CRANE SCALE **CXS**

User Manual

v.201811

Do **NOT** overload the scale. This will damage the load cell and void the warranty.

Do **NOT** leave load hung on the scale for long. This will decrease the scale's accuracy and shorten the load cell's life.

Inspect the shackle and hook before using.

When the scale runs out of power, replace the battery with full ones or recharge it (for rechargeable battery)

Do **NOT** use the scale under thunder or rain.
Do **NOT** attempt to repair the scale yourself. Contact your local distributor.
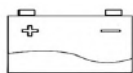
Please replace the battery if it runs out of life. The replaced battery must be handled correctly.

1. Specifications

- Capacity: 50/100/200/300Kg
- Divison: 0.02/0.05/0.1/0.1Kg
- Display: LCD with backlight (20mm)
- Power: 3*AA batteries or rechargeable battery
- Weight unit: Kg/Lb
- Shackle/Hook Material: Stainless steel
- Scale body: Aluminum cast
- Tare Range: 100% F.S.
- Reading stability: 5-8 seconds
- Overload: 100% F.S+9e
- Max.Safety Load: 120% F.S.
- Ultimate Load: 300% F.S.
- Battery Life: >80 hours
- Operating Temp: -10...40℃
- Relative humidity: ≤ 90 % non-condensing at 20℃
- Net Weight: 700g

2. Keyboard Functions

[ON/OFF]   Power On/Power Off
[HOLD/UNIT]   Unit Exchange/Hold
[TARE/ZERO]   Tare/Zero

3. Operation

3.1 ［ON/OFF］ key ,power on

ON: Press ［ON/OFF］ key, the scale start to perform the self-test, after the self-test it will end with following steps: auto-zero >> power capacity (Pbt**, **=percentage of the battery) >> weighing ready

OFF: Press ［ON/OFF］ key for 1.5 second，the scale will show battery volumen Pbt** and show OFF 2 seconds later and then off.

3.2 Tare/Zero

TARE: When {**TARE**} sign is off, the weigh is stable ({**STB**} is on, when it >0, press [TARE], it displays zero. Then {**TARE**} is on, it shows net weight.

TARE CLEAR: When {**TARE**} sign is on, press [TARE] clean tare and come back gross weight, then {**TARE**} is off.

ZERO: Keep pressing【**TARE/ZERO**】for 1 second, it goes to zero If the weighing is stable and gross weight is less than the allowable zero range, it shoes zero and {**ZERO** } is on.

---it doesn't function if the {TARE} or [HOLD] on

3.3. **Display lock/unlock**

Only when weight >20 divisions, press 【**HOLD/UNIT**】when the reading is stable, lock the display and {**HOLD**} is on.

When {**HOLD**} is on, press 【**HOLD/UNIT**】, unlock the display.

3.4. **Kg/Lb unit exchange**

Press ［kg/lb］ key, it change the unit from Kg to lb or from lb to Kg (default unit is kg)

3.5.Auto power off. When scale is stable, 5 mins.later, power off automatically.

4. Connection

4.1 CN1 :load cell socket

(1)：+E

(2)：+S

(3) –S

(4) -E

(5)GND

4.2 CN2: power socket

(1)+4.5V（recommend 1.5V Lead Acid batteries）

(2)GND

5. Parameter Setting and Calibration (Distributor Only)

Keys functions:
Press [TARE / ZERO] key, set the number and shift one bit to the right, the number flashing display.
Press the [HOLD / UNIT] key, set the number of bits are incremented by 1.

Operation:
5.1 When power off , hold the [TARE/ZERO],
Press [ON / OFF] key to power on, display {d 0.1}, it means division d = 0.1
Press the [HOLD / UNIT] key to select the division 0.001, 0.002, 0.005, 0.01, 0.02, 0.05, 0.1, 0.2, 0.5, 1, 2, 5.
5.2 After division selected, press [ON / OFF] key to display the maximum weighing {300.0},press [TARE / ZERO] [HOLD / UNIT] key, enter the new maximum weighing.
5.3 Press【ON/OFF 】,display ｛ABCDE｝
A = T1 (sec). When weight is stable, auto lock 1 seconds.
B backlight setting, B = 0 backlight permanently off, B = 9 backlight permanently on.
B = T2 (1-8) seconds. After the weight is stable for 2 seconds, turn off the backlight automatically.
C is the automatic powered off set, C = 0 does not automatically shut.
C = T3. After weight is stable for T3 × 5 minutes, power off automatically..
D is the power-on zero range,0-90% FS.
E is button zero range, 1 to 10% FS.
[TARE / ZERO] [HOLD / UNIT] key, enter the new number.
5.4 Press 【ON/OFF】, display the internal set number, then display｛S 10｝.Press 【TARE/ZERO】【HOLD/UNIT】, enter the new number.
5.5 Press 【ON/OFF】,display A/D
Display A/D, is to check whether the load cell and A/D works well.

5.6 Press 【ON/OFF】, display{ CAL00}, which means zero calibration. When scale is empty and weight is stable , press the [ON / OFF], display ｛- - - - -｝, which means it's in zero calibration.

After a few seconds, the display {LoAd}, which means the loaded weight.

Now load the calibration weight.

Press【TARE/ZERO】【HOLD/UNIT】,enter actual load weight value,

After weighing stability, press the 【ON/OFF】 key,

Display {-----}, Which means that the span calibration is in progress.

5.7 After a few seconds, the calibration is completed, return to normal weighing display.

6. Bluetooth

6.1 Connect to crane scale by Bluetooth, display { b-on- }, password=1234.

If unconnected, always display { b-on- },cut the connection, press 【ON/OFF】 and after { Error } display for 2 seconds, come back to weight.

If connected, display {SUCCE}, send verification to PDA. After it's verified, transmit the weighing data and status by Bluetooth to PDA as belows.

Pass the verification, display { **-OY-** };if not, **{FALL }.**

(For example: crane scale send characters "MODEL",PDA feedback "A6", it's verified and can transmit.If no feedback or the feedback is not "A6", scales don't transmit data to PDA)

6.2 Turn off Bluetooth connection, showing {b-OFF}. After a couple of seconds to return to the weight display.

After power off, make sure the Bluetooth connected or not, automatically connected or not in next time when it's turned on. When Bluetooth is connected, the current consumption increases.

During working hours, Bluetooth send the following weighing data

STX SA X7 X6 X5 X4 X3 X2 X1 BCC CR

STX is a data head,

CR is the end of the data,

SA is status information,

SA = 010ABCDE (binary number)

A = 1 fault; B = 1 overflow; C ≡ 0; D = 1 stable; E = zero.

BCC efficacy byte, STX later BCC binary data before and

To take the low byte and the highest bit is always 1. (1???????)

X7 - X1 weighing data (ASC code), X7 high level, X1 low level.

The computer can send a command set to zero

 STX K Z R @ BCC CR (02 4B 5A 52 40 B7 0D)

Example: Weighing the value of 136.7kg, stable weight

02 42 20 20 31 33 36 2E 37 81 0D

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HiWEIGH
Weighing system & solution