the "peeled" off state indicator, if the weighing value of $\leq 4\%$ FS, press [Tare] key is invalid. Conversely, if weight $> 4\%$ FS, and the weight has stabilized, then peeled for processing, display zero, "peeled" indicator light. If weight is not stable, is not peeled for processing.

b) Clear tare

In the peeled state ("peeled" light), press [Tare] key to clear the tare, gross value display, and peeled out of the state ("peeled" light off).

3.5weighing accumulate operation

When the auto accumulation function is off and the net weight ($> 20d$) display becomes stable, press (*) to manual accumulate the net weight and it will show "n xy" and return to weight status in 2 seconds. N stands for net weight accumulation, xy stands for times of accumulation. Next net weight accumulation will only be after the net weight showing value $\leq 20d$ (empty). Max.999 times

When the auto accumulation function is on, it will automatically accumulate when the display value becomes stable. Next net weight accumulation will only be after the net weight showing value $\leq 20d$ (empty). Max.999 times

step	operate	display	decription
2	Press[Zero]	[*****] [00000]	Detect an empty scale zero(display zero values,then it empty scale) Let the scale empty,press [zero] after it became stable.
3	Load weight Press[OK]	[#####]	Load(The weight of load, the closer to full-scale value the better) Load weight on the scale,#### is the weight after loading. Enter into input of calibrating weight status
4	Press[>] Press[>] Press[>] Press[>] Press[>] Press[>]	[*****] [00000] [03000] [03000] [03000] [03000] [03000]	Enter the calibration weight value weight With the highest digit flashing, press [^] or [V] to choose the figures. The fourth digit flashes, press [^] or [V] to choose the figures, for example press 3 times of [^] or [V] it will show 3. The third flash,press [^] or [V] to choose the figures. The second flash,press [^] or [V] to choose the figures. The lowest flash,press [^] or [V] to choose the figures. After all digits set, it stops flashing Press [ok],then finish set-up,exit the parameter setting status,return to weighing state.otherwise, if press,then the highest display flashes, can enter the weight calibration weight value again. During this set-up process, digital flashes, press the [ok] is invalid.

Remarks:

- 1.Preheat 15 minutes by turning the power on before operating, and set up the data first according to Parameter setting.
- 2.Press [ESC] to quit at any time and return to weighing status
- 3.Weight for weight calibration would be better as it be closer to the max. weight. If the loaded weight is <10%F.S, the calibration is invalid, the original calibration parameter is still valid.
- 4.It can not enter into "Calibration" under the "Tare" status
- 5.It will automatically quit "Accumulation" status after this process, and zero the cumulative number, cumulative result.

Note :1.Press the [ESC] can quit at any time during the device resetting process.
2.Mandatory to obtain the device number:Turn on the weighing module power, then open the handset power. Before the end of the self-test, keep pressing the [ESC] key, if set to normal frequency communication module, the module can receive a weighing device number is displayed on the LCD monitor, and saved to the microcontroller. Release of [ESC] key will go to the normal weighing mode.

3.9 Password Input (the password is 33333)

step	operate	display	decription
1	Press [OK]	[*****] [000000]	It shows the value under weighing status Enter into 5figures password input state,the highest figure flash.
2	Press[^] Press[>] Press[^] Press[>] Press[^] Press[>] Press[^] Press[>] Press[^] Press[>] Press[^] Press[>]	[30000] [30000] [30000] [30000] [33000] [33000] [33000] [33000] [33300] [33300] [33330] [33330]	Each 3 the [^],flashing the no. +3 Flashing no. To the right one. Each 3 the [^],flashing the no. +3 Flashing no. To the right one. Each 3 the [^],flashing the no. +3 Flashing no. To the right one. Each 3 the [^],flashing the no. +3 Flashing no. To the right one. Each 3 the [^],flashing the no. +3 Flashing no. To the right one. Each 3 the [^],flashing the no. +3 Figures stop flashing if press[>],the highest figure flash Can reset the password in the above steps, when figure flashes, each [V] button, figure flashes.

Note :1.Press [ESC] to quit at any time and return to weighing status
2.Can enter into "specification setup"/"calibration"state only when you input the right password.
3.Can not enter into "password input" state if you in the "Tare".

3.10 Parameter setup
(It can not enter into "Calibration" under the "Tare" status)

step	operate	display	decription
1	Press [OK]	[CAL 1]	Option: CAL 1 to setup the parameter CAL 2 to enter into calibration
2	Press[^] Press[OK]	[d c *] [d c 0]	Set decimal digits Press [^] or [V] to choose the decimal digits, option: 0/1/2/3 Enter into next parameter setting (Division Value)
3	Press[^] Press[OK]	[d * *] [d 1 0]	Set Division Value Press [^] or [V] to select the required Division value Enter into next setting

step	operate	display	decription
4	Press[>]	[* * * *]	Set the max. Weighing range With the highest digit flashing, press [^] or [V] to choose the figures.
	Press[>]	[0 0 0 0] [0 0 0 0]	The fourth digit flashes, press [^] or [V] to choose the figures, for example press 3 times of [^], it will show 3.
	Press[>]	[0 3 0 0]	The third flash,press [^] or [V] to choose the figures.
	Press[>]	[0 3 0 0]	The second flash,press [^] or [V] to choose the figures.
	Press[>]	[0 3 0 0]	The lowest flash,press [^] or [V] to choose the figures.
	Press[>]	[0 3 0 0]	After all digits set, it stops flashing Press[>], when the highest digit flashes, enter into resetting the max.Weighing range Otherwise, if press[OK], it will automatically show the overload warning value of FS+9d During this set-up process, digital flashes, press the [ok] is invalid, into the next parameter set(Zero tracking range)
5	Press[^]	[0 d *] [0 d 2]	Set Zero trace range(0d=Zero tracking range) Press [^] or [V] to choose the required zero tracking range Option: 0-9, each figure match accordingly as below: 0--0.45d 1--0.6d 2--0.7d 3--0.8d 4--0.9d 2--1.0d 6--1.5d 7--2.0d 8--2.5d 9--3.0d
	Press[OK]		Enter into next setting(filter wave)
6	Press[^]	[L * *] [L 12]	Set filter coefficient (L stand for times of smooth views L=8-20 Press [^] [V] to set the parameter of wave
	Press[OK]		Enter into next setting(Power saving)
7	Press[^]	[J d *] [J d 1]	Option: 0-off 1-on Press [^] or [V] for options
	Press[OK]		Enter into next setting(Auto accumulation)
8	Press[^]	[L J *] [L J 1]	Option for auto accumulation: 0-Off; 1-On Press [^] or [V] for option
	Press[OK]		Enter into next setting(Weight unit)

step	operate	display	decription
9	Press[^]	[L g *] [L g 1]	Press [^] or [V] for weigh units option: 0-kg; 1-Lb
	Press[OK]		Enter into next setting(Gravity Speed)
10		[9 * * *]	Set up the parameter of acceleration of gravity. The highest digit is 9, and the one next to it flashes ,press [^] or [V] for option
	Press[>]	[9 0 0 0] [9 0 0 0]	The fourth digit flashes, press [^] or [V] to choose the figures, for example press 3 times of [^] or [V] it will show 3.
	Press[>]	[9 3 0 0]	The third flash,press [^] or [V] to choose the figures.
	Press[>]	[9 3 0 0]	The second flash,press [^] or [V] to choose the figures.
	Press[>]	[9 3 0 0]	The lowest flash,press [^] or [V] to choose the figures.
	Press[>]	[9 3 0 0]	After all digits set, it stops flashing When press [>], the next high digit flashes, restart setting Otherwise, if press [ok], then finish set-up,exit the parameter setting status,return to weighing state During this set-up process, digital flashes, press the [ok] is invalid.

Remarks:

- 1.Press[ESC] to quit at any time and return to weighing status. the data becomes effective only after all processes completed.
- 2.The original setup gravity is as that of Ningbo 9.7936. The user can adjust it into local one; program will automatically correct the gravity. If the user has calibrated at the local, the gravity doesn't need to be adjusted.

3.11 Weighing Demarcation

step	operate	display	decription
1	Press[^]	[CAL 1] [CAL 2]	Option: CAL 1 Parameter setting CAL 2 Calibration Switch to calibration operation
	Press[OK]		Enter into calibration status