



CCS Series

Electronic Crane Scale Operation Manual



PLEASE READ THIS MANUAL VERY CAREFULLY
BEFORE OPERATING THIS SCALE

Specifications subject to change without prior notice

CCS/OP/2015/11/002

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1. Cautions

1. Do not overload this scale.
2. Do not perform overhead weighing. Stay clear when weighing is in operation
3. Do not perform weighing under strong wind condition which may cause incorrect reading
4. Do not attempt to open this scale, no user serviceable parts inside.
5. Do not remove wire rope stopper from hook. For safety reasons, always apply it.
6. Remove all loads from hook when not in used.
7. Before weighing, check and make sure that all hanging /load-receiving elements/ wire rope / devices are in good condition.
8. Check hook, shackle, sling, safety pins, and latches periodically. Contact your dealer for parts replacement in case defect, deform or wearing is found.
9. For maximize operation safety, it is strongly suggested that all hook, shackle, sling, safety pins, and latches should be replaced with new one every 2 ~ 3 year depends on frequency of usage.
10. Always lift loads vertically.

2. About Metrological Legislation

Because of metrological legislation, settings of some metrological parameter may only be accessed by authorized personnel. Do not attempt to change any of these built-in metrological parameters. Contact your dealer for installation and technical assistance.

This scale 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 this scale or remove the serial number. Contact your dealer for more information and after sales service.

For the most accurate weighing results, do not use this scale when any of the environmental conditions is beyond those listed in **Specifications**.

Depends on law requirements, calibration and internal function parameter setting may be controlled by jumper. Contact your dealer if calibration and other operation parameters are required.

3. Installation Instruction

3.1 Unpack

Unpack this scale very carefully. Check and make sure that the following items are included. If necessary, keep all packing material for future transportation use.

- a. This operation manual
- b. CCS series scale x 1
- c. Power adaptor x 1
- d. Wireless remote control x 1

Contact your dealer if any items are missing.

3.2 Securing the Scale

This unit must be hanged via a strong media, e.g. a steel wire rope or a metal hook, to a firm support that can withstands at least 5 times of scale capacity. Make sure that the scale is hanged vertically.

3.3 Power the Scale

This scale is powered by the built-in rechargeable battery. A power adaptor is included which is used to recharge this built-in rechargeable battery. Before first time use, charge the built-in rechargeable battery until the **Charge Indicator** turns green.

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

4. Specifications

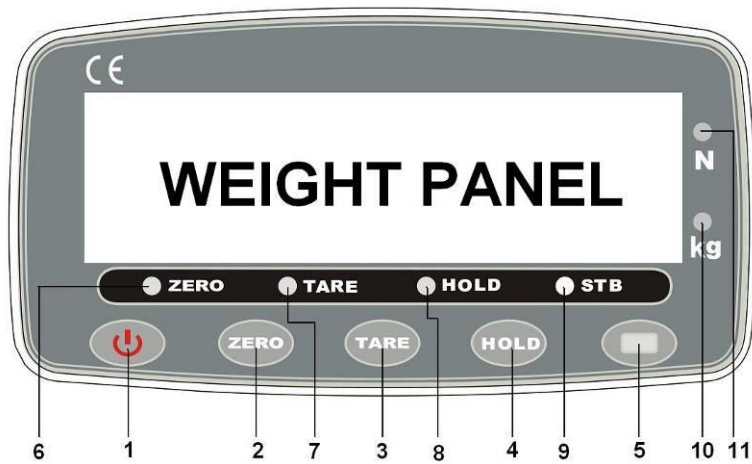
Model	Kilogram (kg)			Newton (N)		
	Capacity	Division	Min	Capacity	Division	Min
CCS-60	60	0.02	0.4	588	0.2	4
CCS-150	150	0.05	1	1470	0.5	10
CCS-300	300	0.1	2	2940	1.0	20
CCS-600	600	0.2	4	5880	2.0	40
CCS-1000	1000	0.5	10	9800	5.0	100
Tare Range	•	To Capacity by Subtraction				
Power Source	•	Built-In Rechargeable Battery (6V/5Ah), or				
	•	External Power Adapter				
Operating Environment	0~40°C(32~104°F) Non Condensing R.H. ≤85%					
Specifications subject to change prior to notice						

Key Features: -

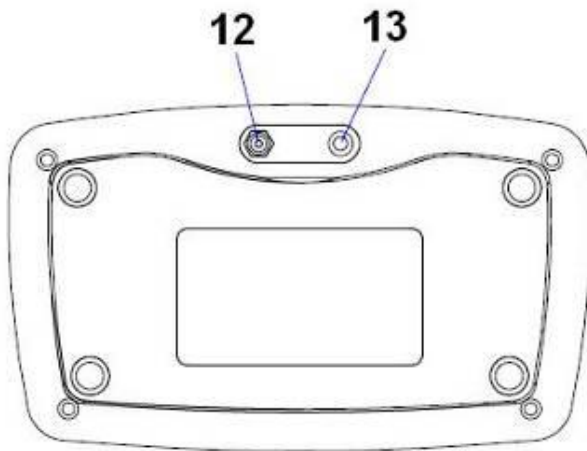
- Light Weight and Heavy Duty Cast Aluminum Housing
- Safe Overload = 125%
- Testified Ultimate Overload = CCS-1000 = 650%, Others = 1200% plus
- 5 x 30mm LED Display Digits
- User Friendly Functions: -
 - Tare, Preset Tare, Zero, Auto Zero Tracking, Memory Accumulation, Hold, Overload Warning, LED Contrast adjustment and Auto Power Saving
- Dual Units: - Metric and Newton
- Charge Status indicator
- Battery protection circuits against over-charging
- 360° Rotary Safety Hook with Wire Rope Stopper

5. Layout and Description

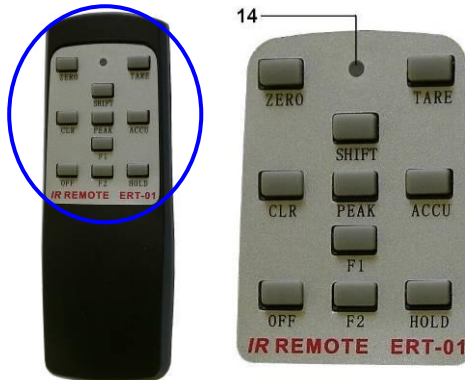
Front Panel



Back of Scale



Remote Control



1. [ON/OFF]

Press once to turn scale on. Press and hold for 3 seconds to turn scale off.

2. [ZERO]

Press to set weight being displayed to zero when loaded.

3. [TARE]

Press to tare off the weight of a container and wire rope.

4. [HOLD]

Press to hold the weight being displayed on **WEIGHT PANEL**. Press again to release.

5. INFRA RED RECEIVING WINDOW

Signal from remote control is received here, do not obstruct.

6. ZERO INDICATOR

This indicator appears to indicate a net zero weight status.

7. TARE INDICATOR

This indicator appears when the **TARE** function is in operation. The weight being displayed on the **WEIGHT PANEL** is the net weight.

8. HOLD INDICATOR

This indicator appears to indicate the **HOLD** function is in effect and the

weight being displayed is a frozen value.

9. STABLE INDICATOR

This indicator appears to indicate the weight being display is a stable weight.

10. WEIGHT UNIT INDICATOR: - KILOGRAM (kg)

This indicator appears to indicate the kilogram (kg) is being employed.

11. WEIGHT UNIT INDICATOR: - NEWTON (N)

This indicator appears to indicate Newton (N) is being employed.

12. DC INPUT JACK

The output jack of the external power adaptor is plugged in here.

13. CHARGE STATUS INDICATOR

- Red color: Recharging in process
- Green color: Charging is completed

14. TRANSMISSION INDICATOR

Indicator flashes to indicate infra red signal is being transmitted.

Keys on Remote Control

Key	Normal Operation	Internal Function Setup
[ZERO]	To set weight being displayed to zero when loaded.	To increase value by 1.
[TARE]	To tare off the weight of a container and wire rope.	To move cursor to 1 place left.
[SHIFT]	To be used with other keys to trigger various function.	To confirm value enter or setting.
[CLR] (CLEAR)	To clear the accumulated weight resided in memory.	To decrease value by 1.
ACCU	To accumulate the current weight to memory.	To move cursor to 1 place right.

[F1]	To set LED brightness.	To be used with F2 .
[F2]	NIL	To be used with F1 .
[HOLD]	To hold the weight being displayed on WEIGHT PANEL . Press again to release.	NIL
[OFF]	Press and hold for 3 seconds to turn scale off.	
[PEAK]	NIL	NIL

6. Getting Started

6.1 Placing the Scale

Hang this scale with a strong media. Weighing should be performed in where is free from RF interference, vibration, extreme heat, direct sunlight and excessive moisture. For safety reasons and best weighing result, always hang this scale and lift the load vertically.

6.2 Lifting a Load

Always lift a load gently. Sudden shock, excessive force or overloading the scale may cause damage to the weighing sensor inside.

It is a good practice to remove all loads from hook when not in use. This would prolong the lifetime of weighing sensor.

6.3 Weighing Function

Before weighing, make sure that a zero weight value is being displayed and the **ZERO INDICATOR** is on. If not, press **[ZERO]** to set weight to zero.

For best weighing result, refer to Operating Environment section under **SPECIFICATIONS**.

6.4 Scale Overload Signal

Scale overloading is represented by **-oL-** on **WEIGHT PANEL** accompanied

by continuous beeps.

When overloaded, unload immediately. Fail in doing so may cause damages to scale and fatal consequence.

6.5 Recharging the Battery

The scale is equipped with a built-in rechargeable battery. When the **-LB-** appears on display, it means the built-in rechargeable battery is at low voltage status. Recharge the scale immediately by applying the power adaptor.

In order to protect the built-in battery, the scale may power off automatically.

The **CHARGE INDICATOR** will light up when battery recharging is in process. Battery recharge status is represented by the color of this indicator.

Red color: - Battery charging is in progress.

Green color: - Battery charging completed.

7. Instruction for Use

7.1 Turn Scale On¹

Press and hold **[ON/OFF]** for one seconds.

Press	Display	Illustration
[ON/OFF]	[8.8.8.8.8.]	All display segments/indicators check.
	[Ert.]	Display software number
	[xxxxx]	Display capacity
	[U X.XX]	Display battery voltage
	[-----]	Waiting stable

¹ Battery voltage is usually between 5.80 and 6.90. Apply external power adaptor and recharge battery when voltage is = 5.8 or lower.

It is a good practice to allow 2 minutes warm up time before operation.

7.2 Turn Scale Off

Press and hold **[ON/OFF]** or **[OFF]** for three seconds. Scale displays battery voltage before power off.

7.3 Zero Function²

If zero weight value does not appear when scale is unloaded, press **[ZERO]** to reset weight displayed to zero. **ZERO INDICATOR** appears after **[ZERO]** is pressed; if not, press **[ZERO]** again.

7.4 Tare Function

If a container is used, follow the below steps to tare the weight of the container off and to obtain the net weight.

7.4.1 To Tare off the weight of a container

Apply the container and then press **[TARE]** to tare off the weight of it. After the **[TARE]** is pressed, the **TARE INDICATOR** appears.

To clear the weight of a container, remove the container from hook then press **[TARE]**, the **TARE INDICATOR** goes off.

7.4.2 Preset tare

Pre-determinate tare value can be entered through the following

- a. Press **[SHIFT followed by [TARE]**.
- b. Scale displays **00000** (preset tare value).
- c. Enter desired preset tare value through **[TARE]**, **[ZERO]**, **[CLR]** and **[ACCU]**.
- d. Press **[SHIFT]** to confirm setting.
- e. After **[SHIFT]** is pressed, scale displays **-xxxx** (preset tare value).
- f. To clear preset tare value from memory, press **[TARE]** again.

² Maximum Zero range depends on internal setting. Contact your dealer for more information.

7.5 Hold Function

- Press **[HOLD]** to hold the weight value being displayed³.
- After **[HOLD]** is pressed, **HOLD INDICATOR** appears.
- Press **[HOLD]** again to release and **HOLD INDICATOR** goes off.

7.6 Weight Accumulation⁵

7.6.1 To add a transaction to memory

Press **[ACCU]** to accumulation current weight to memory.

Press	Display	Illustration
[ACCU]	[No***]	Display total number of transactions accumulated
	[H****]	Display the first 4 digit of the total accumulated value
	[L****]	Display the last 4 digit of the total accumulated value

Example: - total accumulated value 654320 will be displayed as **H0065** followed by **L4320**.

The above information will be repeated twice and scale returns to normal operation status or press **[SHIFT]** to return immediately.

7.6.2 To check individual accumulated data

Press	Display	Illustration
[SHIFT] followed by [ACCU]	[no.***]	Display transaction number
	[****]	Display weight of this transaction number.
	[H****]	Display the first 4 digit of total accumulated value
	[L****]	Display the last 4 digit of total

³ For the most accurate result, only press **[HOLD]** only when the weight is stable.

		accumulated value
[TARE]	--Ditto--	Show details of next accumulated transaction
[ZERO]	--Ditto--	Show details of previous accumulated transaction
[SHIFT]	[*****]	Quit to normal operation status

7.6.3 To clear accumulation data

Press	Display	Illustration
[CLR]	[CLr]	Accumulated data clearance function is above to take place.
[CLR]	[noCLr]	Quit without clearing any accumulated data.
[SHIFT]	[8.8.8.8.8.]	Accumulated data clearance completed.

7.7 To Check Battery Voltage

- Press **[SHIFT]** followed by **[F1]** to display battery voltage.
- Press **[SHIFT]** to quit and return to normal operation status.

7.8 To Adjust Led Brightness

- Press **[F1]** to adjust LED brightness.
- 5 settings are available from BL 01 ~ 05. The higher the number, the brighter the display.
- Scale returns to normal operation within 2 seconds.

7.9 To Shift between Weight Unit Kilogram (kg) And Newton (N)

- Press **[SHIFT]** followed by **[HOLD]** to shift between kg and N.
- 2 settings available: - Un = 0 (kg) and Un = 1(N)
- The corresponding **WEIGHT UNIT INDICATOR** will light up when a weight unit is selected.
- Scale returns to normal operation within 2 seconds.

7.10 Auto Power Off Function

Depends on internally setting, scale will: -

- a. Enter standby status (denoted by a minus sign on **WEIGHT PANEL**), after left idle 15 minutes, and
- b. Power off automatically if left idle for 60 minutes.

8. Message / Error Codes

Code	Description
CALSP	Calibrating zero.
SCALE	Calibration procedures ready to start.
SEtUP	Parameter setting procedures ready to start.
UAdJ	Apply and enter calibration load #1.
LoAd 1	Apply and enter calibration load #1.
LoAd 2	Apply and enter calibration load #2.
LoAd 3	Apply and enter calibration load #3.
-----	Tare weight exceeds capacity.
_____	Cannot tare a negative weight.
-----	Waiting
Err 10	Cannot accumulate to memory because weight is less than Min. Refer SPECIFICATIONS for Min.
Err 11	Total number of accumulated transaction exceeds limitation (30 times)
Err 12	Weight to be accumulated exceeds 99999.
Err 13	Cannot perform repeated accumulation for the same weight.

no***	*** Represents total number of transactions accumulated
H****	**** Represents the first 4 digit of the total accumulated value
L****	**** Represents the first 4 digit of the total accumulated value
CLr	Accumulated data clearance function is above to take place.
noCLr	Quit without clearing any accumulated data.
88888	Accumulated data clearance completed.
SHIFt	Switch
---	Input value is too high.
---	Input value is too low.
noACC	Memory does not contain any accumulated data.
-oL-	Scale overloaded
-Lb-	Battery voltage is too low
U*. **	Battery voltage
End	Calibration or parameter setting completed
OFF	Turning scale off
Unstb	Weight detected is not stable

9. Trouble Shooting

Syndrome	Check If	Action
No display when power on	Battery is low.	Apply external power adaptor and recharge.
	Defective battery.	Replace with new one.
	Defective button.	Contact your dealer.
	Power button not properly depressed.	Try again by pressing and hold [ON/OFF] .
Digits flashes	Battery is low.	Apply external power adaptor and recharge.
CHARGE STATUS INDICATOR does not light up after power adaptor is applied	DC jack is plugged in properly.	Check and plug again.
	Power adaptor is not plugged in the AC outlet properly.	Check and plug again.
Display does not respond to weight change	HOLD function in operation.	Press [HOLD] to release the HOLD function.
	Defective scale.	Contract your dealer.
Excessive Zero drift between	Scale electronics not yet stabilized after turning on.	Allow warm up time for 3-5 minutes after powered on.
Excessive error found on weight result	Scale was not at zero status before applying load.	Unload, press [ZERO] and try again.
	Wrong weight unit is selected.	Refer to this manual on how to shift between weight units.
	Scale is out of calibration.	Contract your dealer.
Remote distance	Batteries inside Remote Control battery are low.	Replace with 2 x AAA new batteries.

shortened	INFRA RED RECEIVING WINDOW is dirty or covered.	Clean and remove all obstacles.
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10. Daily Care and Maintenance

- Clean the scale 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 scale periodically. Re-calibrate the scale if necessary. In some countries, calibration requires authorized / qualified agent. Contact your dealer for more information.
- If it is use in outdoor environment, make sure to bring back indoor afterwards. Do not let the scale stays outdoor overnight to avoid moisture buildup.
- Store scale in a dry and clean place.
- Recharge battery before and every 2 months during long time storage.



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