Crane Scale
User Manual

CE

Manual usuario BBG ref SP

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SAFE OPERATION GUIDE:

1. The capacity of crane scale have been showed on the overlay, Don·t make lifts beyond rated capacity of the crane scale.

2. Operators should not maneuver a loaded crane scale over personnel.

3. The scale must be routinely checked for operation. Don't operate if hook shackle,sling,cable, etc show any sign of defects or excessive wear.

4. If the scale is not going to be used for long time, recharging the battery every three months to preserve the life-span of the battery and recharge it before operation.

5. The battery charger is included in the scale package. Please use this charger, It 's normal that the charger will become warm when the battery is charging.

6. Please note when the screen flash , it means that the battery needs to be recharged.

CHAPTER 1

FEATURES AND SPECIFICATION

1. Features

◆ **Multi-weighing units**:
Kg, lb, N are selectable, generally kg are default unit.

◆ **Multi-function operation:**
Tare, Zero, Auto zero tracking, Total, Hold, Overload warning and record, Calibration through remote controller,etc functions.

◆ **User-friendly design:**
Cast aluminium housing for maximum protection; Large red 5 digit LED display (digit height 30mm); Gravity compensation; Safety factor up to 4 times capacity; Battery Operated with low battery indication; Automatic turn off , power-saving function.

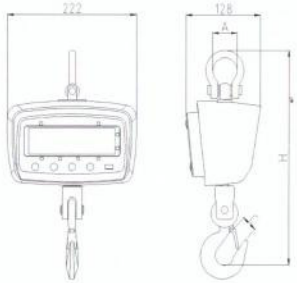
2. Main technical data

Standard	According to OIML class III
Display	30mm (1.2") 5digits LCD/LED
Zero Range	4% F.S.
Tare Range	100% F.S.
Stable Time	≤10 seconds
Overload Indication	100% F.S. + 9e
Max. Safety Load	125% F.S.
Ultimate Load	400% F.S.
Battery Life	≥50 hours
Battery Type	Fully sealed Lead-Acid battery, 6V/5Ah
Adapter	DC9V/1000mA
Operating Temp.	-10℃～+40℃(14° F～104° F)
Operating Humidity	≤85% RH under 20℃
Remote Controller Distance	Min. 15m
Battery of Remote Controller	Battery: SIZE AAA, 1.5V x 2

3.Specification

MODEL	Max. Capacity (Kg/lb)	Min. Weigh (Kg/lb)	Division (Kg/lb)	Total display counts (n)
OCS-005-SP	50/110	0.4/1	0.02/0.05	2500
OCS-01-SP	100/220	1.0/2	0.05/0.1	2000
OCS-02-SP	200/500	2.0/4	0.1/0.2	2000
OCS-03-SP	300/700	2.0/4	0.1/0.2	3000
OCS-05-SP	500/1100	4.0/10	0.2/0.5	2500
OCS-1-SP	1000/2200	10.0/20	0.5/1	2000

4.Appearance illustration



MODEL	A(mm)	C(mm)	H(mm)	N. W
OCS-005-SP	34	25	350	4kg
OCS-01-SP	34	25	350	4kg
OCS-02-SP	34	25	350	4kg
OCS-03-SP	34	25	350	4kg
OCS-05-SP	42	27	370	4.5kg
OCS-1-SP	42	27	370	4.5kg

5. Power supply

Battery: 6V/5Ah fully sealed Lead-Acid battery

Adapter: 9VDC/1000mA adapter

Current: the crane scale average current is about DC 100mA±10%, if battery charged, it can be used for about 50hours.

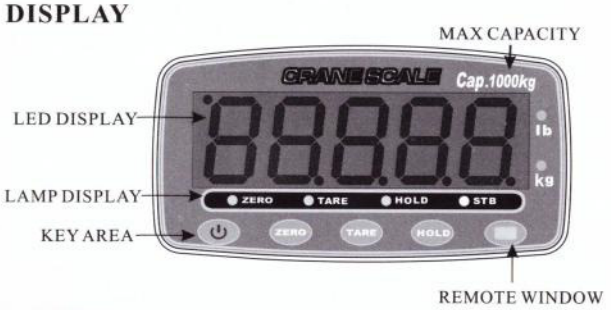
Low battery warning: When the lamp flashes, it means the battery needs to be recharged. The scale will power off automatically after 1 to 2 hours operation if the battery is not charged. Please recharge the battery before operating the scale again.

Charging method: Turn off the crane scale, use adapter in the carton, the lamp on the back cover will become orange when charging, and it will become red when the charging finish.

Generally, charging time should not less than 8hours, the crane scale have charging protection, long time charging can't damage the battery.

CHAPTER 2

DISPLAY



1. LED DISPLAY

30mm (1.2″) 5digits LED/LCD

2. LAMP

a. **ZERO:** ZERO lamp
b. **TARE:** TARE lamp
c. **HOLD:** HOLD lamp
d. **STB:** STABLE lamp
e. **lb:** lb unit lamp
f. **kg:** kg unit lamp

3. KEY

a. ⏻ :ON/OFF

1. Press ⏻ three seconds, the crane scale turn on
2. When turn on, Press ⏻ three seconds, the crane scale turn off.

b. ZERO : ZERO

When crane scale switch on with no load on the hook, but there are small digits on screen, press this key to obtain the zero reading. The " ZERO " lamp switches on.

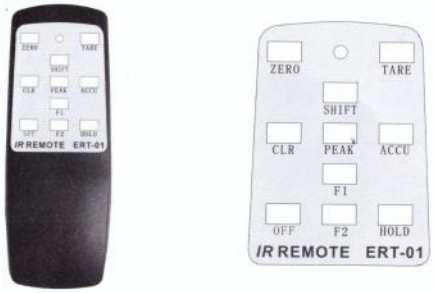
C. TARE : TARE

1. Hang sling or container on the hook, when the weight reading stable, press this key, the digits display "0", and TARE lamp switch on.
2. Put the goods into container, the scale will display goods net weight.
3. If move goods and container, the scale will display minus value of tare weight.

d. HOLD : HOLD

1. When weight is changing, press this key will hold the reading,
2. Press this key again, reading will resume changing, and HOLD lamp switch off.

4. REMOTE CONTROLLER



Press any key on the remote controller, the lamp on the controller will flash.

Key function:

1. ZERO:

a. In weighing status, the function is equal to (ZERO) key on overlay(When crane scale switch on with no load on the hook, but there are small digits on screen, press this key to obtain the zero reading. The"ZERO" lamp switches on).

b. In parameter setting and calibration process, it used for set value up.

2. TARE:

a. In weighing status, the function is equal to (TARE) key on overlay.

b. In parameter setting and calibration process, it used for move digit (the digit choosed flash) .

3. SHIFT:

a. In weighing situation, used for function shift, or used with other key to more function.

b. In parameter setting and calibration process, it used for confirm setting.

4. CLEAR

a. In weighing situation,

b. In parameter setting and calibration process, it used for set value down.

5. ACCU

It used for accumulation function, detals see Chapter3-5.

6. F1

Function Key, used with F2 together, Press F1 solely, it will regulate brightness of LED.

7. F2

Function Key, used with F1 together.

8. HOLD

It used for hold function, details see Chapter3-4.

9. OFF

Turn off the crane scale.

CHAPTER 3

OPERATION GUIDE

◯ express key on scale overlay, 【 】express key on remote controller.

1. Turn on/off

◆TURN ON

Press (⏻) three seconds, the screen display as follows:

OPERATION	DISPLAY	ILLUSTRATION
(⏻)	88888	Display two times
	Ert	Display two times
	10000	Display capacity
	U 6**	Display current battery voltage
	-----	Waiting stable
	0	"STB" light on, you can weigh now

◆TURN OFF

1	Press (⏻) three seconds.
2	Press【OFF】three seconds.
3	Choose turn off method when parameter setting, the scale will display [-] after no operation at 15minutes to save power, and it will turn off automatically after 60 minutes

2. Zero

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

3. Tare

◆TARE DIRECTLY

	OPERATION	DISPLAY	
1	Press (TARE)	0	After turn on,hanging tare weight such as sling, cable at first, press this key,"TARE" light on, then the scale will display net weight of the goods
2	Press【TARE】	0	

◆SET TARE WEIGHT IN ADVANCE

OPERATION	DISPLAY	ILLUSTRATION
【SHIFT】【TARE】	00000	Current tare weight
【TARE】		Move digit, digit flash if choosed
【ZERO】or【CLEAR】	- ***	Set known tare weight
【SHIFT】	- ***	exit, "TARE" light on,it displays minus tare weight,after hanging on goods,it will display net weight of goods.

4. Hold

OPERATION	ILLUSTRATION
Press【HOLD】or press (HOLD)	Hold the weight reading, "HOLD" light on
Press【HOLD】or press (HOLD)	Resume weight, "HOLD" light off

5. Accumulation

OPERATION	DISPLAY	ILLUSTRATION
Press【ACCU】	no***	Current accumulation times
	H****	Rear four digits of total value
	L****	Front four digits of total value

After display above contents two times, the scale will return automatically,you also can press【SHIFT】to return.

6. Accumulation search

OPERATION	DISPLAY	ILLUSTRATION
【SHIFT】【ACCU】	no***	Current accumulation times
	*****	Current weight reading
	H****	Rear four digits of total value
	L****	Front four digits of total value
	*****	Return

Press【TARE】and【ZERO】can forward or reverse to check diffierent times Accumulation value or current weight value

7. Clear

OPERATION	DISPLAY	ILLUSTRATION
【CLEAR】	CLr	
【CLEAR】	noCLr	Cancel clear
【SHIFT】	88888	Confirm clear

8. Battery voltage check

OPERATION	DISPLAY	ILLUSTRATION
【SHIFT】【F1】	U ***	Display current battery voltage
【SHIFT】		Return

9. Brightness

OPERATION	ILLUSTRATION
【F1】	1~5 total 5 options,1:dark;5:bright;(default value is 3)

10. Zero show

OPERATION	ILLUSTRATION
【SHIFT】【ZERO】	Display current zero point

11.Unit switch

OPERATION	ILLUSTRATION
【SHIFT】【HOLD】	Unit switch,Un=0, "kg" light on. Un=1, "lb" light on

CHAPTER 4

PARAMETER SETTING &CALIBRATION

You can use remote controller to operate parameter setting and cabibration

Key function

KEY	FUNCTION
【TARE】	Move digit(the digit choosed flash)
【ZERO】	Set value up
【CLEAR】	Set value down
【SHIFT】	Confirm, exit

1. Parameter setting

◆ **TURN ON**

OPERATION	DISPLAY	ILLUSTRATION
Press(⏻)3 seconds	88888	Display two times
	Ert	Display two times
	6000	New scale，the screen display 6000，if scale calibrated，the screen display capacity.
	U 6**	Display current battery voltage
	-----	Wait stable
	0	Display zero point，generally "STB"，"kg" and "zero" light on

Generally, battery voltage should higher than U 580, lower than U 690, if the voltage lower than U 580, digits flash, the battery should recharge.

◆ **PARAMETER SETTING**

OPERATION	DISPLAY	ILLUSTRATION
Press【F1】and【F2】at same time 3seconds	P0000	Second digit flash，use function key to move digit, set value.
Press【TARE】【ZERO】【CLEAR】	P8088	Input 8088,8088 is parameter setting password
Press【SHIFT】	SEtUP	Confirm, enter parameter setting program
Press【TARE】	FS:06	New scale,the screen display FS=06,if scale calibrated,the screen display capacity.
Press【ZERO】or【CLEAR】to choose	FS:05	Choose capacity, the screen display 02/03/05/06/10/15/20/30/50/60/75 circularly, take cap=500kg as example, choose FS=05
Press【TARE】confirm	Id:05	New scale, the screen display Id=05, if scale Calibrated, the screen display calibrated division.
Press【ZERO】or【CLEAR】to choose	Id:02	Choose division，the screen display 01/02/05/10/20 circularly. 500kg scale division is 0.2kg, so choose Id=02
	Pt: 0	New scale, the screen display Pt=0,if scale calibrated, the screen display calibrated decimal position

OPERATION	DISPLAY	ILLUSTRATION
Press【ZERO】or【CLEAR】to choose	Pt= 1	Choose decimal position, the screen display 0/1/2/3 circularly, 0=xxxxx, 1=xxxx.x, 2=xxx.xx, 3=xx.xxx, Cap.500kg scale choose Pt=1
Press【TARE】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【TARE】to confirm	Cd= 11	New scale, the screen display Cd=11, if scale calibrated, the screen display calibrated value.
Press【ZERO】or【CLEAR】to choose	Cd= 11	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,after calibration, set Cd=11 again, generally choose Cd==11 when ex-stock..
Press【TARE】to confirm	LL= 2	New scale, the screen display LL=2,if scale calibrated, the screen display calibrated value.
Press【ZERO】or【CLEAR】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 again, generally choose LL=1 when ex-stock.
Press【TARE】to confirm	Un= 0	New scale, the screen display Un=0, if scale calibrated, the screen display calibrated unit.
Press【ZERO】or【CLEAR】to choose	Un= 0	Choose unit, Un=0: kg, Un=1: lb, Un=2: other unit. Generally, choose Un=0 when ex-stock.
Press【TARE】to confirm	OFF 1	New scale, the screen display OFF 1,if scale calibrated, the screen display calibrated value.
Press【ZERO】or【CLEAR】to choose	OFF2	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 15minutes, and turn off automatically after 60minutes.Generally, choose OFF=2 when ex-stock.
Press【SHIFT】	End	Confirm above parameter setting, Exit parameter setting program.

1. If you find mis-operation before end, Press【TARE】, the screen will display parameter setting circularly, correct error, if you find mis-operation after Parameter setting program end, you have to enter parameter setting program again to correct.

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

CAPACITY/DIVISION	FS (CAP)	Id (DIVISION)	Pt (DECIMAL POSITION)
50kg/0.02kg	05	02	2
100kg/0.05kg	01	05	2
200kg/0.1kg	02	01	1

CAPACITY/DIVISION	FS (CAP)	Id (DIVISION)	Pt (DECIMAL POSITION)
300kg/0.1kg	03	01	1
500kg/0.2kg	05	01	1
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

2. Calibration

◆ One point calibration program

OPERATION	DISPLAY	ILLUSTRATION
	00	Take Cap=500kg scale as example, Pay attention that the screen display 0 after hanging tare weight, you can hang tare weight at first, then turn on.
Press【F1】and【F2】at same time 3seconds	P0000	Second digit flash, use function key to move digit, set value.
Press【TARE】【ZERO】【CLEAR】	P 1358	Input 1358, 1358 is calibration password
Press【SHIFT】	SCALE	Confirm, into calibration program
Press【SHIFT】	CALSP	No load, the screen display 0,and wait until STB and ZERO light on.
Press【SHIFT】	LoAd 1	Waiting load
Hanging standard weight 500kg		Waiting until STB light on.
Press【SHIFT】	5000	Display capacity you choose when parameter Setting, and first digit flash, Waiting until STB light on.
Press【SHIFT】	-----	Confirm
	-oL-	
	End	Calibration end
	50000	Display calibrated capacity , sometimes it display 499.96,499.98,500.02,500.04.
Press【TARE】	5000	Move decimal position
Put down weight	00	Check zero point, it displays 0.0, and STB, ZERO light on.
Hanging weight 500kg again	5000	Below is test program to check scale accuracy.
Put down 500kg weight and hang on 4kg weight	40	4kg is minimum capacity (20e), 5kg,10kg is also acceptable.
Put down 4kg weight, hang on 100kg weight	1000	100kg is 500e, check accuracy
Put dowm 100kg weight	00	Check zero point

Generally, use one point calibration program, when you find scale linearity is not good, use three points calibration progress as below.

◆ Three points calibration program

OPERATION	DISPLAY	ILLUSTRATION
	00	Take Cap=1000kg scale as example，Pay attention that the screen display 0 after hanging tare weight, you can hang tare weight at first, then turn on.
Press【F1】and【F2】at same time 3seconds	P0000	Second digit flash，use function key to move digit, set value.
Press【TARE】【ZERO】【CLEAR】	P 1358	Input 1358，1358 is calibration password
Press【SHIFT】	SCALE	Confirm，into calibration program
Press【SHIFT】	CALSP	No load，the screen display 0,and wait until STB and ZERO light on.
Press【SHIFT】	LoAd 1	First load calibration
Hanging on first load 200kg		Suppose first load is 200kg, wait until STB light on.
Press【SHIFT】	10000	Display capacity，and first digit flash
Press【TARE】【ZERO】【CLEAR】	2000	Input 200kg. wait until STB light on.
Press【SHIFT】	-----	
	LoAd2	Second load calibration
Hanging on second load 500kg		Suppose second load is 500kg, wait until STB light on.
Press【SHIFT】	04000	Display second minimum load, equal to first load plus 20% capacity, and first digit flash.
Press【TARE】【ZERO】【CLEAR】	05000	Input 500kg. wait until STB light on.
Press【SHIFT】	-----	
	LoAd3	Third load calibration
Hanging on third load 1000kg		Suppose third load is 1000kg, wait until STB light on.
Press【SHIFT】	07000	Display third minimum load, equal to second load plus 20% capacity, and first digit flash.
Press【TARE】【ZERO】【CLEAR】	10000	Input 1000kg. wait until STB light on.
	-oL-	
	End	Calibration end
	00000	Display calibrated capacity , sometimes it display 999.90,999.95,000.05,000.10
Press【TARE】	10000	Move decimal position
Put down weight	00	Check zero point，it displays 0.0, and STB, ZERO light on.
Hanging on 1000kg weight again	10000	Below is test program to check scale accuracy.
Put down 1000kg weight, hang on 10kg weight	100	10kg is minimum cap（20e）, 20kg is also acceptable
Put down 10kg weight, hang on 250kg weight	2500	250kg is 500e, check accuracy
Put dowm 100kg weight	00	Check zero point

1. .First load: LOAD1 must larger than 20% capacity，and LOAD1<LOAD2<LOAD3，at the same time, between LOAD1 and LOAD2， LOAD2 and LOAD3, the interval must bigger than 20% capacity
2. If balance of any point load is less than 20% capacity, after this point load cabliration finish, the scale will end calibration progress automatically and return.

CHAPTER 5
DISPLAY ILLUSTRATION

DISPLAY	ILLUSTRATION	REMARK
SEtUP	Enter zero point calibration	
SCALE	Enter calibration	
CALSP	Enter parameter setting	
U Adj	Enter voltage calibration	
LoAd1	First calibration point	LoAd1<LoAd2<LoAd3
LoAd2	Second calibration point	
LoAd3	Third calibration point	
------	Exceed high limit	Tare weight can't exceed full capacity
------	Exceed low limit	Tare weight can't be negative
------	Waiting	
Err 10	Weight less than Min. Capacity	Can't accumulate the value
Err 11	Accumumated times overflow	Can't accumulate after 30times
Err 12	Accumulated weight overflow	Can't accumulate after 99999
Err 13	Error in repeat accumulation	Can't accumulate one weight repeatedly
Err 14	Calibration disable	Manual calibration selected
no***	Current accumulation times	
H****	Front four digit of accumulated Weight	Total weight=front four digit + rare four digit
L****	Rare four digit of accumulated weight	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	
88888	Confirm deletion	
SHIFt	Switch	
----	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
-oL-	Overload warning	Tare + Net weight exceed full capacity + 9e
-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 6
TROUBLESHOOTING GUIDE

Trouble	Reason	Solution
No display when turn on	Battery damaged	Check battery
	Battery contact loosed	Tighten the contact
Display flash	Low battery	Recharge the battery
Can't trun on &off	【OFF/ON】key damaged	Check&clean the key
Can't tare	【TARE】key damaged	Check&clean the key
Recharge indicator light can't turn on	The recharger damaged	Check the recharger
	The recharger isn't plugged ready	Insert plug again
Display isn't stable	The load is unstable	Stablize the load
	Loadcell cable damaged	Check and replace loadcell
	The scale in damp environment for a long time	Put the scale in dry environment
The display don't show "0" when empty load	No enough time for heating the scale after turn on	After turning on, heating 3-5 minutes
	Put the scale on ground for too long time	Scale should be hung
The error is large	The scale isn't hung properly	Check the scale and sling
Battery can't recharge	Battery damaged	Replace battery
	Outlet damaged	Replace the outlet
Remote distance Shortened	Receiver window is too dirty	Check and clean
	low battery of controller	Replace controller battery

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