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# **WIRELESS DYNAMOMETER**

## **USER MANUAL**



**Model: W3**

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## TABLE OF CONTENTS

<b>SAFE OPERATION GUIDE</b> .....	2
<b>CHAPTER 1 FEATURES AND SPECIFICATION</b> .....	3
1. Features.....	3
2. Main technical data.....	3
3. Specification.....	4
4. Appearance illustration.....	4
5. Power supply.....	5
<b>CHAPTER 2 DISPLAY AND KEYS</b> .....	5
1. LCD display.....	5
2. Keys.....	6
<b>CHAPTER 3 WIRELESS INDICATOR OPERATION GUIDE</b> .....	6
<b>CHAPTER 4 DYMOMETER FUNCTION GUIDE</b> .....	7
1. On/off.....	7
2. Zero.....	8
3. Tare.....	8
4. Peak Hold.....	8
5. Accumulation.....	9
6. Accumulation Search.....	9
7. Accumulation Clear.....	9
8. Battery Voltage .....	9
9. Unit .....	9
10. Return.....	10
11. Set point.....	10
<b>CHAPTER 5 PARAMETER SETTING &amp; CALIBRATION</b> .....	11
1. Key function.....	11
2. Parameter setting.....	11
3. Calibration.....	13
<b>CHAPTER 6 SIGNAL ILLUSTRATION</b> .....	14
<b>CHAPTER 7 TROUBLESHOOTING GUIDE</b> .....	15
<b>CHAPTER 8 RS232 PROTOCOL</b> .....	15

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## **SAFE OPERATION GUIDE :**

1. Do not make lifts beyond rated load capacity of the dynamometer, shackle.
2. Do not perform overhead weighing. Stay clear when Dynamometer is in operation.
3. Do not perform weighing under strong wind condition which may cause incorrect reading.
4. Do not perform weighing under environment of temperature rapid changes in which may cause incorrect reading.
5. Do not attempt to open this Dynamometer, no user serviceable parts inside.
6. Do not remove wire rope stopper from hook. For safety reasons, always apply it.
7. Remove all loads from shackle or hook when not in used.
8. Before weighing, check and make sure that all hanging /load- receiving elements / devices are in good condition.
9. Check hook, shackle, safety pins, and latches periodically. Contact your dealer for parts replacement in case defect, deform or wearing is found.
10. Always lift loads vertically.

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# CHAPTER 1 FEATURES AND SPECIFICATIONS

## Introduction:

W3 wireless Dynamometer is an extremely well-built instrument for industry use ,as a standard wireless tool offer universal applications, Whether used as conventional crane weight or to measure force, W3 wireless Dynamometer is microprocessor controlled for precision accuracy, parameter setting and calibration is easy to operate through wireless indicator.

## 1. Features

- Rugged construction, Aluminum and alloy steel capacities are powder coated.
- Accuracy: 0.05% for 1-50t, 0.1% for above 50t capacity.
- Dual direction wireless communication
- All functions and units are clearly display on the LCD (with backlighting)
- Digits are 1 inch high for easy distant viewing.
- Two user programmable Set-Point can be used for safety and warning applications or for limit weighing.
- The dynamometer is powered by 3 standard "LR6(AA)"size alkaline batteries.
- All commonly used internationally recognized units are available:  
kilograms (kg), short Tons(t), pounds(lb), Newton and kilo-newton(kN).
- Operation through wireless handheld indicator, easier to calibrate (with password)
- 4 local mechanical keys: "ON/OFF", "ZERO", "PEAK" and "Unit Change".
- Low battery warning.
- RF wireless handheld indicator is powered by 4 standard "LR6(AA)"size alkaline batteries.

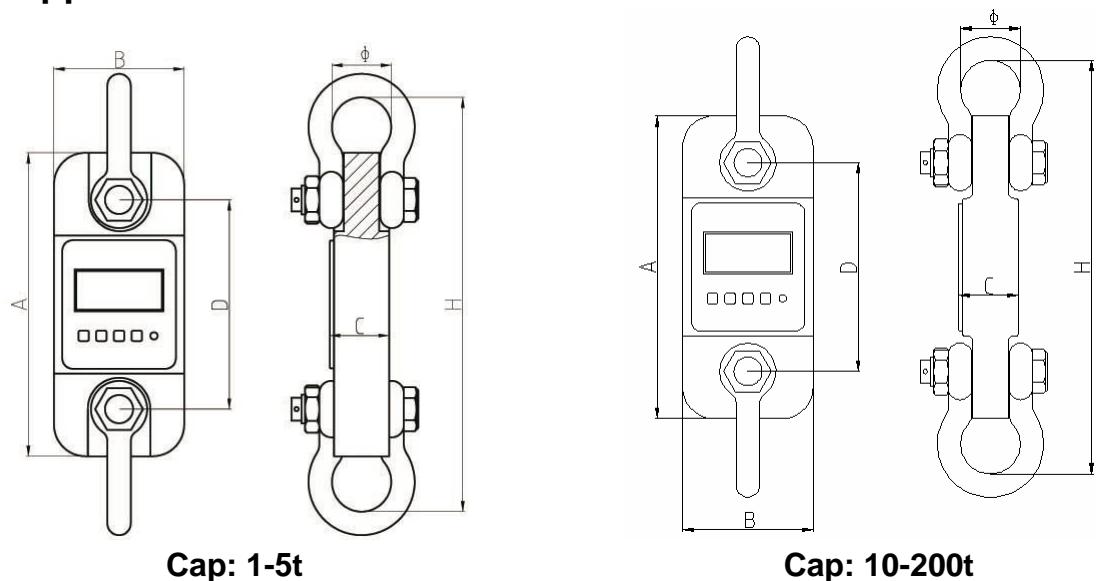
## 2. Main technical data

Display	25mm (1") 5digits LCD with backlight
Power on zero range	20% F.S.
Manual Zero Range	4% F.S.
Tare Range	100% F.S.
Stable Time	≤5 seconds
Overload Indication	100% F.S. + 9e
Max. Safety Load	125% F.S.
Ultimate Load	400% F.S.
Dynamometer battery	"LR6(AA)"size alkaline batteries. 1.5Vx3
Indicator battery	"LR6(AA)"size alkaline batteries. 1.5Vx4
Operating Temp.	- 10°C ~ + 40°C
Operating Humidity	≤85% RH under 20°C
Wireless Distance	Min. 80m(default) , 200m(optional)
Wireless Frequency	2.4GHz(default),433MHz,860MHz(optional)

### 3. Specification

Model	Capacity(kg)	Min.Weight(kg)	Division(kg)	Total counts (n)
W3-01	1000	10	0.5	2000
W3-02	2000	20	1	2000
W3-03	3000	20	1	3000
W3-05	5000	40	2	2500
W3-10	10000	100	5	2000
W3-20	20000	200	10	2000
W3-30	30000	200	10	3000
W3-50	50000	400	20	2500
W3-100	100000	1000	50	2000
W3-200	200000	2000	100	2000

### 4. Appearance illustration



DIMENSIONS(Dimensions shown are nominal and subject to tolerances)

MODEL	CAP	A(mm)	B(mm)	C(mm)	D(mm)	$\phi$ (mm)	H(mm)	MATERIAL
W3-1	1t	245	112	37	190	43	335	Aluminum
W3-2	2t	260	123	37	195	51	365	Aluminum
W3-3	3t	260	123	37	195	51	365	Aluminum
W3-5	5t	285	123	57	210	58	405	Aluminum
W3-10	10t	320	120	57	230	92	535	Alloy Steel
W3-20	20t	375	128	74	260	127	660	Alloy Steel
W3-30	30	420	138	82	280	146	740	Alloy Steel
W3-50	50t	465	150	104	305	184	930	Alloy Steel
W3-100	100t	570	190	132	366	229	1230	Alloy Steel
W3-200	200t	720	265	183	440	280	1362	Alloy Steel

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## WEIGHTS

Model	W3-1	W3-2	W3-3	W3-5	W3-10
Unit Weight(kg)	1.6	2.1	2.1	2.7	10.4
Weight with shackles(kg)	3.1	4.6	4.6	6.3	24.8
Model	W3-20	W3-30	W3-50	W3-100	W3-200
Unit Weight(kg)	17.8	25	39	81	210
Weight with shackles(kg)	48.6	73	128	321	776

## 5. Power supply

Dynamometer battery: "LR6(AA)"size alkaline batteries. 1.5VX3

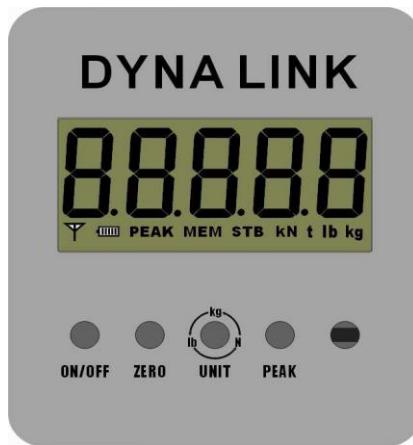
Indicator battery: "LR6(AA)"size alkaline batteries. 1.5VX4

Current: the dynamometer average current is about DC 35mA, 3pcs new batteries can be used for about 40hours under continuous working.

Wireless indicator average current is about DC 28mA, 4pcs new batteries can be used for about 80hours under continuous working.

Low battery warning: When the digits flashes, it means the battery needs to be replaced. The Dynamometer or wireless indicator will power off automatically after one hour without operation.

## CHAPTER 2 DISPLAY AND KEYS



### 1. LCD DISPLAY

- a. 25mm (1") 5digits LCD with all functions and units.
- b. : Wireless signal, it Appear means signal stable, it disappear while signal miss. it flash means signal weak.
- c. : Battery Voltage, : Full, : Low, : Empty
- d. **PEAK:** Current value is Peak Hold value(maximum value).
- e. **MEM:** Appear one time when Parameter or calibration value storage. long time appearance means current value is Accumulation data.
- f. **STB:** Stable Status.
- g. **kN:** "kilonewton", **N:** "Newton". Tare status "N" will flash.
- h. **t :** "ton"
- i. **lb :** "pound"
- j. **kg :** "kilogram "

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## 2. Keys

### a. ON/OFF key

1. Press “ON/OFF” Key 1 Second, the Dynamometer turn on.
2. In ON status, Press “ON/OFF” Key 1 Second, the Dynamometer turn off.

### b. ZERO key

When Dynamometer switch on with no load, but there are small digits on the screen, press this key to obtain the zero reading.

### c. UNIT key

Press UNIT key, the unit on LCD will display circle as follows: “kg” → “lb” → “N” → “kN” → “t” → “kg” .

### d. PEAK key

When load is changing, press this key will catch and display the maximum reading of the load. Press this key again, reading will return to normal.

## CHAPTER 3 WIRELESS INDICATOR OPERATION GUIDE



### a. 【ON/OFF】

1. Press “ON/OFF” Key 1 Second, the indicator turn on.
2. In ON status, Press “ON/OFF” Key 1 Second, the indicator turn off.

### b. 【ZERO】

1. In testing status ,there are small digits on screen, press this key to obtain the zero reading.
2. In Parameter Setting status , it used as scrolling up digit.

### c. 【TARE】

1. When there is tare weight such as container, after the reading stable, press this key, it will display “0”, and “N” indicator Flash.
2. Put the goods into container, the dynamometer will display goods net weight.
3. If move goods and container, the dynamometer will display minus value of tare weight.
4. In Parameter Setting status, it used as digits movement.

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#### d. 【MODE】

Used as function shift, or be combined with other keys.

- ◆ Press【MODE】key once, it display “OFF”, press【ENTER】Key , it will wireless turn off dynamometer, and indicator display “noSIG”, means no signal.
- ◆ Press【MODE】key twice, it display “SETUP”, Press【ENTER】Key access Parameter Setting status. After setting finish, press【MODE】key to confirm setting and back to test mode.
- ◆ Press【MODE】key 3 times, it display “dC”, Press【ENTER】Key to read current battery voltage, press【MODE】key again back to test mode.
- ◆ Press【MODE】key 4 times, it display “Unit”, Press【ENTER】Key access unit selection. Press【ZERO】key to select unit, press【MODE】key again back to test mode.
- ◆ Press【MODE】key 5 times, it display “ACCU”, Press【ENTER】Key access Accumulation status, press【MODE】key again back to test mode.
- ◆ Press【MODE】key 6 times, it display “SACCU”, Press【ENTER】Key access Accumulation Search status, press【MODE】key again back to test mode.
- ◆ Press【MODE】key 7 times, display “CLEAR”, Press【ENTER】Key access Accumulation clear status, display “CLr 1”, Press【TARE】Key, display “noCLr”. press【MODE】key again back to test mode.
- ◆ Press【MODE】key 8 times, display “CLlbr”, Press【ENTER】Key enter into calibration program, after calibration finish, press【MENU】key back to test MENU. Detail see Pg.13
- ◆ Press【MODE】key 9 times, it display “ESC”, Press【ENTER】Key and It will back to test mode.

#### e. 【ENTER】

Used as function selection, normally combined with【MODE】Key

#### f. 【PEAK】

When load is changing, press this key will catch and display the maximum reading of the load. Press this key again, reading will return to normal.

## CHAPTER 4 DYNAMOMETER FUNCTION GUIDE

Note: ( ) means the key on the dynamometer

【 】 means the key on the indicator

〔 〕 means the display content

### 1. ON/OFF

◆ TURN ON dynamometer

OPERATION	DISPLAY	ILLUSTRATION
(ON/OFF)	〔88888〕	Display twice, self test
	〔 Ert 〕	Display twice
	〔 u=3.72 〕	Display current software version
	〔 CH=E3 〕	Display current wireless channel E3
	〔 5000 〕	Display capacity, e.g. 5t
	〔 U=3.98 〕	Display current battery voltage is 3.98
	〔 —— 〕	Waiting stable
	〔 0 〕	Display current load, generally is 0

◆TURN ON indicator

OPERATION	DISPLAY	ILLUSTRATION
【ON/OFF】	【88888】	Display twice, self test
	【 Err 】	Display twice
	【 u 1.2】	Display current software version
	【CH=E3】	Display current wireless channel E3
	【U=3.98】	Display current battery voltage is 3.98
	【 ——】	Waiting stable
	【 0】 or 【noSIG】	If display 0, means the indicator can communicate with the dynamometer, if display noSIG, means no signal from dynamometer

◆TURN OFF dynamometer

1	Manual Power OFF	Press (ON/OFF) Key 1 Second
2	RemotePower OFF	Press 【MODE】 Key to select “OFF”, press 【ENTER】 Key
3	Auto Power OFF	Choose turn off method in parameter setting, the dynamometer will display 【 - 】 after no operation at 15minutes to save power and it will turn off automatically after 60minutes.

◆TURN OFF indicator

1	Manual Power OFF	Press 【ON/OFF】 Key 1 Second
2	Auto Power OFF	The indicator will turn off automatically after 3 minutes if no operation

## 2. ZERO

	OPERATION	DISPLAY	When Dynamometer turn on, generally it displays 【 0】, if display small digits when no load, press this key.
1	Press (ZERO)	【 0】	
2	Press 【ZERO】		

## 3. TARE

	OPERATION	DISPLAY	After turn on, hanging tare weightsuch as sling, cable at first, press this key, “TARE” light on, then the scale will display net weight of the goods.
	Press 【TARE】	【 0】	

## 4.PEAK HOLD

OPERATION	ILLUSTRATION
Press (PEAK)	Catch and display Maximum value of changing load
Press (PEAK)	reading return to normal

## 5. ACCUMULATION

OPERATION	DISPLAY	ILLUSTRATION
Press 【MODE】 key 5 times	【ACCU】	
Press 【ENTER】	【No***】	Current accumulation time
	【H****】	Front four digits of total value
	【L****】	Rear four digits of total value

After display above contents twice, the dynamometer will return automatically.

## 6. ACCUMULATION SEARCH

OPERATION	DISPLAY	ILLUSTRATION
Press 【MODE】 key 6 times	【SACCU】	
Press 【ENTER】	【No***】	Current accumulation time
	【*****】	Current weight reading
	【H****】	Front four digits of total value
	【L****】	Rear four digits of total value
Press 【MODE】 key again		Return

Press 【TARE】 and 【ZERO】 can check different times weight and accumulation.

## 7. ACCUMULATION CLEAR

OPERATION	DISPLAY	ILLUSTRATION
Press 【MODE】 key 7 times	【CLEAr】	
Press 【ENTER】	【CLr 1】	Ask if you want to clear or not
	【noCLr】	Press 【MODE】 key Cancel clear
	【88888】	Press 【ENTER】 key Confirm clear

## 8. BATTERY VOLTAGE

OPERATION	DISPLAY	ILLUSTRATION
Press 【MODE】 key 3 times, Display "dC", press 【ENTER】 key.	【U *.*】	Display current battery voltage
Press 【MODE】 key again		Return

Note : Battery voltage normally between 【U 3.50】 to 【U 4.70】 , if below 【U 3.10】 , the display will flash, Battery should be replaced.

## 9. UNIT

	OPERATION	DISPLAY	ILLUSTRATION
1	Press 【MODE】 key 4 times	【Unit】	
	press 【ENTER】 key	【Un=0】	Un=0, the unit is kg, press 【ZERO】 to select unit from 0-4, 1 means lb, 2 means N, 3 means KN, 4 means ton.
	Press 【MODE】 key	【0】	Confirm unit chosen and return
2	Press (UNIT)	【Un =0】	The dynamometer will display kg, lb, N, kN, ton circley

## 10. RETURN

OPERATION	DISPLAY	ILLUSTRATION
Press 【MODE】key 9 times	【 ESC】	
press 【ENTER】 key	【 0】	Return to normal testing status

## 11. SET POINT

There are two user programmable Set-Point can be used for safety and warning applications or for limit weighing.

— 1 LO SP1 1 HI      2 LO SP2 2 HI —

OPERATION	DISPLAY	ILLUSTRATION
Press 【MODE】key twice	【SETUP】	Confirm, enter into parameter setting program
Press 【ENTER】	【SP1】	Set point 1
Press 【ENTER】 to confirm	【1 OFF】	New dynamometer, it display 1 OFF, if parameter set, it display set value.
Press 【ZERO】 to choose	【1 HI】 or 【1 LO】	There are 3 choice, 1 OFF means you don't set point, 1 HI means the indicator will alarm when load exceed the value you set, 1 LO means the indicator will alarm when load smaller than the value
Press 【ENTER】 to confirm	【02000】	New dynamometer it display 02000, if parameter set, the screen display set value.
Press【 ZERO 】and【TARE】 to change value	【01000】	Set "1 HI" or "1 LO" Value. e.g. 1000kg
Press 【ENTER】 to confirm	【 SP2】	Set point 2
Press 【ENTER】 to confirm	【2 OFF】	New dynamometer, it display 2 OFF, if parameter set, it display set value.
Press 【ZERO】 to choose	【2 HI】 or 【2 LO】	There are 3 choice, 2 OFF means you don't set point, 2 HI means the indicator will alarm when load exceed the value you set, 2 LO means the indicator will alarm when load smaller than the value
Press 【ENTER】 to confirm	【01200】	New dynamometer it display 01200, if parameter set, the screen display set value.
Press【 ZERO 】and【TARE】 to change value	【03000】	Set "2 LO" or "2 HI" Value. e.g. 3000kg

If you needn't to set point, you only need to press 【ENTER】 until it display next function  
【g=】

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## CHAPTER 5 PARAMETER SETTING & CALIBRATION

parameter setting and calibration will be operated through wireless indicator

### 1.Key function

KEY	FUNCTION
【TARE】	Move digit
【ZERO】	Set value up
【MODE】	Storage and exit
【ENTER】	Confirm

### 2. Parameter setting

OPERATION	DISPLAY	ILLUSTRATION
Press【MODE】key twice	【SETUP】	Confirm, enter into parameter setting program
Press 【ENTER】	【FS=06】	New dynamometer, it display FS=06 , if dynamometer calibrated, it will display capacity.
Press 【ZERO】 to choose	【FS=05】	Choose capacity, the screen display 02/03/05/06/10/15/20/30/50/60/75/80 circularly take cap:5000kg/2kg as example, choose FS=05, See following list about FS, Id, Pt chosen.
Press【ENTER】to confirm	【Id=02】	New dynamometer ,the screen display Id=02, if dynamometer calibrated, it will display calibrated division.
Press【ZERO】 to choose	【Id=02】	Choose division, it display 01/02/05/10/20circularly. 5000kg dynamometer division is 2kg, so choose Id=02
Press 【ENTER】	【Pt=0】	New dynamometer, it display Pt=0, if dynamometer calibrated, it will display calibrated decimal position
Press【ZERO】 to choose	【Pt=0】	Choose decimal position, the screen display 0/1/2/3 circularly, 0=xxxxx, 1=xxxx.x, 2=xxx.xx, 3=xx.xxx , Cap.5000kg ,we choose Pt=0
Press【ENTER】 to confirm	【Ab=24】	Display zero range , A: zero range by hand; B: zero range automatically, 0~5 total 6 options: 0=0%F.S; 1=2%F.S; 2=4%F.S; 3=10%F.S; 4=20%F.S; 5=50%F.S, Generally Don't change this parameter.
Press【ENTER】 to confirm	【Cd=11】	New dynamometer, the screen display Cd=11,if Dynamometer calibrated, it display calibrated value.

Press 【ZERO】 to choose	【Cd=12】	C: zero-tracking range, 0~5 total 6 options; 0=0d; 1=0.5d; 2=1d; 3=1.5d; 4=2d; 5=2.5d d: display speed, 0~2 total 3 options; 0=slow; 1=average; 2=fast; before calibration, set Cd=00 to achieve high accuracy, after calibration, set Cd=11 again, generally choose Cd==12 when ex-stock..
Press 【ENTER】 to confirm	【LL=2】	New dynamometer, it display LL=2, if dynamometer calibrated, it display calibrated value.
Press 【ZERO】 to choose	【LL=1】	LL: filter parameter, 0~5 total 6 options, from smallest to biggest , before calibration, set LL=0, after calibration, set LL=1 , generally choose LL=1 when ex-stock..
Press【ENTER】 to confirm	【Un=0】	New dynamometer, it display Un=0, if dyna-link calibrated , the screen display calibrated unit.
Press 【ZERO】 to choose	【Un=0】	Choose unit ·Un=0 kg, Un=1: lb, Un=2: N,Un=3: KN, Un=4: ton, Generally, choose Un=0 when ex-stock.
Press【ENTER】 to confirm	【OFF 1】	New dynamometer, it display OFF 1,if dynamometer calibrated ,it display calibrated value.
Press 【ZERO】 to choose	【OFF 2】	Choose turn off method, 0~2 total 3 options; 0: turn off by hand; 1: if no operation, the screen display ----- after 15minutes to save power; 2: if no operation, the screen display ----- after
Press 【ENTER】	【SP1 】	Set point 1
Press 【ENTER】 to confirm	【1 OFF】	New dynamometer, it display 1 OFF, if parameter set, it display set value.
Press 【ZERO】 to choose	【1 HI】 or 【1 LO】	There are 3 choice,1 OFF means you don't set point, 1 HI means the indicator will alarm when load exceed the value you set, 1 LO means the indicator will alarm when load smaller than the
Press 【ENTER】 to confirm	【02000】	New dynamometer it display 02000, if parameter set, the screen display set value.
Press 【ZERO】 and 【TARE】 to change value	【01000】	Set “1 HI” or “1 LO” Value. e.g. 1000kg
Press 【ENTER】	【 SP2】	Set point 2
Press 【ENTER】 to confirm	【2 OFF】	New dynamometer, it display 2 OFF, if parameter set, it display set value.
Press 【ZERO】 to choose	【2 HI】 or 【2 LO】	There are 3 choice,2 OFF means you don't set point, 2 HI means the indicator will alarm when load exceed the value you set, 2 LO means the indicator will alarm when load smaller than the value

Press 【ENTER】 to confirm	【01200】	New dynamometer it display 01200, if parameter set, the screen display set value.
Press 【ZERO】 and 【TARE】	【03000】	Set “2 LO” or “2 HI” Value. e.g.3000kg,input 3000
Press 【ENTER】	【g=】	acceleration of gravity
Pres 【 ENTER】 Press 【ZERO】 and 【TARE】 to change value	【9.7930】	New dynamometer , it display 9.7930, if dynamometer calibrated, it display calibrated value. user can change it according to local area g value, the value range is 9.783-9.832,
Press 【MODE】 key	【 End 】 【 0】	Confirm above parameter setting, Exit parameter setting program.

**The capacity you choose relate to division, decimal position, below is detail list:**

CAPACITY/DIVISION	FS (CAP)	Id (DIVISION)	Pt (Decimal position)
1000kg/0.5kg	10	05	1
2000kg/1kg	02	01	0
3000kg/1kg	03	01	0
5000kg/2kg	05	02	0
10000kg/5kg	10	05	0
15000kg/5kg	15	05	0
20000kg/10kg	20	10	0
30000kg/10kg	30	10	0
50000kg/20kg	50	20	0

100t, 200t use special software, no need to set FS,Id,Pt.

### 3. Calibration

**User must set all parameter before calibration**

OPERATION	DISPLAY	ILLUSTRATION
Turn on dynamometer and indicator	【 0】	Take Cap:5000kg dynamometer as example , make sure it display 【 0】 before calibration, you can hang tare weight first, then turn on to get zero reading
Press 【 MODE 】 key 8 times,	【CLibr】	Access calibration Status
Press 【ENTER】 key	【CAL 1】	Enter into one point calibration program
Press 【ENTER】 key	【CALSP】	Zero point calibration
Press 【ENTER】 key	【LoAd】	Hanging standard weight, e.g. 3000kg
Press 【ENTER】 key	【05000】	Display capacity you choose in parameter setting , and first digit flash , Do wait until “STB” signal display on screen.
Press 【ZERO】 and 【TARE】 key	【03000】	press 【ZERO】 to change value, press 【TARE】 to move the digit
Press 【 MODE 】 key	【-----】	Confirm and storage

	【 -oL- 】	
	【End】	Calibration finish
	【 3000 】	

**Attention: the standard load should be more than 20% capacity, it's better to use full capacity standard load**

## CHAPTER 6 DISPLAY ILLUSTRATION

DISPLAY	ILLUSTRATION	REMARK
【noS Ig】	Without wireless signal	Distance too far.
【SEtUP】	Enter into parameter setting	
【UAdJ】	Enter voltage calibration	
【LoAd】	Calibration point	
【- - - -】	Exceed high limit	Tare weight can't exceed full capacity
【- - - -】	Exceed low limit	Tare weight can't be negative
【-----】	Waiting stable	
【Err10】	Weight less than Min. Capacity	Can't accumulate the value
【Err11】	Accumulated times overflow	Can't accumulate after 30times
【Err12】	Accumulated weight overflow	Can't accumulate after 99999
【Err13】	Error in repeat accumulation	Can't accumulate one weight repeatedly
【no***】	Current accumulation times	
【H****】	Front four digit of accumulated	Total weight=front four digit + rare four digit
【L****】	Rare four digit of accumulated	Total weight=front four digit + rare four digit
【 CLr 】	Ask if you really want to delete accumulated weight	In case error deletion
【noCLr】	Give up deletion	
【8888】	Confirm deletion	
【 - - - 】	Input value is too large	When you input tare or weight value
【 - - - 】	Input value is too small	When you input tare or weight value
【noACC】	No any accumulated content	when you check accumulation
【-oL0-】	Overload warning	Tare + Net weight exceed full capacity + 9e
【-oL1-】	Overload warning	Tare + Net weight exceed full capacity 125%
【-Lb-】	Low battery warning	Turn off automatically one minute later
【U*.*】	The voltage of current battery	
【 End 】	End	when parameter setting or calibration ready
【 OFF 】	Turn off	
【Unstb】	Input value before STB light on	

## CHAPTER 7 TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SOUTION
No display	Defective battery	Replace
	Defective button	Requires authorized service
	Power button not properly pressed	Press ON/OFF key firmly in three seconds
Digits flash	Low battery	Replace battery
Display doesn't respond to load changes	Faulty load cell or PCB	Requires authorized service
	Out of calibration	Re-calibration
Display experiences excessive Zero drift between weighment	Dynamometer do not stabilize after turning on	After turning on, heating 3-5 minutes.
Displayed weight shows large error	Dynamometer not Zeroed before applying weight	Depress ZERO before applying weight
	Requires recalibration	See calibration
	Kg/lb wrong selection	See operation
Wireless distance shortened	Wireless indicator's battery is low	Replace battery.

## CHAPTER 8 RS232 PROTOCOL

Pre-code		Data(ASCII)					0X +/-0 means+ F means -) X is decimal position	39 39 Commodity number	F0 Stable Signal F0: (stable) 00: (unstable)	F0 Wireless Signal F0: Have signal 00: Without signal
FF	AA	data (H)	data	data	data	data (L)				

### RS-232 Setup Instructions

#### Communication Configuration

Port : COM1

Baud Rate: 4800

Data Bits : 8

Stop Bits : 1

Parity : None

Display mode HEX