OPERATION MANUAL

This operation manual is intended as an instruction manual for trained personnel who are in charge of installation, maintenance, repair, etc.

Before equipment use, please read this operation manual carefully.

Serial Number: _____

Date Purchased: _____

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1.0 WARRANTY

Every product is thoroughly inspected and tested before it is shipped from the factory. If any problem develops within one year, return the product prepaid to the factory. If an inspection reveals that the problem is caused by defective workmanship or material, repairs will be made without charge and the product will be returned with the shipping prepaid.

Excluded Items

This warranty does not cover:

- Deterioration caused by normal wear, abuse, chemical or abrasive actions, improper maintenance or excessive heat.

- Problems resulting from repairs, modifications, or alterations made by people other than factory or ACI representatives.

- If the product has been abused or damaged due to an accident.

- If repair parts or accessories other than ACI equipment are used on the product; they are warranted only to the extent that they are warranted by the manufacturer of said parts or accessories.

Remarks

EXCEPT AS STATED HERE, ACI MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES FOR A PARTICULAR PURPOSE.

⚠ **WARNING**

Alterations or modifications of equipment and use of non-factory repair parts can lead to dangerous operation and injury.

To avoid injury:

DO NOT alter or modify equipment.
DO NOT use equipment to lift, support or otherwise transport people.
DO NOT suspend unattended loads over people.

2.0 SAFETY GUIDE

For good performance and precise measurement, perform maintenance and inspections according to instructions. Note the following instructions:

- 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 shackle and hook before using. Check the clips, pins and screws regularly.

- Check the battery power frequently. When the scale runs out of power, charge the battery with its dedicated charger or replace it with a full one.

- Rotate the load rather than the scale itself if needed.

- Do NOT use the scale under thunder or rain.

- Hang scale on shelf in a dry and well-ventilated room. Do NOT place scale on the ground directly.

- Do NOT attempt to repair the scale yourself. Contact your local representative.

3.0 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

- Great Safety: Aluminum-casting case, high firm hook and ring, dedicated weighing load cell 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.

- Easy Operation: Ultra-red remote controlling design. Easy to operate on the scale or in distance.

- Complete Function: Division switching, measurement unit conversion, automatic power save, automatic battery inspection, idle mode for battery save, pre-set tare, etc.

4.0 QUICK START

This Quick Start introduction will guide you through these basic operations on the crane scale. To make full use of this versatile scale, please refer to section 5 - Advanced Operation.

4.1 Power ON

<u>Action</u>

To Power On the scale, press ON/OFF button on scale for 1 second.

<u>Function</u>

Scale goes through power-on test, battery check and initialization.

<u>Condition</u>

☑ Power-on test is performed when display flashes the following characters twice. If scale doesn't pass the test, error message will be flashed.

Scale's maximum capacity will be displayed on the screen. For example, the scale shows its full capacity, 5000kg.

Battery Check is then performed. If battery works well, the screen flashes battery charge twice.

Please flip to 7 Battery section for more information about battery recharging.

Scale must work at the battery voltage ranging from 6.80V to 5.80V. Recharge the battery when needed.

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☑ Finally, the screen shows detection message while scale detects its load and Auto-Zero itself to Zero status, when the Auto-Zero function is enabled.

To learn more about Auto-Zero function, refer to Auto-Zero Range in Scale Configuration function for details.
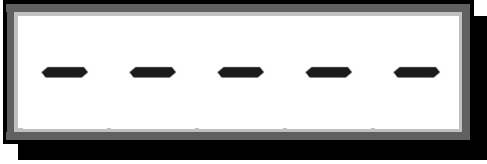
After scale is completely powered up, it is ready to weigh loads.

4.2 Zero

Action

To Zero the scale, press ZERO button on scale or ◀ on remote controller.

Function

Scale sets current load to be Zero, as if it has no load.

The ZERO indicator ● ZERO lights on.

The weight reading turns "0", (or "0.0" or "0.00", depending on the resolution).

Condition

☑ The scale must not be in Hold mode. Otherwise, error message $hoLd$ will keep flashing.

☑ The scale must be stable. Otherwise, error message $UnStb$ will flash.

☑ Current weight reading is in Manual-Zero Range. Otherwise, error message _ _ _ _ _ will flash.

To learn more about Manual-Zero Range, please refer to Scale Configuration function.

4.3 Tare In

Action

To Tare In a tare weight into scale, press TARE button on scale or ▶ on remote controller (when the scale is in Gross Mode).

<u>Function</u>

The scale stores a tare weight, and shifts to Net Mode. All subsequent readings are deviations from the tare value.

The TARE indicator ● TARE lights on.

The weight reading turns to "0" (or "0.0" or "0.00", depending on the resolution).

<u>Condition</u>

☑ The scale must not be in Hold mode. Otherwise, error message ⌐hoLd⌐ will keep flashing.

☑ The scale must be stable. Otherwise, error message ⌐UnStb⌐ will flash.

☑ Current weight reading must be greater than 0 (or 0.0 or 0.00, depending on the resolution). Otherwise, error message ⌐_⌐ ⌐_ _ _ _⌐ will flash.

☑ Current weight reading must be less than 100% of scale's Maximum Capacity. Otherwise, error message ⌐- - - - -⌐ will flash.

☑ The scale must be in gross mode. Otherwise, this action will be recognized as Tare Out.

NOTICE

Setting or changing TARE has no effect on the ZERO setting.

NOTICE

Taring will reduce the apparent overloading range of the scale. For example, if a 1000kg container is tared and the scale maximum capacity is 5000kg, the scale will overload at a new weight of 4009kg (5000 – 1000 + additional 9 divisions).

4.4 Tare out

<u>Action</u>

To Tare Out the tare weight out of scale, press TARE button on scale or [►] on remote controller (when the scale is in Net Mode).

<u>Function</u>

The scale clears the tare weight, returns to gross mode, and displays all subsequent readings in Gross Mode.

The TARE indicator [● TARE] lights off.

The weight reading is added with tare weight.

<u>Condition</u>

The scale must not be in Hold mode. Otherwise, error message [$hoLd$] will keep flashing.

The scale must be in Net Mode. Otherwise, this action will be recognized as Tare In.

4.5 Hold

<u>Action</u>

To Hold the weight reading, press HOLD button on scale or [■] on remote controller.

Or

To unlock current reading, press HOLD button on scale or [■] on remote controller again.

<u>Function</u>

The HOLD indicator [● HOLD] lights on.

All subsequent readings are locked to current reading.

Or

The HOLD indicator [● HOLD] lights off.

The weight reading is unlocked.

<u>Condition</u>

☑ To Hold the scale, it must be stable. Otherwise, error message $UnStb$ will flash.

NOTICE

Scale can be unlocked at anytime in HOLD mode.

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4.6 Power Off

Action

To Power Off the scale, press ON/OFF button on scale or ⏻ on remote controller for 2 seconds.

Function

Scale performs Battery Check and cut off its power.

The screen flashes battery charge twice.

```
U  6.50
```

The screen displays Power Off message.

```
oFF
```

Condition

The scale must be in Weighing Mode. Otherwise, this action will return the scale to Weighing Mode and then perform Power Off.

5.0 USER INPUT

In this section, you will learn how to operate this scale in a convenient way either on scale or by remote controller. Detailed operations are described in section 3 - Quick Start.

5.1 Keys on Scale

Table 5.1.1
Keys on Scale

	ON/OFF	ZERO	TARE	HOLD	2ND
Power Off	Power On				
Weighing Mode	Power Off	Zero	Tare In	Hold	2nd
			Tare Out		
2nd Mode	Exit	Display Unit Switch	Tare Set	System Setup	Password
Password	Exit	↑	→	Confirm	
Tare Set	Exit	↑	→	Confirm	
System Setup	Exit	↑	→	Confirm	Save
Idle Mode	Wake Up	Wake Up	Wake Up	Wake Up	Wake Up

5.2 Keys on Remote Controller

Table 5.2.1
Keys on Remote Controller

	Weighing Mode	2nd Mode	Idle Mode	Password	Tare Set	System Setup
◄	Zero	Display Unit Switch	Wake Up	↑	↑	↑
►	Tare In	Tare Set	Wake Up	→	→	→
	Tare Out					
■	Hold	System Setup	Wake Up	Confirm	Confirm	Confirm
▼	Total	Resolution Switch	Wake Up	↓	↓	↓
◄	Clear Last	Clear Total	Wake Up	←	←	←
F1	View Total	Battery Check	Wake Up			
F2	Pricing Mode	Price Set	Wake Up			
⏻	Power Off	Exit	Wake Up	Exit	Exit	Exit
▲	2nd Mode	Password	Wake Up			Save

5.3 Input Numerals

User's input of numerals is required in Password Mode, System Setup Mode, Scale Configuration Mode, Calibration Mode, and Tare Set function.

Action

To increase the numeral (the flashing digit); press ZERO button on scale or [image] on remote controller.

To decrease the numeral (the flashing digit), press [image] on remote controller.

To move right the flashing digit, press TARE button on scale or [image] on remote controller.

To move left the flashing digit, press [image] on remote controller.

To confirm the numerals you input, press HOLD button on scale or [image] on remote controller.

6.0 ADVANCED OPERATION

Operations in this section feature versatile and powerful functions for crane scale measurement. Most of the operations are accessible via dedicated remote controller. Some of the settings to the scale require password. Please contact your local representatives for password information.

6.1 Scale Modes

6.1.1 Weighing Mode

Action

No buttons or keys are required to enter Weighing Mode.

Function

Weighing Mode is the default mode after the scale is turned on. In Weighing Mode, scale detects its load, and refreshes the weight reading all the time, if the display is not Hold.

If the scale overloads, the display keeps flashing the below error message.

6.1.2 Gross/Net Mode

Action

To enter Net Mode, Tare or Tare Set the scale

To enter Gross Mode, Tare Out the scale.

Function

In Net Mode, the TARE indicator lights on.

In Gross Mode, the TARE indicator lights off.

The default weight reading is in Gross Mode.

In **NET MODE**, **ZERO** is disabled.

6.1.3 View Total Mode

Action

To enter the View Total Mode, press [F1] while scale is in Weighing Mode.

To toggle between the low 5 digits format and the high 5 digits format, press HOLD button on scale or [■] on remote controller.

Function

In View Total Mode, the weight reading keeps flashing to distinguish itself from that in Weighing Mode.

Apparently, Total is the sum of history weight readings, which can be so great that the 5 digits screen is not able to display correctly. The Total is therefore divided into two parts, the low 5 digits format, and the high 5 digits format.

For example, the totalized weight reading "129235.0" will be displayed "9235.0" as its low 5 digits format, like below.

The high 5 digits format of "29235.0" is like below.

To learn more about View Total, please refer to "View Total" in section 6.3 - View Total.

NOTICE

All other functions are disabled in **VIEW TOTAL MODE**.

6.1.4 Idle Mode

<u>Action</u>

No buttons or keys are required to enter the Idle Mode.

<u>Function</u>

In Idle Mode, the screen dims its brightness to save battery power. Except for this power-saving feature, all the operations are the same as in other modes.

To learn how to configure Idle Mode, please refer to section 10.3 – Idle Timing of System Setup.

Any buttons on scale or keys on remote controller will wake the scale up from its **IDLE MODE** and light the screen up as a result.

6.1.5 2nd Mode

<u>Action</u>

To enter the 2nd Mode, press 2ND button on scale or on remote controller, while scale is in Weighing Mode.

<u>Function</u>

The 2nd Mode is designed to make full use of keys on remote controller. Different key pressing combination, results in different function.

To access those functions that are not printed on the remote controller, you must additionally press specified key to access that function.

In 2nd Mode, the screen keeps flashing the below message, waiting for user's input of key combination.

6.1.6 Password Mode

<u>Action</u>

To enter the Password Mode, press 2ND button on scale or ▲ on remote controller twice.

<u>Function</u>

To access advanced settings, password is required.

In Password Mode, the screen displays the password message, waiting for user's input of correct password.

P0000

<u>Condition</u>

☑ The scale must not be in Hold mode. Otherwise, error message $hoLd$ will keep flashing.

☑ The password must be correct. Otherwise, error message $Error$ will flash before the scale automatically returns to Weighing Mode.

6.2 Total

<u>Action</u>

To accumulate the weight reading, press ⬇ on remote controller.

<u>Function</u>

Current weight reading will be accumulated into scale's Total accumulator.

The screen displays the below message, indicating that Total is successfully calculated and saved.

ACC

<u>Condition</u>

☑ The scale must not be in Hold mode. Otherwise, error message $hoLd$ will keep flashing.

☑ The scale must be stable. Otherwise, error message $UnStb$ will flash.

☑ Current weight reading must be greater than 0 (or 0.0 or 0.00, depending on the resolution). Otherwise, error message $\_\_.\_\_.\_$ will flash.

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☑ The weight reading on scale must return 0 (or 0.0 or 0.00, depending on the resolution) before next weight reading can be added. This assures that a load on the scale is only added to the Total once. Otherwise, error message $I\ nuLd$ will flash.

NOTICE

The accumulator always uses the displayed weight, so **GROSS** and **NET** readings can be added into the same **TOTAL**.

6.3 View Total

Action

To view the Total in scale, press **F2** on remote controller.

Function

The scale is switched into View Total Mode.

The screen flashes current Total, for example, 3205kg.

```
3205
```

Condition

☑ The scale must not be in Hold mode. Otherwise, error message $hoLd$ will keep flashing.

☑ The Total must be greater than 0 (or 0.0 or 0.00, depending on the resolution). Otherwise, error message $noACC$ will flash.

To learn more about View Total, please refer to section 6.3 - View Total.

6.4 Delete Last Total

Action

To delete the last accumulated weight reading, press ⬤ on remote controller.

Function

If the last totaled weight was a mistake, it can be erased by Delete Last Total. This erases only the last totaled value.

The screen displays the below message, indicating that the last Total is successfully deleted.

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<u>Condition</u>

- ☑ The scale must not be in Hold mode. Otherwise, error message $\boxed{hoLd}$ will keep flashing.
- ☑ The Last Total must be greater than 0 (or 0.0 or 0.00, depending on the resolution) or has not been deleted. Otherwise, error message $\boxed{nodEL}$ will flash.

6.5 Clear Total

<u>Action</u>

To clear the overall Total, press and in this order on the remote controller.

<u>Function</u>

In order to start a new series of Totals, the old Total can be erased completely by Clear Total.

The screen displays the below message, indicating that the Total is successfully erased.

<u>Condition</u>

- ☑ The scale must not be in Hold mode. Otherwise, error message $hoLd$ will keep flashing.

6.6 Display Unit Switch

<u>Action</u>

To change the scale's Display Unit, press the 2ND button on scale or on remote controller, and ZERO button on scale or on remote controller in turn.

<u>Function</u>

The scale switches to 2nd Mode, and then recognizes Zero action as Display Unit Switching action. Display Unit Switching toggles between kg (metric system) and lb (imperial system).

The screen flashes the unit to change, and returns to Weighing Mode.

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The lb indicator ⬤ lb lights on, after Display Unit switches to lb.

The kg indicator ⬤ kg lights on, after Display Unit switches to kg.

Condition

☑ The scale must not be in Hold mode. Otherwise, error message $hoLd$ will keep flashing.

☑ The scale must be in Gross Mode. Otherwise, error message $tArE$ will flash.

NOTICE

> **DISPLAY UNIT SWITCH** function only changes the unit displayed. The scale does not save this setting unless **SYSTEM UNIT** is changed.

6.7 Tare Set

Action

Press the 2ND button on scale or ▲ on remote controller, and TARE button on scale or ▶ on remote controller in turn (while the scale is in gross mode), to enter Tare Set function.

Press ZERO and TARE button on scale or ◀ and ▶ on remote controller to input the digits.

Press HOLD button on scale or ■ on remote controller to confirm the input value.

Function

The scale stores the tare weight that user inputs, and shifts to Net Mode. All subsequent readings are deviations from the tare value.

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The screen displays "00000" (or "0000.0" or "000.00", depending on the resolution) with the first "0" flashing, waiting for user's input.

```
00000
```

Condition

☑ The scale must not be in Hold mode. Otherwise, error message `hoLd` will keep flashing.

☑ The scale must be in Gross Mode. Otherwise, error message `tArE` will flash.

☑ The input tare weight must be greater than 0 (or 0.0 or 0.00, depending on the resolution). Otherwise, error message `_ _ _ _ _` will flash.

☑ The input tare weight must be lesser than scale's maximum capacity. Otherwise, error message `‾ ‾ ‾ ‾ ‾` will flash.

NOTICE

Tare setting will reduce the apparent overloading range of the scale. For example, if a 1000kg is set by tare set function, and the scale's maximum capacity is 5000kg, then the scale will overload at a new weight of 4009kg (5000 - 1000 + additional 9 divisions).

NOTICE

Setting or changing TARE has no effect on the ZERO setting.

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6.8 Resolution Switch

<u>Action</u>

To switch scale's resolution, press ▲ and ▼ on remote controller in turn.

<u>Function</u>

The screen flashes the resolution to change in descending order, like 5kg, 2kg, 1kg (available optional resolution ranges from 0.01 kg or lb to 50 kg or lb, depending on scale's capacity). After Resolution Switch, new resolution takes effect.

```
E        5
```

To balance between accuracy and measurement speed in high resolution mode, Anti-Motion Level can be changed to fit your measurement application.

To learn how to set Anti-Motion Level, please refer to section 10.6 – Anti-Motion Level.

<u>Condition</u>

☑ The scale must not be in Hold mode. Otherwise, error message $hoLd$ will keep flashing.

NOTICE

High resolution offers better accuracy at the cost of longer measuring time and stricter requirement of load's stability. Designed to meet the OIML R76's directive, this cale has the best (default) performance at the 2000 to 3000 division.

NOTICE

RESOLUTION SWITCHING will change the apparent overloading range of the scale. For example, if the resolution of a 3000kg scale is switched to 0.5kg, it will overload at a new weight of 3004.5kg (3000 + 9 * 0.5), while by default, it overloads at a weight of 3009kg (3000 + 9 * 1).

NOTICE

The default resolution will be restored next time when the scale is powered on or by entering the System Setup Mode (it does not matter if the setting has been changed or not). To save the changes in resolution for later, use the **SYSTEM SETUP** function, rather than **RESOLUTION SWITCHING**.

6.9 Battery Check

Action

To check scale's battery power, press and on remote controller in turn.

Function

System checks the battery, and feedbacks with battery's left charge.

The screen flashes the battery charge in voltage, like the below 6.42V.

For more information about the battery, please refer to section 7 – Battery.

Condition

☑ The scale must not be in Hold mode. Otherwise, error message *hoLd* will keep flashing.

6.10 System Setup

Action

To enter System Setup Mode, press 2ND and HOLD button on scale or and on remote controller in turn.

To input digits, press ZERO and TARE button on scale or and on remote controller.

To confirm the password or input value, press HOLD button on scale or on remote controller.

To save and exit System Setup Mode, press 2ND button on scale for on remote controller.

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To exit System Setup Mode without saving, press ON/OFF button on scale or on remote controller.

Function

In System Setup Mode, user can change the scale's system function to their desired state, like higher resolution, automatic power-off delay, idle delay, the screen's brightness, display frequency, and anti-motion level etc.

The screen displays the welcome message as below.

Condition

☑ The scale must not be in Hold mode. Otherwise, error message will keep flashing.

6.10.1 Resolution

Technically, the Resolution here and the Resolution Switch abovementioned both refer to the same thing. The only difference is that changes made here can be saved for later, while changes at Resolution Switch only come into effect this time, but not next time when the scale is rebooted.

To learn more about Resolution, please refer section 6.8 – Resolution Switch.

6.10.2 Auto Power Off Timing

Auto Power-Off function maximizes scale's battery life against people's carelessness not to power off the scale when it's not working.

Auto Power-Off starts the scale's Power-Off countdown timer when there's no action or the load is stable. Once the timer's timing reaches the delay user set in System Setup, it automatically power off the scale. Any key pressing or motion in load will restart the countdown timer.

Scale can be timed to auto power-off itself from "01" minutes to "99" minutes, or "never" when Auto Power-Off Timing is set to "00".

The default Auto Power-Off Timing is set to "15" minutes.

6.10.3 Idle Timing

To maximize its battery life, the scale automatically enters the Idle Mode, when there's no action or the load is stable. In Idle Mode, the scale works in low-power consumption status.

"01" seconds to "99" seconds can be set to scale's idle countdown timer. Once the timer's timing reaches the delay user set, it automatically lowers the brightness of the screen. If Idle Timing is set to "00", the scale never goes into Idle Mode.

Any key pressing or motion in load, will wake up the scale from Idle Mode (when it is in this mode), and restart the countdown timer.

The default Idle Timing is set to "30" seconds.

```
IdL 30
```

6.10.4 Display Brightness

Lowering the brightness of screen can also save scale's battery life.

There are 3 optional levels of brightness, "1" to "3". At level 1, the screen works at low power, while at level 3, it works at high power.

The default Display Brightness is set to level "2".

```
br    2
```

6.10.5 Display Frequency

Display Frequency decides how frequently the screen updates the weight reading.

There are optional 5 levels of Display Frequency, "0" to "4". At level 4, the screen's weight reading changes slowly, while at level 0, it changes fast.

The default Display Frequency is set to level "1".

```
dISP 1
```

6.10.6 Anti-Motion Level

At the cost of measuring time, Anti-Motion function intelligently settles the weight reading when the scale is in motion. The weaker Anti-Motion is, the faster weight reading displays, but the longer it takes to settle the weight reading.

There are optional 6 levels of Anti-Motion, "0", "1", "2", "3", "4", "5", respectively "Off", "weakest", "weak", "normal", "strong", and "strongest".

The default Anti-Motion Level is set to "2", namely "normal".

```
Stb 2
```

NOTICE

High resolution offers better accuracy at the cost of longer measuring time and stricter requirement of load's stability. Designed to meet the OIML R76's directive, this scale has the best (default) performance at the 2000 to 3000 division.

6.11 Communication Setup

Action

To enter Communication Setup Mode, press and on remote controller in turn.

To input digits, press ZERO and TARE button on scale or and on remote controller.

To confirm input value, press HOLD button on scale or on remote controller.

To save and exit Communication Setup Mode, press 2ND button on scale for on remote controller.

To exit Communication Setup Mode without saving, press ON/OFF button on scale or on remote controller.

Function

In Communication Setup Mode, user can change the scale's serial communication manner to meet the receiver's requirement, like communication on/off status, baud rate, scale communication address, signal output mode, etc.

The screen displays the welcome message as below.

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Condition

☑ The scale must not be in Hold mode. Otherwise, error message hoLd will keep flashing.

6.11.1 Communication On/Off

The scale's serial communication port is controlled by the Communication On/Off status. When the port is set to be on, the scale enables its serial communication, while port is off, communication is disabled.

By default, the Communication On/Off status is set to off.

6.11.2 Baud Rate

Baud Rate is the speed that scale output signal. There are optional 4 baud rates: 1200bps, 2400bps, 4800bps, and 9600bps.

By default, Baud Rate is set to 1200bps.

6.11.3 Scale Address

For multiple scales application, address can be assigned to identify the uniqueness. Scale sends out address number in the serial communication protocol.

Scale Address can be assigned from 00 to 99.

By default, Scale Address is set to 00.

6.11.4 Output Mode

There are optional two modes of data output, "0" continuous way, and "1" manual way.

In "0" continuous way, scale sends out data continuously all the time, while in "1" manual way, scale only sends data out when key

[F2] is pressed.

The default Output Mode is set to "0" continuous way.

```
ñodE0
```

7.0 BATTERY

To maximize the battery life, please note the following battery maintenance guide.

- This scale is powered by a 6V rechargeable lead-acid battery.

- The battery is permanently attached to the battery door. To remove the battery pack, turn off the two screws on the access door, pull the battery pack straight out, and unplug the battery cable from the scale.

- The battery works from 80 hours to 200 hours (depending on LED display brightness setting), before requiring recharging.

- In order to conserve battery life, the scale includes an Auto Power-Off function which senses operational status for no activity after certain minutes that user sets, and turns the scale off. An additional battery saving feature is the auto Idle function. This feature preserves battery life by dimming the display after specified minute of no scale activity.

- Charging time for a completely discharged battery is approximately 6 hours.

- To obtain maximum service life from your batteries, they should be stored between -20°C (-4°F) and +50°C (122°F). Stored batteries should be recharged every three months. Battery is fully charged when the status indicator is red.

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2721 NE 4th Ave Pompano Beach, FL 33064 | 1-888-4-A-HOIST

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8.0 MESSAGE ILLUSTRATION

Table 8.0.1
Message Illustration
Possible messages the scale displays are listed here.

Display	Stands for	Message
8.8.8.8.8.		Power-on
U 6.50		Battery left charge
- - - - -		Weighing detection
hoLd	hold	The display is locked.
UnStb	unstable	The scale is in motion.
- - - - -		The weight reading is too great, or out of range.
- - - - -		The weight reading is too little, or out of range.
2nd	2nd	2nd Mode, waiting for key combination.
ouLd	overload	The scale overloads.
P0000	password	Password Mode
Error	error	The password is incorrect.
oFF	power off	Power-off
ACC	accumulated	The weight reading is totaled.
InuLd	invalid	The weight reading is invalid to be totaled.
noACC	no accumulation	There is no total.
dEL	deleted	The last total is deleted.
nodEL	no deletion	There is no total, so the last total can not be deleted.
CLEAr	clear	The total is cleared.
Un KG	unit kg	Unit is set to kg (metric system).
Un Lb	unit lb	Unit is set to lb (imperial system).
tArE	tare	The scale is tared (in net mode).
E 5		The resolution is 5 kg or lb.
SEtUP	system setup	System Setup welcome message
oFF 10	auto power off	Auto Power-Off Timing
IdL 10	idle	Idle Timing
br 2	brightness	Display Brightness
dISP2	display frequency	Display Frequency
Stb 3	stability performance	Anti-Motion Level
End	end	Save and exit.

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9.0 TROUBLESHOOTING

Symptom	Possible Cause	Suggested Solution
Blank display when Power On/Off button is depressed	Discharged battery	Recharge the battery
	Defective battery	Replace the battery
	Corroded battery	Clean connections
	Power button not properly depressed	Press Power On/Off firmly and hold until power turns on.
Display flashed at low brightness	Discharged battery	Recharge the battery
No action taken after Zero / Tare / Hold / 2nd button pressed	Defective button	Clean button
Display reading not stable	The scale is in great motion	Wait until the scale is stable
	Filter (Anti-Motion) set too low	Change filter (Anti-Motion) setting
	The scale is damped	Dry the scale
	Dust on PCB boards	Clean PCB board
Reading not zero without load	System power is not stable	Give the scale longer warm-up time
	The load-cell stressed too much and too long	Hang the scale in storage
Large error in weight reading	The scale is not zeroed before applying load	Zero the scale before loading
	Require re-calibration	Re-calibrate the scale
	lb/kg unit in wrong selection	Set correct unit
Battery cannot be recharged	Defective battery	Replace the battery
	Defective charging plug	Replace the charging plug
Short remote controlling distance	Remote controller batteries are dead	Replace remote controller batteries

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10.0 DIMENSIONS & SPECIFICATIONS
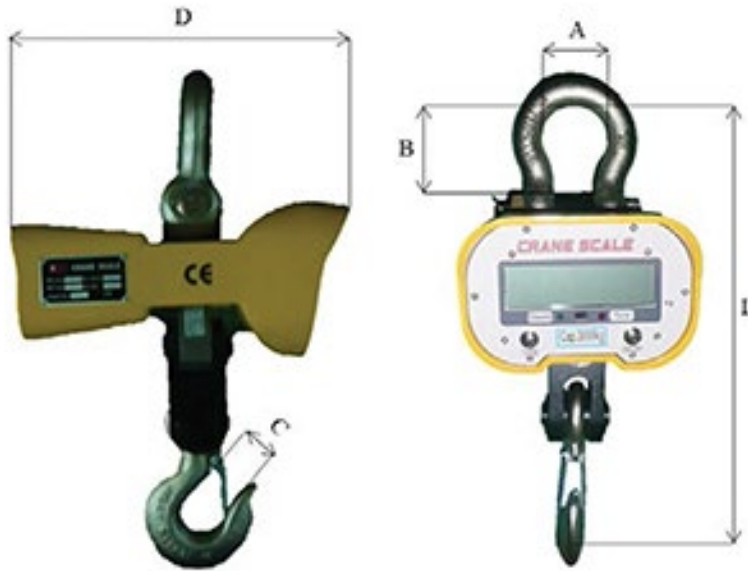
Accuracy Class	Class III Equivalent to OIML R76
Tare Range	100% F.S.
Zero Range	4% F.S.
Reading Stable Time	≤10 seconds
Overload Warning	100% F.S. + 9e
Max. Safety Load	125% F.S.
Ultimate Load	400% F.S.
Battery Life	80 hours ~ 200 hours with 6V/10Ah battery 60 hours ~ 100 hours with 6V/5Ah battery
Scale Battery	6V/10Ah or 6V/5Ah rechargeable battery
Operating Temp.	- 10℃ ~ + 40℃
Operating Humidity	≤90% at 20℃
Display	1.5 inch (38.1mm) ultra-luminance LED

	1.2 inch (30mm) ultra-luminance LED					

Model Number	Max. Cap. (Ton)	A (in)	B (in)	C (in)	D (in)	L (in)	N.W. (lbs)
HACS-020	1	2.28	3.27	1.18	13	16.54	36
HACS-040	2	2.28	3.27	1.18	13	16.54	36
HACS-060	3	2.87	4.21	1.30	13	18.90	36
HACS-100	5	3.60	5.31	1.77	13	23.03	55
HACS-200	10	3.70	5.71	2.36	14.75	30.31	103
HACS-300	15	5.04	7.01	2.95	14.75	33.86	141
HACS-400	20	5.31	9.84	2.95	14.75	37.40	150

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11.0 NOTES