

PR-LCD SERVICE MANUAL



1、 Introduction

1.1 PREFACE

Thank you for the purchasing of our CAS PR Series.

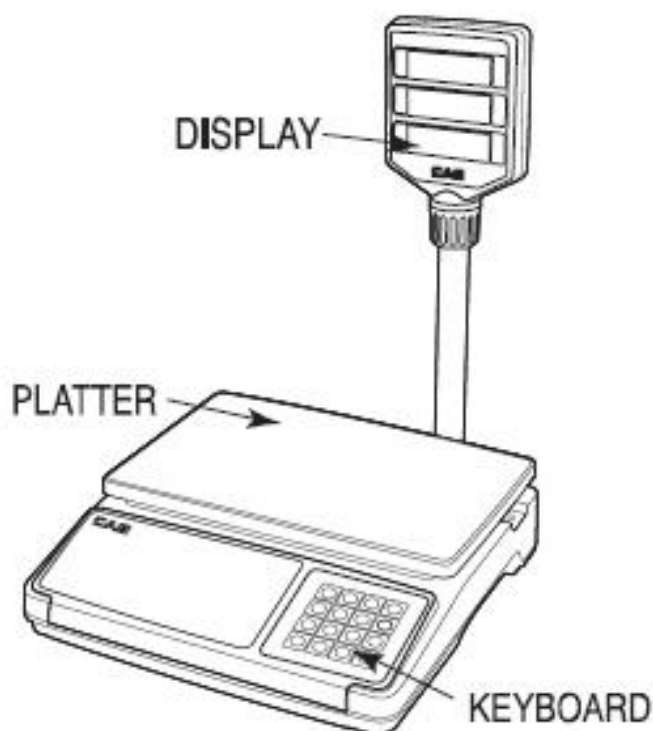
This series have been designed with CAS reliability, under rigid quality control and with outstanding performance. Your speciality departments can enjoy with these high quality reliable CAS products.

We believe that your needs will be satisfied and you will have proper reliability in variable weight.

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

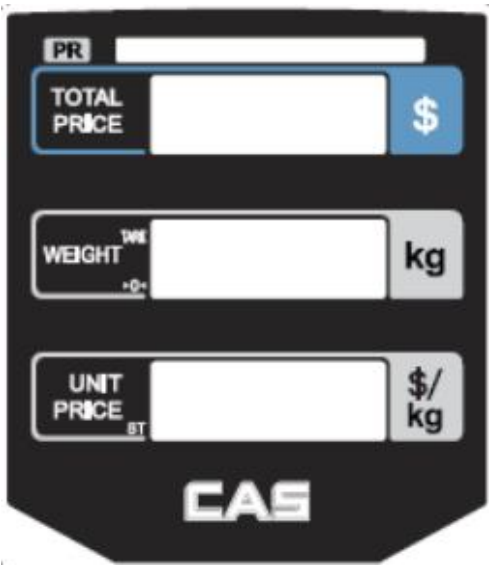
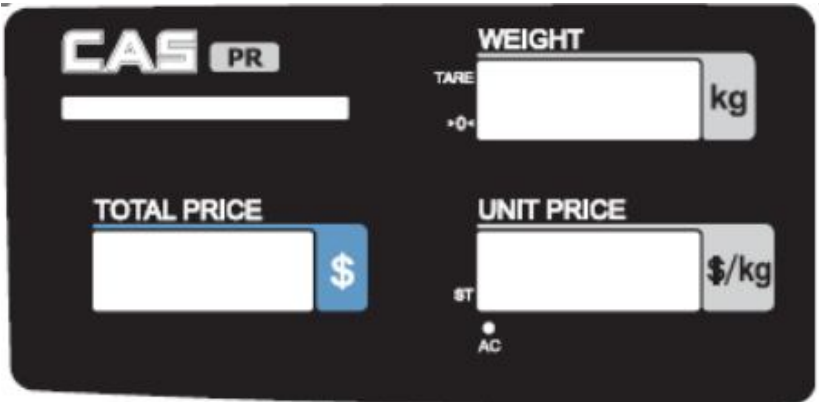
Please keep it handy for the future reference.

OVERALL VIEW

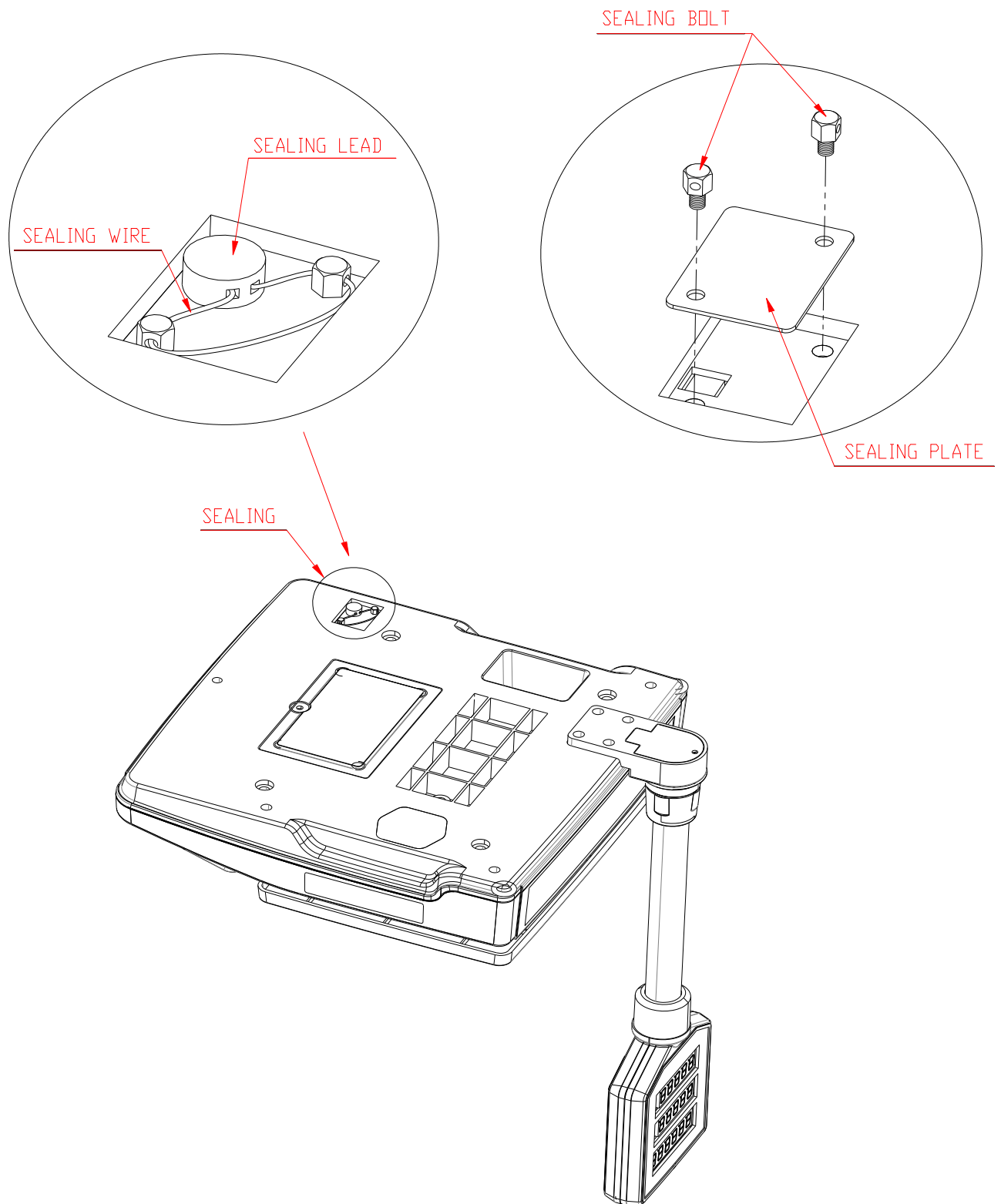


PR-LCD

Display & Key Pad



1.2 Sealing Method



Specifications

Capacity / e=d	6 kg / 2 g 6 kg / 0.2 g	15 kg / 5 g 15 kg / 1 g 15 kg / 0.5 g	30 kg / 10 g 30 kg / 2 g 30 kg / 1 g
Internal Resolution	1/60000	1/60000	1/60000
External Resolution	1/3000 1/30000	1/3000 1/15000 1/30000	1/3000 1/15000 1/30000
MAX Tare	0 – 2.998 kg	0 – 7.495 kg	0 – 14.99 kg
Display	25 x 19(mm, 2 Digit LED) x 3 EA 6 digit LED		
Symbols	STABLE, ZERO, TARE, Low Battery HI / LO & PCS, Charge		
Keys	ZERO, TARE, MODE, POWER		
Functions	Counting-Counting Sample Range : 10~100,200,300,400,500 Weight Comparison Function : hi, ok, low Sleep Mode Function		
Dimensions	340(W)x215(D)		
Platter size	320(W) x 210(D)[mm]		
Weight	5.5kg		
Power	6V 4Ah 20HR Pb Battery or A.C Power		
Operation Time	Approx. 40hours (Normal mode)		
Operating Temperature	-10°C ~ +40°C / 14°F ~ 104°F		
Minimum Voltage Level of The Battery	About 5.6V		
Option	RS 232		

1) General Calibration

- Pressing and holding calibration switch press [POWER] key to go to calibration Mode

1.4 WEIGHING SPECIFICATIONS

(1) Single Capacity (Table 1)

NO.	CAPA	Min	Tare
0	3kg	1g	0 – 1.499kg
1	6kg	2g	0 – 2.998kg
2	15kg	5g	0 – 7.495kg
3	30kg	10g	0 – 14.99kg
4	6lb	0.002lb	0 – 2.998lb
5	15lb	0.005lb	0 – 7.495lb
6	30lb	0.01lb	0 – 14.99lb
7	60lb	0.02lb	0 – 29.98lb
15	3kg	0.0002 kg(1/15000)	

16	15kg	0.001 kg(1/15000)	
17	30kg	0.002 kg(1/15000)	
18	3kg	0.0001 kg(1/30000)	
19	6kg	0.0002 kg(1/30000)	
20	15kg	0.0005 kg(1/30000)	
21	30kg	0.001 kg(1/30000)	
22	15 lb	0.001 lb(1/15000)	
23	30 lb	0.002 lb(1/15000)	
24	6 lb	0.0002 lb(1/30000)	
25	15 lb	0.0005 lb(1/30000)	
26	30 lb	0.001 lb(1/30000)	
27	60 lb	0.002 lb(1/30000)	











(2)Dual Capacity (Table2)

NO.	CAPA	Min		Tare
8	6kg	(0 - 3kg) - 1g	(3 - 6kg) - 2g	0 - 2.999kg
9	15kg	(0 - 6kg) - 2g	(6 - 15kg) - 5g	0 - 5.998kg
10	30kg	(0 - 15kg) - 5g	(15 - 30kg) - 10g	0 - 9.995kg
11	6lb	(0 - 3lb) - 0.001lb	(3 - 6lb) - 0.002lb	0 - 2.999lb
12	15lb	(0 - 6lb) - 0.002lb	(6 - 15lb) - 0.005lb	0 - 5.998lb
13	30lb	(0 - 15lb) - 0.005lb	(15 - 30lb) - 0.01lb	0 - 9.995lb
14	60lb	(0 - 30lb) - 0.01lb	(30 - 60lb) - 0.02lb	0 - 29.99lb
28	6 kg	0-3kg 0.0002	3-6kg 0.0005	
29	15 kg	0-6kg 0.0005	6-15kg 0.0010	
30	30kg	0-15kg 0.001	15-30kg 0.002	
31	6 lb	0-3lb 0.0002	3-6lb 0.0005	
32	15 lb	0-6lb 0.0005	6-15lb 0.0010	
33	30 lb	0-15lb 0.001	15-30lb 0.002	
34	60 lb	0-30lb 0.002	30-60lb 0.005	

1.5 DISPLAY

- LCD Backlight
- Weighting Display: 6 bits
- Unit Price Display: 5 bits
- Total Price Display: 6 bits
- Zero Point Indicator、Tare Indicator、Power Source Indicator、Low Battery Indicator

1.6 KEYBOARDS

KEYS	FUNCTIONS
 ~ 	Used to enter all the numeric data.
 ~ 	PLU key.
	Used to power on& off the scale.
	Used to clear all the numeric price display. Used to clear sum total price. Used to clear all the daily total prices.
	Used to correct the zero point.
	To set or clear tare value.
	PLU save key. Display battery voltage %(push more than 2second)
	Used to enter the decimal point when price is entered.

1.7 Weighing Mode

(1).Weighing with Tare

Tare Method:

Place the container on the platter, press TARE key。

(2).Zero Set Range

Initial Zero \pm The (2%, 5%, 10%, 20%) Capacity

Zero Set Range \pm The (2%, 5%, 10%, 20%) Capacity

1.8 Battery Consumption Time

Battery specifications 6V/4AH, battery charging time 16 hours, 25 hours continuous use time. When the battery voltage drops below 5.3V, the low battery indicator lights. For the protection of battery over discharge, when the battery voltage is lower than 5.6V, the automatic shutdown.

2、 Test Mode Introduction

I、 Power on to Enter Calibration Mode

Press [CAL] key, then press [ON/OFF] key and enter cal mode.

Display [CAL] three times, then show [C-1]. Press [Zero] or Numeric keys to select one of C1~C5 item, press [Tare] key to get into C1~C5 mode.

Notice: Because the keyboard of the scale will test the key value and the battery voltage when enter into CAL mode, please unpress the [CAL] key, and no key will be pressed between display [CAL] and display [C1].

When keyboard can not be used, please try again.

II、 C1 Set Weighing Specification

C1: Weighing Specification Set: 0~34

Display [C1 x] Showed In Table 1 and Table2.

III、 CLEAR MEMORY

C2: EEPROM Initiation

Press [Tare] Key to Initiate EEPROM.

IV、 C3 Calibration

Display [ULoAd]

Press [Tare] Key, Confirm Zero Point.

Display [LoAd]

Load the poise, press [Tare] and wait a few seconds. If the weight loaded is just the same as the full range, press [Tare] complete this calibration. Or you should modify the value through Nemerice Key and Press [Tare] Key.

Notice: Calibration weighting value should not great than 10% of capacity.

V、 FUNCTION SET

C4-1: Initial Zero Range

[C4-1 0]	2% Full Range
[C4-1 1]	5% Full Range
[C4-1 2]	10% Full Range
[C4-1 3]	20% Full Range

C4-2: Zero Set Range

[C4-2 0]	2% Full Range
[C4-2 1]	5% Full Range
[C4-2 2]	10% Full Range
[C4-2 3]	20% Full Range

C4-3: Zero-Tracking Range

[C4-3	0]	1/4e
[C4-3	1]	1/2e
[C4-3	2]	1e
[C4-3	3]	2e

C4-4: BackLight On/Off

[C4-4	0]	BackLight Off
[C4-4	1]	BackLight ON

C6.

C6-1: RS232

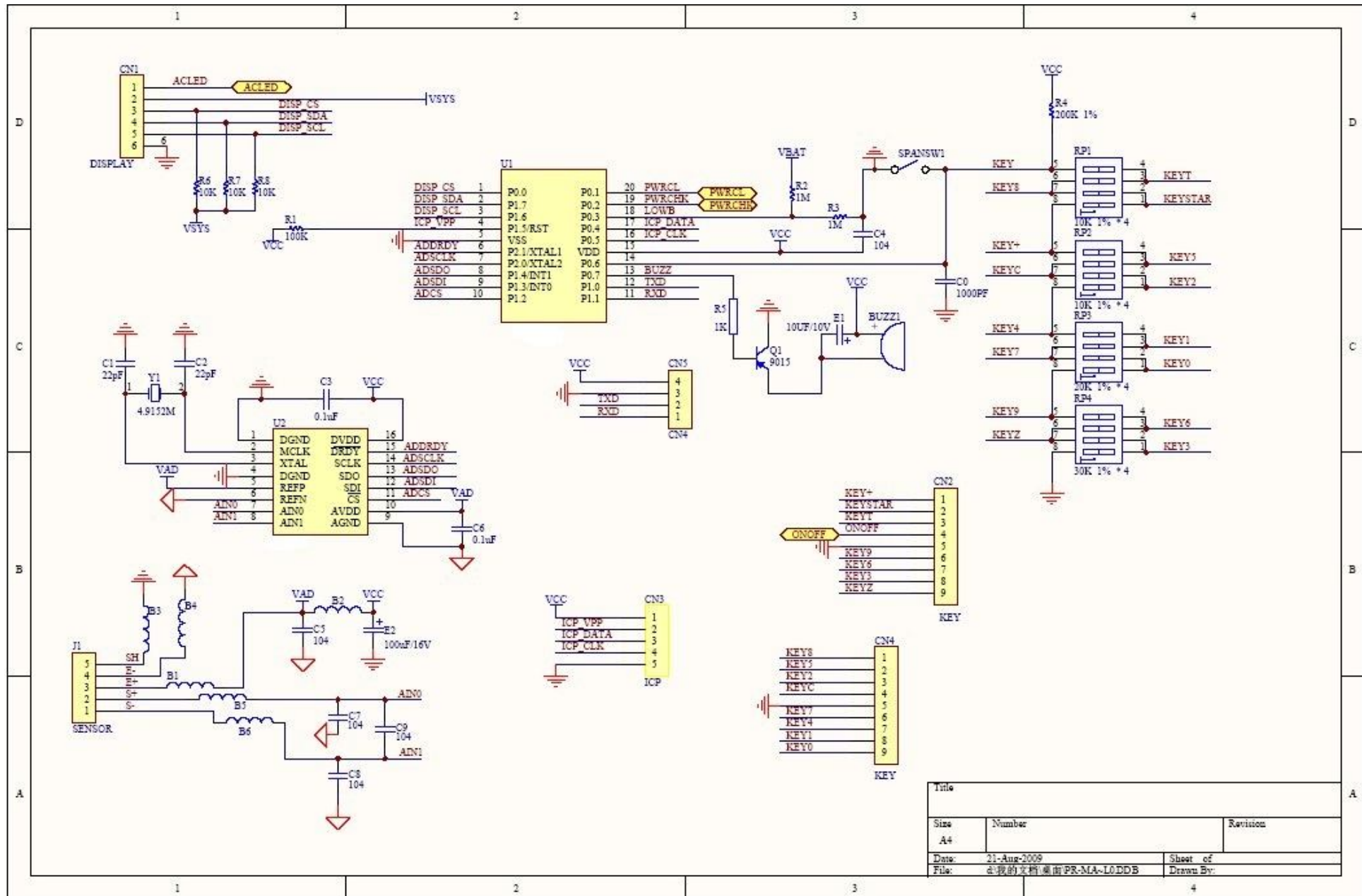
[C6-1	0]	Do Not Print
[C6-1	1]	Manual Print (PR-LCD Non)
[C6-1	2]	Auto Print when the scale is stable
[C6-1	3]	Continue Auto Print when the scale is stable
[C6-1	4]	Continue Print

C6-2: Baud rate .

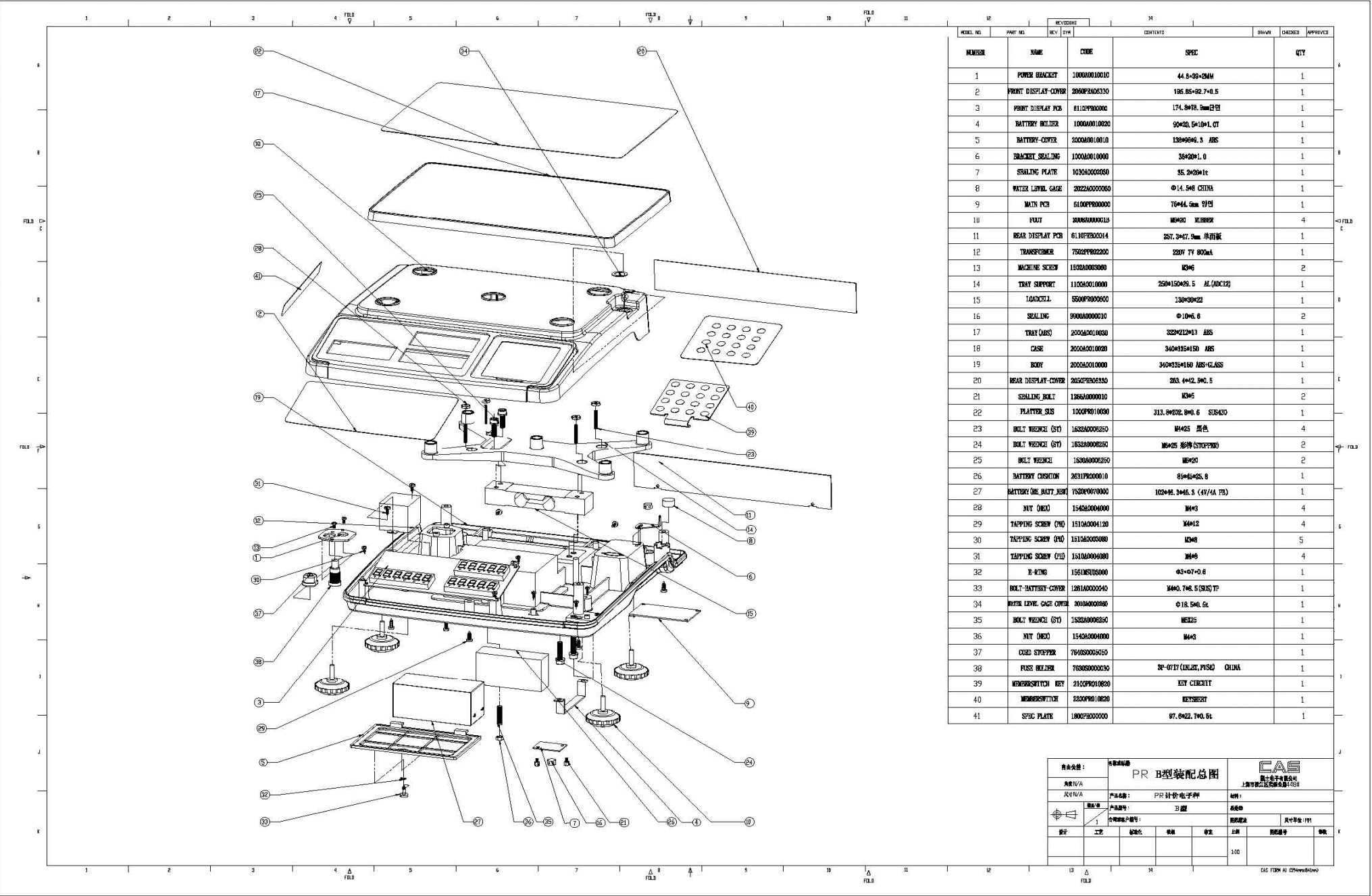
[C6-2	0]	baud rate: 9600
[C6-2	1]	baud rate: 4800
[C6-2	2]	baud rate: 2400
[C6-2	3]	baud rate: 1200
[C6-2	4]	baud rate: 600

C7 . Percent Calibration

3.1 MAIN PCB



4. EXPLOAD VIEW



6、Part List

KOREA P/N	ASS'Y NAME	SPEC	Q'ty	Etc
	BODY ASS'Y	PR-P		
1000PR010520	BRACKET_SEALING	36*20*1.0	1	
1000PR010620	TRANS BRACKET	44.8*39*2MM	1	
1000PR011020	BATTERY HOLDER	90*20.5*10*1.0T	1	
1261A0000050	BOLT-BATTERY COVER	ER-P M4*0.7*20 (Ni)	1	
1502A0003080	SCREW-MACHINE(PH)	M3*8	2	
1502A0004080	SCREW-MACHINE(PH)	M4*8	1	
1510A00004120	TAPPING SCREW (PH)	M4*12	10	
1510A0003080	SCREW-TAPPING(PH)-1	M3*8	7	
1510A0004080	SCREW-TAPPING(PH)-1	M4*8	7	
1530A0006250	BOLT-WRENCH	M6*25	2	
1532A0006250	BOLT-WRENCH(ST)	M6*25 彩鋅(STOPPER)	1	
1551A0006300	WASHER (SPR M6)	Φ6.3	2	
1561MSU03000	E-RING	Φ3*Φ7*0.6-SUS	1	
1100PR010430	LOADCELL SUPPORT	58.32*10.5	1	
2000PR010060	BODY	340*335*150 ABS+GLASS	1	
2000PR010960	BATTERY-COVER	138*96*9.3 ABS	1	
2008A000001B	FOOT	M6*20 RUBBER	4	
2022A0000041	WATER LEVEL GAGE	ø14.9*8(S-2000)상보	1	
7502PRP07220	POWER TRANS	220VAC 7V 800MA	1	
7520P0004060	BATTERY	6V 4AH/20HR(ER PLUS)	1	
7560PAC00080	POWER CORD	폴란드.LVD 일반 (외주)	1	
7620S0605000	FUSE	0.5A/250V Φ6 UL,CSA(SP-LED)	1	
7630S0000030	FUSE HOLDER	3P-0717(INLET,FUSE) CHINA	1	
7640S00005050	CORD STOPPER		1	
7642S0000600	METAL CLAMP T	51*25*1.5mm 6N	3	
7650S0000100	TIE BAND	100mm	5	
7840W0031100	BATTER WIRE	3P*110/240MM	1	
	L/C BRACKET ASS'Y	PR		
1100PR010420	TRAY SUPPORT	250*150*29.5 AL(ADC12)	1	
1530A0006250	BOLT-WRENCH	M6*25	2	
1532A0006250	BOLT-WRENCH(ST)	M6*25 彩鋅(STOPPER)	4	
5519PR000150	LOAD CELL	PR	1	
1540A0004000	NUT(HEX)	M4*3	4	
1551A0006300	WASHER (SPR M6)	Φ6.3	2	
	TRAY ASS'Y	PR		
1000PR010040	PLATTER_SUS	313.8*202.8*0.5 SUS	1	
2000PR010210	TRAY(ABS)	322*212*13 ABS	1	

KOREA P/N	ASS'Y NAME	SPEC	Q'ty	Etc
	DISPLAY CASE ASSY	PR-P	0	
1150PR01122A	POST PIPE	PR 270*27.2*1.5T AL6063	1	
2000PR011180	DISPLAY-CASE	194*136*18.5 ABS	2	
2000PR011380	POLE_BASE3_CAP	Φ42*34 ABS	1	
2000PR011480	POLE_BASE	100*50*54 ABS	1	
2001A0000420	DISPLAY NUT	Φ42*35(ABS)	1	
7702G0000040	PCB CONNECTOR	4N-(T)	3	
7840W0PR1000	WIRE	6P*1000	1	
	IMAGE ASSY	PR-15P	0	
1800SPL0033B	NAME PLATE	97.6*22.7*0.5t	1	
3050PRG00330	DISPLAY COVER	FRONT COVER	1	
3050PRB00330	DISPLAY COVER	REAR COVER	1	
3050PR500330	DISPLAY COVER	POLE FRONT COVER	1	
3050PRH00330	DISPLAY COVER	POLE REAR COVER	1	
3100PR500330	MEMBRANE S/W	PR-U (ENGLISH)	1	
	MANUAL	ENGLISH MANUAL	1	
9020PR506330	STICKER	PR-U (6kg, 1/15000 dual, ENGLISH)	1	
9020PR515330	STICKER	PR-U (15kg,1/15000 dual, ENGLISH)	1	
9020PR530330	STICKER	PR-U (30kg,1/15000 dual, ENGLISH)	1	
	UPPER CASE ASSY	PR-P	0	
2000PR010110	CASE	340*335*150 ABS	1	
2010A0000260	WATER LEVEL GAGE COVER	Φ18.5*0.5t	1	
	C/T BOX ASSY	PR-P	0	
1030A0002030	SEALING PLATE	35.2*26*1T 材料 SPC	1	
1265A0000010	BOLT-SEALING	M3*9	2	
9103PR000010	C/T BOX	B 型	1	
9204PR011780	STYROFOAM BOX	P型	1	
9204PR011880	STYROFOAM BOX	PR-P型	1	
9304A000001A	POLY BAG	400*480*0.06T	1	
9304A000005B	POLY BAG	450*580*0.06T(M)(SET,HD)	1	
	MAIN PCB ASS'Y	PR-U		
6100PR500000	MAIN PCB ASS'Y	개발업체 납품 (SMD)	1	
6220I0078080	IC(REGULATOR)	L7808 CV	1	
1050A0002200	HEAT SINK	TO-220 STANDUP	1	
6200IS075500	IC(REGULATOR)	HT7550	2	
6512CJ000100	RESISTOR	CFR 1ohm/ 2W	1	
6704C1647000	CONDENSER-ELECTRIC	470UF/16V	1	
6704C1047000	CONDENSER-ELECTRIC	470UF/10V	3	
6704C1610000	CONDENSER-ELECTRIC	1000UF/25V	1	
7010ZM01105A	CRYSTAL	11.0592MHz (ATS-49U/S)	1	
7600STA19020	TACT S/W	11902(DJTA-1102)	1	
7002Z0000000	PIEZO BUZZER	APR,ADR(CHINA)	1	
7801CLW00080	CONNECTOR(WAFER)	LW0640-08 (LPH01-08)	1	
7805CCN67060	CONNECTOR(WAFER)	5273-02 (LPH03-02)	1	
7805CCN67020	CONNECTOR(WAFER)	02-5267	2	
7810C0011540	CONNECTOR(WAFER)	11PIN(2.54MM*11.5MM 40PIN)	0.25	
7810C0011540	CONNECTOR(WAFER)	5PIN(2.54MM*11.5MM 40PIN)	0.12	
7810C0001540	CONNECTOR(WAFER)	2PIN(2.54MM*15MM 40PIN)	0.12	

	FRONT DISPLAY PCB ASSY	PR-LCD	0	
6224IS016220	IC(DRIVER)	TM1622(QFP 52)	1	U1
6515CJ0301500	RESISTOR 1/4W	CFR15K Ω ($\pm 5\%$)	1	R1
6515CJ010000	RESISTOR 1/4W	CFR100 Ω ($\pm 5\%$)	3	R2~4
6710CAP01040	CONDENSER-CERAMIC	0.1uF/50V	1	CP1,2
	LCD	PRLCD	3	DP1~17
7801CLW00060	CONNECTOR (WAFER)	LW0640-06 (LPH01-06)	2	CN1
7232DR00003A	LAMP LED	$\Phi 3$ -RED RED	1	LED1~15
6110PR600000	FRONT DISPLAY PCB	6110-PR6-0000-0	1	
	POLE DISPLAY PCB ASSY	PR-LCD	0	
6224IS016220	IC(DRIVER)	TM1622 (QFP52)	1	U1
6515CJ0301500	RESISTOR 1/4W	CFR15K Ω ($\pm 5\%$)	1	R1
6515CJ010000	RESISTOR 1/4W	CFR100 Ω ($\pm 5\%$)	3	R2~4
6710CAP01040	CONDENSER-CERAMIC	0.1uF/50V	1	CP1
	LCD	PRLCD	3	LCD1~3
7801CLW00060	CONNECTOR (WAFER)	LW0640-06 (LPH01-06)	1	CN1
6110PR600010	POLE DISPLAY PCB	6110-PR6-0001-0	1	