CAS ELECTRICS CO.,LTD

SW-II Series

Service Manual

(English)

2016. 11. 03

Table of Contents

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 SW-II.

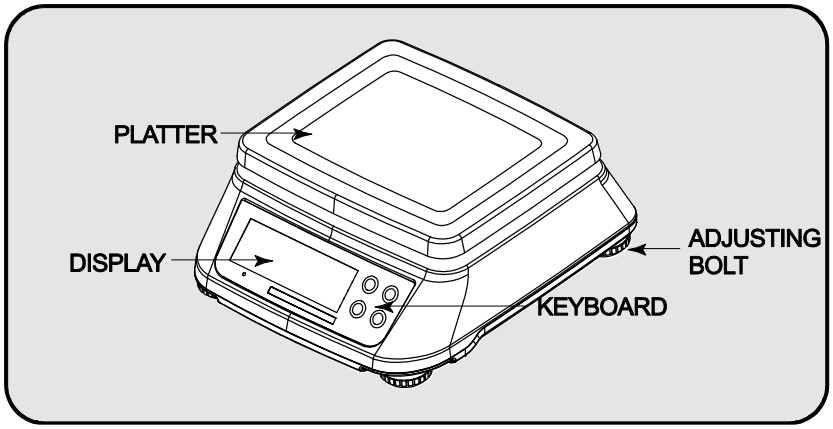
Please keep it handy for the future references.

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



2.2. Specifications

MODEL	SW-II							
Capacity	Dual Max 1.5/3kg	Single Max 3kg	Dual Max 3/6kg	Single Max 6kg	Dual Max 6/15kg	Single Max 15kg	Dual Max 15/30kg	Single Max 30kg
e	e=0.5/1g	e=1g	e=1/2g	e=2g	e=2/5g	e=5g	e=0.5/1g	e=10g
External Resolution	1/3000	1/3000~ 1/30000	1/3000	1/3000~ 1/30000	1/3000	1/3000~ 1/30000	1/3000	1/3000~ 1/30000
MAX Tare	-1.4995 kg	-2.999 kg	-2.999 kg	-5.998 kg	-5.998 kg	-14.995 kg	-14.995 kg	-29.990 kg
Display	115 x 35 [mm]/45 " x 15.5 " 6 digit LCD							
Symbols	STABLE, ZERO, TARE, g, kg, lb, oz, Low Battery HI / OK / LO & PCS							
Keys	ZERO/ UNIT, TARE/ HOLD , MODE,FUCTION							
Functions	Weighing, Hold, Unit Conversion, Counting-Counting Sample Range : 10, 20, 50, 100,200, 500 Weight Comparison Function : hi, ok, low Backlight ON/OFF Control Function							
Dimensions	250 (W) x 281 (D) x 110 (H)[mm] / 984 (W) x 111 (D) x 43 (H)[inch]							
Platter size	226 (W) x 187 (D)[mm] / 88.97 (W) x 73.62 (D)[inch]							
Weight	1.8 kg							
Power	1.5 V x 3 units (D size Battery), Pb 4V/4Ah, 6V/500mA Adapter							
Operation Time	Approx. 300 hours (Manganese battery)/ 600 hours (Alkaline at 20 °C /68 °F)							
Operating Temperature	-10 °C ~ +40 °C / 14 °F ~ 104 °F							
Option	6 V Adapter 500 mA, Pb 4 V4 A, Rear Display, RS232, USB, SUS TRAY							

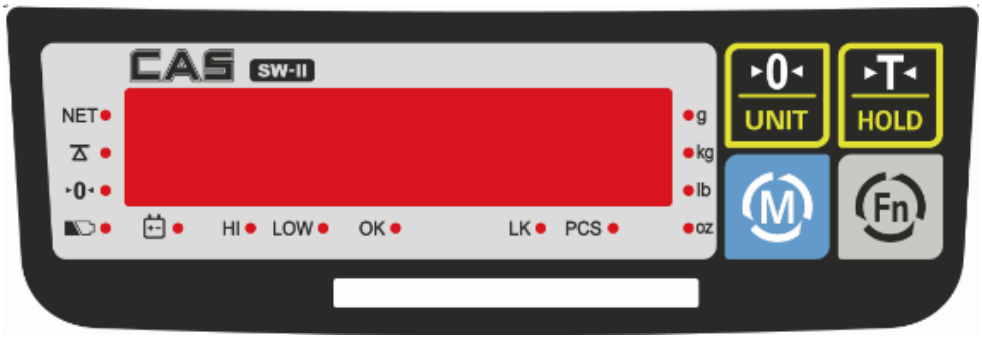
2.3. Display & Key

2.3.1. Display

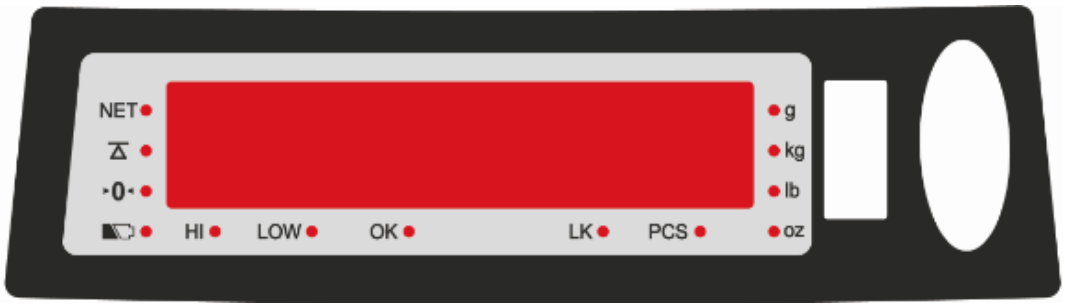
2.3.1.1 LCD Front

2.3.1.1 LCD Rear

2.3.1.3 LED Front



2.3.1.4 LED Rear

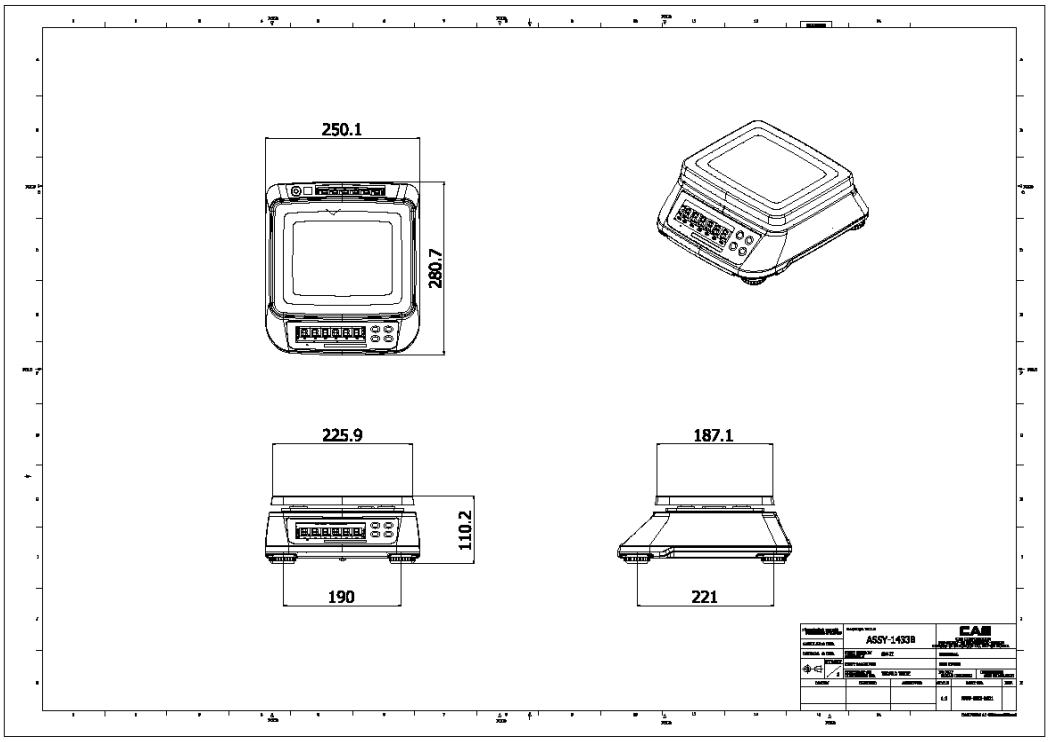


2.3.2. Key Function

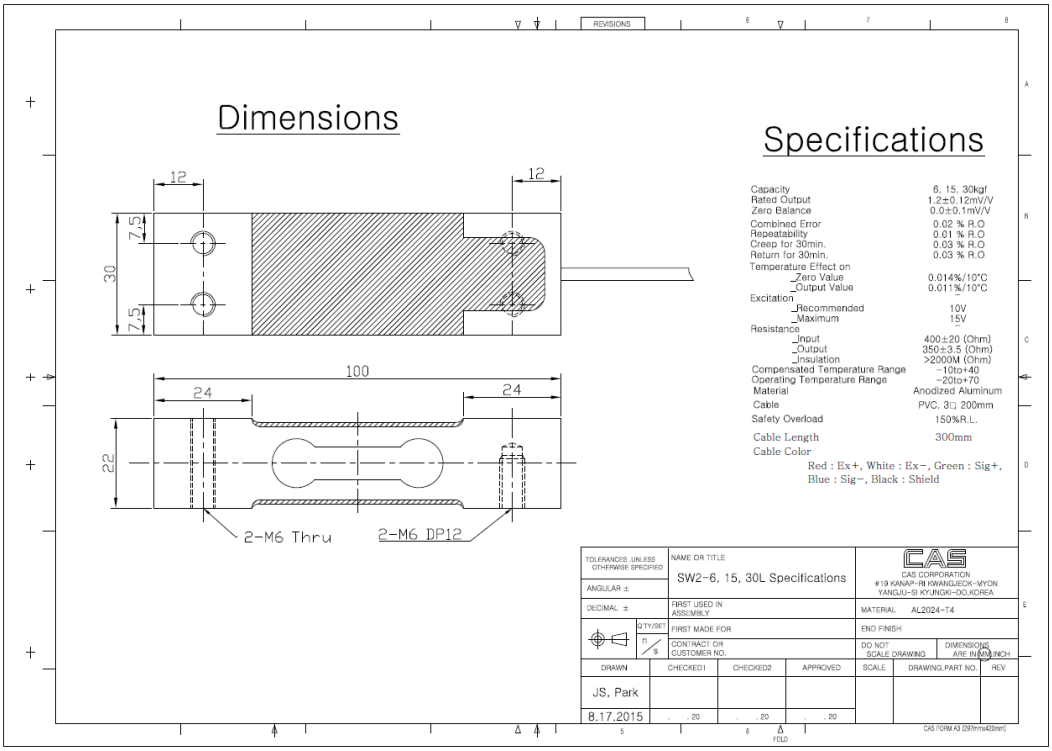
KEYS	FUNCTIONS
0 UNIT	Used to set the zero point.
T HOLD	Used to input or cancel the weight of tare.
M	Used to change the unit of weight, and shown as following sequence on the display. [Kg] → [WL on or off] → [PCS] → [Kg]
Fn	Used to select and hold or unit conversion function
Fn + 0 UNIT	Used to convert the unit of weight.
Fn + T HOLD	Used to make the weight of commodity stable. This weight is average value.

2.4. Dimension

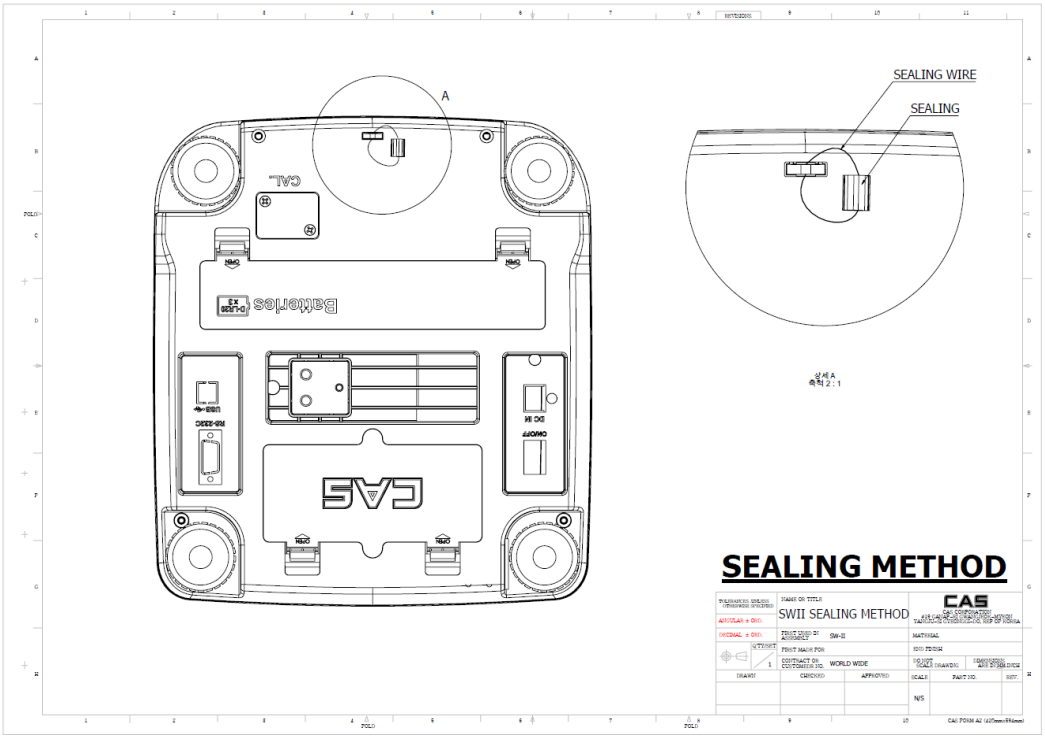
2.4.1. Scale



2.4.2. Loadcell



2.5. Sealing Method



3. Calibration

3.1. Calibration Mode

SW-II supports two calibration mode.

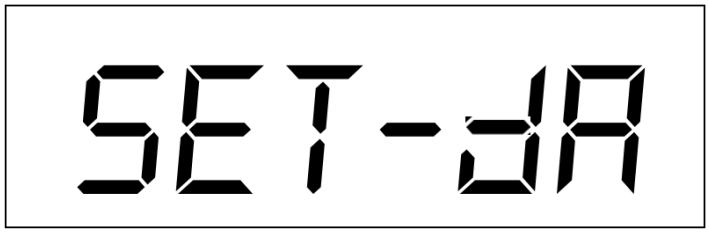
Cal mode 1: Calibration after the initialization data

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.

For example, for a 3kg scale, when Cal Mode 1 entry, show as follows:



Since it shows the screen as shown below. The meaning of the figure below is shown in Scale setting Table [TARE] key and change the settings, select the desired settings, press the [ZERO] key.

Capacity	Mode	Interval	e	Resolution
3 kg	3000	dual	0.5/1	1/3000
	3001	single	1	1/3000
	3000.5	single	0.5	1/6000
	3000.2	single	0.2	1/15000
	3000.1	single	0.1	1/30000
6 kg	6000	dual	1/2	1/3000
	6002	single	2	1/3000
	6001	single	1	1/6000
	6000.5	single	0.5	1/12000
	6000.2	single	0.2	1/30000
15 kg	15000	dual	2/5	1/3000
	15005	single	5	1/3000
	15002	single	2	1/7500

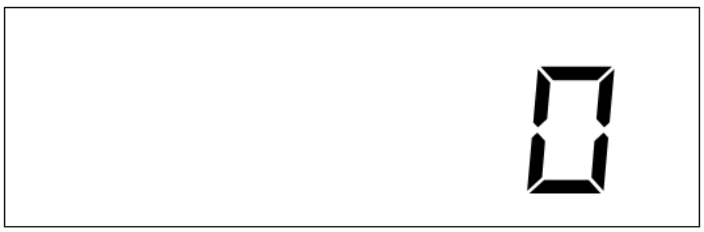
	15001	single	1	1/15000
	15000.5	single	0.5	1/30000
30 kg	30000	dual	5/10	1/3000
	30010	single	10	1/3000
	30005	single	5	1/6000
	30002	single	2	1/15000
	30001	single	1	1/30000

After pressing the [ZERO] key, the display is as follows. When press [TARE] key, digits shift is possible, pressing the [MODE] key to increase the number. After finishing the setting, press the [ZERO] key to save, and exit from the menu.

Parameter setting, see below table.

DIGIT	Description	Value	Description
DIGIT 6	Initial Zero range	0	Disable
		1	±10%
DIGIT 5	Vibration Filter	0~9	Filter level
DIGIT 4	Auto Zero Tracking	0~9	0~9 d
DIGIT 3	Zero compensation	0~9	0~9 d
DIGIT 2	Creep compensation	0~9	0~9 d
DIGIT 1	Decimal display	0	. (colon)
		1	, (semi-colon)

If you enter cal mode 2, it appears as below:

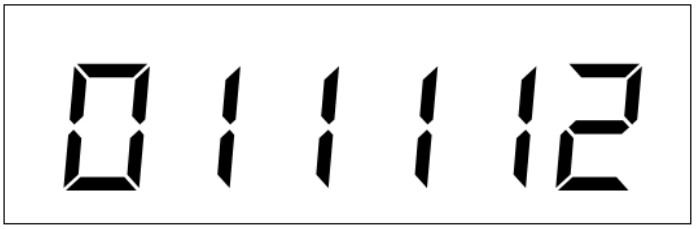


you can only calibrate span calibration.

Apart from calibration mode, SW-II supports to change user settings and AD tests such as:

(1) Change your settings

After turning on the power scale, while the display are turned on, press the [TARE] key you can change the user settings. Press [TARE] key, and move digits (digit shift) is possible, pressing the [MODE] key to increase the number. After finishing the setting, press the [ZERO] key to save, and exit from the menu.

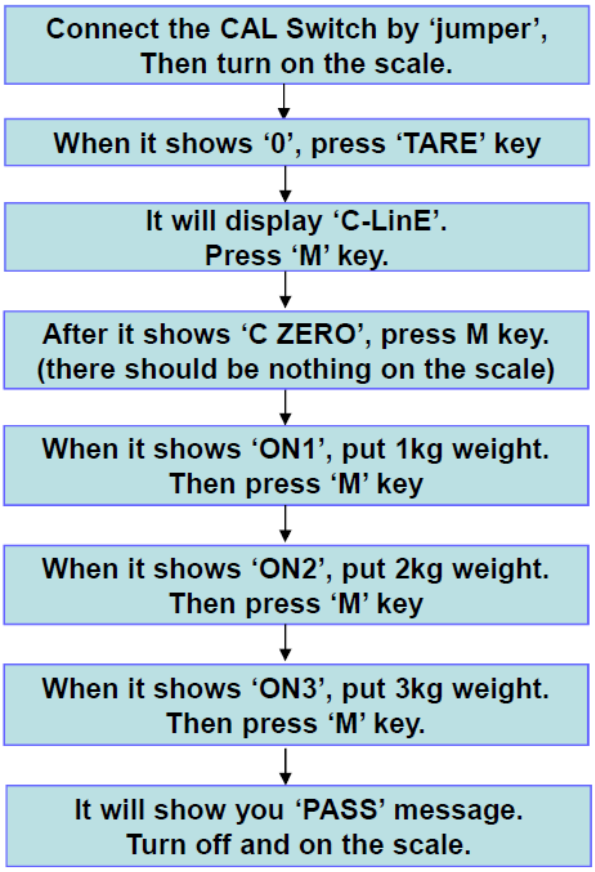


DIGIT	Description	Value	Description
DIGIT 6	Use Back light	0	Don't use
		1	Use
DIGIT 5	Use kg	0	Don't use
		1	Use
DIGIT 4	Use lb	0	Don't use
		1	Use
DIGIT 3	Use gram	0	Don't use
		1	Use
DIGIT 2	Use oz	0	Don't use
		1	Use
DIGIT 1	Default Weight Unit	0	Use kg
		1	Use lb
		2	Use gram
		3	Use oz

(2) AD test function

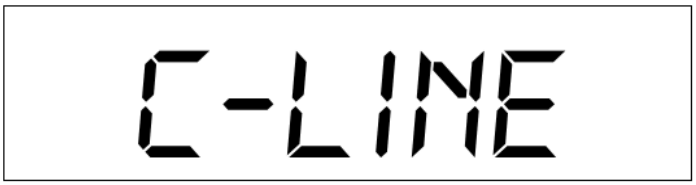
If after turning on the power scale, press the [MODE] key nit, you can check the AD value. In this case, press [ZERO] key to exit to the weighing mode.

3.2. Span Calibration



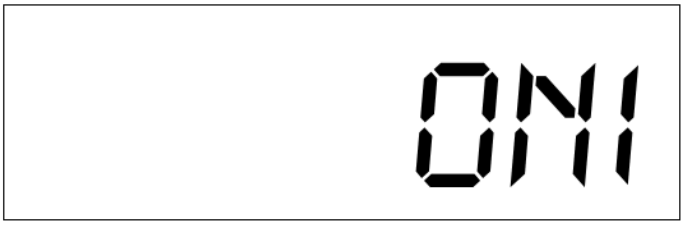
(1) Pressing and holding "Calibration Switch" press power on/off switch. It displays "0" message.

(2) Press [TARE] to display "C-line".



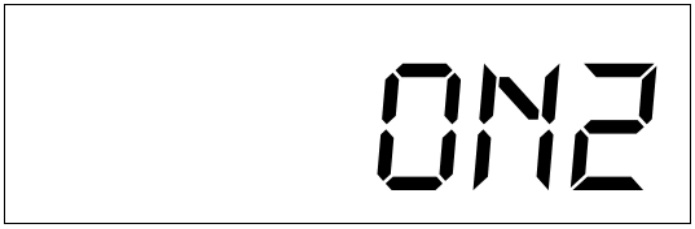
(3) Press [ZERO] key and then it displays "zero" message.

(4) Press [M] key and then it displays “On1” message



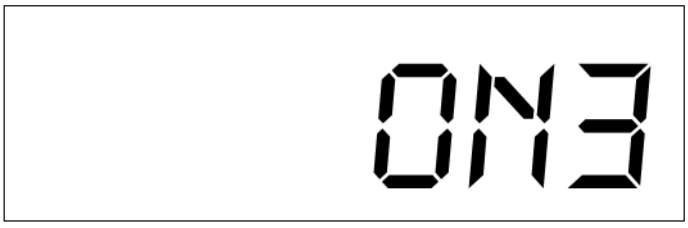
(5) Load middle weight (ex:1/3 full capacity) on the platform

(6) Press [M] key and then it displays “On2 ” message

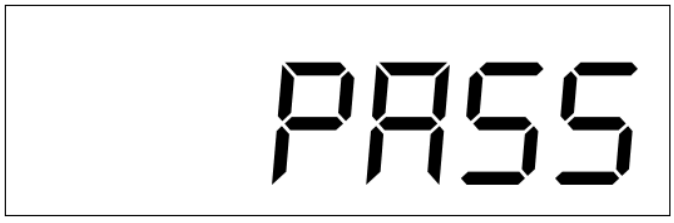


(7) Load middle weight (ex:2/3 full capacity) on the platform

(8) Press [M] key and then it displays “On3 ” message



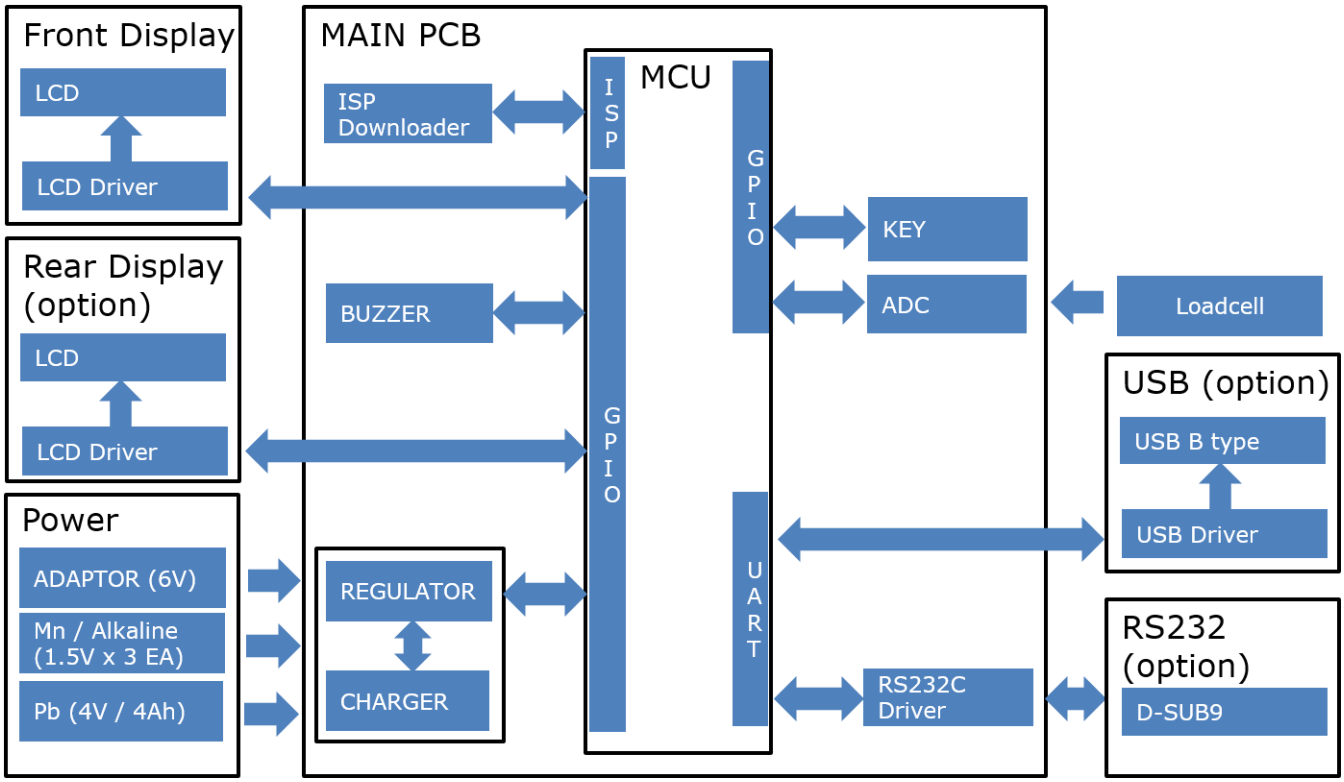
(9) Load full weight on the platform



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

4. The Schematics and Diagram

4.1. System Block Diagram

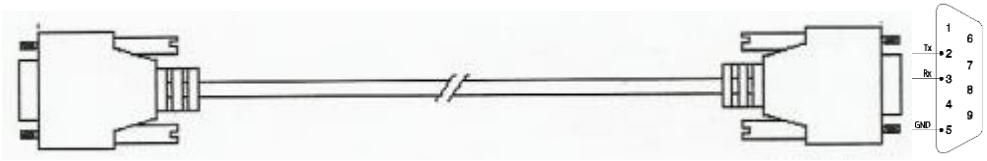


4.2. Circuit Diagram

Please call your CAS dealer.

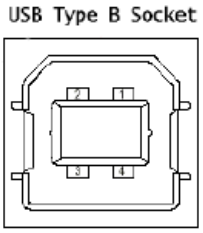
4.3. Interface

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

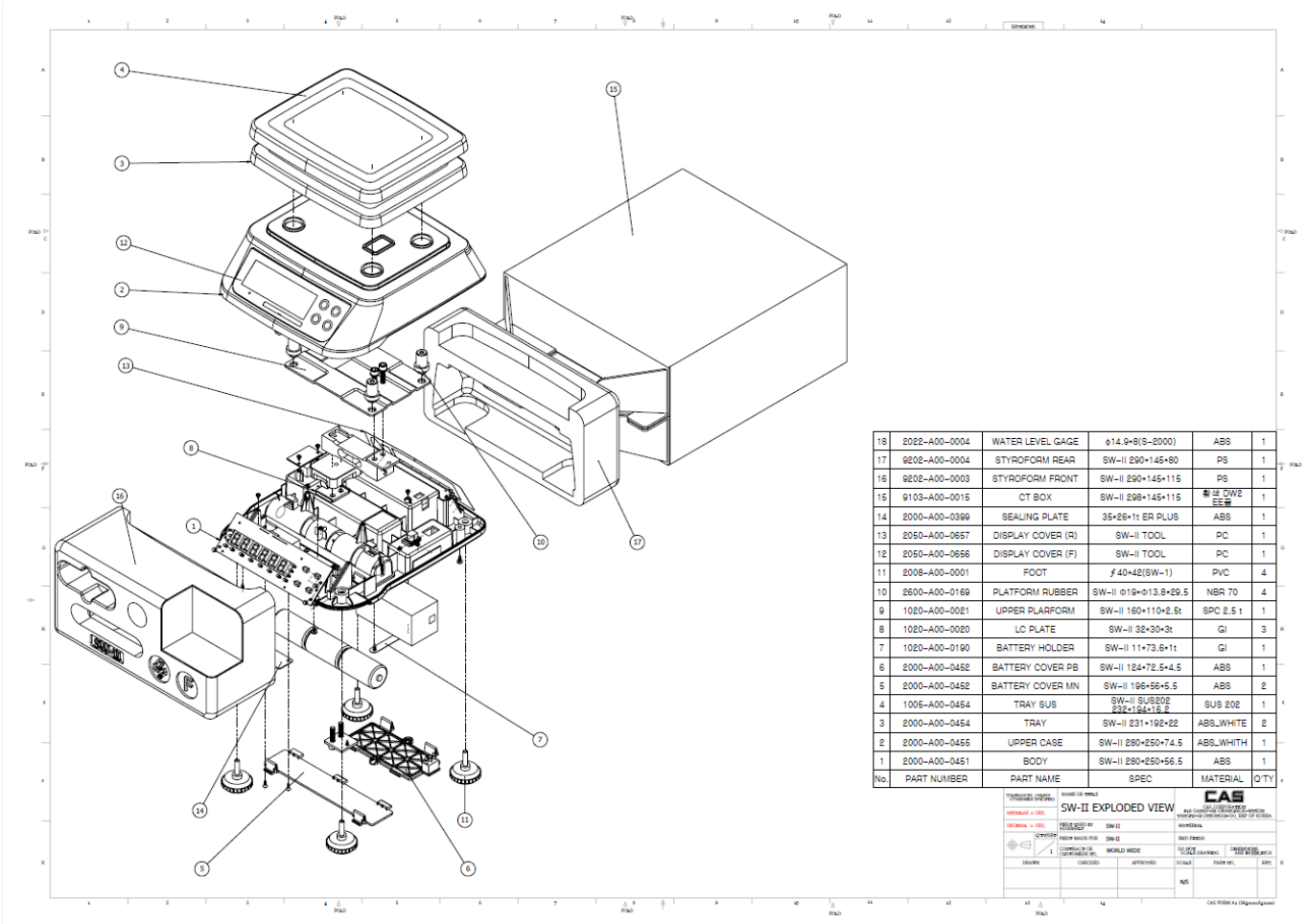


1: Vbus (5V)
2: D-
3: D+
4: Ground

5. Firmware Update Method

Please call your CAS dealer.

6. Exploded Views

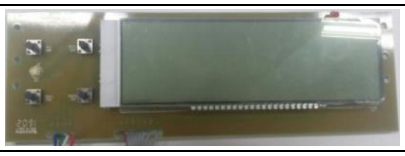
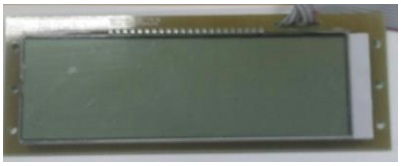
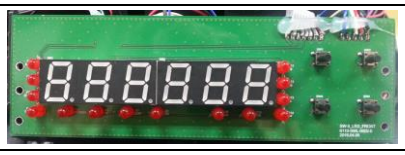


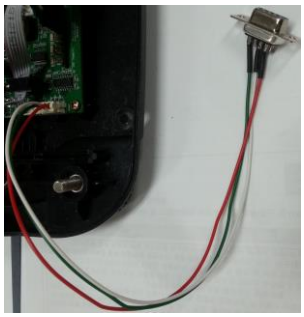
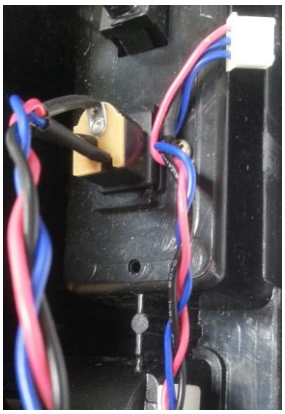
No.	PART NUMBER	PART NAME	SPEC	MATERIAL	Q'TY
18	2022-A00-0004	WATER LEVEL GAGE	φ14.9×8(S-2000)	ABS	1
17	9202-A00-0004	STYROFORM REAR	SW-II 290×145×80	PS	1
16	9202-A00-0003	STYROFORM FRONT	SW-II 290×145×115	PS	1
15	9103-A00-0015	CT BOX	SW-II 298×145×115	황보 DW2 EE용	1
14	2000-A00-0399	SEALING PLATE	35×26×1t ER PLUS	ABS	1
13	2050-A00-0657	DISPLAY COVER (R)	SW-II TOOL	PC	1
12	2050-A00-0656	DISPLAY COVER (F)	SW-II TOOL	PC	1
11	2008-A00-0001	FOOT	∮40×42(SW-1)	PVC	4
10	2600-A00-0169	PLATFORM RUBBER	SW-II φ19×φ13.8×29.5	NBR 70	4
9	1020-A00-0021	UPPER PLARFORM	SW-II 160×110×2.5t	SPC 2.5 t	1
8	1020-A00-0020	LC PLATE	SW-II 32×30×3t	GI	3
7	1020-A00-0190	BATTERY HOLDER	SW-II 11×73.6×1t	GI	1
6	2000-A00-0452	BATTERY COVER PB	SW-II 124×72.5×4.5	ABS	1
5	2000-A00-0452	BATTERY COVER MN	SW-II 196×56×5.5	ABS	2
4	1005-A00-0454	TRAY SUS	SW-II SUS202 232×194×16.2	SUS 202	1
3	2000-A00-0454	TRAY	SW-II 231×192×22	ABS_WHITE	2
2	2000-A00-0455	UPPER CASE	SW-II 280×250×74.5	ABS_WHITH	1
1	2000-A00-0451	BODY	SW-II 280×250×56.5	ABS	1

SW-II EXPLODED VIEW

7. Parts List

7.1. Electronic Parts

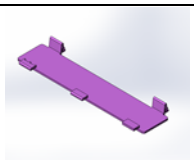
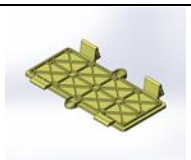
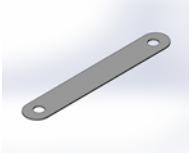
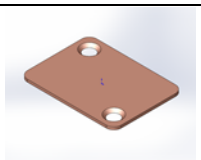
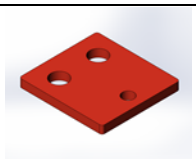
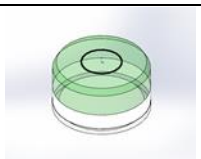
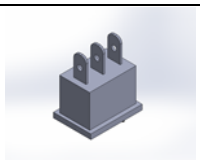
No	Image	Part Code	Parts Name	DESCRIPTION	Q'ty
1		6D00-SWL-0000-0	MAIN PCB ASS'Y	6100-SWL-0000-0 (SW2,PR2)	1
2		6A10SWL01000	DISPLAY PCB ASS'Y (FRONT/REAR)	6A10-SWL-0100-0	
3		6D10-SWL-0000-0	DISPLAY PCB ASS'Y (LCD FRONT)	6D10-SWL-0000-0 (SW2 FRONT)	1
4		6D10-SWL-0001-0	DISPLAY PCB ASS'Y (LCD REAR)	6110-SWL-0001-0 (SW2 REAR)	1
5		6D10-SWL-0100-0	DISPLAY PCB ASS'Y (LCD FRONT)	6D10-SWL-0100-0 SWII(LCD),WITHOUT WIRE	1
6		6D10-SWL-0110-0	DISPLAY PCB ASS'Y (LCD REAR)	6D10-SWL-0110-0 SWII(LCD),WITHOUT WIRE	1
7		6D10-SWL-0002-0	DISPLAY PCB ASS'Y (LED FRONT)	6110-SWL-0002-0 (SW2 FRONT)	1

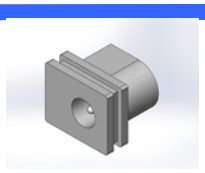
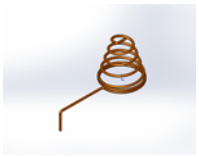
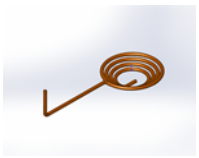
8		6D10-SWL-0003-0	DISPLAY PCB ASS'Y (LED REAR)	6110-SWL-0003-0 (SW2 REAR)	1
9		6D55-SWL-0001-0	USB PCB ASS'Y	6180-SWL-0000-0 (SW2,PR2)	1
10		7832W0003100	RS232 Cable	D9P*3P*310 (SW2,PR2,RS232)	1
11		7840W0032750	POWER Cable	3P*275 (SW2,PR2,POWER)	1
12		7840W0022710	Switch Cable	2P*370mm (SW2,PR2,Battery)	1
13		7520P0070000	Pb Battery	102*46.3*46.3 4V/4A PB)	1

14		7520P0001500	Mn Battery	R20-1.5V-D(TP,SW)	3
15		7562P0602CE0	SMPS ADAPTOR	100-240V/6V0.5A (CE.STRAIGHT)	

7.2. Mechanical Parts

7.2.1. BODY ASS'Y

No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
1		2000-A00-0451	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		2000-A00-0453	LC PLATE		EA	3
8		2022A0000041	WATER LEVEL GAGE	ø14.9*8(S-2000)상보	EA	1
9		BB01JP000130	SWITCH		EA	1

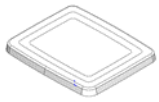
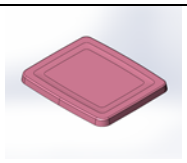
10		7610SBT0303B	DC JACK		EA	1
11		2000-A00-0458	T SCREW PH M4X10		EA	8
12		2000-A00-0452	T SCREW FH M3X8		EA	2
		1590A0000240	BATTERY SPRING D			1
		1590A0000070	BATTERY SPRING C			1
		7840W000213C	BATTERY WIRE(-)	2P*135m/m(SW-1)		1
		7840W000216A	BATTERY WIRE(+)	2P*165(SW-1)		1
		7840W000323B	CONNECTOR WIRE	3P*230mm-303(SW-1S/C 전용)		1
		1535-MSU-0620	W BOLT WA 6X25			2
		1535-MSU-0625	W BOLT WA 6X20			2
		1510A0003060	T SCREW PH M3X6			13

7.2.2. UPPER CASE ASS'Y

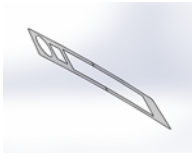
No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty

1		2000-A00-0455	UPPER CASE		EA	1

7.2.3. TRAY ASS'Y

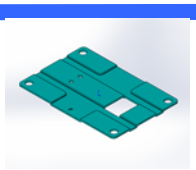
No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
1		1005-A00-0454	TRAY (SUS)		EA	1
2		2000-A00-0454	TRAY (ABS)		EA	1

7.2.4. IMAGE ASS'Y

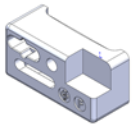
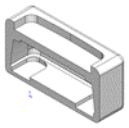
No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
1			SPEC PLATE		EA	1
2		2050-A00-0656	DP COVER (F)	SW-II TOOL	EA	1
3		2050-A00-0657	DP COVERV ®	SW-II TOOL	EA	1
4			CAPA STCKER FRONT		EA	1
5			CAPA STCKER REAR			

7.2.5. PLATFORM ASS'Y

No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty

1		1020-A00-0021	UPPER PLATFORM		EA	1
3		2600-A00-0169	PLATFORM RUBBER		EA	4

7.2.6. C/T ASS'Y

No	Image	Part Code	Parts Name	DESCRIPTION	Unit	Q'ty
1		9103-A00-0015	C/T BOX		EA	1
3		9202-A00-0003	STYROFORM BOX (F)		EA	1
4		9202-A00-0004	STYROFORM BOX ®		EA	1
5			MANUAL		EA	1
6		9301A0000030	POLY BAG		EA	1
7		9300A000003A	POLY BAG		EA	1
8		9304A000005B	POLY BAG		EA	2
		9400A0000460	SILICAGEL		EA	2
		9900A0000010	봉인납	수출용	EA	1
		9900A0000020	SEALING WIRE	300M/ROLL	EA	0

7.3. PMechanical Parts

7.3.1. Loadcell Parts

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

Revision

NO	CAUSE	DATE	APPROVAL	Remark
0	Start	2016.05.10	Keum Youngkwang	