



AXLE SCALE XM6+

User Manual

Instructions

Thank you for choosing our product. Hiweigh Scale is a professional weighing solution provider located in China. We have our own R&D company focusing on developing software, hardware in weighing area for different applications.

Please read this manual carefully and if you have anything uncertain, please get in touch with our trained local distributors to get service.

Please note that there might be some differences with actual software.

Software changing will not be noticed in advance.

If there is any change in Manual, we will not be able to notify everyone.

Hiweigh Scale Received All Rights.



Warning!

DO NOT OPEN PANEL ON INDICATOR BOX.



Linux

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Chapter 1 XM6+ Functions and Specifications

1. Main Functions:

- a. Data Transfer: *Wired or Wireless. From weighing scale to indicator data transfer methods are optional. The wire would be offered by scale and connector will be offered with this indicator. The wireless is using RFID to identify each scale.*
- b. 8" IPS Touch screen with True Color display.
- c. Menu could be clicked by fingers or Mouse (optional).
- d. Build-in Multiple Channels. *Default is 2 channels and maximum 16 channels.*
- e. Multiple working methods are optional.
- f. Records stored and could be inquired by "License Number", "Date", and more filters.
- g. Records could be export to USB drive / Smart Phone Application at any time with CVS format. *If LTE/5G communication is installed, data could be upload to cloud.*
- h. 1 Channel Static Weighing, 2 Channels Dynamic Weighing, 2 Channels Static Weighing, More Channels Static Weighing are build-in supported.

2. Specifications:

- a. Enclosure Material: ABS
- b. Units of Measurement: kg, ton, lb., kilo lb.
- c. Power Supply and Consumption:
AC Adaptor 110 ~ 240V 50/60Hz. Rechargeable Battery 6V/4000mA
- d. Working Humidity: < 90% RH
- e. Working Temperature: -10°C to 60°C / 14°F to 140°F
- f. Driving Number of Load cells: Up to 24 x 350 Ω or 12 x 700 Ω
- g. A/D Converter: 24bit – 4.8kHz
- h. Conversions per second: 200/s
- i. Division: 1, 2, 5, 10, 15, 20, 25, 50
- j. Communication Interface: RS232, USB, Bluetooth, WIFI (Optional), LTE/5G (Optional)
- k. Baud rate: 4800, 9600 bit/s
- l. Printer: Build-In Thermal Printer
- m. Mini Weighing Capability: 20e

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3. Sample Picture:



4. Printing Tickets:

```
WEIGHING REPORT
-----
Department:HiWEIGHSCALE
Serial No.:00023
Date:05-05-2021
Time:16:25
Truck:ABCDEFGH1012
Operator:001
Driver:
Location:CHANGZHOU JIANGSU CHINA
-----
Speed:      0.8km/h
-----
Total weight: 5582kg
-----
No.1      Axle
Axle Weight: 2101kg
-----
No.2      Axle
Axle Weight: 1709kg
-----
No.3      Axle
Axle Weight: 1772kg
-----
```

Printing ticket sample for **Auto-Dynamic** Weighing

Department: Manual input. Blank information will not be printed.

Serial No: Generated by indicator.

Date and Time: Set in the system.

Truck: Vehicle License Number. Manual input.

Operator: For signature purpose.

Driver: For Signature purpose.

Location: Manual input. Blank information will not be printed.

Speed: System auto detect.

Total Weight: Auto Add up by system.

No.1 Axle: Two scales weights added.

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WEIGHING REPORT

Department:HiWEIGHSCALE
Serial No.:00027
Date:05-05-2021
Time:16:27
Truck:ABCDEFGH1012
Operator:001
Driver:
Location:CHANGZHOU JIANGSU CHINA

Speed: 0.7km/h

Total weight: 5498kg

No.1 Axle Type: 1
Axle Weight: 2015kg

No.2 Axle Type: 5
Axle Weight: 3483kg

Printing ticket sample for **Manual-Dynamic** Weighing

Department: Manual input. Blank information will not be printed.

Serial No: Generated by indicator.

Date and Time: Set in the system.

Truck: Vehicle License Number. Manual input.

Operator: For signature purpose.

Driver: For Signature purpose.

Location: Manual input. Blank information will not be printed.

Speed: System auto detect.

Total Weight: Auto calculated by system.

No.1 Axle Type: Two scales weights allocated by system according to different Axle Type.

Axle Type: Manual Input.

WEIGHING REPORT

Department:HiWEIGHSCALE
Serial No.:00024
Date:05-05-2021
Time:16:25
Truck:ABCDEFGH1012
Operator:001
Driver:

Total weight: 5923kg

No. 1 Axle
Axle Weight: 1974kg
(CH A): 975kg
(CH B): 999kg

No. 2 Axle
Axle Weight: 1975kg
(CH A): 975kg
(CH B): 1000kg

No. 3 Axle
Axle Weight: 1974kg
(CH A): 975kg
(CH B): 999kg

Printing ticket sample for **Static** Weighing

Department: Manual input. Blank information will not be printed.

Serial No: Generated by indicator.

Date and Time: Set in the system.

Truck: Vehicle License Number. Manual input.

Operator: For signature purpose.

Driver: For Signature purpose.

Location: Disabled.

Total Weight: Auto added by system.

No.1 Axle Type: Two scales weights added by system.

CH A: Scale weight on Channel A.

CH B: Scale weight on Channel B.

Chapter 2 Scale Prepare

1. Prepare:

a. Wired

Single Scale (Typical: Weighbridge): Connect your scale to the indicator Channel A OR Channel B.

Double Scale (Typical: Axle Scale): Connect your scale to the indicator Channel A AND Channel B.



Multiple Scale (Typical: Wheel Scale):

Connect your scale to the indicator Channel 1# and Channel 2# for the 1st axle, Channel 3# and Channel 4# for the 2nd axle, ... Channel 15# and Channel 16# for the 8th axle.

Combined Scale (Typical: Multi Decks Combined Weighbridge):

Connect 1st Deck to Channel 1#, 2nd Deck to Channel 2#, 3rd Dec to Channel 3#.

b. Wireless

No need to connect any cable.



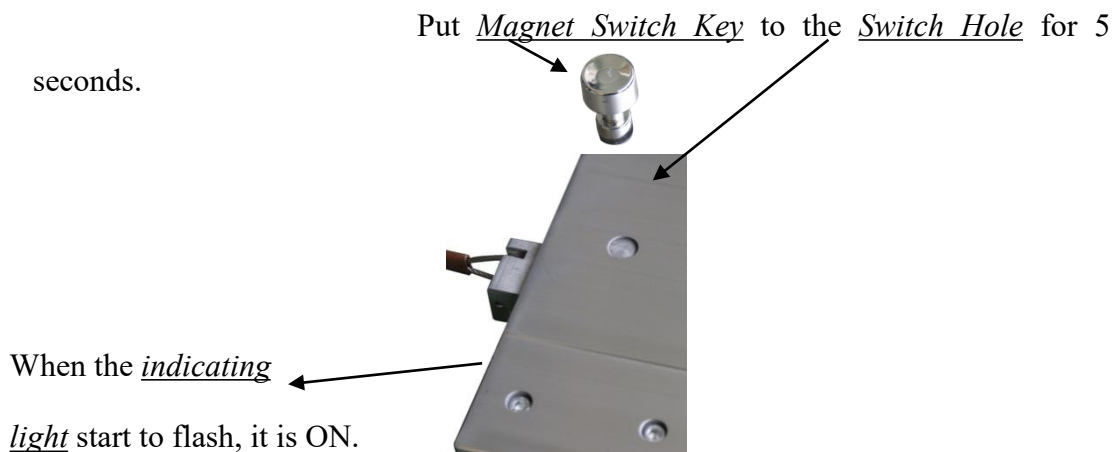
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2. Portable Scales Check

- a. For portable scales, usually for portable axle scale or wheel scale, please make below preparation:
- b. Choose a flat area to place the portable scales. Make sure the scales stand on ground without seesawing.
- c. Make sure the ground is clear and without small chippings.
- d. Make sure the scale is towards the vehicle wheels center.
- e. Make sure the distance between two scales is suitable and wheels will not move out of the scales.
- f. For wireless scales, make sure the antenna towards to the indicator.

3. Switch on

- a. For Wired scales, switch on indicator.
- b. For Wireless scales, switch on scales first. Scales will start to look for indicator connection immediately.



- c. Please switch on the indicator within 1 minutes after scales are on to setup the connection. If the connection cannot be established, the scales will automatically switch off. When indicator is switched off after work, the wireless scales will automatically switch off.

Chapter 3 System Operation

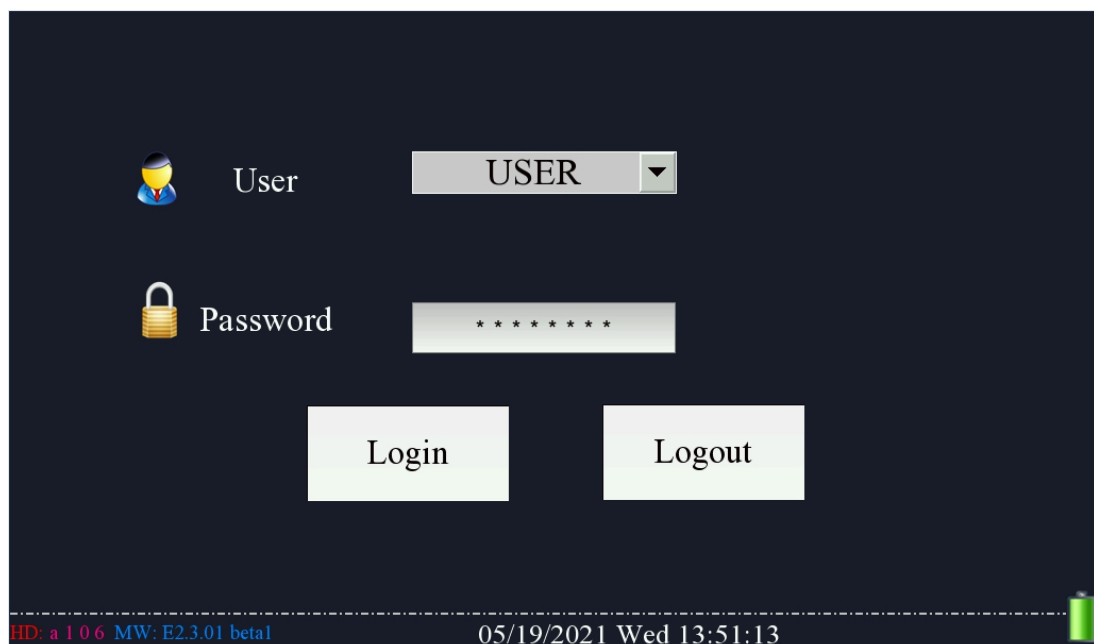
1. User Interface

a. Switch On

Press the “Power” button on indicator first to start power supply. Please note the indicator should be charged or connected to the AC power supply.

The indicator will start self-checking process, and this will take up to 10 seconds.

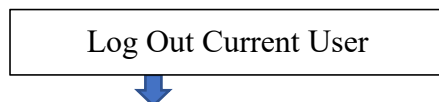
b. Login



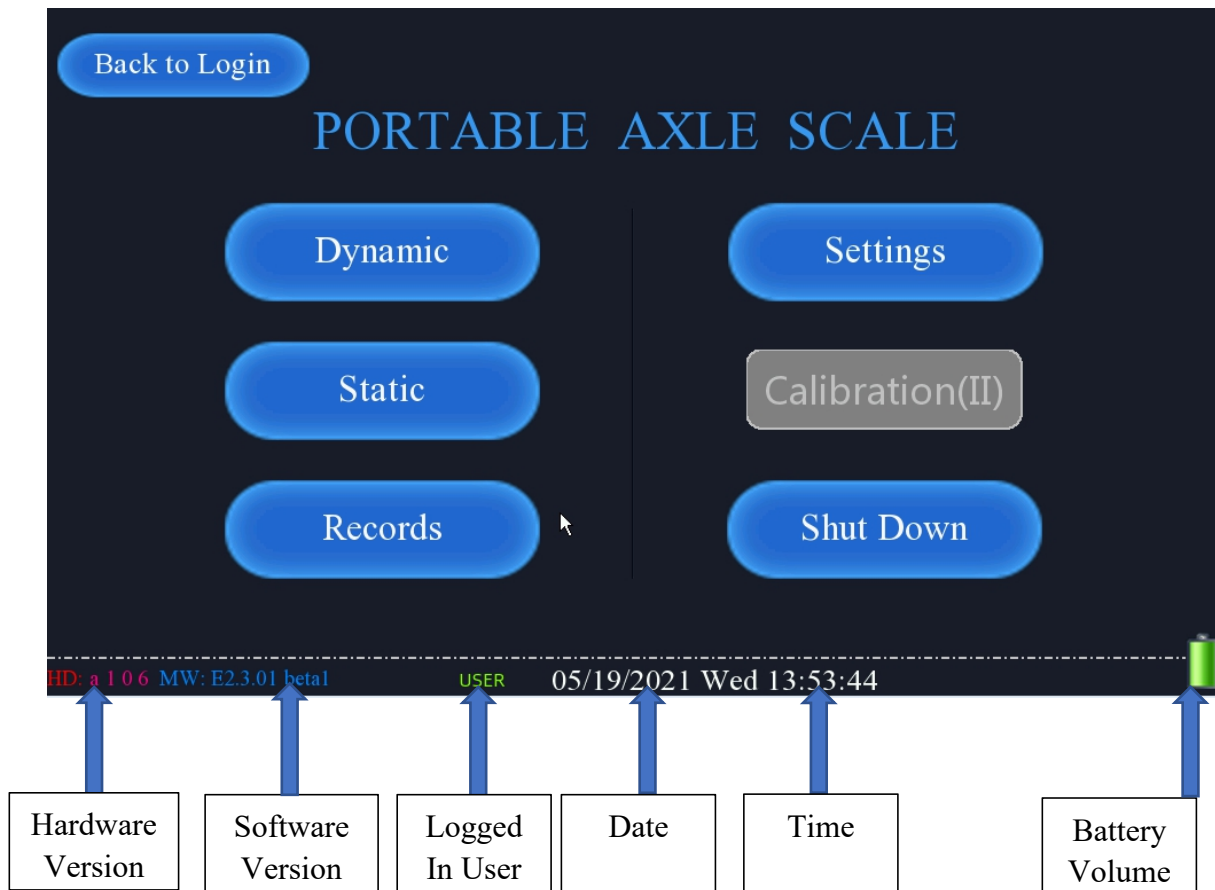
The default password for “User” is “111111”. If this is incorrect, please check with your distributor. Please cation for password case when input.

Please note that only trained administrator is authorized to login as “Admin” to operate the system.

c. Interface



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Please note for Wireless Edition, there will be “Signal” strength of Channel A and Channel B showing in below position.



2. In-Motion Weighing

Click on “Dynamic” to enter In-Motion Weighing mode. There are two modes for In-Motion Weighing: Auto and Manual. In-Motion weighing mode can be selected in “Settings (I)”. In-Motion Weighing Modes are only accept weighing data from Channel A and Channel B ports on Indicator.

a. Automatic (Unattended) Mode

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The screenshot shows the main interface of the HIWEIGH software. At the top, there is a status bar with the word "Auto" in red. Below this, there are two large digital scales labeled "A" and "B", both showing "0" with a green indicator light. Below these, there is a "Locked" section with two smaller scales labeled "A" and "B", also showing "0". To the right of the "Locked" section is a "Total Weight" section showing "0". Below these scales, there are four input fields: "Serial No." (containing "34"), "Vehicle License:" (containing "D00001"), "Axle Config:" (containing "9"), and "Speed:" (containing "0.0 km/h"). At the bottom, there are five buttons: "Start", "End", "Print", "Zero", and "Back". A status bar at the very bottom displays "HD: a 1 0 6 MW: E2.3.01 beta1", "USER", and the date/time "05/19/2021 Wed 15:14:00".

Operation Step:

1). Enter Vehicle License Number by Click on the text box of "Vehicle License". Or leave it blank as the system will automatically start and waiting for trucks.

This screenshot shows the same interface as the previous one, but with a "License Alphabet" soft keyboard overlay. The keyboard has a grid of buttons for digits 0-9, letters A-Z, and a "Del" button. There is also an "Enter" button. The "Vehicle License:" field now contains "C00001". The "Speed:" field now shows "10 km/h". The "Auto End:" field is now visible and shows "10". The status bar at the bottom shows the date/time "05/19/2021 Wed 14:05:01".

A soft keyboard will appear to enter the Vehicle License Number. It accepts maximum 10 digits. Use  to delete one alphabet typed and click on  to confirm typing.

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2). The truck could go through the scale platforms because the system is automatically start and ready to weigh.

3). During weighing process, the windows will display the real time weighing data.

Real Time Weight Windows. It could be increased due to the wheel moving forward and system will capture the suitable data when wheel is on center of scale.



Captured Weights. This is weight on each scale of previous axle.

Axle Type will be determined by system.

Auto End Timer. This is the countdown timer to **End** weighing process. It is designed as unmanned. It is the same as press “END” button manually. The time could be set in settings and default setting is 20 seconds.

Total Weight Window. Final total weight will be calculated by system allocation according to different **Axle Type**, it could be different as all data sum up.

Restart

“Restart” button will make the system **DROP** all weighing data captured and start a completely **NEW** weighing session. The new weighing session will still use previous Vehicle License Number.

End

The “End” button will make the system complete current weighing session and continue to data calculation, report, and record process. When “Auto End” timer counts to 0, the system will automatically complete current weighing session and having the same process with “End” button is manually clicked.

Zero

“Zero” button will force the “**Real Time Weight Windows**” value to be 0. *Please note* this is usually used when scale platform is empty but there is residual data in “**Real Time Weight Windows**”.

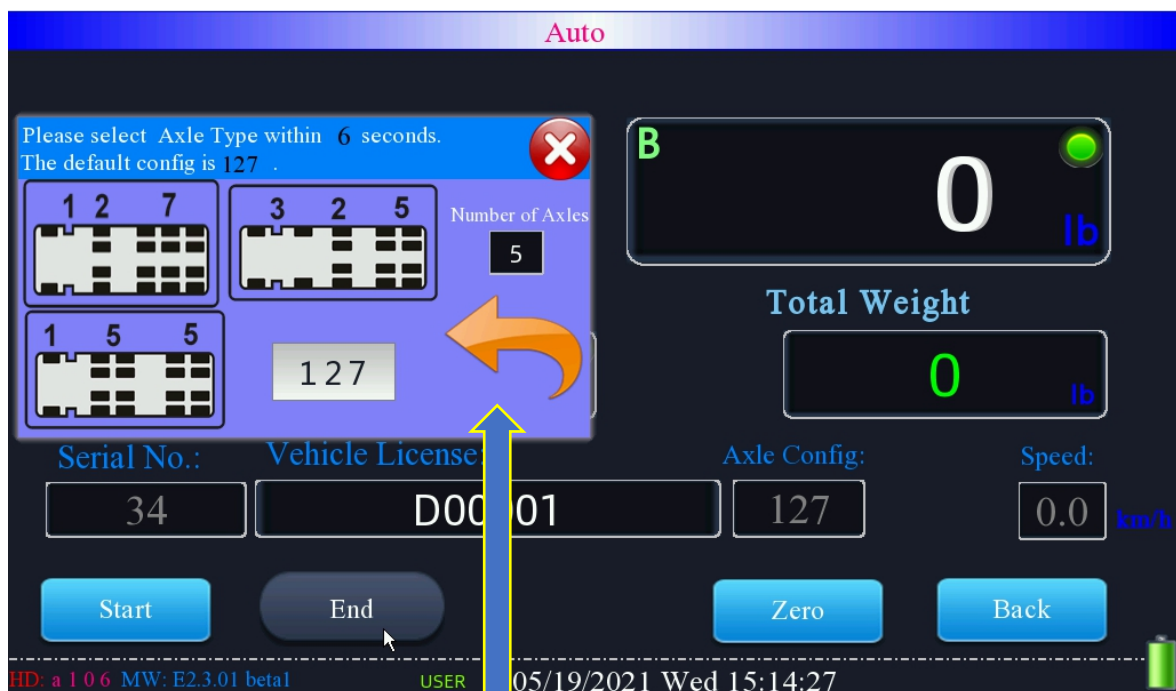
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Please note pressing this button will set a temporary “Zero” point in current weighing session and this could seriously affect the weighing accuracy in current session. When exit this application and start a new “**Auto In-Motion**” weighing session, the stored “Zero” point will be loaded.

Back

“Back” will make the system stop everything and back to the main menu. In this case, the uncompleted weighing session data will NOT be stored.

4). After the whole truck has passed through the scale platform, the system will complete the weighing session automatically in certain time (default is 20 seconds). Or the weighing session is completed by manually clicking on “**End**”. The system will start data analysis. In this mode, the **Axle Type** will be automatically determined by the system. But the system will still give a chance for manual selecting:



When axle numbers match more **Axle Type**, a window will pop up an showing all types of axles. A recommended type has been filled in, but operator could select different axle type according to reality case.

Please select Axle Type within 6 seconds.
The default config is 127 .



The operator would select the suitable **Axle Type**, or the system will use the determined **Axle Type** in 10 seconds. Usually, the system determined **Axle Type** is correct but could be incorrect in some special purpose vehicle.

Print

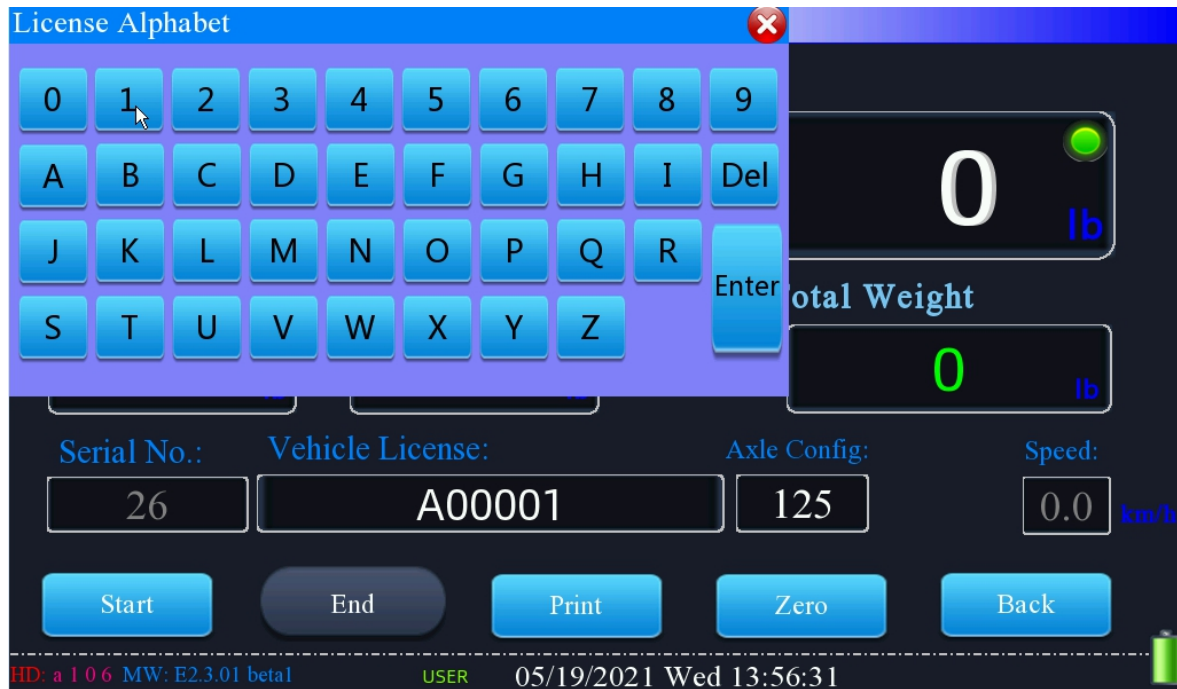
5). If “**Auto Print**” is selected in “**Settings**”, the system will auto print ticket after current weighing session has been completed and data stored. If the “**Auto Print**” is not selected, the “**Print**” button will appear so that ticket could be manually printed. When ticket printing is not must and next vehicle comes to the scale platform, this button will disappear, and previous weighing data could only be found and printed from “**Records**”.

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b. Manual Mode

Operation Step:

1). Enter Vehicle License Number by Click on the text box of “Vehicle License”. If operator does not input Vehicle License Number, previous filled information will be used and will affect the “Records Inquiry” by vehicle license number.



A soft keyboard will appear to enter the Vehicle License Number. It accepts maximum 10 digits. Use **Del** to delete one alphabet typed and click on **Enter** to confirm typing.

2). Select Axle Type by clicking on the text box of “Axle Config”. This is must input according to reality vehicle situation. Different axle type selecting would make the final total weights different because different vehicle will allocation different weights.



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3). After everything is ready, click on “Start” to start weighing process.

Manual

A 0 lb

B 0 lb

Locked

A 0 lb

B 0 lb

Total Weight

72080 lb

Serial No.: 27

Vehicle License: A00001

Axle Config: 125

Speed: 2.7 km/h

Start End Print Zero Back

HD: a 1 0 6 MW: E2.3.01 beta1 USER 05/19/2021 Wed 13:57:44

Start

Press “Start” button to start a new weighing session.

End

The “End” button will make the system stop current weighing session and drop all weighing data. Standby for a new weighing session again.

Zero

The “Zero” button will force the “**Real Time Weight Windows**” value to be “0”. *Please note* this is usually used when scale platform is empty but there is residual data on “**Real Time Weight Windows**”.

Please note pressing this button will set a temporary “Zero” point in current weighing session and this could seriously affect the weighing accuracy in current session. When exit this application and start a new “**Manual In-Motion**” weighing session, the stored “Zero” point will be loaded.

Print

“Print” button will print the latest record.

Back

“Back” will make the system stop back to the main menu. In this case, the uncompleted weighing session data will NOT be stored.

4). After the whole vehicle passed through the scale platform and all axles’ weights are captured, the system will auto end current weighing session. If “**Auto Print**” is selected in “**Settings**”, the system will auto print ticket after current weighing session has been completed and data stored. If the “**Auto Print**” is not selected, the system will auto end.

Print

At this moment, when click on “Print”, the system will print weighing data in current weighing session.

3. Static Weighing Mode

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Click on “Static” to enter Static Weighing mode. This mode only accepts two scale platform data input from Channel A and Channel B.

Axle Static

A 0 lb B 0 lb

Locked Total Weight

A 0 lb B 0 lb

Serial No.: 27 Vehicle License: A00001 Axle Quantity: 0

Weigh Print End Zero Back

HD: a 1 0 6 MW: E2.3.01 beta1 USER 05/19/2021 Wed 13:58:22

Operation Step:

1). Enter Vehicle License Number by Click on the text box of “Vehicle License”. If operator does not input Vehicle License Number, previous filled information will be used and will affect the “Records Inquiry” by vehicle license number.

License Alphabet

0 1 2 3 4 5 6 7 8 9

A B C D E F G H I Del

J K L M N O P Q R

S T U V W X Y Z Enter

Serial No.: 27 Vehicle License: B00001 Axle Quantity: 0

Weigh Print End Zero Back

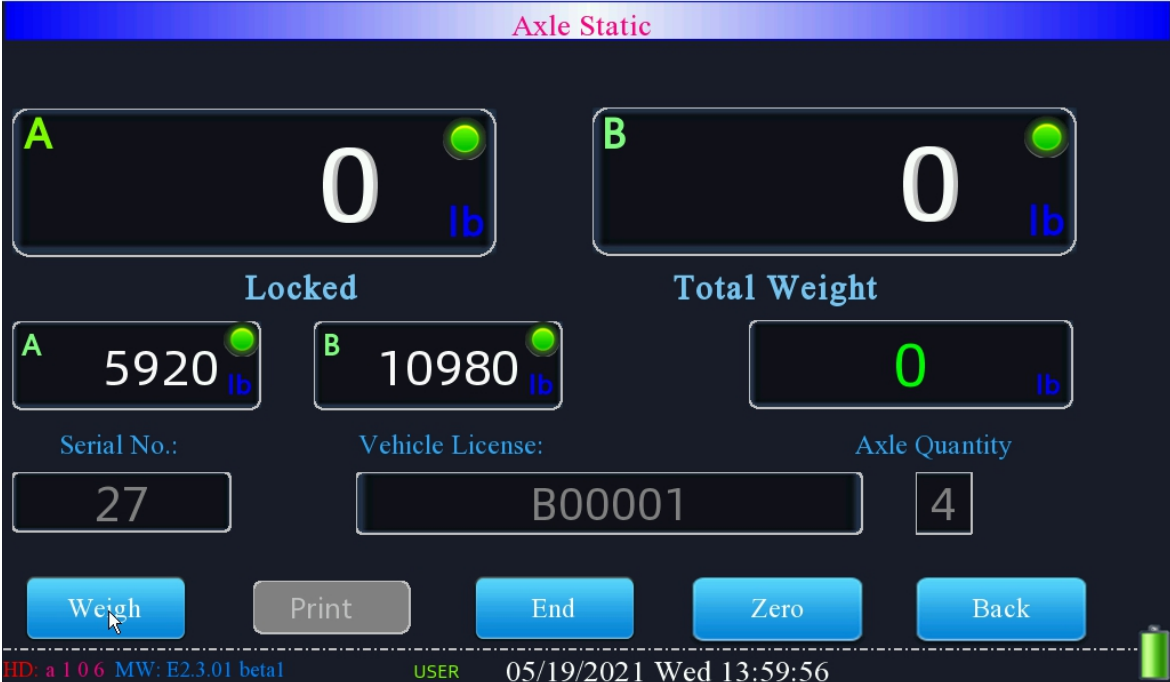
HD: a 1 0 6 MW: E2.3.01 beta1 USER 05/19/2021 Wed 13:58:39

2). The vehicle will go onto the scale platform and stop the first axle on the scale platforms. When vehicle goes onto the scale platform, the system will determine the stability of the weighing data.

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3). Make sure the wheels are completely standing on the scale platform center.

 “Weigh” button only available when the weighing data is stable. Click on “Weigh” button to capture current real time weight.



Axle Static

A 0 **lb** **B** 0 **lb**

Locked **Total Weight**

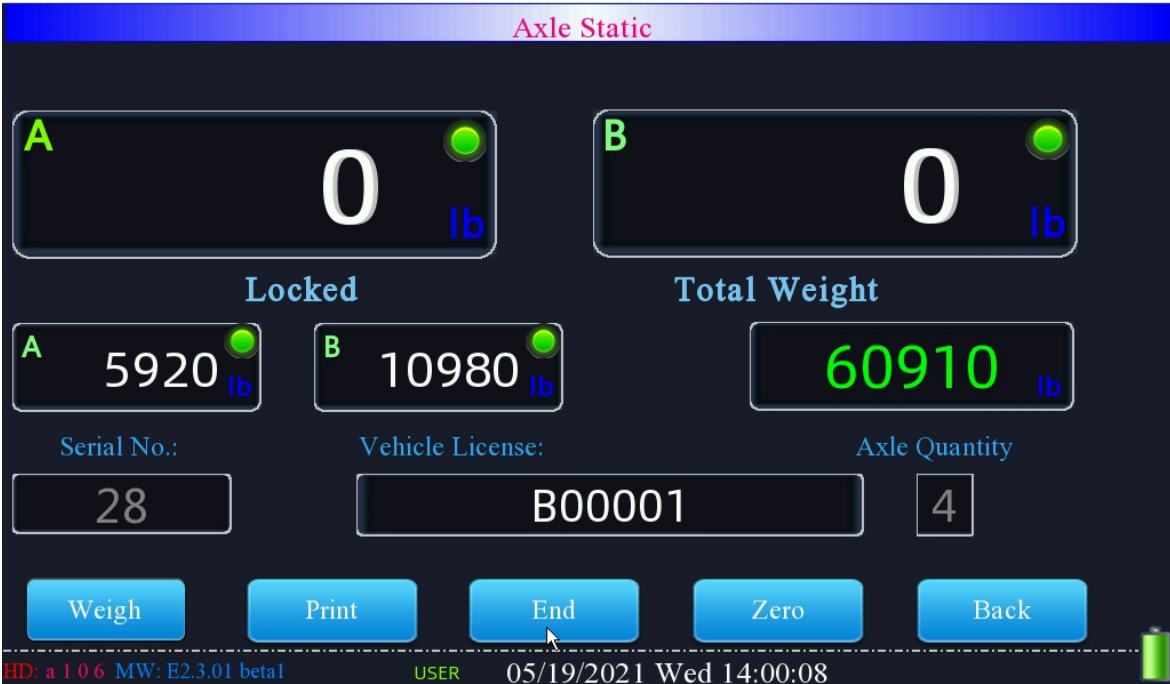
A 5920 **lb** **B** 10980 **lb** 0 **lb**

Serial No.: 27 Vehicle License: B00001 Axle Quantity 4

Weigh **Print** **End** **Zero** **Back**

HD: a 1 0 6 MW: E2.3.01 beta1 USER 05/19/2021 Wed 13:59:56

4). When current weight is captured, weighing data is in “Lock Windows”. Then the vehicle would move forward to weight the next axle. Repeat this until all axle weights are captured.



Axle Static

A 0 **lb** **B** 0 **lb**

Locked **Total Weight**

A 5920 **lb** **B** 10980 **lb** 60910 **lb**

Serial No.: 28 Vehicle License: B00001 Axle Quantity 4

Weigh **Print** **End** **Zero** **Back**

HD: a 1 0 6 MW: E2.3.01 beta1 USER 05/19/2021 Wed 14:00:08

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5). End current weighing session by click on “End” button. The “Axle Quantity” would display how many axle weights are captured. And total weight will be showed.

4. Records

Click on “Records” to enter data inquiry mode. All weighing records are stored in the database.

Move the bar right to find more axle weight records.

Scroll down the bar to find more records. The latest one will be on top.

Weighing Records								
Serial	Date	Time	Vehicle License	Total Weight	Speed	Axle Config	Axle Type:1	Axle Type:2
33	05-19-2021	14:37	C00001	65840	5.2	15	21960	43880
32	05-19-2021	14:37	C00001	68960	5.0	15	24970	43990
31	05-19-2021	14:06	C00001	53060	4.0	15	13980	39080
30	05-19-2021	14:06	C00001	77840	2.2	15	26270	51570
29	05-19-2021	14:03	B00001	17310	0.0	9	0	0
27	05-19-2021	13:57	A00001	72080	2.7	125	16860	20800
26	05-15-2021	13:41	ABCDEFGH	4050	2.0	125	1200	1000
24	05-15-2021	11:07	ABCDEFGH	11500	2.7	125	3068	3573
23	05-15-2021	08:42	ABCDEFGH	4480	5.4	125	1265	1155
22	05-15-2021	08:42	ABCDEFGH	9200	5.2	1257	1936	1627
21	04-23-2021	18:15	ABCDEFGH	0	0.0	0	0	0

Vehicle License:
Date:

HD: a 1 0 6 MW: E2.3.01 beta1 USER 05/19/2021 Wed 14:37 08

All weighing data could export to USB driver by connect a USB Disk through USB port on Indicator. Data will be exported in CVS format.

For data safety purpose, please don't forget to reject the USB disk after exported data.

Caution: “Erase All” will erase all weighing data records and **NO WAY** to recover.

a. Inquiry by Vehicle License Number

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Weighing Records Unit: lb

Serial	Date	Time	Vehicle License	Total Weight	Speed	Axle Config	Axle Type:1	Axle Type:2
33	05-19-2021	14:37	C00001	65840	5.2	15	21960	43880
32	05-19-2021	14:37	C00001	68960	5.0	15	24970	43990
31	05-19-2021	14:06	C00001	53060	4.0	15	13980	39080
30	05-19-2021	14:06	C00001	77840	2.2	15	26270	51570

C00001

Vehicle License:

Date:

1 2 3 4 5 6 7 8 9 0

\$ % & * - + ()

@ ! " ' : ; / ? ←

ABC Space _ . Enter

HD: a 1 0 6 MW: E2.3.01 beta1

Click on “Vehicle License” and input the Vehicle License number. Then click on “Inquiry” to look for the weighing data belongs to this vehicle number.

Weighing Records Unit: lb

Serial	Date	Time	Vehicle License	Total Weight	Speed	Axle Config	Axle Type:1	Axle Type:2
33	05-19-2021	14:37	C00001	65840	5.2	15	21960	43880
32	05-19-2021	14:37	C00001	68960	5.0	15	24970	43990
31	05-19-2021	14:06	C00001	53060	4.0	15	13980	39080
30	05-19-2021	14:06	C00001	77840	2.2	15	26270	51570

Vehicle License:

Date:

Show all

Inquiry

Reject U Disk

Export to U Disk

Erase All

Back

HD: a 1 0 6 MW: E2.3.01 beta1 USER 05/19/2021 Wed 14:40:15

When finishing inquiry, click on **Show all** to return back to all weighing records.

b. Inquiry by Data

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[illegible]

Click on Date and select the date to inquiry.

Date format will be Month-Day-Year. Or simply click on “Today” to find all weighing date captured today.

When finishing inquiry, click on  to return to all weighing records.



5. Settings

Click on “Settings” to enter the settings menu.

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Settings

Department 1.
2.
3.

Operator

Mode ☒ Manual ☐ Auto

Location 1.
2.
3.

Speed:

Print Mode:

Copy:

HD: a 1 0 6 MW: E2.3.01 beta1 USER 05/19/2021 Wed 14:00:47

“*Department*” There are 3 lines to enter the using department information including company name, company address, contact number, etc. The information will be printed in the weighing ticket.

Please note: Each line accepts maximum 128 alphabets.

“*Operator*” Enter the name of operator.

“*Manual*” It is set the system to Manual In-Motion Weighing

“*Auto*” It is set the system to Auto In-Motion (Unmanned) Weighing (see next page)

“*Speed*” It is selecting the speed unit - “km/h” or “mph”.

“*Print Mode*” Selecting whether ticket will be printed after weighing process completed

“*Auto*” Means the ticket will be printed automatically after weighing.

“*Manual*” Means the ticket will NOT be printed.

“*Copy*” It is to select tickets quantity each time prints.

“*Location*” There are 3 lines to enter the location of the weighing process. The information will be printed in the weighing ticket.

Please note: Each line accepts maximum 128 alphabets.

When “Auto” weighing mode is selected, there is an extra option of whether the unmanned system will be working.

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Settings

Department 1.
2.
3.

Operator

Mode ☐ Manual ☒ Auto ☐ Auto End OFF

Location 1.
2.
3.

Speed:

Print Mode:
Copy:

HD: a 1 0 6 MW: E2.3.01 beta1 USER 05/19/2021 Wed 14:01:26

It is the “Auto End” option.

When this is ON,
Default is 10
countdown timer

Auto End ☒ ON

Timing

the countdown timing can be changed.
seconds. In “*Dynamic Weighing*” the
will be available.

Auto End: ☒ ON

Timing

In “System Setting”, brightness of the screen, date, time screen saver time, can be adjusted.

Brightness

100
80
60
40
20
0

5 M 19 D 2021 Y 14 : 02 : 21

Beep ☐ OFF

Screen Saver Time Mins

Backlight Time Mins

Brightness Down Mins

HD: a 1 0 6 MW: E2.3.01 beta1 USER 05/19/2021 Wed 14:02:22

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Chapter 4 Maintenance

1. Charging

When the battery volume is less than 5%, we suggest charging the battery. The battery volume is shown in the icon.

2. Storage

a). This instrument is a precision instrument and please make sure the package is protecting the whole indicator when transportation.

b). Please keep this instrument stored at a low humidity (<80%) and low temperature (<40°C) place.

3. Tips

- a. The touch screen is soft. Please use USB mouse, attached Pen, or human finger to click on the screen.
- b. In dynamic weighing, please make sure the vehicle speed is less than 10km/h and passing keep on average speed. Don't accelerate or decelerate the vehicle in short time.
- c. The vehicle must start driving at a place 2 times longer than the length of the vehicle. This is to make sure the vehicle passing the scales with an average stable speed.
- d. **Do NOT open the indicator pannel without authoization. This will make the Warranty Invalid.**
- e. Consult local distributor when any error happen or any problem cannot be solved.

4. Warranty

- a. The warranty period for this product is 2 years starting from the date when it is delivered.
- b. The firmware can be updated free of charge when a new version is launched. Please check with your local distributor for new version and update.

Hiweigh Scale All rights received.