PR-II Series

Service Manual

(English)

2016. 05. 13

CAS ELECTRICS CO.,LTD

Table of Contents

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1. Introduction

1.1. Preface

Thank you for purchasing of our CAS scale.

This scale has been designed with CAS reliability, under rigid quality control

and with outstanding performance.

WE hope that your departments enjoy with high quality of CAS product.

This manual will help you with proper operations and care of the PR-II.

Please keep it handy for the future references.

1.2. Precaution

- Make sure that you plug your scale into the proper power outlet.
- Place the scale on a flat and stable surface.
- Plug into a power outlet 30 minutes before operations.
- Keep the scale away from strong EMI noises may cause incorrect weight readings.
- This scale must be installed in a dry and liquid free environment.
- Do not subject the scale to sudden temperature changes.
- Do not subject the platter to sudden shocks.
- If the scale is not properly level, please adjust the 4 legs at the bottom of the scale (turn legs clockwise or counterclockwise) so as to center the bubble of the leveling gauge inside the indicated circle.

2. Classification

2.1. Overall View
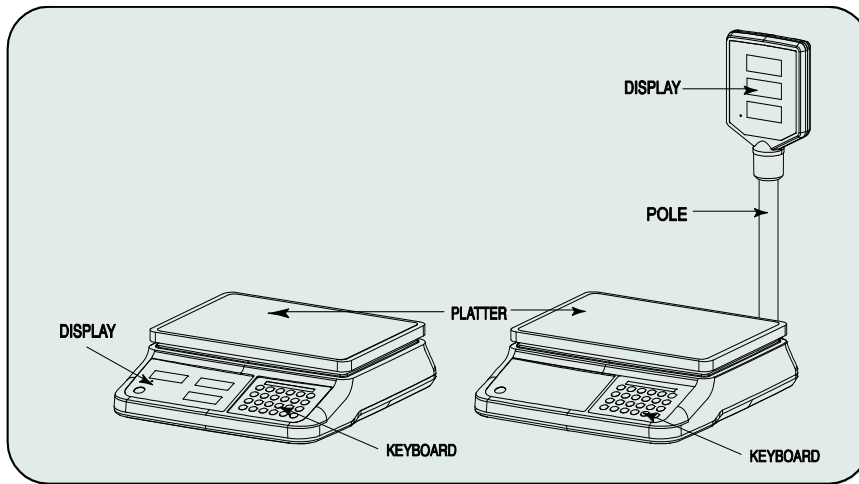
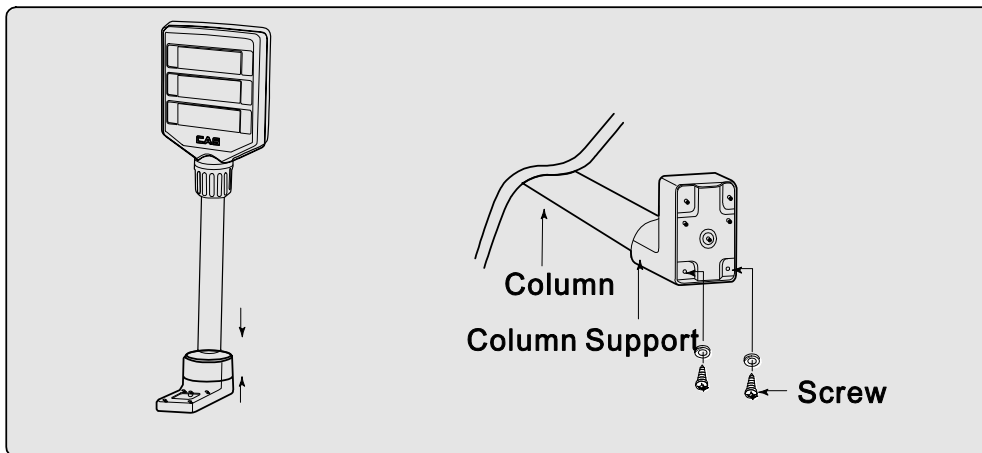PR II - B   PR II - P

■ Rcolumn instaltion

Figure one   Figure two

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2.2. Specifications

MODEL	PR-II					
	Dual Interval	*Single*	*Dual Interval*	*Single*	*Dual Interval*	*Single*
Capacity	Max 3/6kg	Max 6kg	Max 6/15kg	Max 15kg	Max 15/30kg	Max 30kg
e	e=1/2g	e=2g e=1g e=0.5g e=0.2g	e=2/5g	e=5g e=2g e=1g e=0.5g	e=0.5/1g	e=10g e=5g e=2g e=1g
External Resolution	1/3000	1/3000~1/30000	1/3000	1/3000~1/30000	1/3000	1/3000~1/30000
MAX Tare	-MAX					
Display	6/6/6(Weight / Unit price/ Total price)					
Symbols	ZERO, TARE, kg/lb,100g/1oz, ADD, SUM, Low Battery, AC POWER					
Keys	ZERO, TARE, M1~M7 KEY, FUCTION, ADD, SUM					
Functions	Direct PLU 7, Unit Conversion, Power Save Mode Print out Function, Back-light ON/OFF Control Function					
Dimensions	P TYPE : 341 (W) x 435 (D) x 474 (H)[mm] / 134 (W) x 171 (D) x 186 (H)[inch] B TYPE : 341 (W) x 383 (D) x 102 (H)[mm] / 134 (W) x 151 (D) x 40 (H)[inch]					
Platter size	330 (W) x 235 (D)[mm] / 129.92 (W) x 92.52 (D)[inch]					
Weight	2.8 kg					
Power	1.5 V x 3 units (D size Battery), Pb 4V/4Ah, 6 V Adapter					
Operation Time	Approx. 250hours (Manganese battery)/ 500 hours (Alkaline at 20 °C /68 °F)					
Operating Temperature	-10 °C ~ +40 °C / 14 °F ~ 104 °F					
Option	RS232, USB, Mn Battery, Pole Type					

※ Notice: Specifications are subject to change for improvement without notice.
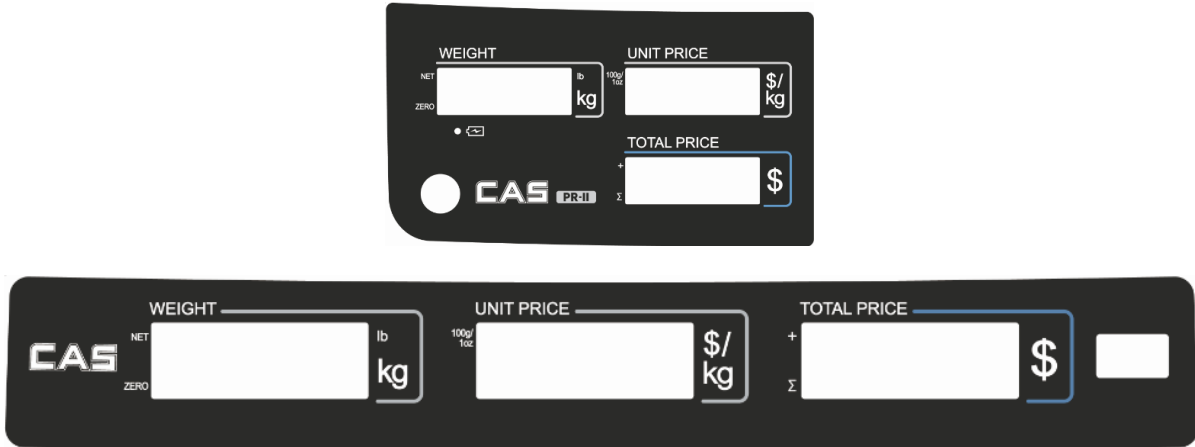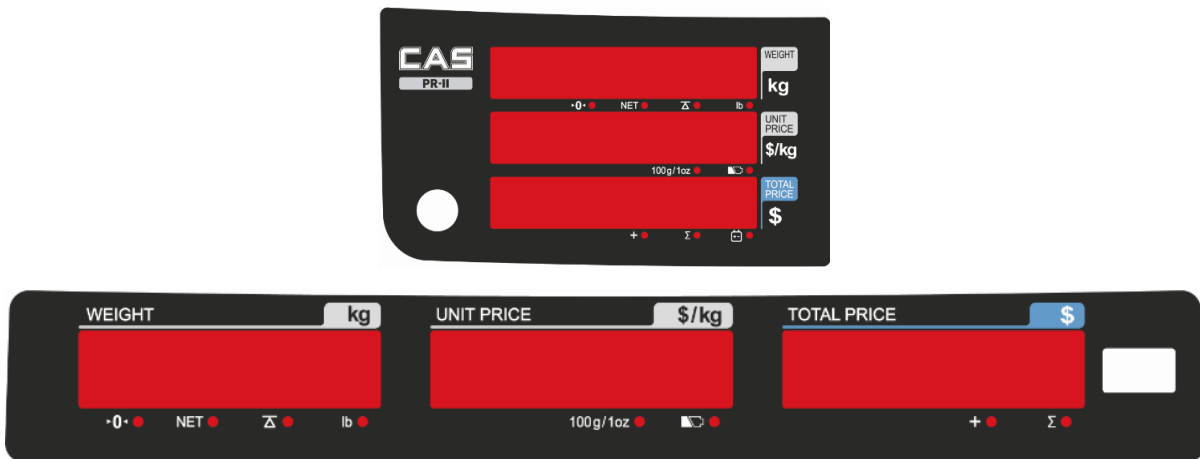
2.3. Display & Key

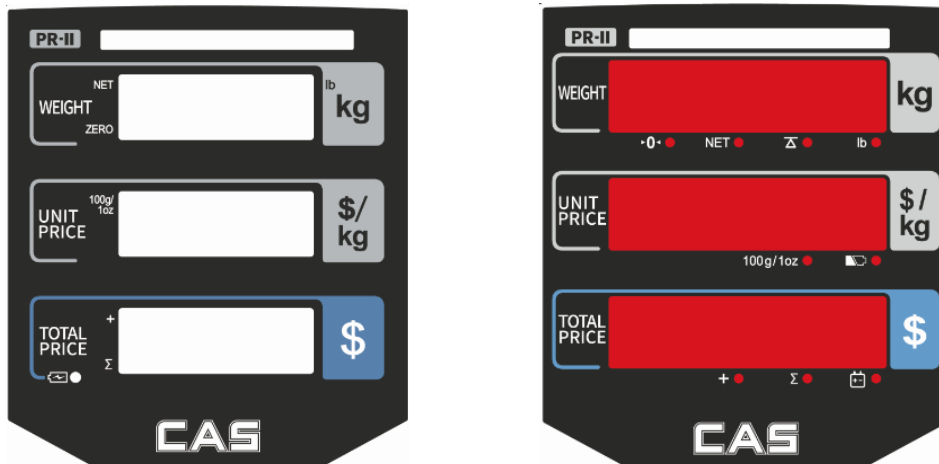### 2.3.1. Display

2.3.1.1 B Type

■ LCD Front/Rear

■ LED Front/Rear

2.3.1.2 P Type

■ LCD / LED (front/rear is same)
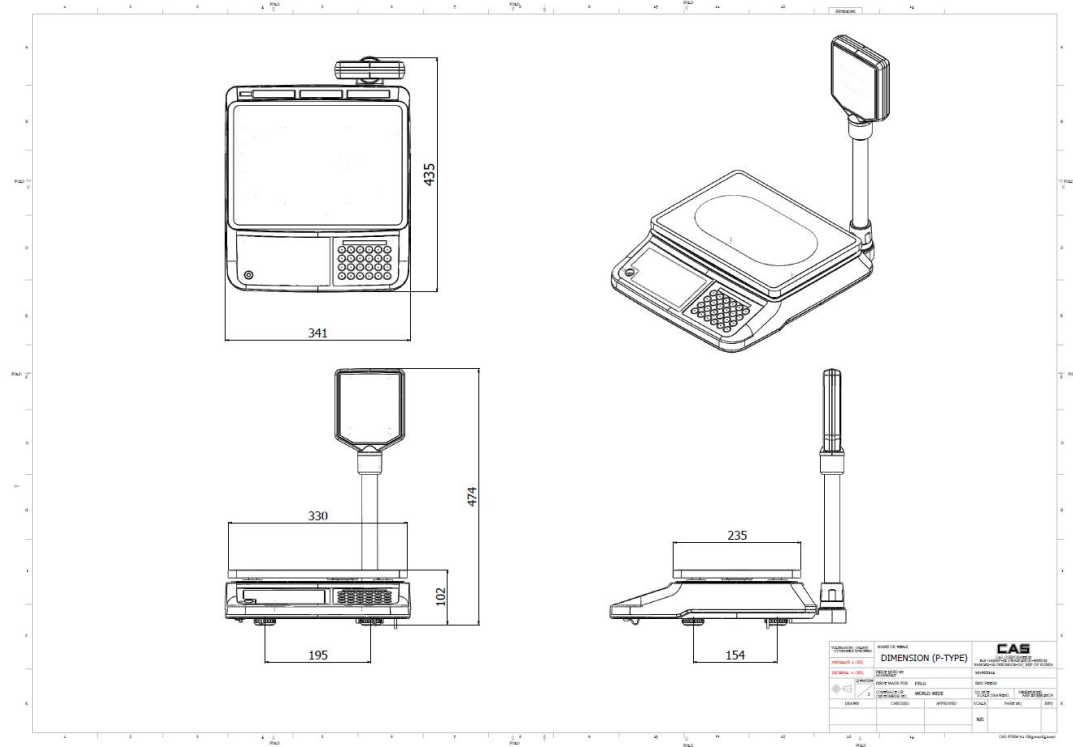
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2.3.2. Key Function
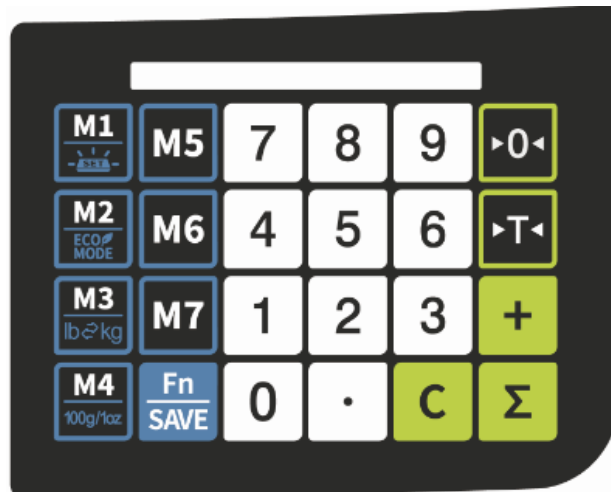
| KEYS	FUNCTIONS
0 ~ **9**	Used to enter all the numeric data
M1 ~ **M7**	PLU key.
Fn SAVE	Function key(Back-light, Power Save Used to enter PLU setting
C	Used to clear all the numeric price display Used to clear sum total price Used to clear all the daily total prices
▶0◀	Used to correct the zero point
▶T◀	To set or clear tare value
+	PLU save key. To make several sales transaction by adding up.
Σ	To check total sales amount or finalize sales transaction.
·	Used to enter the decimal point when price is entered.
Fn SAVE + **M1**	Used to change back-light setting.(OFF, ON. AUTO)
Fn SAVE + **M2**	Power Save Mode
Fn SAVE + **M3**	Used to change the unit of weight.(kg or lb)
Fn SAVE + **M4**	Used to price per 100g ($/100g) or 1oz ($/1oz)

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2.4. Dimension
2.4.1. Scale
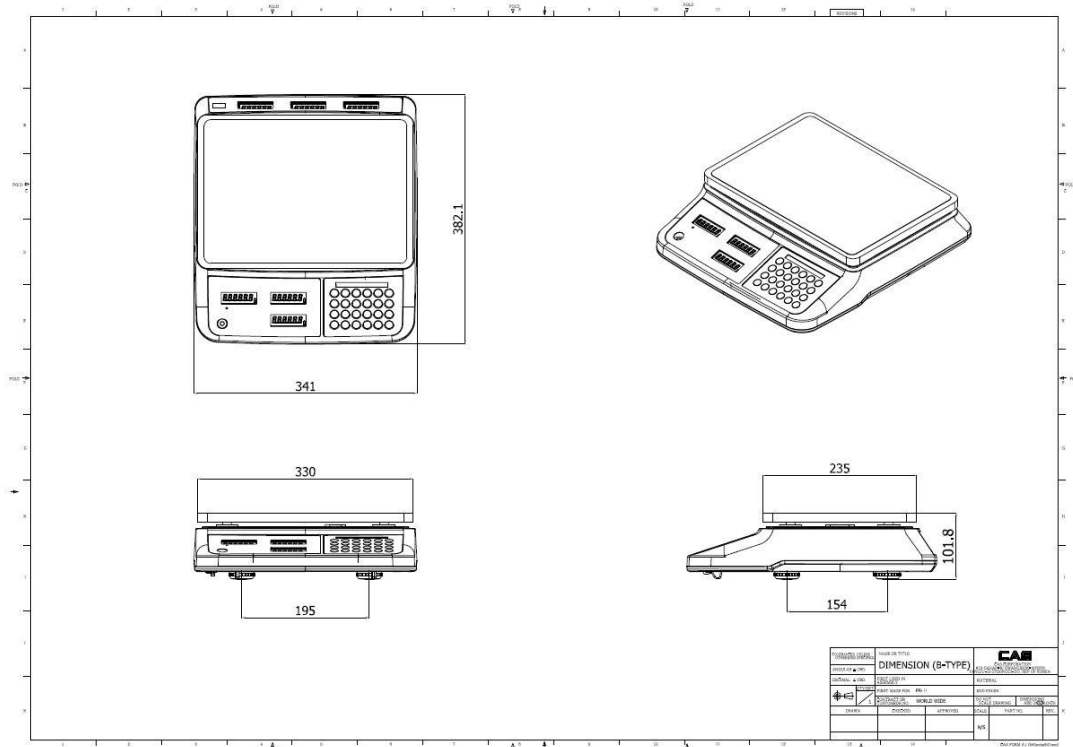
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2.4.2. Loadcell

2.5. Sealing Method

9
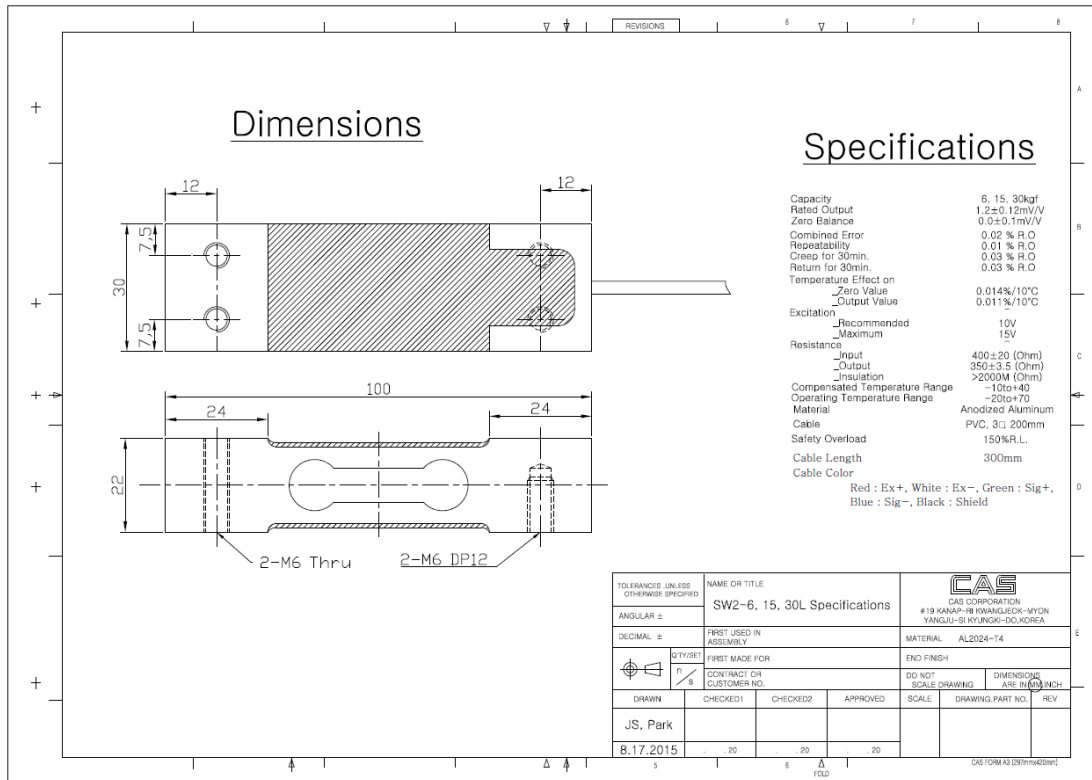
CAS ELECTRICS CO.,LTD
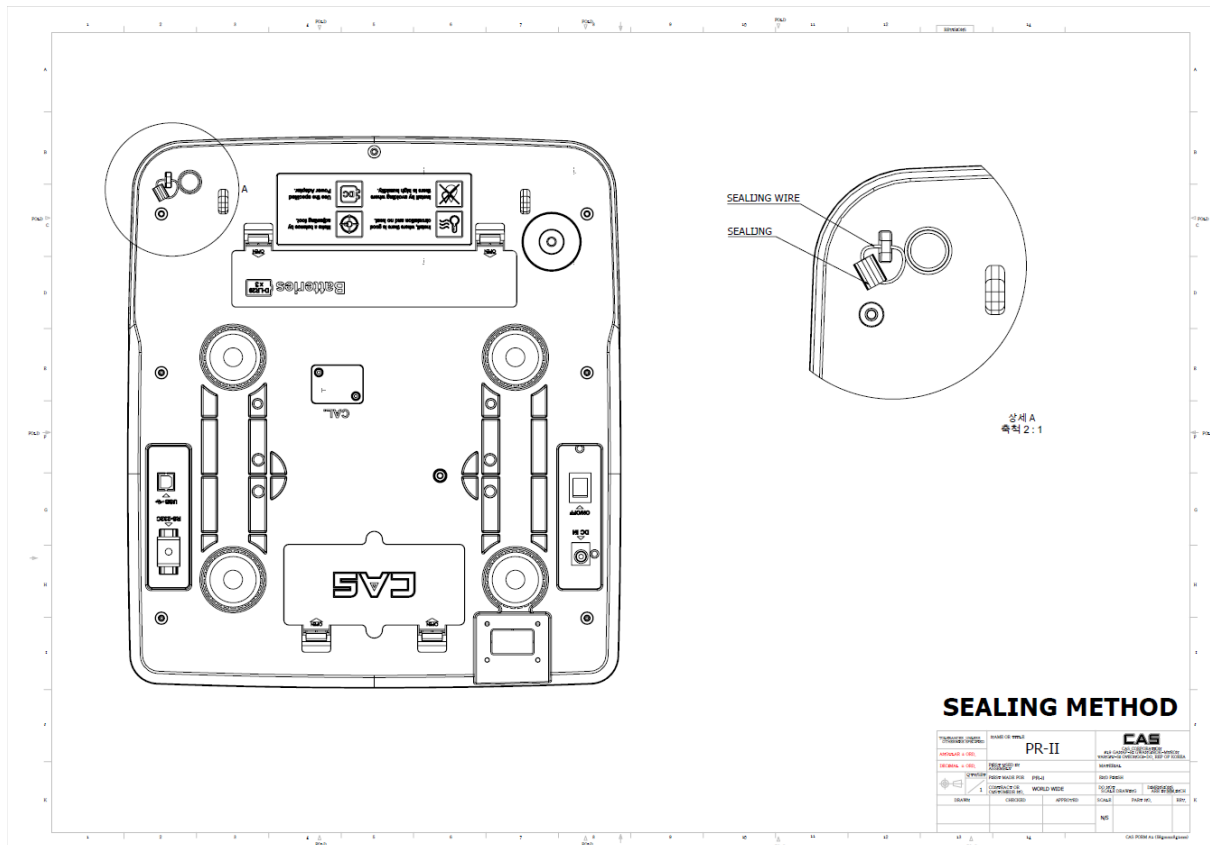
3. Calibration

3.1. Calibration Mode

PR-II supports two calibration mode.

Cal mode 1: Calibration after the initialization data

Cal mode 2: Calibration should only proceed again

After turning on the power, while the number is changed to "999999", "888888", "777777" on the display, calibration jumper short to enter the cal mode 1. Before turning on the scale, calibration jumper already shorted, turn on power and enter the cal mode 2.

Apart from calibration mode, PR-II supports Test function such as:

[ZERO] key while holding down, when the power is turned on, and go into test mode.

Test mode can be seen the AD value, voltage, key operation. Press [TARE] key, making the AD value to 0, press the [ZERO] key to exit the test menu.
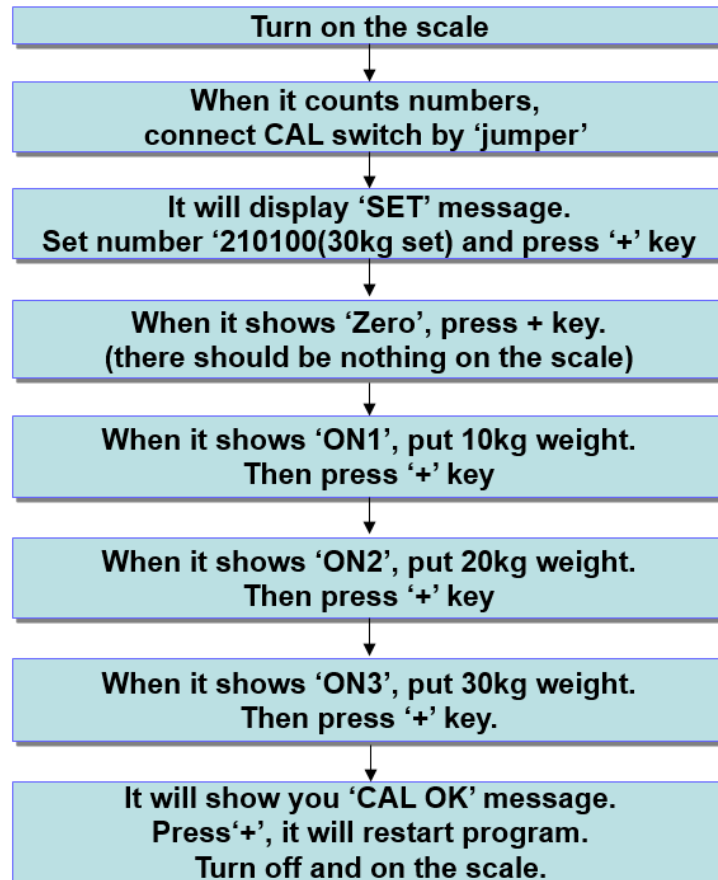
```
04256
```

```
4.7
```

```
0
```

1st display: AD value

2nd display: voltage

3rd display: key value

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3.2. Span Calibration

Turn on the scale

When it counts numbers, connect CAL switch by 'jumper'

It will display 'SET' message. Set number '210100(30kg set) and press '+' key

When it shows 'Zero', press + key. (there should be nothing on the scale)

When it shows 'ON1', put 10kg weight. Then press '+' key

When it shows 'ON2', put 20kg weight. Then press '+' key

When it shows 'ON3', put 30kg weight. Then press '+' key.

It will show you 'CAL OK' message. Press'+', it will restart program. Turn off and on the scale.

Cal mode 1:

(1) Pressing and holding "Calibration Switch" push power on/off switch. It displays below:
Then enter the settings by pressing a number key, press the [+] key to save settings and exit the following menu.

```
200100
```

```
      0
```

```
SET
```

For exampe,

DIGIT 6	DIGIT 5	DIGIT 4	DIGIT 3-2	DIGIT 1
2	0	0	10	0
Decimal 2	Vibration filter Disable	Weight unit => kg	30 kg Single 1/3000	Unit price weight unit => kg

Parameter setting, see below table.

DIGIT	Description	Value	Description
DIGIT 6	Unit price Decinal point	0-3	0: use decimal 0 1: use decimal 1 2: use decimal 2 3: use decimal 3
DIGIT 5	Vibration Filter	0~1	0: Disable 1: Enable
DIGIT 4	Weight unit	0~1	0: kg 1: lb
DIGIT 3-2	Capacity setting	00~14	Refer to capacity table
DIGIT 1	Unit price weight unit	0	kg (or lb)
		1	100 g (or oz)

Capacity table

Setting Value	Mode	Interval	e (g)	Resolution
00	6 kg	dual	1/2	1/3000
01	6 kg	single	2	1/3000
02	6 kg	single	1	1/6000
03	6 kg	single	0.5	1/12000
04	6 kg	single	0.2	1/30000
05	15 kg	dual	2/5	1/3000
06	15 kg	single	5	1/3000
07	15 kg	single	2	1/7500
08	15 kg	single	1	1/15000
09	15 kg	single	0.5	1/30000
10	30 kg	dual	5/10	1/3000
11	30 kg	single	10	1/3000
12	30 kg	single	5	1/6000

| 13 | 30 kg | single | 2 | 1/15000 |
| 14 | 30 kg | single | 1 | 1/30000 |

Pressing a number key will be stored by pressing the Enter the set value, the + key.

Caution must be canceld if you do not enter in succession.

(2) Do not place anything on top of the tray, press the [+] key.

```
   OL
```

```
  4287
```

```
  ZERO
```

(3) Press [+] key and then it displays "On1" message

```
   IL
```

```
  9890
```

```
  ON1
```

(4) Load middle weight (ex:1/3 full capacity) on the platform
(5) Press [+] key and then it displays "On2 " message

```
  2L
```

```
 19990
```

```
  ON2
```

(6) Load middle weight (ex:2/3 full capacity) on the platform

(7) Press [+] key and then it displays "On3 " message

```
  3L
```

```
 28895
```

```
  ON3
```

(8) Load full weight on the platform

```
  CAL
```

```
  OK
```

(9) Press [+] key and then, the display will show all the segments and count up "9" to "0".

Cal mode 2:

Cal Mode 2 is a calibration method for using the weight that corresponds to one of the zero and the three intervals. If you do not have the three weights, even if only a single weight has the advantage that can be calibrated.

OL	SPAN
	28895
ZERO	

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4. The Schematics and Diagram

4.1. System Block Diagram
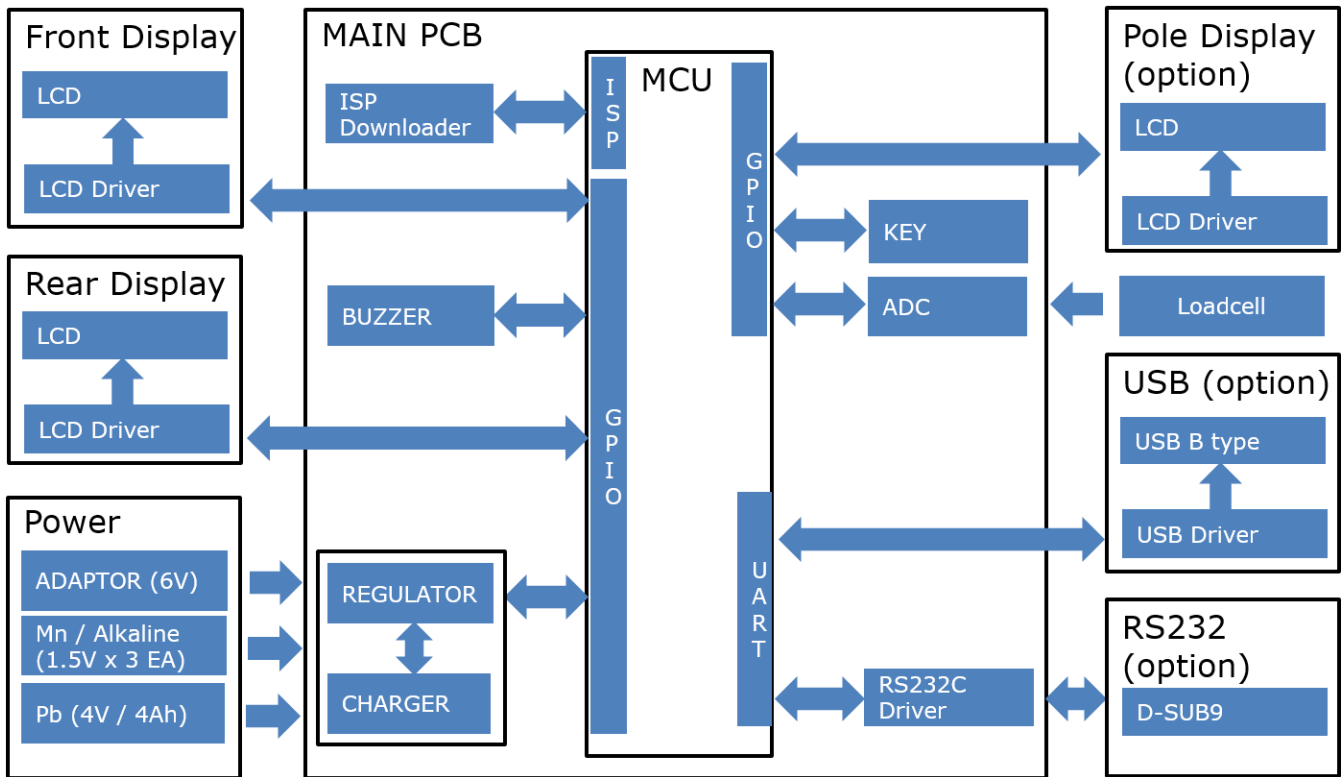
4.2. Circuit Diagram

Please call your CAS dealer.

4.3. Interface
4.3.1. RS232C Interface (direct)

1, 4, 6, 7, 8, 9: Not connected
2: RX DATA
3: TX DATA
5: Ground

4.3.2. USB Interface

USB Type B Socket
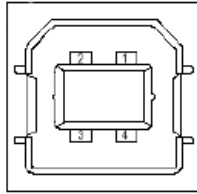
1: Vbus (5V)
2: D-
3: D+
5: Ground

5. Firmware Update Method

Please call your CAS dealer.

6. Exploded Views

EXPLODED VIEW _ U-TYPE
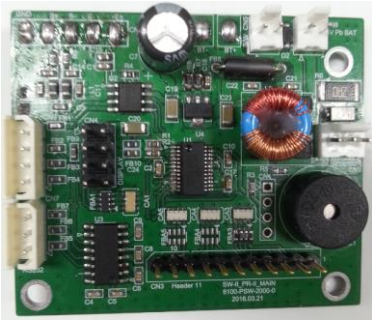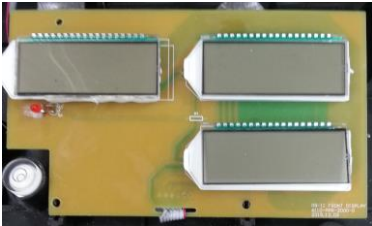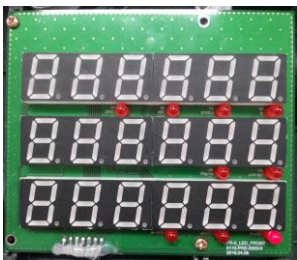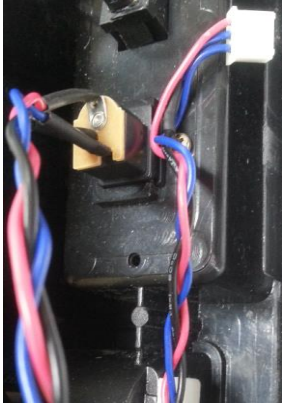
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7. Parts List

7.1. Electronic Parts

No	Image	Part Code	Parts Name	DESCRIPTION	Q'ty
1		6D00SWL00000	MAIN PCB ASS'Y		1
2		6110PRE00000			1
3		6110PRE00010			1
4		6110PRE00020			1
5		6110PRE00030			1
6		6110PRE00040			1

7		6110PRE00050			1
8		6130PRE00000			1
9		7840W0032750			1
10		7840W0022710	Switch Cable		1
11		7832W0003100	RS232 Cable		1

12		810SWL153GUN0103	USB PCB ASS'Y		1
13		7520P0070000	Pb Battery		1
14		7520P0001500	Mn Battery		3
15		7562P0602CE0	SMPS ADAPTOR		

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7.2. Mechanical Parts
7.2.1. BODY ASS'Y
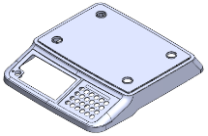
No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
1		2000-A00-0456	BODY		EA	1
2		2000-A00-0452	BATTERY COVER Mn		EA	1
3		2000-A00-0453	BATTERY COVER PB		EA	1
4		2008-A00-0001	FOOT		EA	1
5		1020-A00-0019	BATTERY HOLDER		EA	
6		2000-A00-0399	SEALING PLATE		EA	
7		2022A0000041	WATER LEVEL GAGE		EA	1
8		BB01JP000130	SWITCH		EA	1
9		7610SBT0303B	DC JACK		EA	1
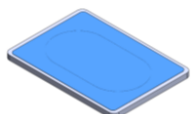
No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
10		1510-A00-0306	T SCREW PH M3X6		EA	12
11		1511-A00-0306	T SCREW FH M3X6		EA	2
12		1510-A00-0410	T SCREW PH M4X10		EA	7
13		1590A0000240	BATTERY SPRING D			1
14		1590A0000070	BATTERY SPRING C			1
15		7840W000213C	BATTERY WIRE(-)	2P*135m/m(SW-1)		1
16		7840W000216A	BATTERY WIRE(+)	2P*165(SW-1)		1
17		7840W000323B	CONNECTOR WIRE	3P*230mm-303(SW-1S/C 전용)		1

7.2.2. UPPER CASE ASS'Y

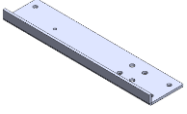| No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
1		2000-A00-0457	UPPER CASE		EA	1
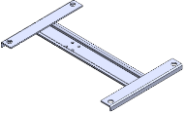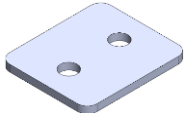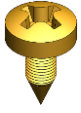
7.2.3. TRAY ASS'Y

No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
1		BB01-JP0-0001	TRAY		EA	1

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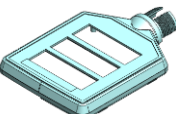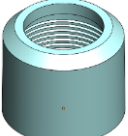
No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
2		BB01-JP0-0021	FISH TRAY		EA	1
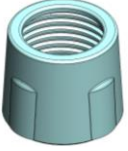
7.2.4. PLATFORM ASS'Y

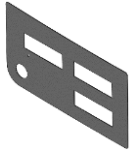| No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
1		BB01-JP0-0006	UPPER PLATFORM		EA	1
2		BB01-JP0-0007	LOWER PLATFORM		EA	1
3		BB01-JP0-0008	LOADCELL PLATE			
4		1510-A00-0408	T SCREW-1 (PH M4X8)			
5		1530-A00-0620	W BOLT (M6X20)			
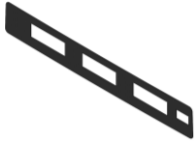
7.2.5. PLATFORM ASS'Y

No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
1		2000-PR0-1118	DISPLAY CASE		EA	1
2		2001-A00-0042	DISPLAY NUT		EA	1
3		1150-PR0-1122	POST PIPE		EA	1

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No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
4		2000-PR0-1138	POLE_BASE3_CAP		EA	1
5		2000-PR0-1148	POLE_BASE		EA	1
6		2000-PR0-1168	BASE COVER		EA	1
7		1510-A00-0410	T SCREW-1 (PH M4X10)		EA	5
8		1510-A00-0306	T SCREW-1 (PH M3X6)		EA	4
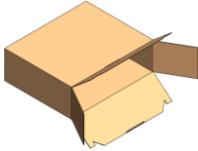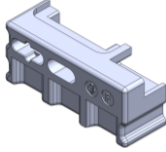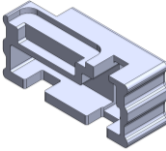
7.2.6. IMAGE ASS'Y

No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
1			CAPA STICKER		EA	1
2		2050-A00-0678	LCD DP COVER (F)	PRII TOOL	EA	1
3		2050-A00-0680	LED DP COVERV (F)	PRII TOOL	EA	1
4		2050-A00-0679	LCD REAR DISPLAY COVER	PRII TOOL	EA	1
5		2050-A00-0681	LED REAR DISPLAY COVER	PRII TOOL	EA	1

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No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
6		2050-A00-0684	TACT KEY COVER	PRII TOOL	EA	1
7		3050-PRP-0033	PR-POLE FILTER	PRII TOOL		

7.2.7. C/T ASS'Y

No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
1		9104-A00-0026	C/T BOX		EA	1
3		9203-A00-0021	STYROFORM BOX _ LEFT		EA	1
4		9203-A00-0022	STYROFORM BOX _ RIGHT		EA	1
5			MANUAL		EA	1
6		9301A0000030	POLY BAG		EA	1
7		9300A000003A	POLY BAG		EA	1
8		9304A000005B	POLY BAG		EA	2
9		9400A0000460	SILICAGEL		EA	2
10		9900A0000010	봉인납	수출용	EA	1
11		9900A0000020	SEALING WIRE	300M/ROLL	EA	0

7.3. Loadcell Parts

No		Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
1					EA	1

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Revision

NO	CAUSE	DATE	APPROVAL	Remark
0	Start	2016.05.10	Keum Youngkwang	