

REV : 01  
AUGUST 12, 1999

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SW SERIES

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SERVICE MANUAL

C A S CORPORATION

# THE CONTENTS

## CHAPTER-I THE GENERAL INTRODUCTIONS

A...PREFACE	3
B...THE PRECAUTIONS	3
C...SPECIFICATIONS	4
D...SEALING METHOD	5

## CHAPTER-II THE CALIBRATIONS

A...SET THE CALIBRATION MODE	6
B...HOW TO DISPLAY THE A/D VALUE	6
C...SPAN CALIBRATION	7
C.1..SPAN CALIBRATION	7
C.2..PERCENT CALIBRATION	8
C.3..TO CONFIRM THE SPAN AND TO DO FINE TRIMMING	8
D...HOW TO RETURN TO NORMAL MODE	9

## CHAPTER-III THE PART REPLACEMENTS

A...REPLACEMENT OF THE LOAD CELL	10
A.1..REPLACEMENT OF THE LOAD CELL	10
A.2..CORRECTION OF THE ECCENTRICITY	10
A.3..THE SPAN CALIBRATION	10

## CHAPTER-IV THE SCHEMATICS AND THE DIAGRAMS

A...MAIN CIRCUIT DIAGRAM	11
B...REAR CIRCUIT DIAGRAM	12
C...WIRING DIAGRAM	13
D...PARTS LOCATION	15

## CHAPTER-V THE ERROR MESSAGES

A...THE ERROR MESSAGES	18
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## CHAPTER-VI FULL PARTS LIST

A...EXPLODED VIEW	19
B...FULL PARTS LIST	20

## APPENDIX – DEVICE SPECIFICATION

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# CHAPTER-I

## THE GENERAL INTRODUCTIONS

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### A. PREFACE

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Thank you for the purchasing of SW scale.

This scale has been designed with CAS reliability, under rigid quality control and with outstanding performance.

Your departments can enjoy with this high quality reliable CAS product.

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

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

Please keep it handy for the future references.

### B. THE PRECAUTIONS

1. Make sure that you plug your scale into the proper power outlet.
2. Place the scale on a flat and stable surface.
3. Plug into a power outlet 30 minutes before operations.
4. Keep the scale away from strong EMI noises may cause incorrect weight readings.
5. This scale must be installed in a dry and liquid free environment.
6. Do not subject the scale to sudden temperature changes.
7. Do not subject the platter to sudden shocks.
8. 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.

## C. SPECIFICATIONS

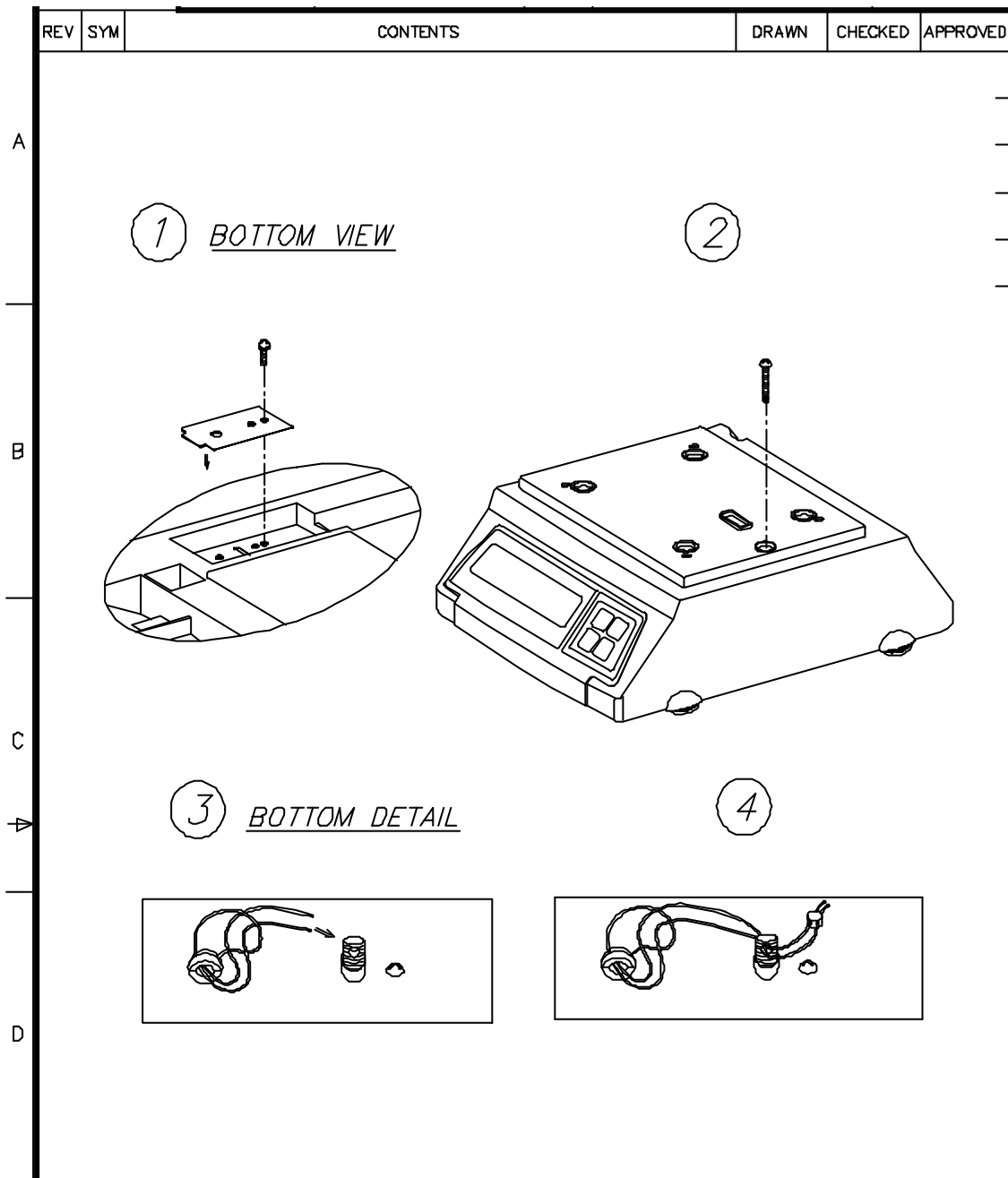
MODEL ITEM	SW-2	SW-5	SW-10	SW-20
CAPACITY	2.000 kg	5.000 kg	10.000 kg	20.00 kg
MIN. DIVISION	0.001 kg	0.002 kg	0.005 kg	0.01 kg
DISPLAY	LCD (5 DIGIT)			
PLATTER SIZE	230(W) x 190(D)			
PRODUCT SIZE	260(W) x 287(D) x 137(H)			
PRODUCT WEIGHT	2.8 kg			
POWER SUPPLY	1.5V x 6 (D size)			
POWER CONSUMPTION	APPROX. 0.25W			
BATTERY OPERATING TIME	500 hours(Manganese battery), 1000 hours(Alkaline battery)			
OPERATING TEMPERATURE	-10℃ ~40℃			
OPTION	9V Adaptor			

MODEL UNIT	SW-2	SW-5	SW-10	SW-20
g	2000 g	5000 g	10000 g	20000 g
	1g/2000	2g/2500	5g/2000	10g/2000
kg	2.000 kg	5.000 kg	10.000 kg	20.00 kg
	0.001kg/2000	0.002kg/2500	0.005kg/2000	0.01kg/2000
lb	5.000 lb	10.000 lb	20.00 lb	50.00 lb
	0.002lb/2500	0.005lb/2000	0.01lb/2000	0.02lb/2500
oz	80.00 oz	160.0 oz	400.0 oz	800.0 oz
	0.05oz/1600	0.1oz/1600	0.2oz/2000	0.5oz/1600

Notice : Specifications are subject to change for improvement without notice.

# D. SEALING METHOD

REV : 00



NO	PARTS NAME	SPECIFICATION	Q'TY	REMARK		
TOLERANCES UNLESS OTHERWISE SPECIFIED		NAME OR TITLE		<b>CAS</b> CAS CORPORATION #19 KANAP-RI KWANGJEOK-MYON YANGJU-KUN KYUNGKI-DO, KOREA		
ANGULAR ± N/A		SEALING METHOD				
E	DECIMAL ± N/A	FIRST USED IN ASSEMBLY	SIMPLE WEIGHING SCALE	MATERIAL N/A		
	Q'TY/SET	FIRST MADE FOR	SW-1	END FINISH N/A		
	1/1	CONTRACT OR CUSTOMER NO	WORLD WIDE	DO NOT SCALE DRAWING	DIMENSIONS ARE IN MM.INCH	
DRAWN	CHECKED	CHECKED	APPROVED	SCALE	DRAWING.PART NO.	REV
				F.S	3005-SW0-0000	00
.19	.19	.19	.19			

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## CHAPTER-II

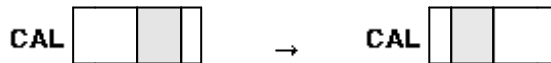
# THE CALIBRATIONS

---

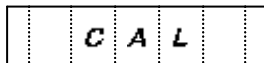
### A. SET THE CALIBRATION MODE

The CAL switch is in the hole at the bottom of the scale.

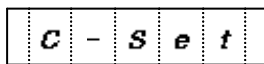
1. Remove a seal cover.
2. Make sure that power is OFF.
3. Slide CAL switch to the CAL position.



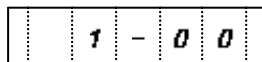
4. Turn the power ON.
  - The display will show CAL three times as below, then it will be disappeared.



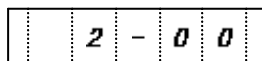
- Press the DN/OFF key, the display will show "C-SET" as below.



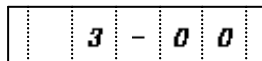
- After 2 or 3 seconds, the display will show "1-00" as below.  
(If you have set this before, the display will show previous value.)



- Press the ZERO key, the display will show "2-00" as below.  
(If you have set this before, the display will show previous value.)



- Press the ZERO key, the display will show "3-00" as below.  
(If you have set this before, the display will show previous value.)



- Press the ZERO key, the display will show the "End".  
After seconds, the display will show the A/D value.

### B. HOW TO DISPLAY THE A/D VALUE

1. Press the ZERO key, then you can adjust zero point.
2. Press the TARE key to release the zero point.
3. Press the ON/OFF key to display A/D value.
4. Press the ON/OFF key to go to C. SPAN CALIBRATION.

## C. SPAN CALIBRATION

There are three kinds of calibration:

- 1) Span calibration.
- 2) Percent calibration.
- 3) Fine trimming.

When the calibration is finished, the display will be cleared.

### C.1 SPAN CALIBRATION

1. Press the ON/DFF key.
2. The display will show "ULDA d" as below.

U	L	O	A	d
---	---	---	---	---

3. Press the ON/DFF key.
4. The display will show "StAbL" as below.

S	t	A	b	L
---	---	---	---	---

5. Zero adjustment is finished, then "StAbL" will be disappeared.  
(If this scale exceed the zero range, the display will show "HHHHH" and then go to step 1.)
6. The display will show "LOAd" as below.

	L	O	A	d
--	---	---	---	---

7. Load the full weight on the platter.
8. Press the ON/DFF key.
9. The display shows "StAbL" as below.

S	t	A	b	L
---	---	---	---	---

10. The span calibration is finished and "StAbL" will be disappeared.  
(If the span value exceed the span range, the display will show "LLLLL" or "HHHHH".  
And then go to step 1.)

11. The display will show "End" as below.

E	n	d		
---	---	---	--	--

12. "End" will be disappeared.
13. Go to section D. HOW TO RETURN TO NORMAL MODE.

NOTE : If you want to stop calibrations, press the Zero key.  
Then you can go to section D. HOW TO RETURN TO NORMAL MODE.

## C.2. PERCENT CALIBRATION

1. Press the HOLD/UNIT key.
2. The display shows "Per" and then the display shows "10" as below.

P	e	r		
		1	0	

3. Type the Percent value. (Percent value should be bigger than 10)
  - Press the HOLD/UNIT key, then first digit can be increased from 0 to 9.
  - Press the TARE key, then the first digit move to second digit and first digit becomes 0, it can be increased by pressing HOLD/UNIT key.
  - Press the HOLD/UNIT key, until the display shows first digit that you wish to take.
4. Press the ZERO key, then the display shows "ULdAd" as below.

U	L	O	A	d
---	---	---	---	---

5. Press the ON/OFF key.
6. The display shows "StAbL" as below.

S	t	A	b	L
---	---	---	---	---

7. Zero adjustment is finished and "StAbL" will be disappeared.
8. The display shows "LOAd".
9. Place the load on the platter.
10. Press the ON/OFF key.
11. The display shows "StAbL" as below.

S	t	A	b	L
---	---	---	---	---

12. Span calibration is finished, and "StAbL" will be disappeared.  
(If the span value exceed the range, the display shows "LLLLL" or "HHHHH".  
And then go to step 1.)
13. The display shows "End".
14. The display will be cleared, remove the weight from the platter.
15. Go to section D.HOW TO RETURN TO NORMAL MODE.

## C.3. TO CONFIRM THE SPAN AND TO DO FINE TRIMMING

1. Press the Tare key, then the display shows A/D value.
2. Load a weight on the platter.
3. If you want to increase the value, press the HOLD key.  
Then you will see "HOLD" on the display, press the HOLD key again.  
If you want to decrease the value, press the HOLD and TARE key.
4. Empty the platter.
5. Press the ON/OFF key to finish this calibration.
6. The display will be cleared, and then go to section D. HOW TO RETURN TO NORMAL MODE.



## D. HOW TO RETURN TO NORMAL MODE

1. Press the ZERO key.
2. The display shows "Err 2", but actually this error message is not a real error, it prompts only return CAL switch to the normal position.

E	r	r	2
---	---	---	---

3. Return CAL switch to the normal position (initial position).

CAL 

--	--	--

 → CAL 

--	--	--

4. This scale checks the display, and go to normal mode to weigh an item.

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## CHAPTER-III

### THE PART REPLACEMENTS

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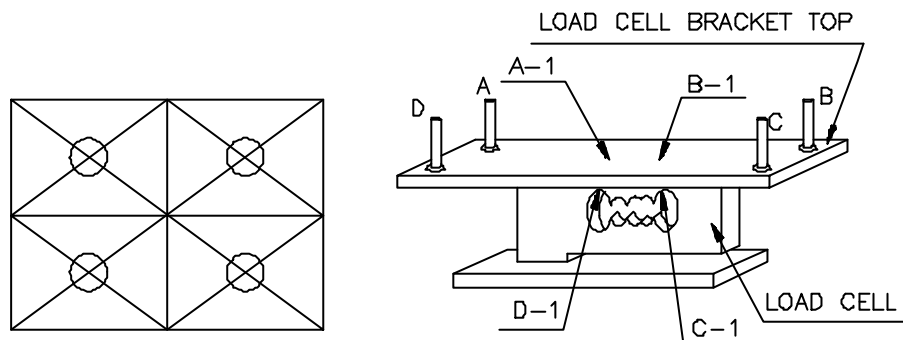
#### A. REPLACEMENT OF THE LOAD CELL

##### A.1 REPLACEMENT OF THE LOAD CELL

- A.1.1 Remove the platter and disassemble the upper case.
  - A.1.2 Remove the platform on the load cell with a hex wrench.
  - A.1.3 Disconnect a connector wire of the load cell from the P.C.B.
  - A.1.4 Remove the load cell from the body.
  - A.1.5 Replace the load cell by a new one.
  - A.1.6 Connect a connector wire of the load cell to the P.C.B.
  - A.1.7 Place the platform on the load cell.
- NOTE : After replacement of the load cell, you must do the calibration again.

##### A.2 CORRECTION OF THE ECCENTRICITY

- A.2.1 Set the calibration mode (Refer to Section A. in chapter II.)
- A.2.2 Rezero the display by pressing the "ZERO" key, if it is needed.
- A.2.3 Place a third of the full weight on the platter by turns as shown in below.



- A.2.4 Compare to four values which is output from load cell.  
Maximum value is regarded as a base and grind the point in load cell where shows less than other value.  
And check each point is within  $\pm 1$  count tolerance with  $1/3$  of full load.

##### A.3 THE SPAN CALIBRATION

Refer to the SPAN CALIBRATION.

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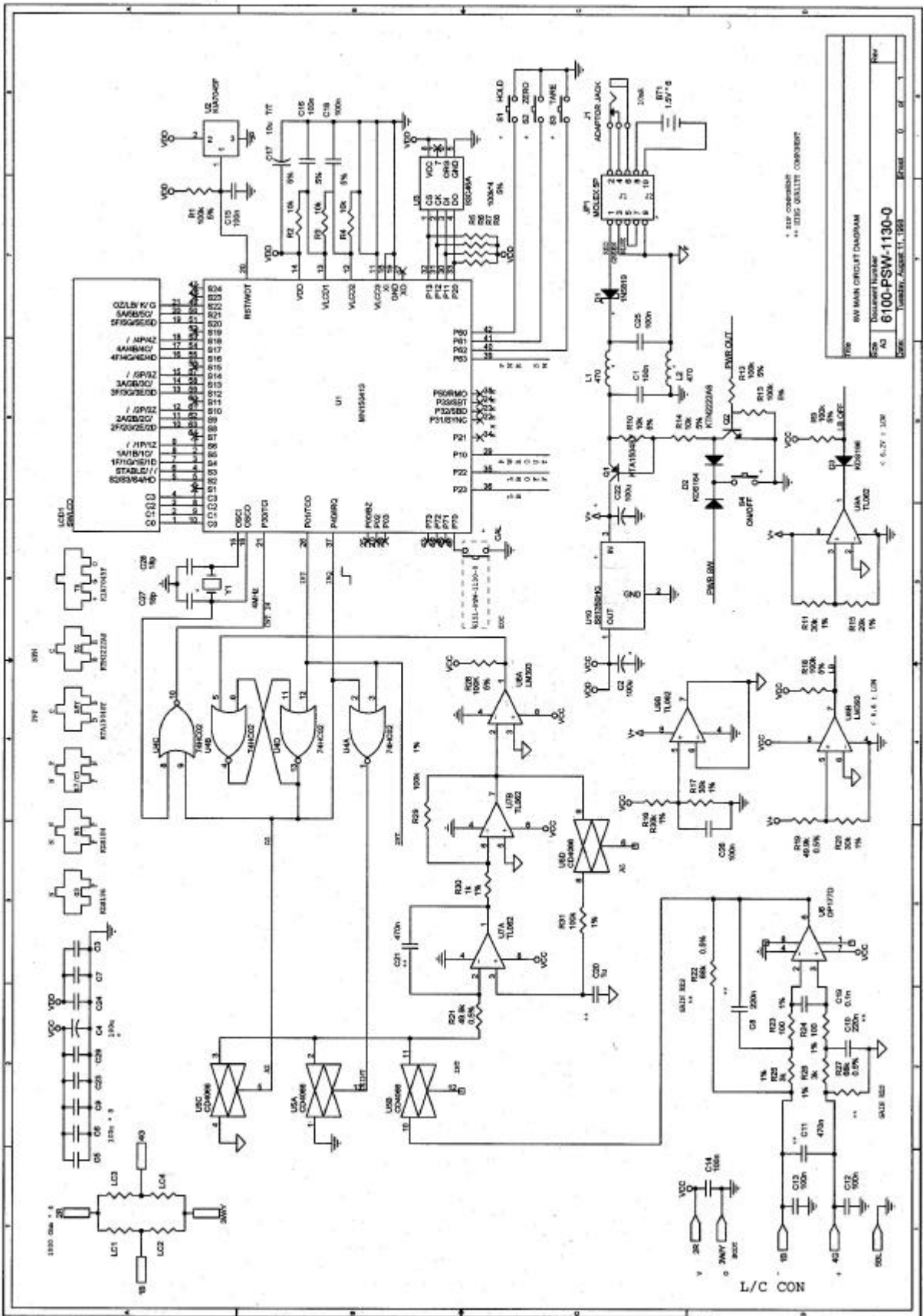
# CHAPTER-IV

## THE SCHEMATICS AND THE DIAGRAMS

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### A. MAIN CIRCUIT DIAGRAM

REV : 00



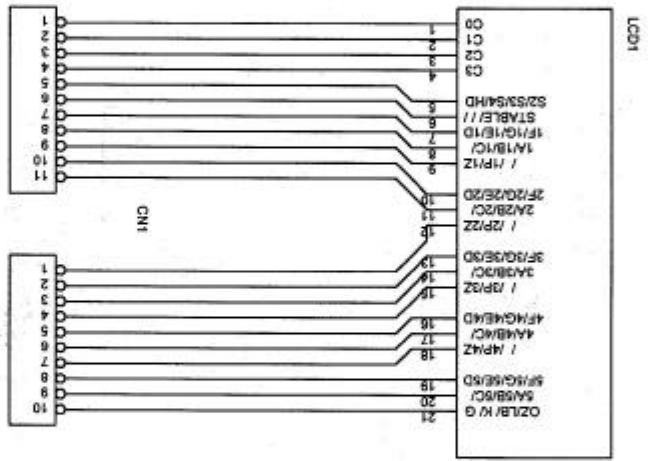
\* 100% COMPLIANCE  
 \*\* 100% QUALITY COMPONENTS

9W MAIN CIRCUIT DIAGRAM	
Doc No	6100-PSW-1130-0
Rev	AD
Date	Thursday, August 11, 2005
Page	0 of 1

L/C CON

**B. REAR CIRCUIT DIAGRAM**

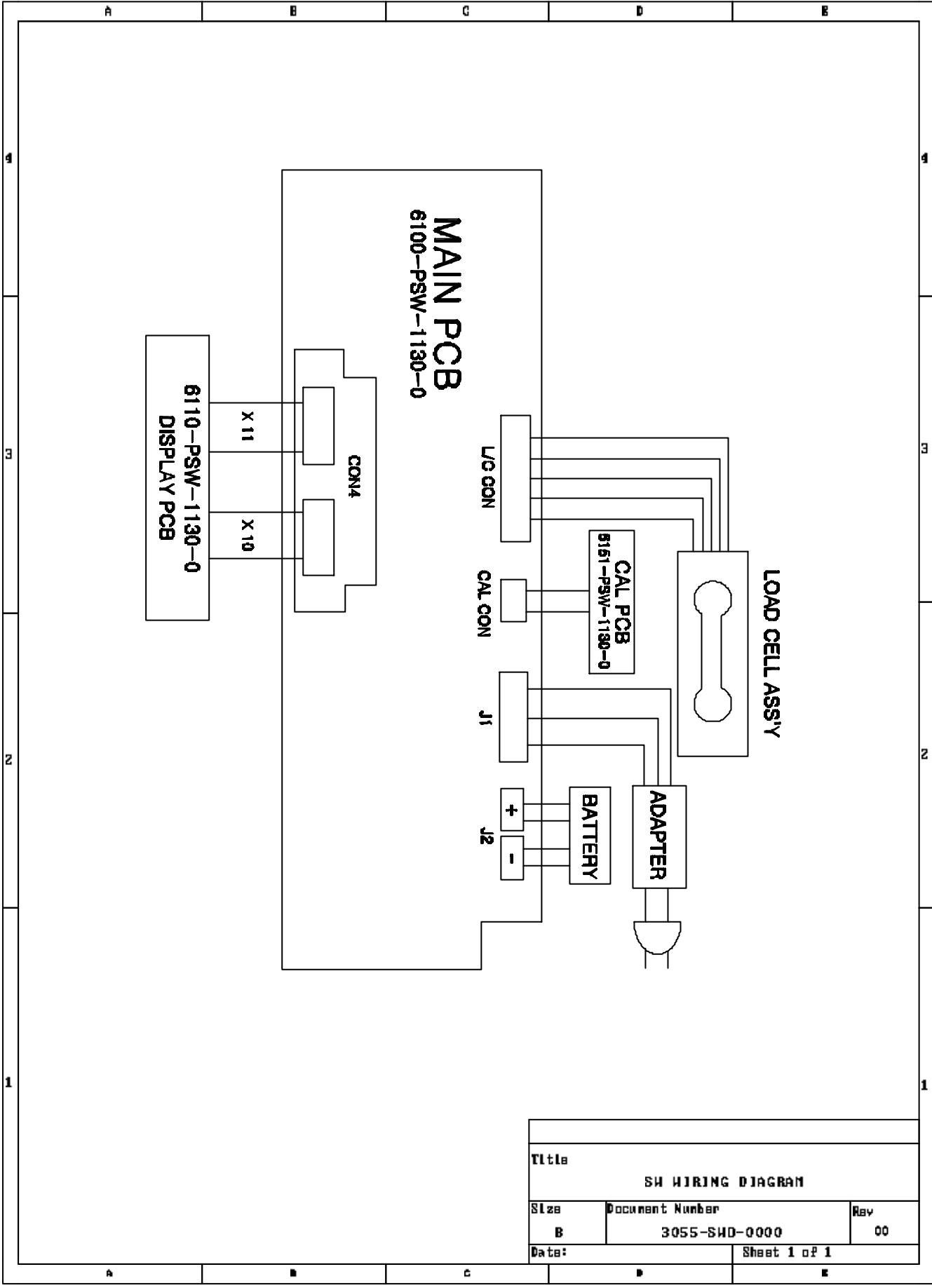
REV : 00



Title: SW-REAR CIRCUIT DIAGRAM  
 Scale: A4  
 Document Number: 8110-PSW-1130-0  
 Date: Tuesday, August 11, 1998  
 Sheet: 0 of 0

## C. WIRING DIAGRAM

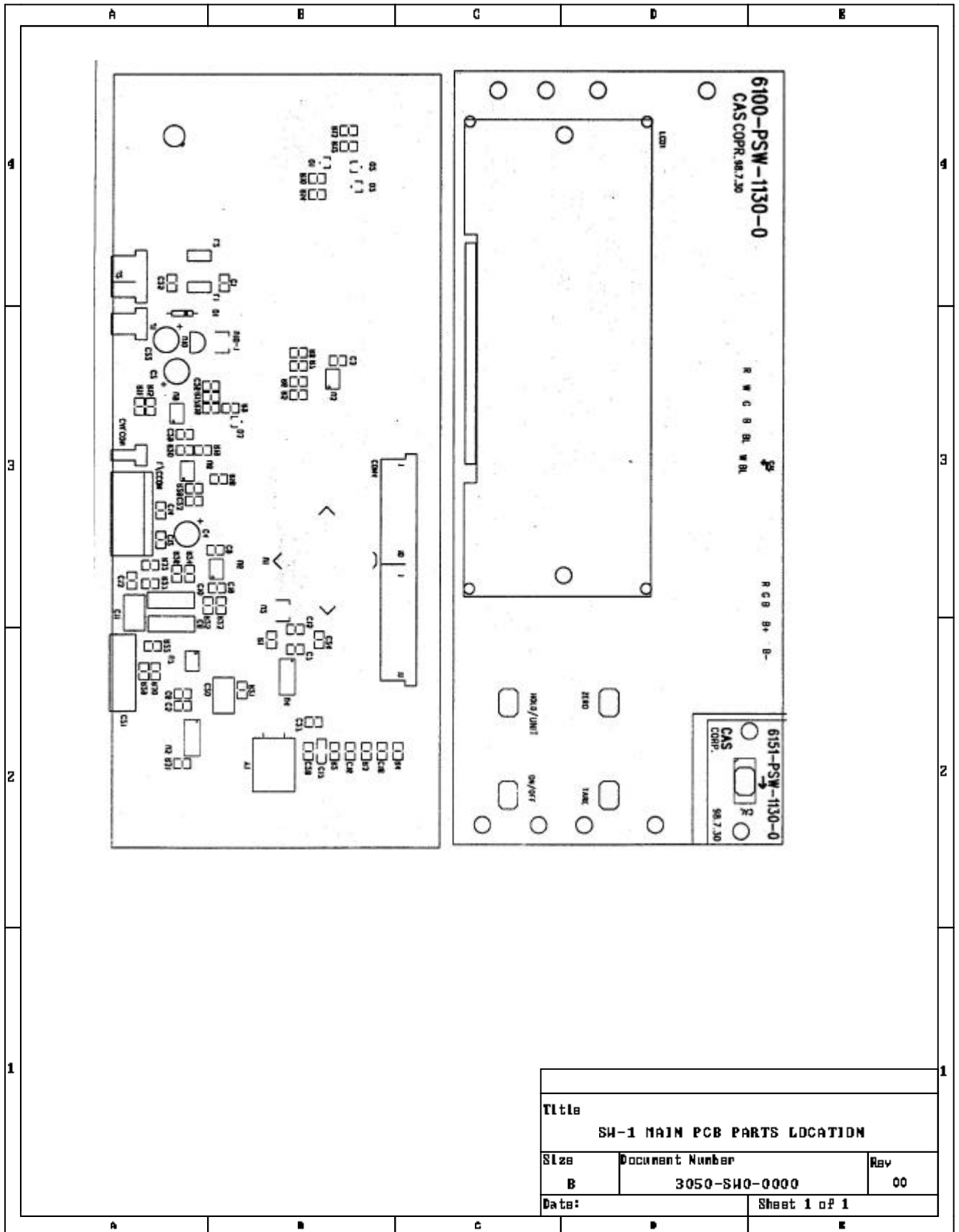
REV:00

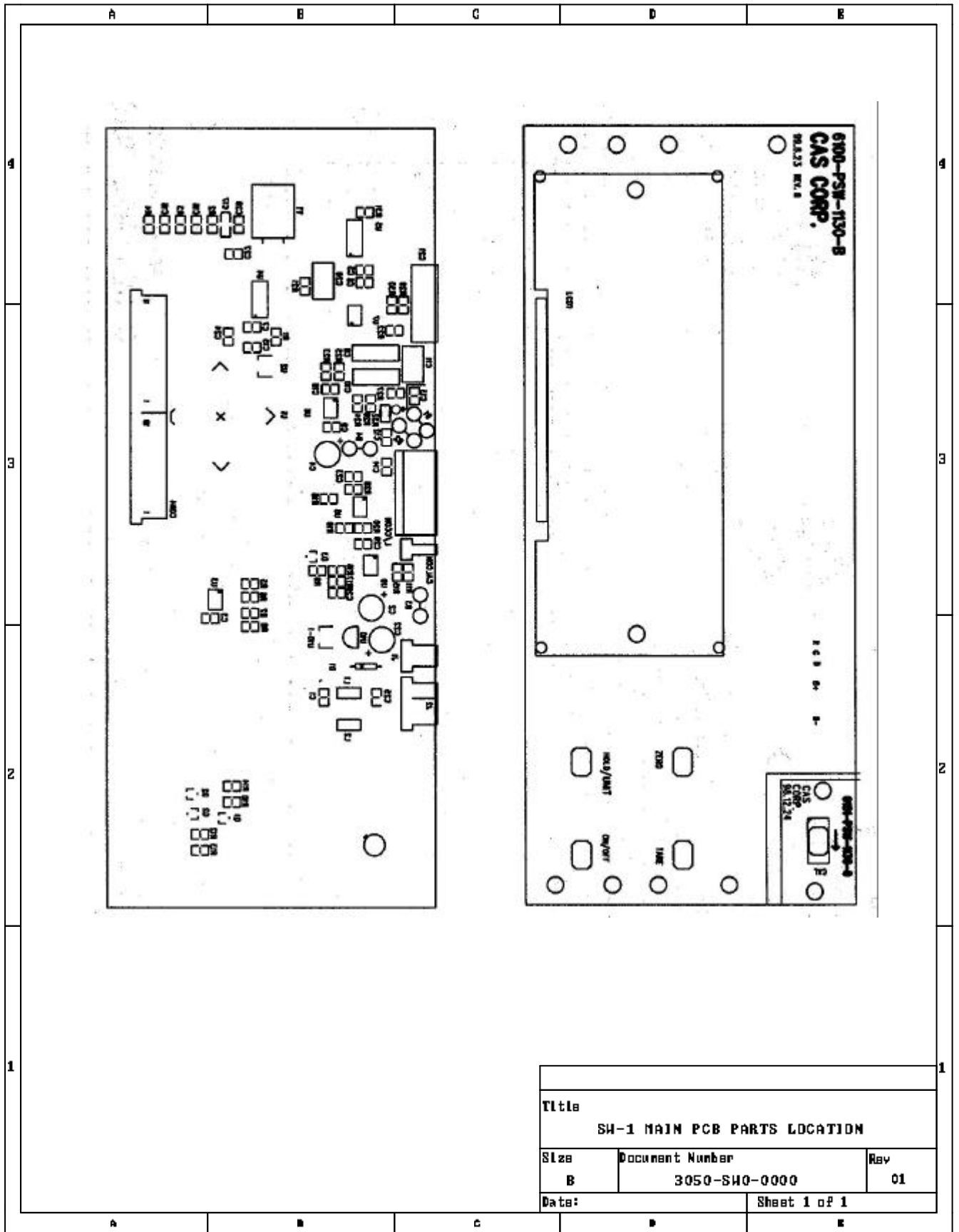




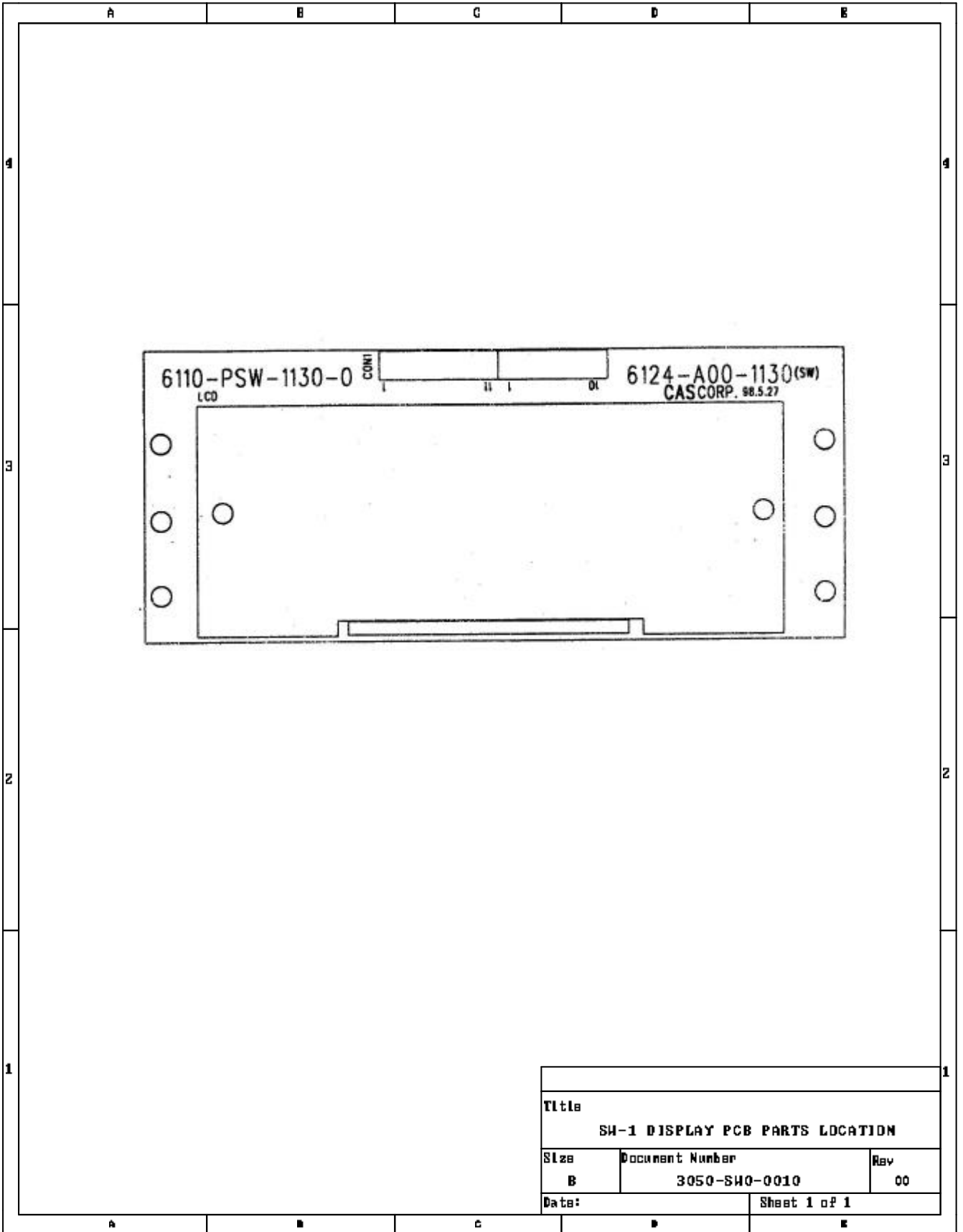
# D. PARTS LOCATION

REV : 00





Title		
SH-1 MAIN PCB PARTS LOCATION		
Size	Document Number	Rev
B	3050-SH0-0000	01
Date:	Sheet 1 of 1	



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# CHAPTER-V

## THE ERROR MESSAGES

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### A. THE ERROR MESSAGES

These error messages will guide you to do quick troubleshooting.

▶ **"Err 1"**

This is an error of the initial zero range. Please set the platter empty.

▶ **"O-L"**

This is an over load. Refer to SPECIFICATIONS.

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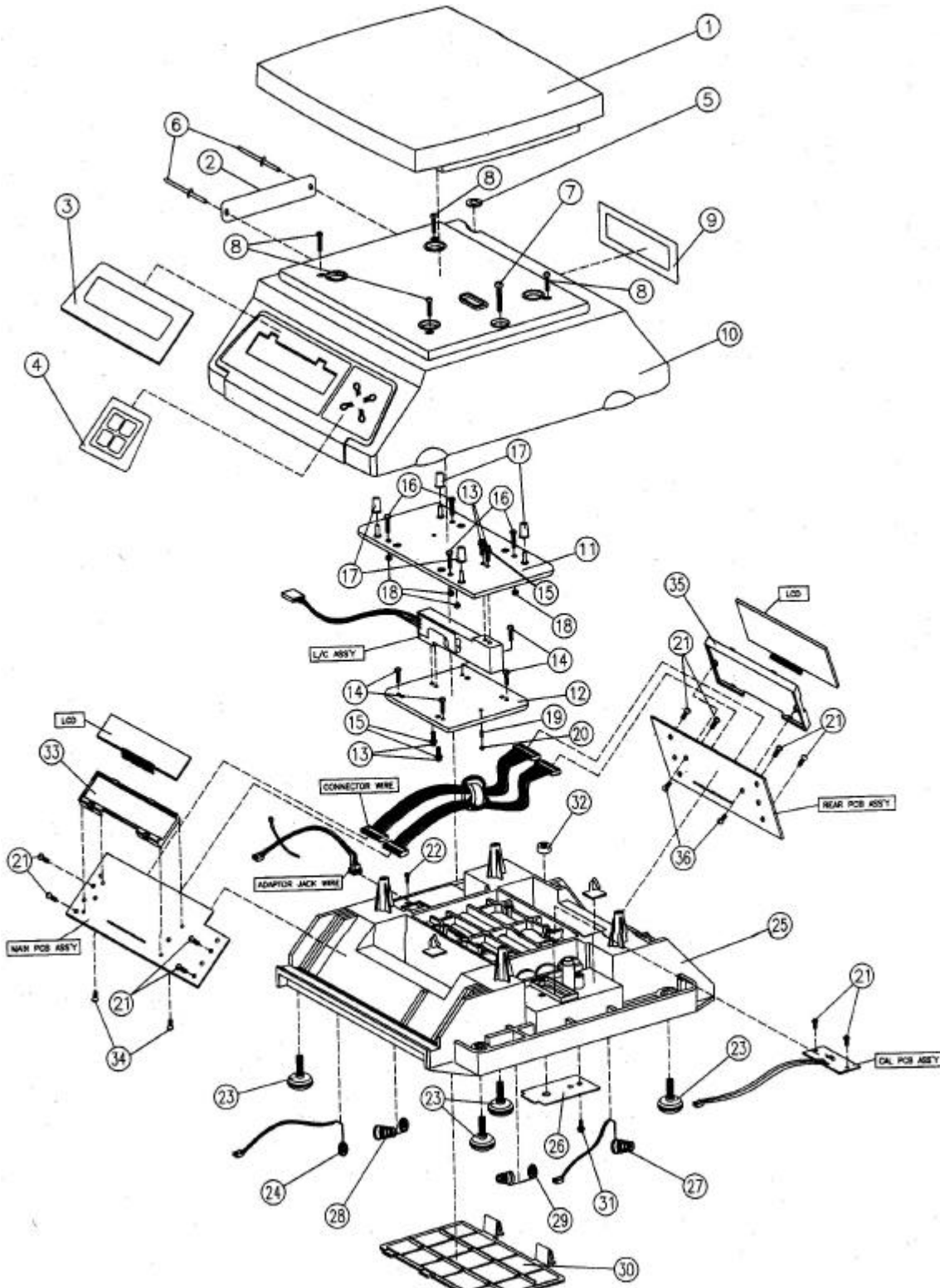
# CHAPTER-VI

## FULL PARTS LIST

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### A. EXPLODED VIEW (MECHANICAL PART)

REV : 00



# B. FULL PARTS LIST

ELECTRONIC PART

REV: 00

NO	NAT'L CODE	PARTS NAME	SPECIFICATION	UNIT	Q'TY	LOCATION
	MAIN PCB ASS'Y	(140SH1ENAPUN0101)				
01	6100-PSW-1130-0	MAIN P.C.B	6100-PSW-1130-0	BA	1	
02	6200-1S0-0813-0	I.C(CPU)	MM150B13-QFP	BA	1	U1
03	6236-1S0-0002-0	I.C(CMDS)	74HC02	BA	1	U4
04	6236-1S0-4066-0	I.C(CMDS)	UPD4066BG	BA	1	U5
05	6240-1S0-0177-0	I.C(OP AMP)	OP177GS	BA	1	U6
06	6240-1S0-0062-0	I.C(OP AMP)	TL062	BA	1	U9
07	6241-1S0-0393-0	I.C(LINEAR)	LM393D(GL393D)	BA	1	U8
08	6205-1S0-8346-A	I.C(BEPRDN)	CAT93C46S	BA	1	U3
09	6210-1S0-7045-0	I.C(RESET)	K1A7045F	BA	1	U2
10	6281-100-2222-0	CHIP-TRANSISTDR	2N2222AS	BA	2	Q2
11	6281-100-1504-0	CHIP-TRANSISTDR	HTA1504SY	BA	1	Q1
12	6220-100-1350-0	I.C(REGULATOR)	S-B1350 HG	BA	1	U10
13	6284-1CP-0184-0	CHIP-DIODE	KDS184	BA	1	D2
14	6284-1CP-0186-0	CHIP-DIODE	KDS186	BA	1	D3
15	6283-1SK-5818-0	SCHOTTKY-DIODE	1N5818	BA	1	D1
						C1, 3, 5, 6, 7, 8, 12
16	6712-CHP-0104-0	CHIP-CONDENSER	CL21F104NBMC	BA	17	13, 14, 15, 16, 18, 23, 24, 25, 26, 28
17	6712-CHP-0180-0	CHIP-CONDENSER	1BPF/50V(CL21C180J)	BA	2	C27, 28
18	6712-CHP-0101-0	CHIP-CONDENSER	CL21F101NBMC	BA	1	C19
19	6702-CAP-0106-0	CHIP-TANTAL	10MCS106NBTER	BA	1	C17
20	6720-CAP-0105-A	POLYESTER-CDM	1uF/63V J-3B0X-TY	BA	1	C20
21	6720-CAP-0474-A	POLYESTER-CDM	0.47uF/63V J-3B0X-TY	BA	1	C11
22	6722-CAP-0474-A	P.P-CDMD'(MKP-4)	0.47uF/1600V/5x/15mm	BA	1	C21
23	6720-CAP-0224-A	POLYESTER-CDM	0.22uF/63V J-3B0X	BA	2	C8, C10
24	6704-C16-0100-0	ELECTRIC-CDM	100uF/16V	BA	3	C2, 4, 22
25	6527-R00-0101-0	CHIP-RESISTDR 1/10W	RR1220P-1010(0.5%)	BA	2	R23, 24
26	6527-R00-0102-0	CHIP-RESISTDR 1/10W	RR1220P-1020(0.5%)	BA	1	R30
27	6527-R00-0103-0	CHIP-RESISTDR 1/10W	RR1220P-1030(0.5%)	BA	5	R2, 3, 4, 10, 14
28	6527-R00-0203-0	CHIP-RESISTDR 1/10W	RR1220P-2030(0.5%)	BA	1	R15
29	6527-R00-0302-0	CHIP-RESISTDR 1/10W	RR1220P-3020(0.5%)	BA	2	R25, 26
30	6527-R00-0303-0	CHIP-RESISTDR 1/10W	RR1220P-3030(0.5%)	BA	4	R11, 16, 17, 20
31	6527-R00-4992-0	CHIP-RESISTDR 1/10W	RR1220P-49920(0.5%)	BA	2	R19, 21
32	6527-R00-0104-0	CHIP-RESISTDR 1/10W	RR1220P-1040(0.5%)	BA	12	R1, 5, 6, 7, 8, 9, 12 13, 18, 28, 29, 31
33	6527-R00-0683-0	CHIP-RESISTDR 1/10W	RR1220P-6830(0.5%)	BA	2	R22, 27
34	7010-ZNO-0004-0	CRYSTAL	4MHz	BA	1	Y1
35	6670-T00-0470-0	INDUCTANCE	470uH	BA	2	L1, 2
36	7600-STA-1105-B	TACT SWICH	KPT-1105B	BA	4	S/W
37	7212-D00-5055-0	LCD	JYTS05-055	BA	1	LCD1
38	7808-CAL-0002-0	CONNECTDR(HAFER)	LAL0640-02	BA	3	J2, J3
39	7808-CAL-0003-0	CONNECTDR(HAFER)	LAL0640-03	BA	1	J1
40	7808-CAL-0010-0	CONNECTDR(HAFER)	LAL0640-10	BA	1	J5
41	7808-CAL-0011-0	CONNECTDR(HAFER)	LAL0640-11	BA	1	
42	6240-1S0-0040-0	I.C(OP AMP)	UPC4072G2	BA	1	U7

NO	MAT'L CODE	PARTS NAME	SPECIFICATION	UNIT	Q'TY	LOCATION
43	7808-CGD-0005-0	CONNECTOR(HAFER)	1143-05(GOLD)	EA	1	J4
REAR DISPLAY PCB ASS'Y (140SH1BRDPUN0101)						
01	5110-PSW-1130-0	DISPLAY P.C.B	5110-PSW-1130-0	EA	1	
02	7212-D00-5055-0	LCD	JYTS05-055	EA	1	LCD
03	7850-H00-2032-0	FLAT CABLE-CDN	10P*10P*325mm	EA	1	CDN1
04	7850-H00-2232-0	FLAT CABLE-CDN	11P*11P*325mm	EA	1	
CAL PCB ASS'Y (140SH1BCAPUN0101)						
01	5151-PSW-1130-0	CAL PCB	5151-PSW-1130-0			
02	7600-STA-1802-0	TACT S/W	1180	EA	1	CAL(PD-1공용)
03	7840-H00-0212-B	CONNECTOR WIRE	2P*120mm	EA	1	
BODY ASS'Y (140SH1BDDUN0101)						
01	7840-H00-0213-C	BATTERY WIRE(-)	2P*135mm	EA	1	
02	7840-H00-0216-A	BATTERY WIRE(+)	2P*165mm	EA	1	
03	7840-H00-0323-0	CONNECTOR WIRE	3P*230-303	EA	1	BP공용
03	7642-S00-0060-0	METAL CLAMP	5M	EA	2	
C/T BDX ASS'Y (140SH1ECTBUN0101)						
01	7520-P00-0150-0	Mo BATTERY	R20 1.5V D SIZE	EA	5	
02	7510-P00-1122-0	ADAPTOR	110V/220V-BV 300mA	EA	1	BP공용,OPTION
LOAD CELL ASS'Y ( LLASH0103G000000 )						
			SW-10L	EA	1	

## ELECTRONIC PART

REV:01

NO	NAT'L CODE	PARTS NAME	SPECIFICATION	UNIT	Q'TY	LOCATION
	MAIN PCB ASS'Y	(140SH1ENAPUN0101)				
01	6100-PSW-1130-B	MAIN P.C.B	6100-PSW-1130-B	BA	1	
02	6200-1S0-0813-0	I.C(CPU)	MM150813-QFP	BA	1	U1
03	6236-1S0-0002-0	I.C(CMDS)	74HC02	BA	1	U4
04	6236-1S0-4066-0	I.C(CMDS)	UPD4066BG	BA	1	U5
05	6240-1S0-0177-0	I.C(OP AMP)	OP177GS	BA	1	U6
06	6240-1S0-0062-0	I.C(OP AMP)	TL062	BA	1	U9
07	6241-1S0-0393-0	I.C(LINEAR)	LM393D(GL393D)	BA	1	U8
08	6205-1S0-8346-A	I.C(BEPRDN)	CAT83C46S	BA	1	U3
09	6210-1S0-7045-0	I.C(RESET)	K1A7045F	BA	1	U2
10	6281-100-2222-0	CHIP-TRANSISTOR	2N2222AS	BA	2	Q2
11	6281-100-1504-0	CHIP-TRANSISTOR	HTA1504SY	BA	1	Q1
12	6220-100-1350-0	I.C(REGULATOR)	S-B1350 HG	BA	1	U10
13	6284-1CP-0184-0	CHIP-DIODE	KDS184	BA	1	D2
14	6284-1CP-0186-0	CHIP-DIODE	KDS186	BA	1	D3
15	6283-1SK-5818-0	SCHOTTKY-DIODE	1NSB18	BA	1	D1
						C1, 3, 5, 6, 7, 8, 12
16	6712-CHP-0104-0	CHIP-CONDENSER	CL21F104NBMC	BA	17	13, 14, 15, 16, 18, 23, 24, 25, 26, 28
17	6712-CHP-0180-0	CHIP-CONDENSER	1BPF/50V(CL21C180J)	BA	2	C27, 28
18	6712-CHP-0101-0	CHIP-CONDENSER	CL21F101NBMC	BA	1	C18
19	6702-CAP-0106-0	CHIP-TANTAL	10MCS106NBTER	BA	1	C17
20	6720-CAP-0105-A	POLYESTER-CON	1uF/63V J-3B0X-TY	BA	1	C20
21	6720-CAP-0474-A	POLYESTER-CON	0.47uF/63V J-3B0X-TY	BA	1	C11
22	6722-CAP-0474-A	P.P-COND' (MKP-4)	0.47uF/1600V/C/5x/15mm	BA	1	C21
23	6720-CAP-0224-A	POLYESTER-CON	0.22uF/63V J-3B0X	BA	2	C8, C10
24	6704-C16-0100-0	ELECTRIC-CON	100uF/16V	BA	3	C2, 4, 22
25	6527-R00-0101-0	CHIP-RESISTOR 1/10W	RR1220P-1010(0.5%)	BA	2	R23, 24
26	6527-R00-0102-0	CHIP-RESISTOR 1/10W	RR1220P-1020(0.5%)	BA	1	R30
27	6527-R00-0103-0	CHIP-RESISTOR 1/10W	RR1220P-1030(0.5%)	BA	5	R2, 3, 4, 10, 14
28	6527-R00-0203-0	CHIP-RESISTOR 1/10W	RR1220P-2030(0.5%)	BA	1	R15
29	6527-R00-0302-0	CHIP-RESISTOR 1/10W	RR1220P-3020(0.5%)	BA	2	R25, 26
30	6527-R00-0303-0	CHIP-RESISTOR 1/10W	RR1220P-3030(0.5%)	BA	4	R11, 16, 17, 20
31	6527-R00-4992-0	CHIP-RESISTOR 1/10W	RR1220P-49920(0.5%)	BA	2	R19, 21
						R1, 5, 6, 7, 8, 9, 12
32	6527-R00-0104-0	CHIP-RESISTOR 1/10W	RR1220P-1040(0.5%)	BA	12	13, 18, 28, 29, 31
33	6527-R00-0683-0	CHIP-RESISTOR 1/10W	RR1220P-6830(0.5%)	BA	2	R22, 27
34	7010-ZNO-0004-0	CRYSTAL	4MHz	BA	1	Y1
35	6670-T00-0470-0	INDUCTANCE	470uH	BA	2	L1, 2
36	7600-STA-1105-B	TACT SWICH	KPT-1105B	BA	4	S/W
37	7212-D00-5055-0	LCD	JYTS05-055	BA	1	LCD1
38	7808-CAL-0002-0	CONNECTOR(WAFER)	LAL0640-02	BA	3	J2, J3
39	7808-CAL-0003-0	CONNECTOR(WAFER)	LAL0640-03	BA	1	J1
40	7808-CAL-0010-0	CONNECTOR(WAFER)	LAL0640-10	BA	1	J5
41	7808-CAL-0011-0	CONNECTOR(WAFER)	LAL0640-11	BA	1	
42	6240-1S0-0040-0	I.C(OP AMP)	UPC4072G2	BA	1	U7



NO	MAT'L CODE	PARTS NAME	SPECIFICATION	UNIT	Q'TY	LOCATION
43	7808-CGD-0005-0	CONNECTOR(WAFER)	1143-05(GOLD)	EA	1	J4
44	6800-F00-3565-A	EMI BEAD FILTER	BFD-3565 R2	EA	4	B1,2,3,4
REAR DISPLAY PCB ASS'Y (140SH1ERDPUN0101)						
01	6110-PSW-1130-0	DISPLAY P.C.B	6110-PSW-1130-0	EA	1	
02	7212-D00-5055-0	LCD	JYTS05-055	EA	1	LCD
03	7850-W00-2035-0	FLAT CABLE-CON	10P*10P*350mm	EA	1	CON1
04	7850-W00-2235-0	FLAT CABLE-CON	11P*11P*350mm	EA	1	
CAL PCB ASS'Y (140SH1ECAPUN0101)						
01	6151-PSW-1130-0	CAL PCB	6151-PSW-1130-0			
02	7600-STA-1802-0	TACT S/W	11802	EA	1	CAL(PD-1공용)
03	7840-W00-0214-B	CONNECTOR WIRE	2P*140mm	EA	1	
BODY ASS'Y (140SH1EBDUN0101)						
01	7840-W00-0213-C	BATTERY WIRE(-)	2P*135mm	EA	1	
02	7840-W00-0216-A	BATTERY WIRE(+)	2P*165mm	EA	1	
03	7840-W00-0323-0	CONNECTOR WIRE	3P*230-303	EA	1	BP공용
03	7642-S00-0060-0	METAL CLAMP	6M	EA	2	
C/T BDX ASS'Y (140SH1ECTBUN0101)						
01	7520-P00-0150-0	Mn BATTERY	R20 1.5V D SIZE	EA	6	
02	7510-P00-1122-0	ADAPTOR	110V/220V-BV 300mA	EA	1	BP공용,OPTION
LOAD CELL ASS'Y ( LLASH0103G000000 )						
			SH-10L	EA	1	

NO	MAT'L NBR CODE	PART NAME	SPECIFICATION	UNIT	Q'TY	LOCATION
ASS'Y UPPER COVER (140SH1NUPCUM0101)						
1	2000-A00-0017-0	TRAY	ABS 750 241*182*22*2.5t	EA	1	
2	1B10-A00-0016-0	SPEC PLATE	AL 0.3t*107.6*27.6	EA	1	
3	2050-A00-04B7-0	DISPLAY FILTER(FRONT)	PC 1t*138.4*57.8	EA	1	
4	2200-A00-0102-0	KEY PAD	LEXAN 0.2t*62.25*58.07	EA	1	
5	2010-A00-0008-0	W/G COVER	LEXAN 0.5t* $\varnothing$ 24.8	EA	1	
6	1563-A00-0308-0	RIVET	$\varnothing$ 3.2*8	EA	2	
7	1260-A00-0008-0	SEALING BOLT	M4*40-(N1)	EA	1	
8	1512-A00-0420-0	TAPPING SCREW (PH)-2	4*20	EA	4	
9	2050-A00-0563-0	DISPLAY COVER (REAR)	PC 1t*124.7*53.7(GRAY)	EA	1	
	2050-A00-0488-0	DISPLAY FILTER (REAR)	PC 1t*124.7*53.7	EA	1	OPTION
10	2000-A00-0011-0	UPPER COVER	ABS 750 264.7*286.75*3t	EA	1	
ASS'Y L/C BRACKET (140SH1NLCBUM0101)						
11	1030-A00-0040-0	L/C BRACKET TOP	SPC 3.2t*160*110 (Zn)	EA	1	5,10kg
	1050-A00-0021-0	L/C BRACKET TOP	AL 4t*160*110	EA	1	2kg
	1030-A00-0080-0	L/C BRACKET TOP	SPC 4t*160*110 (Zn)	EA	1	20kg
12	1030-A00-0038-0	L/C BRACKET LOWER	SPC 4t*120*100 (Zn)	EA	1	
13	1530-NSU-0512-0	WRENCH BOLT	M5*12-SUS	EA	4	
14	1512-A00-0412-0	TAPPING SCREW (PH)-2	4*12	EA	4	
15	1551-NSU-0500-0	WASHER (SPR)	$\varnothing$ 5-SUS	EA	4	
16	1261-A00-0005-0	LIMIT BOLT	M5*33.8(Zn)	EA	4	20kg ,10kg:2
	1261-A00-0006-0	LIMIT BOLT	M5*34.8 (Zn)	EA	4	2,5kg,10kg:2
17	2600-A00-0017-0	TRAY RUBBER-A	NBR $\varnothing$ 17.4*21-BLACK	EA	4	20kg
	2600-A00-0051-0	TRAY RUBBER-B	NBR $\varnothing$ 17.4*21-GRAY	EA	4	2,5,10kg
18	1540-A00-0500-0	NUT (HEX)	M5	EA	4	
19	1532-A00-0412-0	WRENCH BOLT (ST)	M4*12	EA	1	
20	1540-NSU-0400-0	NUT (HEX)	M4-SUS	EA	1	
ASS'Y BODY (140SH1NBDDUM0101)						
21	1512-A00-0308-0	TAPPING SCREW (PH)-2	3*8	EA	6	
	1512-A00-0308-0	TAPPING SCREW (PH)-2	3*8	EA	10	OPTION
22	1512-A00-0306-0	TAPPING SCREW (PH)-2	3*6	EA	1	
23	2610-A00-0010-0	FOOT	PVC 40 <sup>o</sup> , $\varnothing$ 40*42	EA	4	
24	1580-A00-0007-0	BATTERY SPRING C	SWP $\varnothing$ 0.8* $\varnothing$ 16*37*11(N1)	EA	1	
25	2000-A00-0016-0	BODY	ABS 750 240.4*268.7*87.5*3t	EA	1	
26	1000-A00-0078-0	SEALING PLATE	SUS304 1t, 28*68.8(HAIR LINE)	EA	1	
27	1580-A00-0024-0	BATTERY SPRING D	SWP $\varnothing$ 0.8* $\varnothing$ 16*37*26(N1)	EA	1	
28	1580-A00-0014-0	BATTERY SPRING A	SUS304, $\varnothing$ 0.8*50*18	EA	1	
29	1580-A00-0006-0	BATTERY SPRING B	SUS304, $\varnothing$ 0.8*50*18	EA	1	
30	2000-A00-0067-0	BATTERY COVER	ABS 750 137.6*107.2*14*2t	EA	1	
31	1503-A00-0408-0	MACHINE SCREW (WPH)	M4*8	EA	1	

NO	NAT'L NEW CODE	PART NAME	SPECIFICATION	UNIT	Q'TY	LOCATION
32	2022-A00-0004-0	W/L GAUGE	∅15*B-BLACK	EA	1	
ASS'Y MAIN PCB (140SHINMAPUN0101)						
33	2000-A00-0066-0	LCD BRACKET	ABS 2.5t*114.B*44.B*B.5(BLACK)	EA	1	
34	1512-A00-0306-0	TAPPING SCREW (PH)-2	3*B	EA	2	
ASS'Y REAR PCB (140SHINRDPUN0101)						
35	2000-A00-0066-0	LCD BRACKET	ABS 2.5t*114.B*44.B*B.5(BLACK)	EA	1	OPTION
36	1512-A00-0306-0	TAPPING SCREW (PH)-2	3*B	EA	2	OPTION
ASS'Y DTHBR (140SHINMETCUN0101)						
1	1250-A00-0002-0	INSERT-A	BSBN, M4*12*∅8	EA	1	
2	1250-A00-0008-0	INSERT-B	BSBN, M6*22*∅10	EA	4	
3	1520-MSU-0635-0	HEXAGON BOLT	M6*35-SUS	EA	4	
ASS'Y C/T BOX (140SHINCTBUN0101)						
1	2014-A00-0004-0	CAP	P.P ∅36*16.5	EA	4	
2	B106-AC3-0001-0	C/T BOX-4	615*375*435	EA	0.25	
3	B103-AC1-0004-0	C/T BOX-1	356*286*200	EA	1	
4	B203-AS0-0007-0	STYRDFDAM BOX (L)	352.5*181*146	EA	1	
5	B203-AS0-0008-0	STYRDFDAM BOX (R)	352.5*181*146	EA	1	
6	B002-A00-0106-0	MANUAL	SH-1	EA	1	
7	B304-A00-0005-0	SBT POLY BAG	450*580*0.05t	EA	1	
8	B303-A00-0002-0	TRAY POLY BAG	320*320*0.05t	EA	1	
9	B301-A00-0003-0	MANUAL POLY BAG	170*250*0.05t	EA	1	
10	B400-A00-0040-0	SILICAGEL	10g	EA	2	

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APPENDIX  
DEVICE SPECIFICATION

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