

# OCS-F Series

## High Resolution Wireless Crane Scale



### User Guide

Please read this manual carefully, before using the scale.

Rev: 1.1A.1.0B-5

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# 1. Safety Guide

**For good performance and precise measurement, be careful with daily operation and maintenance. Note the following instructions:**

- i** Do NOT overload the scale. This will damage the loadcell and void the warranty.
- i** Do NOT leave load on scale for long. This will decrease scale accuracy and shorten loadcell life.
- i** Inspect shackle and hook before using. Check the clips, pins and screws regularly.
- i** Check the battery power frequently. When scale runs out of power, charge battery with its dedicated charger or replace it with a full one.
- i** Rotate load rather than scale itself if needed.
- i** Do NOT use scale under thunder or rain.
- i** Hang scale on shelf in dry and well-ventilated room. Do NOT place scale on ground directly.
- i** Do NOT attempt to repair scale yourself. Contact your local representative if needed.

## 2. Features

**This scale is a combination of the sound and proven mechanical design, with today's most advanced electronics to provide a superb feature set. It is versatile, reliable, accurate and easy to operate.**

- Superb Quality.** Strictly in accordance with OIML R76, Chinese

- GB/T 11883-2002 national standards.
- ☑ Great Safety. Steel case, high firm hook and ring, dedicated weighing loadcell for safety installation.
  - ☑ Strong Reliability. Cutting-edge technology, quality integrated circuit for high performance and long time stability.
  - ☑ Broad Applicability. Popular and applicable in storage, textile, metallurgy industry, and so forth.
  - ☑ Stable Communication. Use open ISM wireless channel. Optional radio frequency, 430MHz, 860Mhz, etc.
  - ☑ Embedded Printer. Stylus dot-matrix EPSON M150-II embedded, for Chinese, English, numerals and various sign printing.
  - ☑ Friendly Interface. Wide temperature range HTN segmental LCD display with white LED backlight, for night use.
  - ☑ Easy Operation. Wireless communication between scale and indicator, easy to operate in distance. Quality keypad and beeper, for convenient operations.
  - ☑ Complete Function. Division switch, unit switch, auto power-off, battery inspection, tare set, accumulate, delete, query, hold, peak view, date time view, list printing, etc.

### 3. Specifications

#### Main Parameters

Accuracy Class	Chinese GB/T 11883-2002 Class III Eqv. to OIML R76
Tare Range	100% F.S.
Zero Range	4% F.S.
Stable Time	≤10sec

Overload Warning	100% F.S. + 9e
Safety Load	125% F.S.
Ultimate Load	400% F.S.
Battery	6V/3.2Ah acid-lead battery
Charger	AC220V Input, DC9V1500mA Output
Op. Temp.	-10°C ~ +40°C
Op. Humidity	≤90% at 20°C
Display	148mm*45mm LCD, 1.2' (30mm) numerals

### Wireless Communication

Distance	≥200m, scale over 2m, without barrier
Modulation	2-FSK / GFSK
Wireless Frequency	Open ISM
Band Frequency	Band 0: 433.8500 MHz; Band 1: 436.9987 MHz; Band 2: 440.1474 MHz; Band 3: 443.2961 MHz; Band 4: 446.4448 MHz; Band 5: 449.5935 MHz; Band 6: 452.7422 MHz; Band 7: 455.8909 MHz; Band 8: 430.7013 MHz; Band 9: 427.5526 MHz; Band 10: 424.4039 MHz; Band 11: 421.2552 MHz; Band 12: 418.1065 MHz; Band 13: 414.9578 MHz; Band 14: 411.8091 MHz; Band 15: 408.6604 MHz.

### Printer

Printing Type	Stylus dot-matrix EPSON M150-II
Printing Speed	0.4 line/sec
Printing Width	33mm
Character	5×7 dot-matrix
Paper type	44mm±0.5mm×ø33mm

Printing Life	500,000 lines(MCBF)
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## 4. Capacity & Resolution

Modal	Max. Cap.	Min. Cap.	Res.	Division
OCS-XS-1	1,000kg	10kg	0.5kg	2,000
OCS-XS-2	2,000kg	20kg	1kg	2,000
OCS-XS-3	3,000kg	20kg	1kg	3,000
OCS-XS-5	5,000kg	40kg	2kg	2,500
OCS-XS-10	10,000kg	100kg	5kg	2,000
OCS-XS-15	15,000kg	100kg	5kg	3,000
OCS-XS-20	20,000kg	200kg	10kg	2,000
OCS-XS-30	30,000kg	200kg	10kg	2,000
OCS-XS-50	50,000kg	400kg	20kg	2,500

## 5. Display & Keypad

### Keypad Function

Key	Function	Notes
	Power On	Press 2sec to power on the indicator.
	Power Off	Press 2sec to power off the indicator.
	Paper Feed	Paper feed 1 line.
		After  pressed, paper feed 3 lines.
	Print Weight	Print & accumulate weight.
	Print Header	Print header.
	Setup	Follow other keys to enter Setup menu.
	Backlight On/Off	Turn on/off backlight manually.
	Date & Time	Enter or exit Date & Time Mode.

	Mode	
	2nd	Follow other keys to trigger 2nd functions.
	Dot	Input dot.
	Peak On	Show peak weight.
	Peak Off	Cancel peak weight.
	0	Input 0.
	Zero	Zero the scale.
	1	Input 1.
	User Setup	After  pressed, enter User Setup menu.
	Group Set	After  pressed, input group number.
	Tare In	Tare weight in.
	Tare Out	Tare weight out.
	Tare Set	After  pressed, input weight as tare.
	2	Input 2.
	Tare View	After taring, view the tared weight.
	3	Input 3.
	Radio Setup	After  pressed, enter Radio Setup menu.
	Accumulate	Accumulate weight into memory.
	4	Input 4.
	Print Setup	After  pressed, enter Print Setup menu.
	Delete	Delete one accumulated data.
	Clear	After  pressed, clear all accumulated data.
	5	Input 5.
	Serial Output Setup	After  pressed, enter Serial Output Setup.
	View	View accumulated weight.
	View Total	After  pressed, view accumulated weight total.

	6	Input 6.
	Calibration	After  pressed, enter Calibration.
	Hold	Lock screen.
	Unhold	Resume screen.
	7	Input 7.
	Resolution Switch	Switch resolution in specified range.
	8	Input 8.
	Unit Switch	Switch measurement unit.
	9	Input 9.
	Enter	Confirm option, or enter the input number.
	Cancel	Cancel the input number.

### Display Sections

      peak	Status Section
	Message Section
	Weight Section

### Status Section Illustration

Icon	Name	Notes
	Indicator Battery	When  shown, please charge the indicator.
	Wireless Signal	When  shown, wireless signal is weak. Try to shorten the distance between scale and indicator, or remove the obstacle. When  not shown, wireless communication is failed. Check the scale battery or re-seek RF

		band (and re-set RF band).
	Scale Battery	When  shown, please replace the scale battery and charge the dead one.
	Net/Tare	When  shown, weight is in Gross mode. When  shown, weight is in Net mode. When  shown, weight is tare.
	Zero	When  shown, weight is at zero.
	Motion	When  shown, scale is in motion, try to make scale stable or wait until scale becomes stable.
	Peak	When <b>peak</b> shown, the weight is the maximum in history.

### Measurement Units

Message	Illustration
<i>KG</i>	kg
<i>LB</i>	lb
<i>KN</i>	kilo Newton
<i>N</i>	Newton
<i>T</i>	Ton
<i>TN</i>	Short Ton
<i>UN</i>	User Unit

### Weight Section Illustration

Message	Name	Notes
<i>USER</i>	user	User Setup
<i>Print</i>	print	Print Setup
<i>on / off</i>	on / off	On/Off
<i>YES / no</i>	yes / no	Yes/No

-----	overload	Weight exceeds 100%F.S.+9e
-	-	No Data

### Message Section Illustration

Message	Name	Note
PASSWORD	password	password required
SETUP	setup	press keys to enter Setup
2ND	2nd	press keys to perform 2nd function
INVALID	invalid	invalid operation
ACCUMULATE	accumulate	weight accumulated
ACC DELETE	accumulation delete	weight deleted
ACC CLEAR	accumulation clear	all weight cleared
NO DATA	no data	no data in memory
MEMORY FULL	memory full	memory full
TOTAL	total	sum of viewed weights
NO DEL	no deletion	no data to be deleted
WAITING...	waiting...	waiting for result
GROUP SET	group set	set group number
GROUP	group	group number
DATE SET	date set	date set
TIME SET	time set	time set
AUTO OFF	auto off	auto power-off time
LUMINANCE	luminance	backlight luminance
LIGHT TIME	light time	backlight auto-off time
PRINT MODE	print mode	printing mode
PRINT TIME	auto print time	auto-print time

**FORMAT**

format

printing format

## 6. Operation Guide

### On/Off

- ✓ Press  2sec, to power up indicator.

Indicator performs self-testing, display testing, and then displays max. cap., detects weight (auto zero) at last.

- ⓘ If wireless communication fails, or weight is in motion, indicator goes into Date & Time mode.
- ⓘ For more info about Auto Zero, refer to Auto Zero in Scale Setup. When Save Zero is on, Auto Zero is disabled.
- ✓ Press  2sec, to power off indicator.

After power-off message shown, indicator powers off.

### Zero

- ✓ Press , to zero the scale.  shows in Status Section.
- ⓘ If weight is in motion, or tared, or exceeds Manual Zero Range, Zero is not allowed, **INVALID** shows for 1sec in Message Section.

### Tare In/Out

- ✓ Press  (weight in gross mode), to tare weight in.  shows in Status Section.
- ⓘ If weight is in motion, or minus, or exceeds Max. Cap., Tare In is not allowed, **INVALID** shows for 1sec in Message Section.

Tareing reduces the apparent overloading range. E.g., if a 1000kg container is tared and scale maximum capacity is 5000kg, scale will overload at a new weight of 4018kg (5000 – 1000 + additional 9

divisions).

- ☑ Press  again (weight in net mode), to tare weight out.  shows in Status Section.

### Tare Set

- ☑ Press  first, then press , to enter Tare Set mode. Press 0~9, to input weight. Press , to confirm the input. Press , to cancel the input.  shows in Status Section.

Tare Set also reduces the apparent overloading range.

- ⓘ If the input weight Max. Cap., Tare Set is not allowed, **INVAL I D** shows for 1sec in Message Section.

### Tare View

- ☑ Press  (weight in net mode), to enter Tare View.  shows in Status Section.
- ☑ Press  again, to exit Tare View.  shows in Status Section.

### Accumulate

- ☑ Press , to store and accumulate weight.
- ⓘ If weight is stable, not overloaded, over zero, and fell in Zero Range before, Accumulate is allowed, **ACCUMULATE** shows for 1sec in Message Section. Otherwise, Accumulate is not allowed, **INVAL I D** shows for 1sec in Message Section.
- ⓘ Up to 480 weights can be stored into memory. If memory is full, **MEMORY FULL** shows for 1sec in Message Section.

### Delete

- ☑ Press , to delete the former accumulated weight.

- ❗ If there are accumulated weights left in memory, **ACC DELETE** shows for 1sec in Message Section, otherwise, **NO DATA** shows for 1sec in Message Section.

### Clear

- ☑ Press **2nd** first, and then press **5 del.**, to clear all accumulated weights and the total.
- ❗ If there are accumulated weights left in memory, **ACC CLEAR** shows for 1sec in Message Section, otherwise, **NO DATA** shows for 1sec in Message Section.

### View & Print

- ☑ Press **6 view**, to enter View mode. Record group number and record number **600 1--NO0 12** shows in Message Section, record weight shows in Weight Section.

Weight changes with different measurement unit and resolution.

- ❗ If there are no accumulated weights in memory, **NO DATA** shows for 1sec in Message Section.
- ☑ Press **2 tare** and **8 res.** to flip up and down. Press **2 tare** increase No., press **8 res.** decrease No.
- ☑ Press **enter**, to view record date and time **090307 1026**, first 6 digits indicating YYMMDD, last 4 digits indicating HHMM. Press **enter** again, to view group and number.
- ☑ Press **print**, to print record.
- ☑ Press **2nd** first, and then press **print**, to print all records.
- ☑ Press **5 del.**, to delete record.
- ☑ Press **on/off**, to exit View & Print.

## View & Print by Group

- ✓ In View & Print mode, press **2nd** first, and then press **1 zero**, to enter Group Input mode. **GROUP** shows in Message Section, the input group number shows in Weight Section.
- ✓ Press number keys to input group number.
- ✓ Press **enter**, to filter record by group number.
- ⓘ Record viewing and printing operations are the same as those in View & Print mode. The only difference is that pressing **2nd** first, and then pressing **print**, will print all matching records.

## View & Print by Date

- ✓ In View & Print mode, press **time**, to enter Date Input mode. **DATE** shows in Message Section, the input date shows in Weight Section.
- ✓ Press number keys to input date YYMMDD.
- ✓ Press **enter**, to filter record by date.
- ⓘ Record viewing and printing operations are the same as those in View & Print mode. The only difference is that pressing **2nd** first, and then pressing **print**, will print all matching records.

## View & Print by Group and Date

- ✓ In View & Print mode, both group number and date can be used as filtering condition. Filter record by group number first and then filter record by date, or filter record by date first and then filter record by group number.
- ⓘ Record viewing and printing operations are the same as those in View & Print mode. The only difference is that pressing

 first, and then pressing , will print all matching records.

## Total & Print

- ✓ Press  first, and then press , to enter Total & Print mode. Records number **TOTAL 63** shows in Message Section, total weight shows in Weight Section.
- ⓘ Total weight changes with different measurement unit and resolution.
- ✓ Press , to print total weight.
- ✓ Press , to exit Total & Print.

## Total & Print by Group

- ✓ In Total & Print mode, press  first, and then press , to enter Group Input mode. **GROUP** shows in Message Section, the input group number shows in Weight Section.
- ✓ Press number keys to input group number.
- ✓ Press , to filter record by group number.
- ⓘ Printing operations are the same as those in Total & Print mode.

## Total & Print by Date

- ✓ In Total & Print mode, press , to enter Date Input mode. **DATE** shows in Message Section, the input date shows in Weight Section.
- ✓ Press number keys to input date YYMMDD.
- ✓ Press , to filter record by date.
- ⓘ Printing operations are the same as those in Total & Print mode.

## Total & Print by Group and Date

- ☑ In Total & Print mode, both group number and date can be used as filtering condition. Filter record by group number first and then filter record by date, or filter record by date first and then filter record by group number.
- ❗ Printing operations are the same as those in Total & Print mode.

### Hold / Unhold

- ☑ Press , to lock the screen. **HOLD** shows in Status Section.
- ☑ Press  again, to resume the screen. **HOLD** hides in Status Section.

### Resolution Switch

- ☑ Press , to switch resolution in certain range. New resolution shows for 1sec in Message Section.

The switchable resolution range depends on scale Max. Cap. and loadcell sensitivity, according to OIML R76 directive, the scale works at resolution around 1/2000 ~ 1/3000.

### Unit Switch

- ☑ Press , to switch measurement unit between kg, lb, kN, N, T, Tn, and UN.

UN is the user defined unit, possible value range is 0.00000 ~ 999999. For more info about UN, refer to User Unit option in Scale Setup.

### Peak View

- ☑ Press , to enter Peak View mode. **peak** shows in Status Section.

In Peak View mode, screen shows the maximum weight in history.

- ✓ Press **0 peak** again, to resume normal weight display. **peak** hides in Status Section.

### Group Number Set

- ✓ Press **\* 2nd** first, and then press **1 zero**, to enter Group Number Set mode. **GROUP SET** shows in Message Section, the input Group Number shows in Weight Section.
- ✓ Press number keys to input Group Number.
- ⓘ Group Number can be set from 0 to 255.
- ⓘ Default Group Number is 0.
- ✓ Press **enter**, to save and exit Group Number Set mode.

### Print Weight

- ✓ Press **print**, to print and accumulate weight.
- ⓘ If weight is stable, out of Zero Range, fell in Zero Range before, not overloaded, and over zero, Print Weight is allowed; **ACCUMULATE** shows for 1sec in Message Section. Weight can be printed or accumulated only once, otherwise, **INVALID** shows for 1sec in Message Section.
- ⓘ If memory is full, **MEMORY FULL** shows for 1sec in Message Section.

The printing format can be selected from 'number + weight' and 'time + weight' at Printing Format option in Print Setup.

### Print Header

- ✓ Press **header**, to print the header.
- ✓ Press **\* 2nd** first, and then press **header**, to print the accumulated Total.

### Paper Feed

- ✓ Press , to feed paper out 1 line.

### Fast Paper Feed

- ✓ Press  first, and then press , to feed paper out 3 lines.

### Turn On/Off Backlight

- ✓ Press , to turn on backlight.
- ✓ Press , again, to turn off backlight manually.

Backlight will be turned off automatically in certain time. It can be set to be 'never off' at Backlight in User Setup.

### Date & Time View

- ✓ Press , to enter Date & Time mode.
- ✓ Press , again, to exit Date & Time mode.

## 7. Date & Time Setup

- ✓ Press , first, and then press , to enter Date Setup.
- ✓ Press number keys to input date.

Date format is YY.MM.DD.

- ✓ Press , to cancel the input. Press , to enter Time Setup.

- ✓ Press number keys to input time.

Time format is HH:MM:SS.

- ✓ Press , to cancel the input. Press , to exit Date & Time Setup.

## 8. User Setup

- ✓ Press , first, and then press , to enter User Setup.  
**USER** shows in Weight Section.

- ✓ Press , to enter Auto-off Time.

### Auto-off Time

**AUTO OFF** shows in Message Section, Auto-off Time shows in Weight Section.

Indicator will auto power-off in certain time if no operation. Optional Auto-off Time is: 0 (disabled), 5min, 15min, 30min, 60min.

- ✓ Press  and , to change selection.
- ✓ Press , to enter Backlight Luminance.

### Backlight Luminance

**LUMINANCE** shows in Message Section, Backlight Luminance level shows in Weight Section.

Dimming backlight can reduce power and save battery life. Optional Backlight Luminance is: 0(disabled), 1, 2, 3, 4, 5.

- ✓ Press  and , to select.
- ✓ Press , to enter Backlight Time.

### Backlight Time

**LIGHT TIME** shows in Message Section. Backlight Time shows in Weight Section.

Shorten Backlight Time can also reduce power and save battery life. Optional Backlight Time is: 0(disabled), 5sec, 15sec, 30sec, 60sec.

- ✓ Press  and , to change selection.
- ✓ Press , to exit User Setup.

## 9. Print Setup

- ✓ Press  first, and then press , to enter Print Setup.  
**Print** shows in Weight Section.
- ✓ Press , to enter Print Mode.

### Print Mode

**PRINT MODE** shows in Message Section, Print Mode shows in Weight Section.

Optional Print Mode is: 1(manual print), 2(auto print).

- ☑ Press  and , to change selection.
- ☑ Press , to enter Auto Print Delay.

### Auto Print Delay

**AUTO PRINT** shows in Message Section, Auto Print Delay shows in Weight Section.

Optional Auto Print Delay is: 0(no delay), 1sec, 2sec, 3sec, 5sec, 10sec, 20sec and 30sec.

- ☑ Press  and , to change selection.
- ☑ Press , to enter Print Language.

### Print Language

**LANGUAGE** shows in Message Section, Print Language shows in Weight Section.

Optional Print Language is: 1(Chinese), 2(English).

- ☑ Press  and , to change selection.
- ☑ Press , to enter Print Format.

### Print Format

**FORMAT** shows in Message Section, Print Format shows in Weight Section.

Optional Print Formats are: 1(No. + Time + Weight); 2(Group + Time + Weight); 3(Group + No. + Weight).

- ☑ Press , to exit Print Setup.

## 10. Trouble-shooting

**This section discusses the possible solution in daily use trouble. For more professional technical support, please contact your local representatives for help.**

Symptoms	Possible Causes	Solutions
Failed to power on when  is depressed	Defective keypad	Contact representatives
	Dead battery	Charge the indicator
	Defective circuit	Contact representatives
No response after key is depressed	Wireless connection failed	Check Adf. Check scale address. Band seek.
	Defective keypad	Contact representatives
Weight reading unstable	Load in motion	Wait or make load stable
	Weak Anti-Motion	Set Anti-Motion stronger
	Unstable wireless communication	Shut off or avoid source of wireless disturbance, and then Band Switch
	Damp loadcell	Dry Adf and loadcell
	Defective Adf	Contact representatives
Not zero when no load on receptor	Unstable voltage in Adf circuit	Check Adf battery
	Loadcell stressed long time	Hang scale in storage without any load
	Zero drift in loadcell or Adf	Contact representatives
Large error in weight reading	Not zeroed	Manual Zero scale
	Improper unit	Switch to proper unit
	Calibration required	Re-calibrate scale
	Defective loadcell or	Contact representatives

	Adf	
printing not clear	Ribbon improper installed	Re-install ribbon
	Dead ribbon	Replace a new ribbon
failed to feed paper out	Dusty printer	Clean printer and lubricate printer
	Defective printer	Replace a new printer





