CRANE SCALE **CSA**

User Manual

v.201811

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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 digits flash on the display, it means that the battery needs to be recharged.

7. Check hook, shackle, safety pins, and latches periodically. Contact your dealer for parts replacement in case defect, deform or wearing is found.

8. Always lift loads vertically.

CHAPTER 1   FEATURES AND SPECIFICATION

1. Features

◆ **Rotating hook:** 360**°**safe rotated hook, convenient to use

◆ **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 aluminum 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/7Ah
Adapter	DC9V/1000mA
Nominal operating Temp.	- 10℃ ~ + 40℃
Operating Humidity	≤85% RH under 20℃
Remote Controller Distance	Min. 15m
Battery of Remote Controller	AAA Size battery, 1.5V x 2

3. Specification

MODEL	Max. capacity (kg)	Min. weigh (kg)	Division (kg)	Total display counts (n)
CSA1K	1000	10	0.5	2000
CSA2K	2000	20	1	2000
CSA3K	3000	20	1	3000
CSA5K	5000	40	2	2500
CSA10K	10000	100	5	2000

4. Appearance illustration
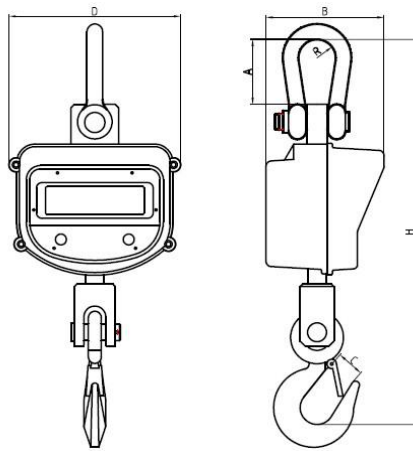
MODEL	Cap.(kg)	A(mm)	B(mm)	C(mm)	D(mm)	H(mm)	R(mm)	N.W(kg)
CSA1K	1000	95	180	28	264	570	27	12
CSA2K	2000	95	180	28	264	570	27	12
CSA3K	3000	95	180	35	264	580	27	13
CSA5K	5000	124	188	40	264	665	39	21
CSA10K	10000	124	206	48	264	745	45	30

5. Power supply

Battery: 6V/7Ah 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 digits flash, 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 front cover will become orange when charging, and it will become green 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
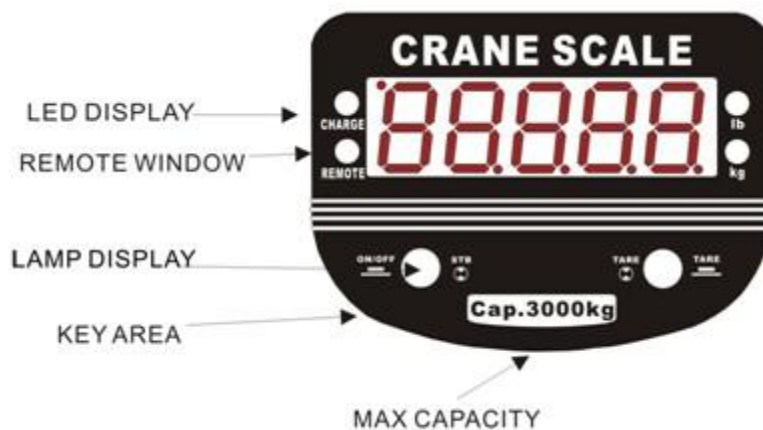
1. LED DISPLAY

30mm (1.2'') 5digits LED/LCD

2. INDICATOR LAMP

a. **TARE:**   TARE indicator

b. **STB:**   STABLE indicator

c. **CHARGE:** CHARGE indicator

d. **lb:**   Lb indicator

e. **kg:**   kg indicator

3. KEY

a. ON/OFF

  1. Press ON/OFF three seconds，the crane scale turn on.

  2. When turn on，Press ON/OFF three seconds，the crane scale turn off.

b. TARE

  1 Hang sling or container on the hook, when the weight reading stable, press this key, the digits display "0", and "TARE" indicator 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.

4. REMOTE CONTROLLER

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

Key function：

1. 【ZERO】

   a. In weighing status, when crane scale switch on with no load on the hook, but there are small digits on screen,   press this key to obtain zero reading.

   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 on front panel

   b. In parameter setting and calibration process, it used for move digit（the digit choose 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 status, it used to clear accumulation.

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

5. 【ACCU】

   It used for accumulation function, details 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 remote controller.

1 TURN ON/OFF

◆TURN ON

Press ON/OFF three seconds，   the screen display as follows：

OPERATION	DISPLAY	ILLUSTRATION
ON/OFF	〖88888〗	Display two times
	〖 Ert 〗	Display two times
	〖XXXXX〗	Display capacity
	〖U 6.XX〗	Display current battery voltage
	〖-----〗	Waiting stable
	〖 0〗	"STB" light on, you can operate now

◆TURN OFF

1	Press ON/OFF 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 60minutes.

2 ZERO

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

3 TARE

◆ TARE DIRECTLY

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

◆ SET TARE WEIGHT IN ADVANCE

OPERATION	DISPLAY	ILLUSTRATION
【SHIFT】【TARE】	〖0000.0〗	Current tare weight
【TARE】【ZERO】【CLEAR】	〖 xxx〗	Set known tare weight, 【TARE】used to move digit, 【ZERO】【CLEAR】 used to set value.
【SHIFT】	〖- xxx〗	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】	Hold the weight reading no matter load change
Press【HOLD】again	Return to normal weighing status

5 ACCUMULATION

OPERATION	DISPLAY	ILLUSTRATION
Press【ACCU】	〖No***〗	Current accumulation time
	〖H****〗	Front four digits of total value
	〖L****〗	Rear 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 time
	〖*****〗	Current weight reading
	〖H****〗	Front four digits of total value
	〖L****〗	Rear four digits of total value
【SHIFT】	〖*****〗	Return

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

7 ACCUMULATION CLEAR

OPERATION	DISPLAY	ILLUSTRATION
【CLEAR】	〖 CLr 〗	Ask if you want to clear or not
【CLEAR】	〖noCLr〗	Cancel clear
【SHIFT】	〖8.8.8.8.8.〗	Confirm clear

8 BATTERY VOLTAGE

OPERATION	DISPLAY	ILLUSTRATION
【SHIFT】【F1】	〖U 6.**〗	Display current battery voltage
【SHIFT】		Return

The voltage should be between 5.8 and 6.9, if below than 5.8, the digits flash, you need to recharge immediately.

9 BRIGHTNESS

OPERATION	ILLUSTRATION
【F1】	1～5 total 5 options, from darkness to brightness(Default is 3)

10 ZERO POINT

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

11 UNIT

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

CHAPTER 4   PARAMETER SETTING &CALIBRATION

You need to use remote controller to operate parameter setting and calibration

Key function:

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

1. PARAMETER SETTING

OPERATION	DISPLAY	ILLUSTRATION
Press ON/OFF 3seconds	〖 0〗	Turn on crane scale
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:5000kg 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. 5000kg scale division is 2kg, so choose Id=02
	〖Pt=0〗	New scale，the screen display Pt=0, if scale calibrated，the screen display calibrated decimal position
Press【ZERO】or【CLEAR】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 scale choose Pt=0
Press【TARE】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】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】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】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】confirm	〖OFF 1〗	New scale ， the screen display OFF 1,if scale calibrated，the screen display calibrated value.
Press【ZERO】or【CLEAR】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 15minutes, and turn off automatically after 60minutes. Generally, choose OFF=2 when ex-stock.
Press【TARE】confirm	〖g 〗	Acceleration of gravity
Press【TARE】,Press【ZERO】and【CLEAR】to change value	〖9.7930〗	New crane scale , it display 9.7930, it local local g value， if scale calibrated, it display calibrated value. user can change it according to local area g value, the value range is 9.783-9.832,
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 circularly, correct error, and if you find mis-operation after parameter setting program finished，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）
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

OPERATION	DISPLAY	ILLUSTRATION
	〖　0〗	Take Cap:5000kg 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】	〖P1358〗	Input 1358，1358 is calibration password
Press【SHIFT】	〖SCALE〗	Confirm，into calibration program
Press【SHIFT】	〖CALSP〗	Zero point calibration, wait until STB light on
Press【SHIFT】	〖LoAd1〗	First load calibration
Hanging on first load e.g.1000kg		First load must exceed 20% capacity, Waiting until STB light on.
Press【SHIFT】	〖05000〗	Display capacity
Press【TARE】【ZERO】【CLEAR】	〖01000〗	Input 1000, wait until STB light on.
Press【SHIFT】	〖LoAd2〗	Second load calibration
Hanging on second load e.g.3000kg		Second load must exceed Load 1+20% capacity, Waiting until STB light on.
Press【SHIFT】	〖02000〗	Mention you Load2 must exceed 2000kg
Press【TARE】【ZERO】【CLEAR】	〖03000〗	Input actual weight 3000, waiting stable
Press【SHIFT】	〖LoAd3〗	Third load calibration
Hanging on third load e.g.5000kg		Third load must exceed Load 2+20% capacity, Waiting until STB light on.
Press【SHIFT】	〖04000〗	Mention you Load3 must exceed 4000kg .
Press【TARE】【ZERO】【CLEAR】	〖05000〗	Input actual weight 5000kg. wait until STB light on.
Press【SHIFT】	〖------ -〗	Waiting stable

	〖 -oL- 〗	
	〖 End 〗	Calibration end
	〖5000.0〗	Display calibrated capacity , sometimes it display 4999.5, 5000.5
Press【TARE】	〖05000〗	Move decimal position
Put down weight	〖 0〗	Check zero point, it display 0, and STB, ZERO light on.

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 LOAD1 is bigger than 80% capacity, such as full capacity, after first load calibration, it will finish automatically, you only need to press【TARE】to move decimal position. Generally, we strong recommend you to use this one point calibration program if you have 100% capacity standard weight**

3. **If you only have 20% standard weight, after first load calibration, when it display 〖LoAd2〗, press【OFF】 2 times, then press【TARE】to move decimal position. Calibration finish.**

CHAPTER 5 DISPLAY   ILLUSTRATION

DISPLAY	ILLUSTRATION	REMARK
〖CALSP〗	Enter zero point calibration	
〖SCALE〗	Enter calibration	
〖SEtUP〗	Enter parameter setting	
〖UAdJ 〗	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	
〖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 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

PROBLEM	POSSIBLE CAUSE	SOUTION
No display when put on	Discharged battery	Recharge
	Defective battery	Replace
	Defective button	Requires authorized service
	Power button not properly depressed	Press ON/OFF in three seconds
Digits flash	Low battery	Recharge the battery
Recharge indicator light can't turn on	Battery charger damaged	Check the battery charger
	The Battery charger is not plugged properly	Insert plug again
Display doesn't respond to weight changes	Faulty load cell or PCB	Requires authorized service
	Load cell cable damaged	Check and replace load cell
	Out of calibration	Check calibration
Display experiences excessive Zero drift between weighment	Scale electronics do not stabilize after turning on	After turning on, heating 3-5 minutes.
	Put the scale on ground for too long time	Scale should be hung
Displayed weight shows large error	Scale not Zeroed before applying weight	Depress ZERO before applying weight
	Requires recalibration	See calibration
	Kg/lb wrong selection	See operation
Battery can't recharge	Battery damaged	Replace battery
	Outlet damaged	Replace the outlet
Remote distance shortened	Receiver window is dirty	Check and clean
	Remote Control's battery is low	Replace Remote Control's battery.

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HiWEIGH

Weighing system & solution