

## User Manual

# Remote Display



Version: 1.1

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# Contents

<b>1</b>	<b>INTRODUCTION.....</b>	<b>3</b>
<b>1.1</b>	<b>Purpose of the manual .....</b>	<b>3</b>
<b>1.2</b>	<b>Technical knowledge Required .....</b>	<b>3</b>
<b>1.3</b>	<b>manual validation.....</b>	<b>3</b>
<b>1.4</b>	<b>technical support.....</b>	<b>3</b>
<b>2</b>	<b>SAFETY TIPS.....</b>	<b>3</b>
<b>3</b>	<b>DESCRIPTION.....</b>	<b>4</b>
<b>3.1</b>	<b>Basic description .....</b>	<b>4</b>
<b>3.2</b>	<b>Technical Specifications .....</b>	<b>4</b>
<b>4</b>	<b>INSTALLATION.....</b>	<b>5</b>
<b>4.1</b>	<b>belongings .....</b>	<b>Error! Bookmark not defined.</b>
<b>4.2</b>	<b>How to install accessories.....</b>	<b>5</b>
<b>5</b>	<b>SETTINGS.....</b>	<b>7</b>
<b>5.1</b>	<b>Display intensity settings: .....</b>	<b>Error! Bookmark not defined.</b>
<b>5.2</b>	<b>Display serial communication settings: .....</b>	<b>Error! Bookmark not defined.</b>
<b>5.3</b>	<b>Weight unit settings: .....</b>	<b>Error! Bookmark not defined.</b>

# 1 Introduction

## 1.1 Purpose of the manual

This manual contains all the information needed to set up, install, wiring and communicate with the PM-RD01 module.

## 1.2 Technical knowledge Required

In order to understand this booklet, a basic acquaintance with electrical topics is required.

## 1.3 manual validation

This manual is valid for this specification.

MODEL	Hardware	Software
PM-RD01	V1.1	V1.1

## 1.4 technical support

To get technical support through the following contact:

- ❖ Email: **info@parsmega.com**
- ❖ Phone: **+98 21 91009955**
- ❖ WhatsApp: **+98 9981122566**

# 2 safety tips

- Starting the module by non-experts and ignoring the commands may cause serious damage to the module.
- This module does not directly pose a risk to human life.
- The use of this module is not approved for use in life-threatening devices.

## 3 Description

### 3.1 Basic description

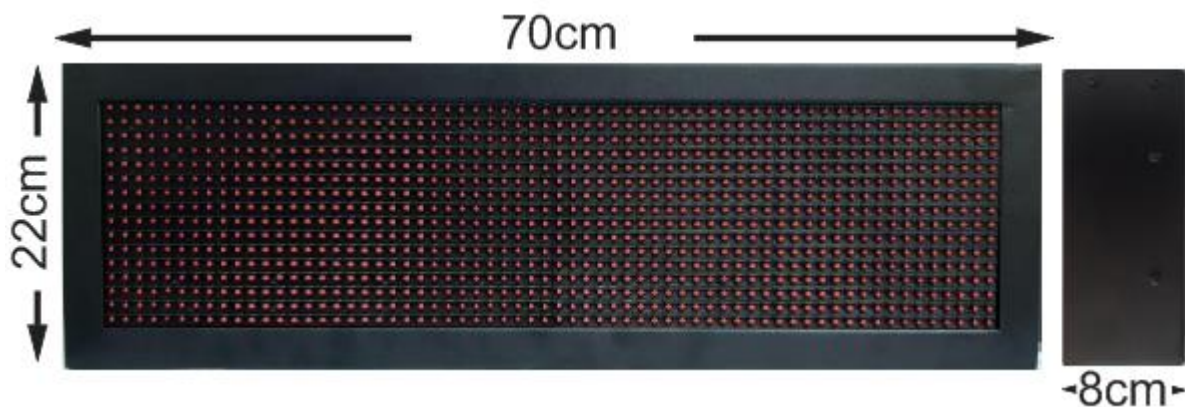
PM-RD01 is a remote display that can be connected to the following models of weight displays.

- YAOHUA T7E
- YAOHUA A12E
- KELI X3118
- LAUMAS W series
- Pars Mega

Remote display PM-RD01 can be ordered in three colors: red, green and white.

### 3.2 Technical Specifications

- 9600 serial port board
- It has RS232 and RS485 ports
- It has a display (LED) with a character height of 16 cm
- Supply voltage 220 volts
- The working temperature range is -10 ~ +60 degrees Celsius



## 4 Installation

### 4.1 Included items

- Serial communication interface cable with connector
- Power connection cable with connector
- Bracket
- Sun visor

### 4.2 How to install Included items

**4.2.1** How to install the sun visor: There are two holes on both sides of the sun visor to connect the sun visor screws to the body of the second screen

**4.2.2** How to install the bracket to the wall: There are two holes on both sides of the bracket piece to connect the screws of the bracket to the body of the second display



**4.2.3** Connecting the serial communication connector: The remote display has the capability of serial communication through RS485 and through RS232 (asynchronously).

- By default, it is connected to the serial communication connector of the cable, which is connected to each strand of the cable, the label specifying each wire
- Serial communication connector table: Each pin number is indicated next to each pin.

Connector pin number	Function
1	D- in RS485 serial communication
2	D+ in RS485 serial communication
3	GND Ground pin in RS232 serial communication
4	RX pin to receive data in RS232 serial communication
5	No connection

- RS232 serial communication must be used to connect to YAOHUA, KELI and LAUMAS weight indicators.
- RS485 serial communication must be used to communicate with Pars Mega indicators.

Note: To select the type of indicator connected to the remote display, the internal dip switch of the display is used (explained in the settings section).

- 4.2.4** Power connector connection: The power supply voltage of the remote indicator is 220 volts. The power connector consists of two pins that are connected to the phase and neutral of the city electricity.



Power connector connection

Power connector

## 5 Settings

The settings of the remote display are adjusted according to the state of the setting dip switch and the internal serial communication jumper of the display. To access the dip switch settings and jumper, the back door of the remote display must be opened.



Dip switch setting

Serial communication jumper

### 5.1 Display intensity settings:

In the remote display, you can adjust the light intensity of the display LEDs by adjusting dip switches number one and two. The table below shows how to adjust the light intensity according to the dip switches.

Function	Dip switch 2	Dip switch 1
100% Maximum brightness	OFF	OFF
75% Maximum brightness	ON	OFF
50% Maximum brightness	OFF	ON
25% Maximum brightness	ON	ON

## 5.2 Display serial communication settings:

The remote display has the ability to communicate serially through RS485 and through RS232 (asynchronously). If using mods that require the use of RS232 port, pins number four (RX) and three (GND) are used, and if mods that require RS485 port are used, pins one (D-) and two (D+) are used.

**Note:** RS232 serial communication must be used to connect to YAOHUA, KELI, and LAUMAS weight indicators, and RS485 serial communication must be used to communicate with Pars Mega displays. According to the type of the main display, the serial communication jumper should be placed in the right position.

**5.2.1 ParsMega Indicator Setting:** To connect the ParsMega indicator to the remote display, the serial communication settings of the Pars Mega indicator must be set as follows:

**Baud Rate:** 9600

**Parity:** none

**Stop Bit:** 1

**Serial Mode:** 3 (In this mode, the indicator continuously sends the amount of net weight).

**5.2.2 Laumas W series indicator settings:** To connect the Laumas W series indicators to the remote display, the RS232 serial communication settings of the

Laumas indicator must be set as follows *Hdr! P*.

To do this, we first enter the main menu with the combination keys,



and then enter the serial menu,



◀ ▲ SEr1 AL and then enter the submenu r5232. And then set the RS232 sub-menu to the Hdrl P option. By setting the menu r5232 as above, the Laumas indicator automatically adjusts the network parameters and no other changes are needed.

**5.2.3 KELI X3118 indicator settings:** To set the KELI indicator to communicate with the remote display, first enter the main menu with the Fn function key, then go to the Baud Rate menu and set this value of this menu to br9600, and then set the Co sending format menu to Co 4.

**5.2.4 Yaohua T7E indicator settings:** To set the T7E indicator to communicate with the remote display, first enter the main menu by pressing the function



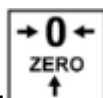
and clear



keys at the same time. First, we enter the password (by

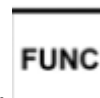


default it is 111), then we enter the main menu by pressing the hold key. And by pressing this key again, move between the options of this menu and select



[bt \*] option. By using the zero key, set the value of this menu to the bt 4 option and exit the menu with the hold key. By doing this, the baud rate value of the indicator is set to 9600. And the T7E indicator can be connected to the remote display.

**5.2.5 Yaohua A12E indicator settings:** To set the A12E indicator to communicate



with the remote display, first we hold down the function key for about 5 seconds, with this we enter the main menu, then we move between the options



using the accumulate key. And then we set the P3 menu to the number 1,



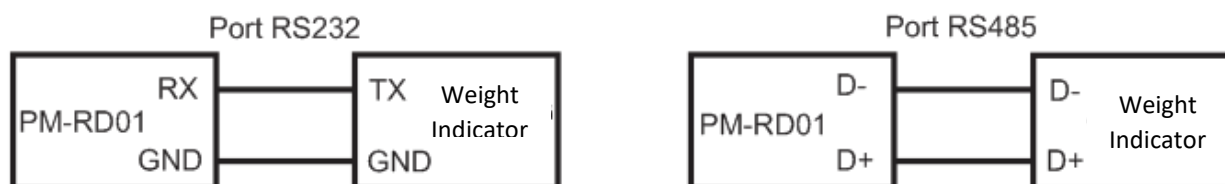
this parameter can be changed by pressing the Tare button, with this the Baud Rate is set to 9600, then we go to the P4 option again using the accumulate

key. If the value of this option is set to 1, the net weight value will be sent to the remote display through the serial port, if it is set to 2, the total gross weight value will be sent to the remote display.

**5.2.6 Table of dip switches for serial communication:** dip switches number 3, 4 and 5 are related to selecting the serial connection of the display with the remote display (determines the type of the main display):

Function	Serial communication jumper	Dip switch 5	Deep switch 4	Dip switch 3
Communication with ParsMega display	RS485	OFF	OFF	OFF
Reserve	---	ON	OFF	OFF
Reserve	---	OFF	ON	OFF
Connection with LAUMAS display Total weight display	RS232	ON	ON	OFF
Connection with LAUMAS display Show net weight	RS232	OFF	OFF	ON
Communication with KELI 3118 display	RS232	ON	OFF	ON
Communication with YAOHUA A12E display	RS232	OFF	ON	ON
Communication with YAOHUA T7E display	RS232	ON	ON	ON

### 5.2.7 Schematic of how to connect the weight indicator and remote display PM-RD01:



### 5.3 Weight unit settings:

By using the setting dip switches, you can choose the weight unit displayed on the remote display.



Function	Dip switch 7	Dip switch 6
Kilogram unit display "kg"	OFF	OFF
Display the gram unit "g"	ON	OFF
Ton unit display "T"	OFF	ON
No units ""	ON	ON