



RACE CAR SCALE **RS147**  
User Manual



v.201811



**HiWEIGH**  
Weighing system & solution

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Value Each Gram

# Before Use

## 1.1 Safety precautions



### WARNING!

- ▲ Do not use XM4 weighing terminal in hazardous area! Do not use it within areas classified as hazardous division 1/2 or zone 0/1/2/21/22 because of combustible or explosive atmospheres.
- ▲ Never immerse it in liquid or pour chemical/corrosive liquid on it.
- ▲ Do not expose the scale to direct sun light or another high temperature source
- ▲ Do not open the scale!  
The warranty is void if this stipulation is ignored. The scale may only be opened by authorized persons.



### DANGER!

Electric shock hazard!

- ▲ Always unplug AC/DC adaptor before performing any service work on the indicator.

Hazard of electric shock if the adaptor is damaged!

- ▲ Check the power adaptor regularly. Unplug the power adaptor immediately if it is damaged.



### Disposal

In conformance with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE), this device may not be disposed of in domestic waste. This also applies to countries outside the EU as per their specific regulations.

Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment.

If you have any questions, please contact the responsible authority or the distributor from which you purchased this indicator.

Should this indicator be passed on to other parties (for private or professional use), the content of this regulation must also be related.

The indicator has a rechargeable internal battery. The battery contains heavy metals. Please observe the local regulations on the disposal of environmentally hazardous materials.

# Introduction

The XM4 terminal provides a compact yet flexible solution for a variety of weighing needs of different vehicles, such as cars, trucks, pickups, vans, etc. Built-in rechargeable battery for portable applications (with rugged ABS suitcase), and built-in printer for receipts and records printing if it needed.

V1.\*2 – race car weighing (4 wheels)

Weight/percentage of each wheel

Weight/percentage of each axle

Weight/percentage of cross axle

Target weight calculation for each wheel

V1.\*3 – single axle weighing (2 wheels, v1.33 with 1 wheel included)

Single axle weighing, totalizing all axle weight.

V1.\*4 – double axles weighing (4 wheels, v1.34 with 3 wheel included)

Double axles weighing, totalizing all axles weight.

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## Technical Specifications

Model	XM4
Enclosure Type	Rugged ABS
Product Dimension	380x310x117mm
Shipping Weight	4.9kg
Accuracy	Class III
Input Signal	0-10mV
A/D resolution	1,000,000
A/D speed	8 times/second
Power	AC/DC adaptor 12V/1Ah 6V7Ah rechargeable battery
Display	5xLCD (6 digits)
Load cell	Each platform of 4*350Ohm or 8*700Ohm, 4 platforms maximum
Excitation voltage	5 VDC
Units	Kg   lb
Operating Temperature	-10°C~40°C
Storage Temperature	-25°C~55°C
Relative humidity	85%Rh non-condensing
Communication	RS232

## Model Identification

Model:                    XM4   -R    UK   1   0  
Corresponding:        A        B        C        D        E

A = Main model name

B = Software version:        -R : Race car weighing  
                                      -2: single axle weighing  
                                      -4: double axle weighing

C = Plug type, examples:

AU = Australia Type CN = China Type EU = EU Type US = USA Type SA = South Africa Type UK = UK Type
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D = Printer:                    0 = Without printer  
                                      1 = With printer

E = pending, no function

## **Packing List**

After the weighing terminal received, please open the box carefully and check and compare all following items included:

- Indicator with suitcase      x 1
- AC/DC adaptor                x 1
- Load cell connector        x 4
- RS232 connector            x 1
- Manual                         x 1

## **Connecting**

### **POWER**

The AC/DC adaptor with 2-pins socket and the definition of it as below:

- Pin1    -      Positive
- Pin2    -      Negative

### **RS232**

The RS232 connector with 3-pins socket and the definition of it as below:

- Pin1    -      TXD
- Pin2    -      RXD
- Pin3    -      GND

### **LOAD CELL**

The load cell connector with 5-pins socket and the definition of it as below:

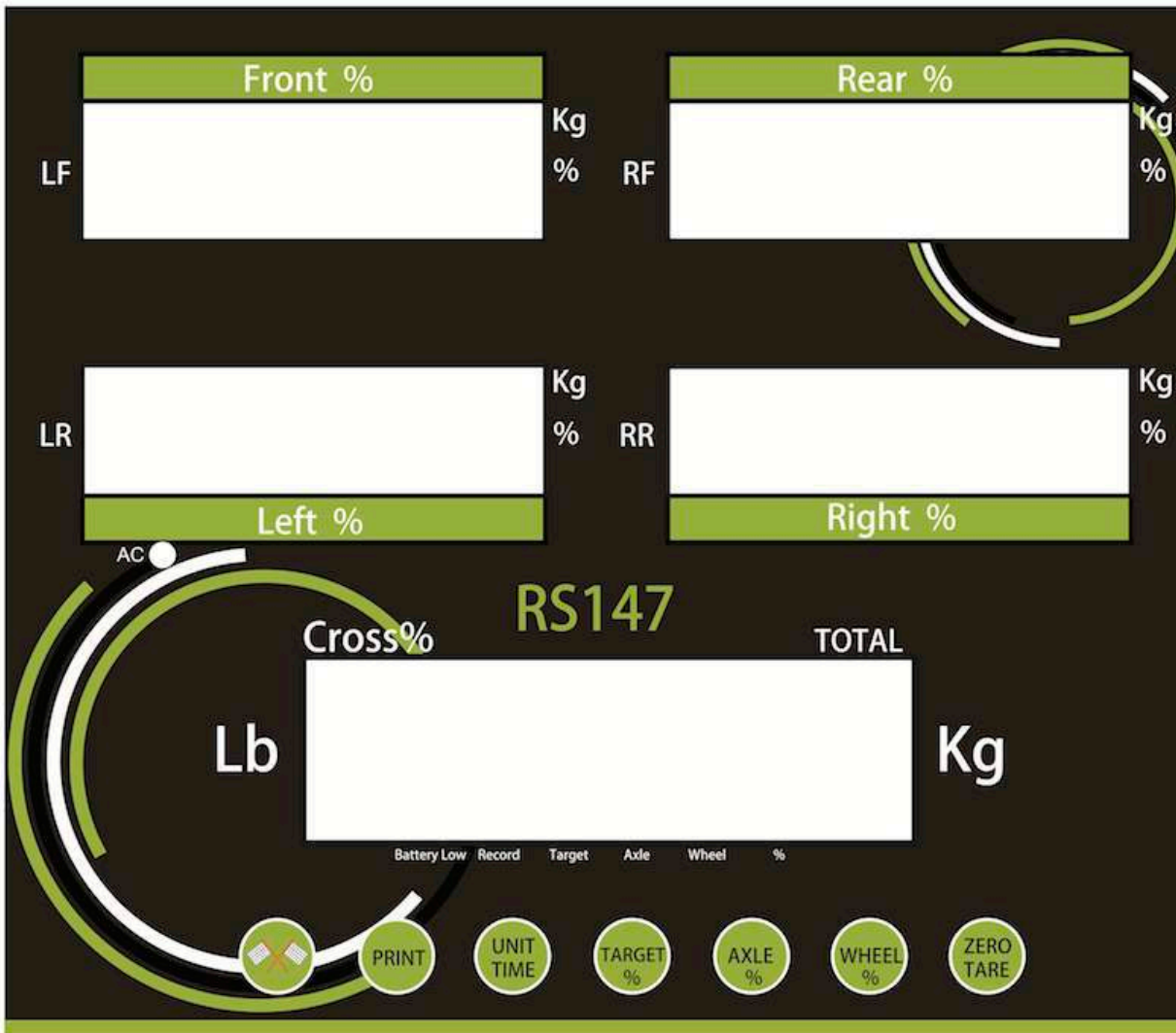
- Pin1    -      + Excitation
- Pin2    -      + Signal
- Pin3    -      - Signal
- Pin4    -      -Excitation
- Pin5    -      GND

Please connect the platform according to the indication label on the terminal:

- RF      -      Front wheel on the right
- LF      -      Front wheel on the left
- RR      -      Rear wheel on the right
- LR      -      Rear wheel on the left

Check all connected well and then power on the terminal to operate.

## Keypad Layout



### Signs indication

AC	-	AC/DC Adaptor connected
Battery low	-	Low battery
Record	-	Records check
Target	-	Target weight
Axle	-	Axle weight
Wheel	-	Wheel weight
%	-	Percentage

### Keypad

Flags                      Short press to act as ESC and back to normal weighing mode  
                                  Long press to switch on/off the indicator.

PRINT:                      Short press to print and store data.

UNIT/TIME:                Short press to switch between kg and lb unit,  
                                  Long press to display the time, long press again to display the date.



- TARGET%:** Short press to get target weight calculated, short press again to display the target percentage of each wheel.  
Long press to retrieve the records.
- AXLE%:** Short press to display the axle weight, and short press again to display the percentage of each axle (including the cross weight).
- WHEEL%:** Short press to display the percentage for each wheel
- ZERO/TARE:** Short press to Tare.  
Long key to Zero.

## Standard Operation

- 1. On/Off** Long press the flag key.
- 2. Zero:** If the read weight <2%F.S., Long pressing **ZERO/TARE** key more than two seconds to zero the scale, and >0< indicator light on.
- 3. Tare:** Tare: when the >T< light off and the weight value is bigger than 0 and stable, short press **ZERO/TARE** to tare the scale, and the >T< light will be on.  
Tare clean: when the >T< light on, short press **ZERO/TARE** key again to clean the tare and the >T< light will be off.
- 4. Percentage of wheel:** Short press **WHEEL%** key to display the percentage of each wheel, and short press it again to return the weight display.
- 5. Cross axle weight:** Short press **AXLE%** key to display the weight of cross axle, and short press it again to display the percentage of it, and short press it again to quit.
- 6. Target weight:** Short press **TARGET%** key to calculate the target weight of each wheel, and short press it again to display the percentage of each wheel, short press it again to quit.
- 7. Unit exchange:** Short press **UNIT/TIME** key to exchange the unit (kg-lb).
- 8. Print:** Short press **PRINT** key to print the weight of each wheel, percentage of wheel, target weight and target percentage and store this record.

### 9. Record retrieve:

Step	Operating	Display	Explanation
1	Long Press <b>[TARGET%]</b>	Display [XXXXX] [n YY]	XXXXXX-- Record the weight of each wheel YY-- Serial number
2	Press <b>[WHEEL%]</b> Or press <b>[TARE/ZERO]</b>	display [XXXXX] [n YY]	Upper and lower records check
3	Press <b>[AXLE%]</b> press <b>[WHEEL%]</b>	display [XXXXX] [n 00]	Enter two Serial number

	Or press <b>[TARE/ZERO]</b>		
4	Press <b>[TARGET%]</b>	Display [XXXXX] [n YY]	Displays retrieved records
5	Press <b>[PRINT]</b>	Display [XXXXX] [n YY]	Print that record
6	Press <b>[UNIT/TIME]</b>	Display [XXXXX] [dEL]	Press <b>[UNIT/TIME]</b> , display [dEL] , Asks whether to delete all records? Press <b>[UNIT/TIME]</b> to confirm it and exit automatically after all deleted. Press <b>[TAREGET%]</b> to deny it and exit.
7	Long Press <b>[TARGET%]</b>	Display [XXXXX] [n YY]	Return to normal weighing mode

**10. Time/date:**

Long press UNIT/TIME to display the time and long press it again to display date, during it display time or date, press **AXLE%**, **WHEEL%** and **ZERO/TARE** to modify it and press **TARGET%** to confirm. Long press UNIT/TIME again to quit.

**11. ESC:**

During all operations, press flag key to exit at any time.

**Printing Format**

10/03/2015 14:16:49
No.02
Total= 288.2 kg
 Actual Weight
LF= 73.6 kg 25.53%
RF= 70.1 kg 24.32%
LR= 93.8 kg 32.54%
RR= 50.7 kg 17.59%
CR= 163.9 kg 56.87%
 Target Weight
LF= 63.7 kg 22.10%
RF= 80.0 kg 27.75%
LR= 83.9 kg 29.11%
RR= 60.6 kg 21.02%
CR= 144.1 kg 50.00%

**Trouble Shooting**

[ OVER]                      Weighing > 100% F.S.+9d

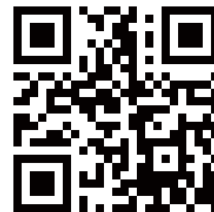
[-OVER]                      Weighing < -10% F.S.

When the weight twinkling, it means the battery volume is lower than 20%, please recharge the battery.

When the weight twinkling and the beeper sounds, it means that the battery use up, please recharge the battery immediately.

**Electric Diagram**

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