REV:00

2002. MAY

MW - II Series

Service Manual

CAS CORPORATION

CONTENTS

1. PREFACE

A. Introductions

Thank you for purchasing our CAS MW-II Series.
These series has been designed with CAS reliability, under rigid quality control and with outstanding performance. Your specialty departments can enjoy these high quality reliable CAS products.
We believe that your needs will be satisfied and you will have proper reliability.
This manual will help you with proper operation and care of the MW-II series.
Please keep it handy for future reference.

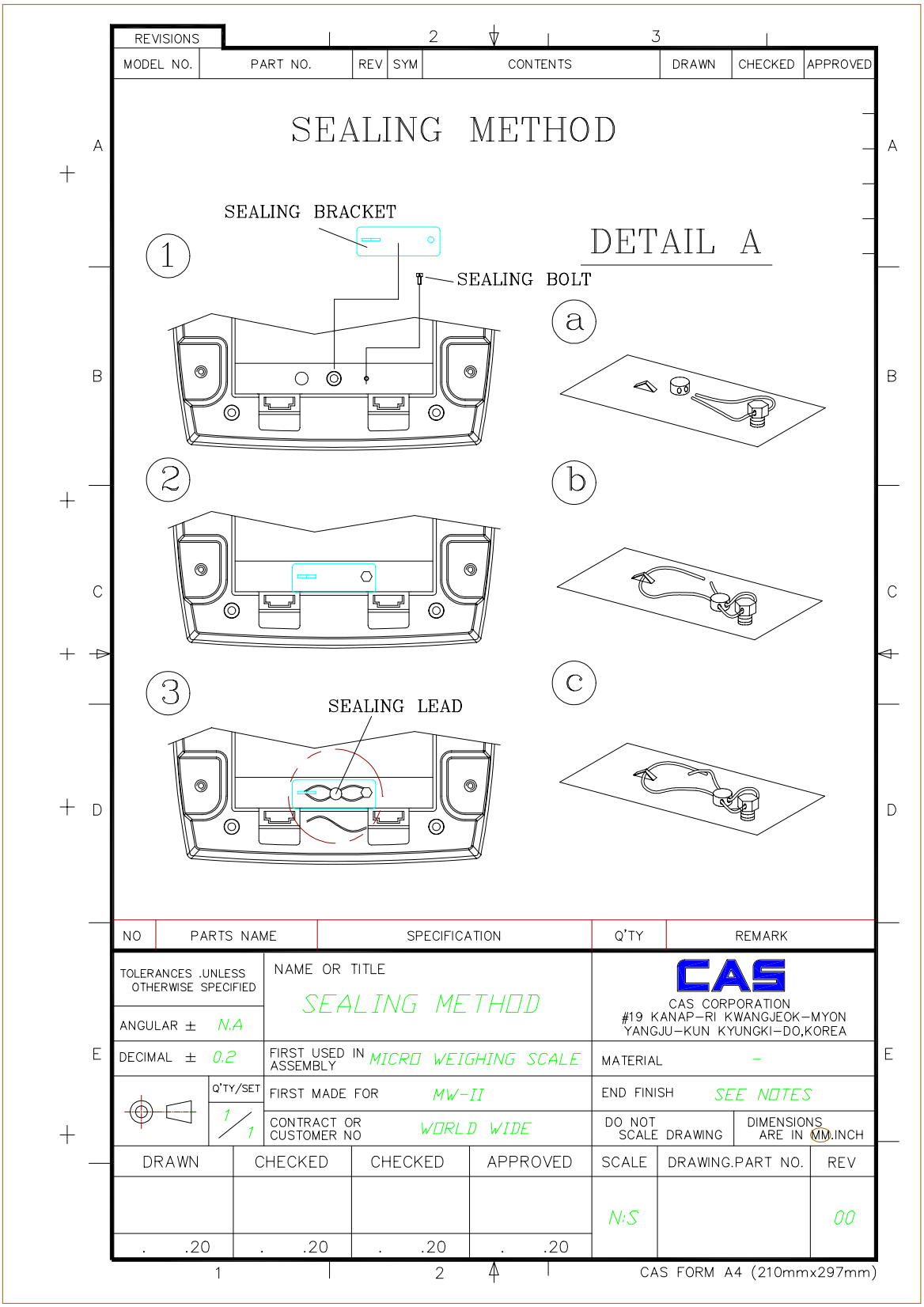
B. Precautions

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 one hour 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	MW II 200	MW II 300	MW II 2000	MW II 3000
MAX. CAPACITY	200 g	300 g	2 kg	3 kg
READABILITY	0.01 g	0.01 g	0.1 g	0.1 g
TARE SUBTRACTION	200 g	300 g	2 kg	3 kg
DISPLAY	6 digit (LCD)			
WEIGHING UNIT	g,oz,tl,PCS,dwt, mom,ct,GN,lb,%			
LINEARITY	± 0.01 g		± 0.1 g	
REPEATABILITY	± 0.01 g		± 0.1 g	
STABILIZATION TIME	2~3 seconds			
DISPLAY SPEED	5 times/ seconds			
INTERFACE	RS232C			
POWER SOURCE	- Adaptor DC12V/300mA (Recharge Adaptor DC12V/850mA) - Dry Battery (1.5V x 6 AA size)			
POWER CONSUMPTION	0.4 W			
OPTION	● **B Type : Display Backlight** - Using backlight cut the battery life by 30 -40%. ● **R Type : Rechargeable Battery** - NiCd/NiMH Battery (7.2V) - Adaptor DC 12V/850mA - Approx. 12 hours (NiMH battery) ● **D type : Dual Display**			
OPERATING TEMPERATURE	-10℃ ~ +40℃			
PLATTER SIZE(mm)	Φ 300		158*144.6	
PRODUCT WEIGHT	1.04 kg		1.3 kg	
PRODUCT SIZE(mm)	189(W) x 271(D) x 83(H)		189(W) x 271(D) x 83(H)	

D. Sealing Method



2. Calibration & Program code download

A. General calibration

1. Span Calibration - " C.SPAN "

1) **CAL** Switch is located in the battery cover at the bottom of the scale.
While pressing the switch, turn on the power then you will go to calibration mode.
2) The display will shows **" CALMod "** three times and **" C.SPAN "**.
3) Press the **SET** key to go to **" C. SPAN "** menu.
4) The display will shows **" UNLOAd "** then press the **SET** key. Note that there is nothing on the platter. If you want to cancel this span calibration, press the **ZERO** key.
5) Press the **SET** key, then the display shows **" StAbLE "**. Note that the scale should be stable.
6) When the display shows **" LOAd "**, place the weight of maximum capacity on the platter then press the **SET** key.
7) The display shows **" StAbLE "** and **" End "** then span calibration is finished.

2. Capacity - " C.CAPA "

1) Press the **MODE** key until the display shows **" C.CAPA "** menu in the calibration mode.
2) Press the **SET** key to go to **" C.CAPA "** menu.
3) Press the **MODE** key until the display shows maximum capacity of your scale.
4) Press the **SET** key to save. If you want to cancel, press the **ZERO** key.
5) Note that the capacity is set to **300 g** by default.

3. Trimming (Multi-Point Calibration) - " C.triM "

1) Press the **MODE** key until the display shows **" C.triM "** menu in the calibration mode.
2) Press the **SET** key, you will see the internal value.
3) If the internal value is not zero, press the **TARE** key to set it to zero.
4) Place a weight, M1 on the platter and adjust the value to AD1 by pressing the **PRINT** or **MODE** key. Refer to Table 1. **PRINT** key is used to increase the value and **MODE** key is used to decrease the value.

<Table 1>

Weight			Internal Value Range	
Capa.	**MW II-300**	**MW II-3000**		
M1	100g	1000g	**AD1**	99944 -100055
M2	200g	2000g	**AD2**	199944 -200055
M3	300g	3000g	**AD3**	299944 -300055
Capa.	**MW II-200**	**MW II-2000**		
M1	50g	500g	**AD1**	74944 -75055
M2	100g	1000g	**AD2**	149944 -150055
M3	200g	2000g	**AD3**	299944 -300055

5) If the value is within AD1, the display shows **“ ZERO ”** but if the value is out of this range, it is impossible to adjust this value.
6) Place a weight, M2 on the platter and adjust the value to AD2 by pressing the **PRINT** or **MODE** key. Refer to Table 1.
7) If the value is within AD2, the display shows **“ NET ”**.
8) Place a weight, M3 on the platter and adjust the value to AD3 by pressing the **PRINT** or **MODE** key. Refer to Table 1.
9) If the value is within AD3, the display shows **“ Battery ”**.
10) Press the **SET** key to save it. If you want to cancel, press the **ZERO** key.

4. Option (Backlight) - “ C.OPtbL ”

1) Press the **MODE** key until the display shows **“ C.OPtbL ”** in calibration mode.
2) Press the **SET** key, the display shows **“ OFF ” or “ On ”**.
3) You can change this setting by pressing **MODE** key. Press the **SET** key to save. If you want to cancel, press the **ZERO** key.
   - ON : It is available to use backlight
   - OFF : It is not available to use backlight

   Note that backlight is set to **OFF** by default.

5. Zero Range - “ C.ZPASS ”

This is an allowable range from calibrated zero that the scale goes to zero from at start up.

1) Press the **MODE** key until the display shows **“ C.ZPASS ”** in calibration mode.
2) Press the **SET** key, the display shows **“ 10 PEr ”** or **(“ 2 PEr ”)**.
3) You can change this setting by pressing **MODE** key.
   - 10 PEr : Zero range is 10% of maximum capacity.
   - 2 PEr : Zero range is 2% of maximum capacity.

   Note that zero range is set to **10 PEr** by default.
4) Press the **SET** key to save it.

6. Unit - “ C.Unit ”

1) Press the **MODE** key until the display shows **“ C.Unit ”** in calibration mode.
2) Press the **SET** key, the display shows **“ C.U.grAm ”**.
3) Press the **SET** key, the display shows **“ OFF ” (“ ON ”)**.
4) You can change this setting by pressing **MODE** key. Press the **SET** key to save.
   - ON: You can use this unit.
   - OFF : You cannot use this unit.
5) When the display shows “ C.U.grAm ”, press the **MODE** key to set other units.
   Press the **SET** key to save.
   Note that g, ct, pcs and % are set to **ON** by default.

7. Gravity Constant - " C.Grvty "

1) Press the **MODE** key until the display shows **" C.Grvty "** in calibration mode.
2) Press the **SET key**, the display shows **" C.G.NEwG "**. At this time, press the **MODE** key. You will see the **" C.G.OLdG "**.
   C.G.OldG menu : you can enter gravity constant of calibration place.
   C.G.NewG menu : you can enter gravity constant of using place.
3) Press the **SET** key, the display shows " 9.XXXXX ".
4) To increase the number, press the **MODE** key and to go to the right side of digit, press the **SET** key. To go to the left side of digit, press the **TARE** key. At last digit, press the **SET** key to save. If the value of fifth decimal place is zero, you have to enter 0.
5) If you want to cancel, press the **ZERO** key.
6) The value of C.G.OldG is converted to the value of C.G.NewG automatically when you perform the span calibration.
7) Note that the gravity constant is set to **9.79940** by default.

8. Zero Tracking Level " C.ZtrAC "

1) Press the **MODE** key until the display shows " C.ZtrAC in calibration mode.
2) Press the **SET** key, the display shows previous setting value. Press the **MODE** key to change this value. (Note that zero tracking level is set to **1.0d** by default.)
3) Press the **SET** key to save.

9. Self-Calibration " C.SELFC "

1) Press the **MODE** key until the display shows " C.SELFC " in calibration mode.
2) Press the **SET** key, the display shows previous setting value. Press the **MODE** key to change this value. (Note that self calibration is set to **ON** by default.) If you set it to ON, the scale performs self calibration every 5 minutes.
3) Press the **SET** key to save.

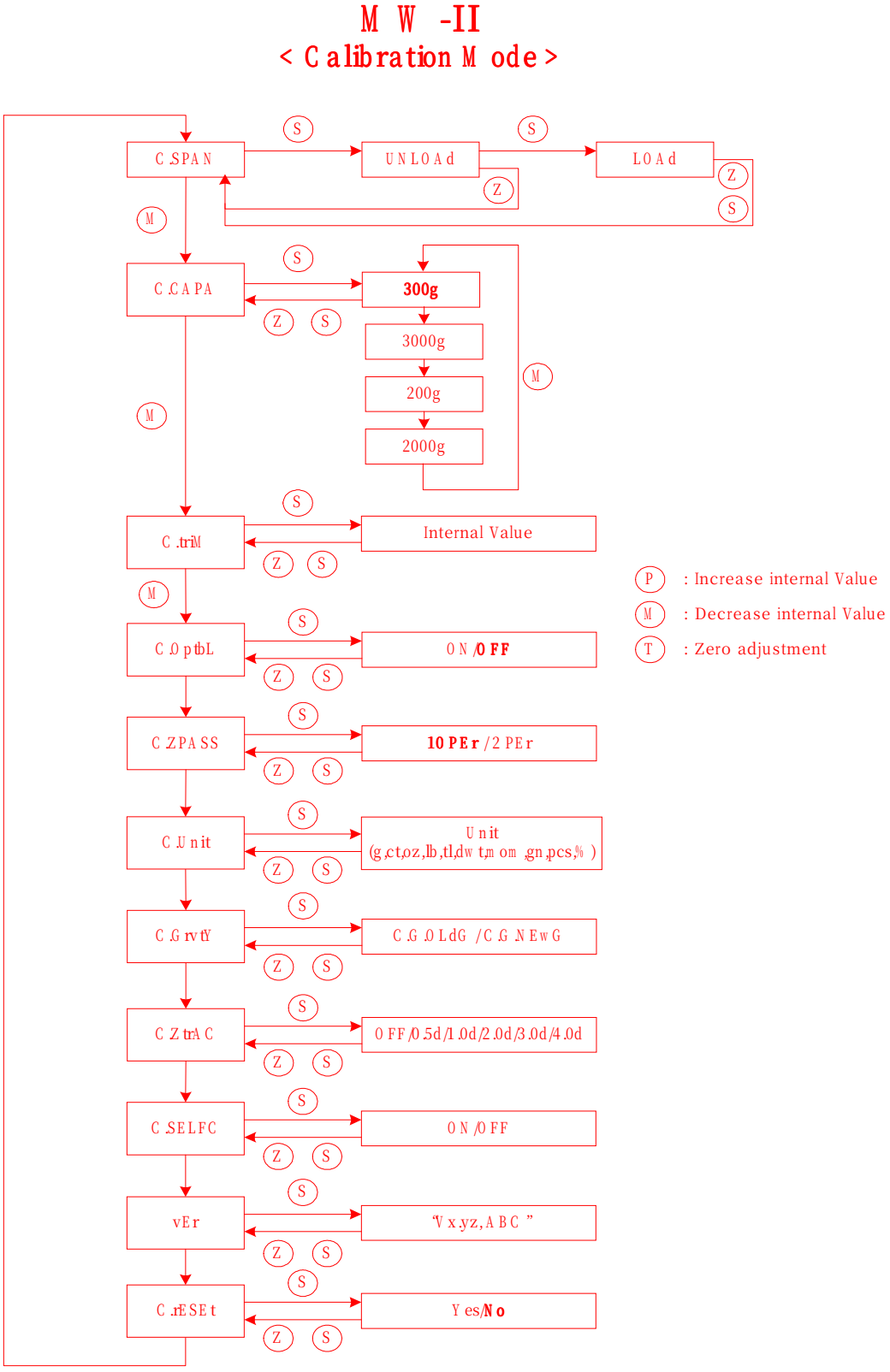
10. Version " C.vEr "

1) Press the **MODE** key until the display shows " C.vEr " in calibration mode.
2) Press the **SET** key, the display shows the version of the scale (For example, " V2.00 ")
3) Press the **MODE** key, the display shows country code. (For example, " Std " - Standard)
4) To exit this mode, press the **ZERO** key.

11. Reset (Default Setting : Calibration Data) - **" C.rESEt "**

1) Press the **MODE** key until the display shows, **" C.rESEt "** in calibration mode.
2) Press the **SET** key, the display shows **" No "**.
3) Press the **MODE** key, you will see **" yES "** and press the **SET** key to reset. All settings are changed to default but zero and span values are remained. If you want to set these values to 0, press the CAL switch and **SET** key when the display shows **" yES "** on step 3).

B. Calibration Block Diagram



S : SET key **Z** : ZERO key **T** : TARE key **M** : MODE key **P** : PRINT key

C. How to Confirm the Setting Value

1. Turn on the power and connect the scale to PC with RS232C cable.
2. Open the terminal on PC and adjust COM1, COM 2 and transmission speed to the scale.
3. Press the **P** on the keyboard of PC then you will hear the beep on the scale. Check the weight on the terminal.
4. If there is no response on step 3, check the cable, port, transmission speed.
5. Enter **83419** on the PC terminal, you will go to debugging mode.
6. Press **Ctrl+R** key, you will see the data as below on the PC terminal. If not, enter 83419 slowly.

```
CAS MW-2 300                    -> Model
STD V2.00b                      -> Code Version

Comp. Date :                    -> Date of Code Compile <= Code Version
2001Mar14-174117                   (YYYYMMMDD-HHMMSS)

2001/04/27 16:33:15             -> The Present Time
Weight   : 779                  -> Weight
AD(aver) : 25002                -> Internal AD value
AD(aver2): 7753                 -> (aver - Zp_Cal) * CalFact
Zp_Cal   : 16518                -> Zero AD value
Fp_Cal   : 344804               -> Span AD value
CalFact  : 91383                -> (300000 / (Span - Zero)) * 100000
LSpanDif0: 0                    -> Multi-Calibration Data
LSpanDif1: 0                    -> Multi-Calibration Data
FactGap0 : 0                    -> Multi-Calibration Data
FactGap1 : 0                    -> Multi-Calibration Data
FactGap2 : 0                    -> Multi-Calibration Data
Capa.    : 0                    -> Capacity(0-3)
Ini_ZeroV: -37                  -> Initial Zero Buffer
Z_Buf    : 0                    -> Rezero Buffer
T_Buf    : 0                    -> Tare Buffer
T0_Cnt70m: 65                   -> Timer0
T1_Cnt70m: 0                    -> Timer1
Gravity0 : 9.7994               -> OLD Gravity Constant(Reference)
GravityN : 9.7994               -> NEW Gravity Constant
Hand_Buf0: 25003                -> AD Buffer
Hand_Buf1: 25006
        :
Hand_Buf8: 25003
Hand_Buf9: 25003
```

- Keys for debugging mode

Keys	Descriptions
Ctrl + R	Report
Ctrl + E	EEPROM Erase
X	EEPROM Read
A	ADC(CS5522) Initializing
D	Display Buffer Read

D. Program Code Download

1. Set J40, J41, J60 of main PCB to download mode as below.
   After setting the J40, J41 and then set the J60.

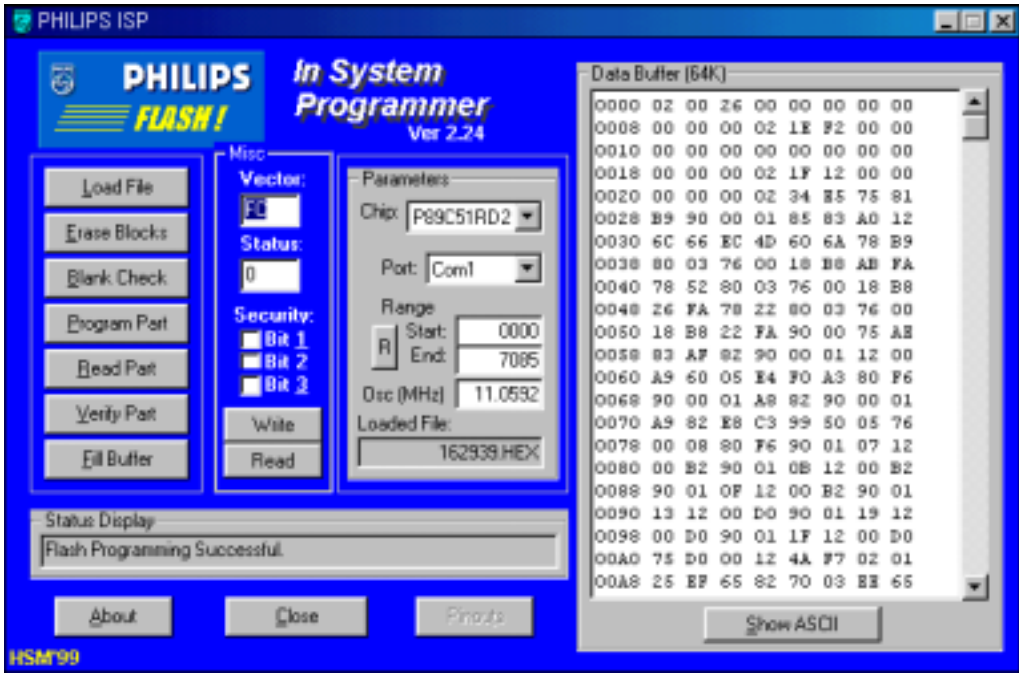
Mode	J40			J41		J60	
	1	2	3	1	2	1	2
	5V		12V		G		
Normal	■	■	□	□	□	□	□
Code Download	■	■	□	■	■	■	■

2. Connect RS232c cable to PC.

3. Turn on the power.

4. Type **winisp.exe** and press the **ENTER** key.

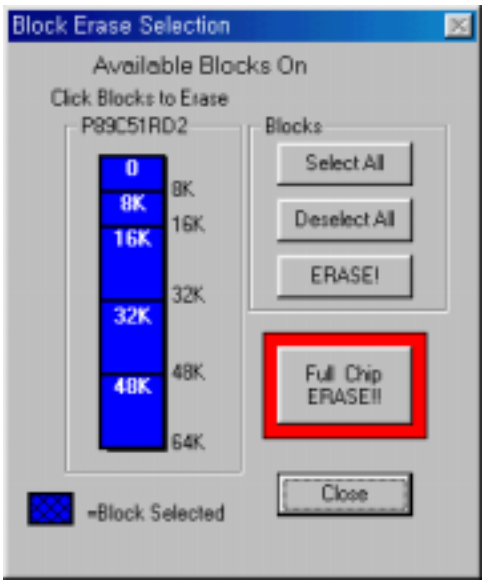
5. Set the parameters as below.
   Chip : P89C51RD2
   Port : Com1/Com2
   Osc(MHz) : 11.0592



6. Click **Read** and confirm the message "Boot Vector Read OK." on Status Display. At this time confirm **Vector:FC**, **Status:00** setting. If not, set them again and click **Write**. If "Boot Vector Read OK." Message is not shown, confirm step 1, 2.

7. Click **Load File**.

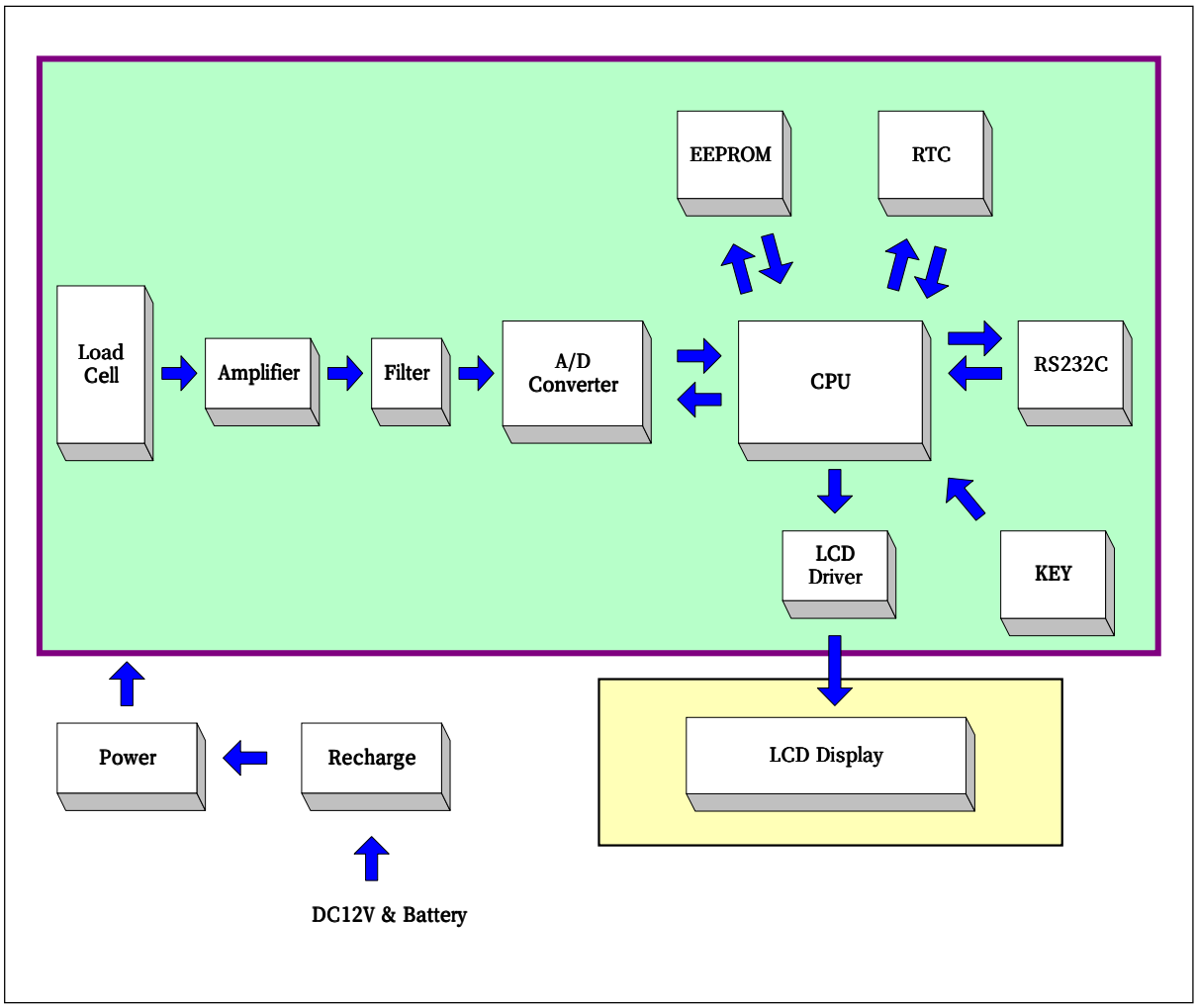
8. Click **Erase Blocks**.
9. Click **Select All** and then **ERASE!**.

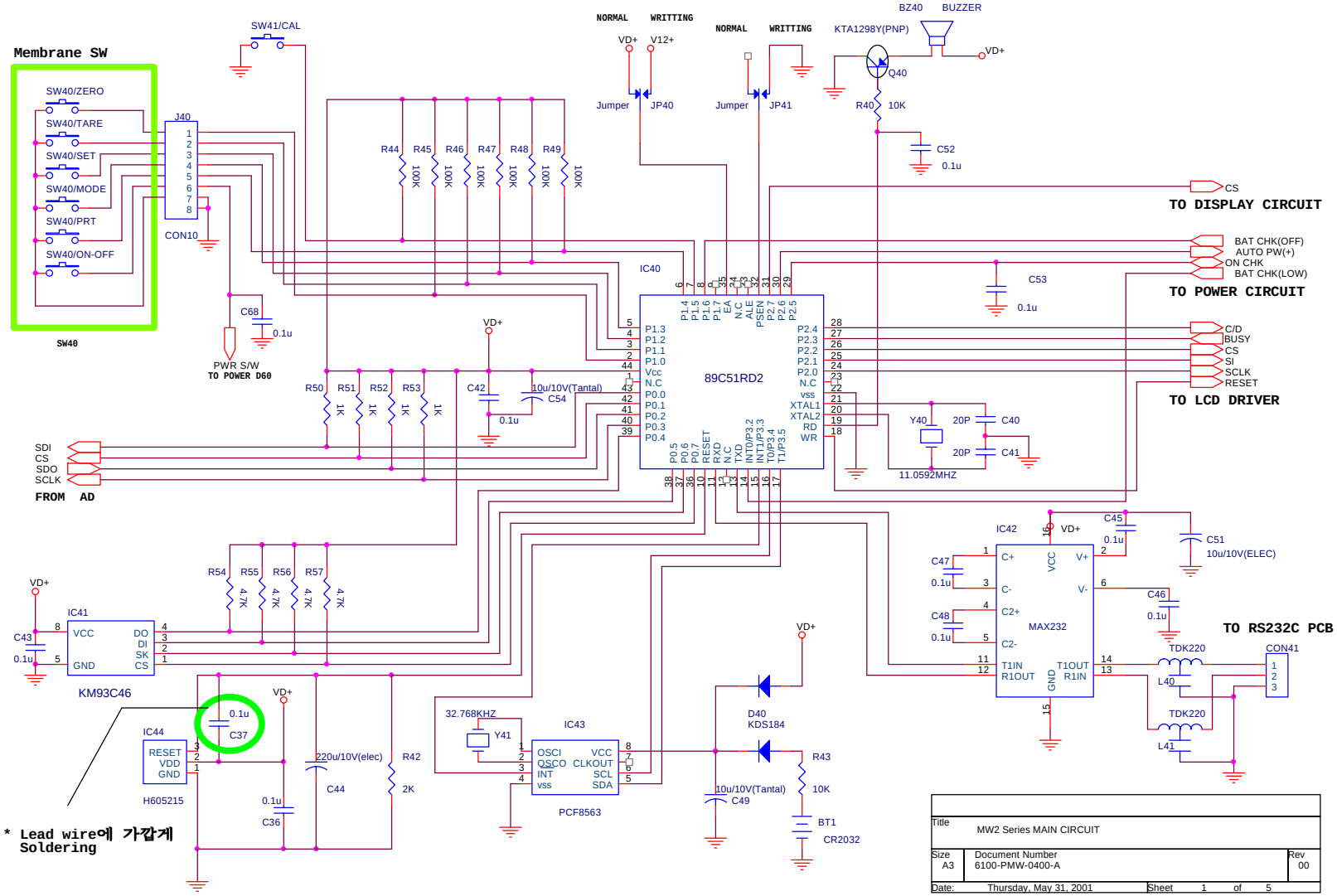


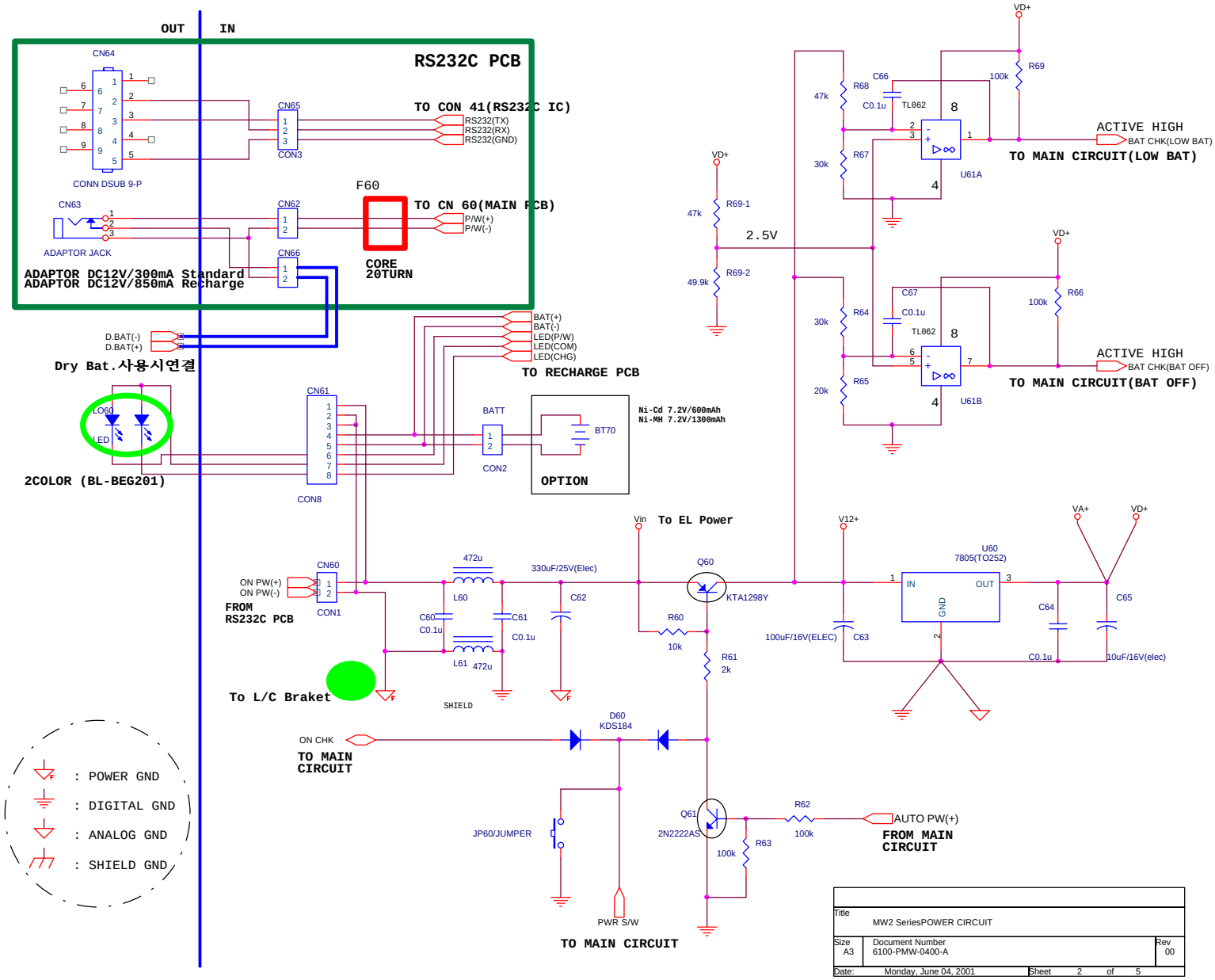
9. Click **Blank Check**, **Program Part** and **Verify Part**.
10. Turn off the power and set J40, J41, J60 to Normal Mode.
11. Turn on the power and check the operation.

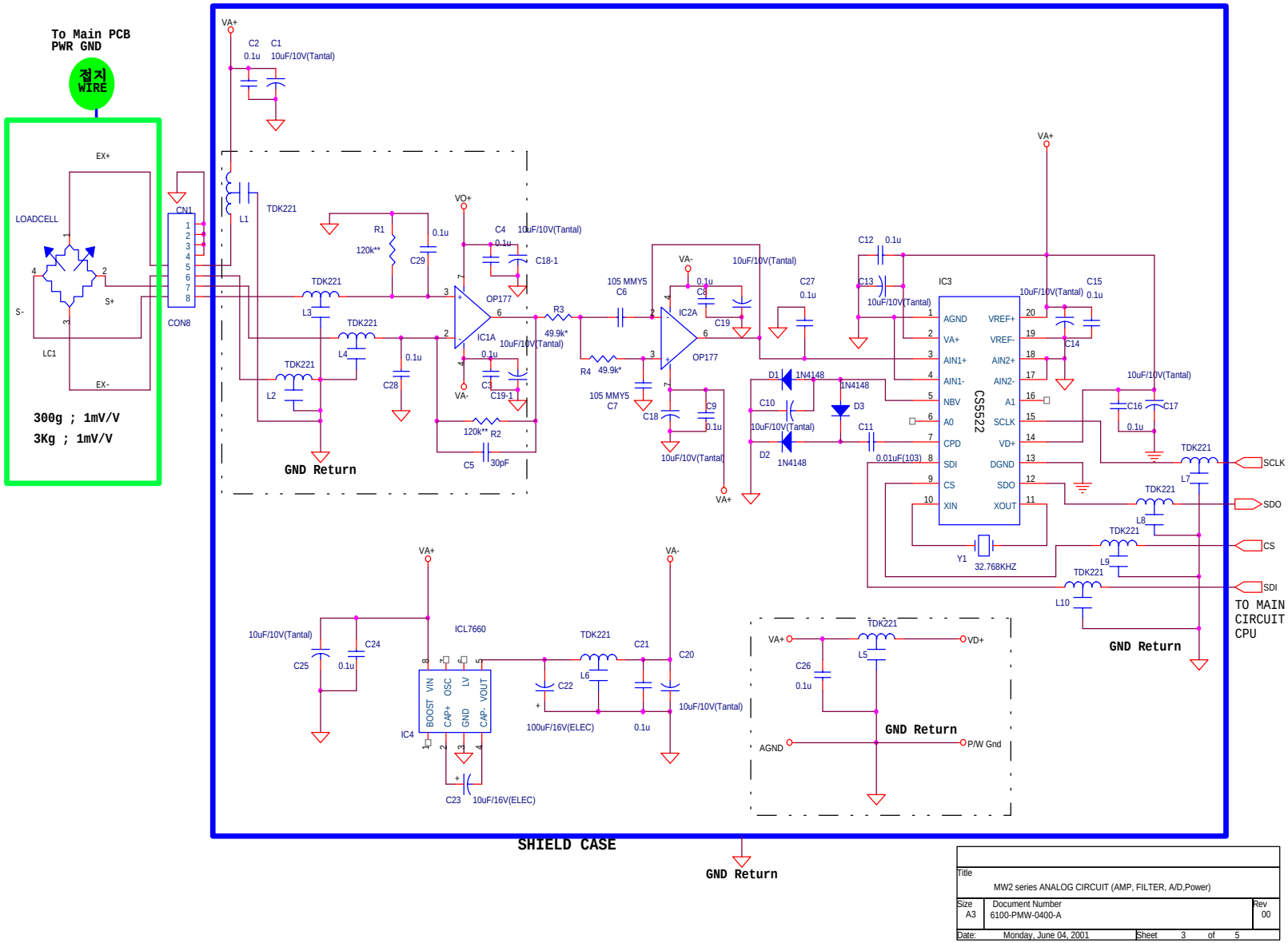
3. The Schematics and the Diagram

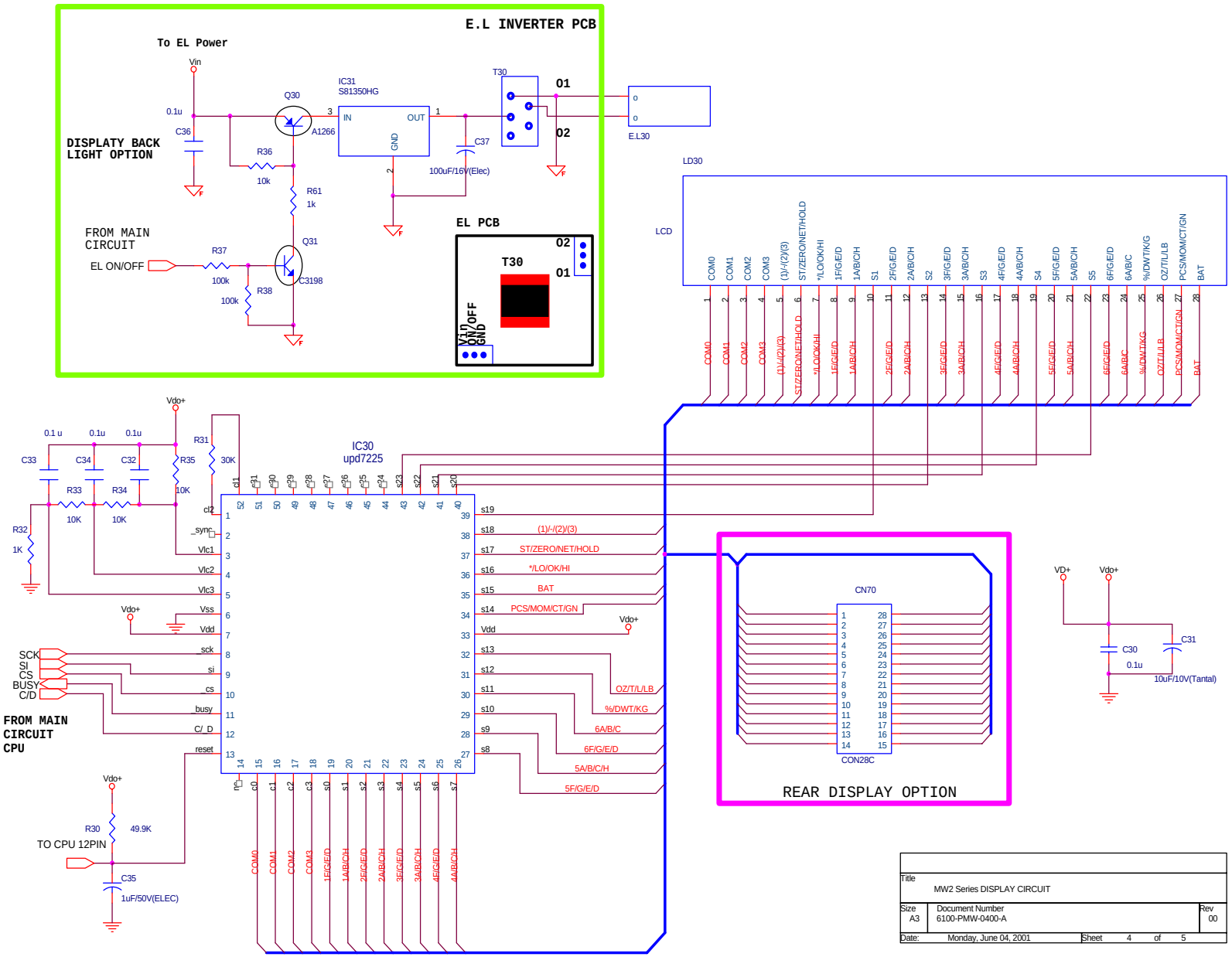
A. System Block Diagram

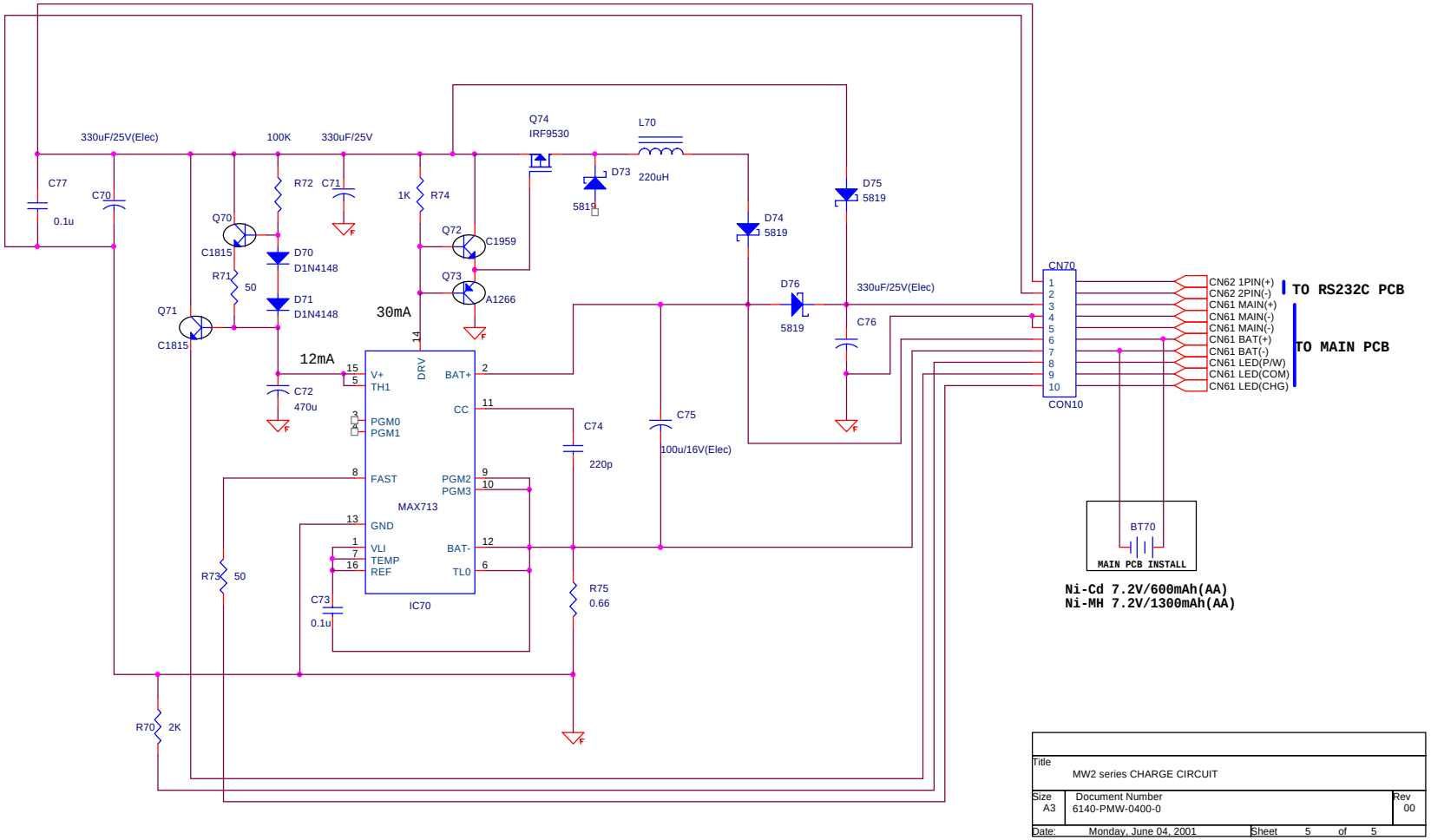



Membrane SW
SW40/ZERO
SW40/TARE
SW40/SET
SW40/MODE
SW40/PRT
SW40/ON-OFF
SW40
J40
CON10
SW41/CAL
PWR S/W
TO POWER D60
C68
0.1u
NORMAL
WRITTING
VD+
V12+
Jumper
JP40
JP41
BZ40
BUZZER
KTA1298Y(PNP)
Q40
R40
10K
C52
R44
R45
R46
R47
R48
R49
100K
IC40
89C51RD2
C53
CS
TO DISPLAY CIRCUIT
BAT CHK(OFF)
AUTO PW(+)
ON CHK
BAT CHK(LOW)
TO POWER CIRCUIT
C/D
BUSY
CS
SI
SCLK
RESET
TO LCD DRIVER
R50
R51
R52
R53
1K
C42
10u/10V(Tantal)
C54
Y40
20P
C40
C41
11.0592MHZ
SDI
CS
SDO
SCLK
FROM AD
IC42
MAX232
C45
C51
10u/10V(ELEC)
C47
C48
C46
TDK220
L40
L41
CON41
TO RS232C PCB
R54
R55
R56
R57
4.7K
IC41
KM93C46
C43
IC44
H605215
C37
C36
220u/10V(elec)
C44
R42
2K
32.768KHZ
Y41
IC43
PCF8563
D40
KDS184
R43
C49
BT1
CR2032
* Lead wire에 가갑게
Soldering
Title
MW2 Series MAIN CIRCUIT
Size
A3
Document Number
6100-PMW-0400-A
Rev
00
Date:
Thursday, May 31, 2001
Sheet
1
of
5


OUT
IN
RS232C PCB
CN64
CONN DSUB 9-P
CN65
CON3
TO CON 41(RS232C IC)
RS232(TX)
RS232(RX)
RS232(GND)
F60
CN62
TO CN 60(MAIN PCB)
P/W(+)
P/W(-)
CN63
ADAPTOR JACK
CN66
CORE
20TURN
ADAPTOR DC12V/300mA Standard
ADAPTOR DC12V/850mA Recharge
D.BAT(-)
D.BAT(+)
Dry Bat.사용시연결
BAT(+)
BAT(-)
LED(P/W)
LED(COM)
LED(CHG)
TO RECHARGE PCB
LED0
LED
2COLOR (BL-BEG201)
CN61
CON8
BATT
CON2
BT70
OPTION
Ni-Cd 7.2V/600mAh
Ni-MH 7.2V/1300mAh
VD+
R69
100k
47k
R68
C66
C0.1u
TL062
8
30k
R67
U61A
ACTIVE HIGH
BAT CHK(LOW BAT)
TO MAIN CIRCUIT(LOW BAT)
R69-1
47k
2.5V
49.9k
R69-2
C67
C0.1u
R64
30k
R66
100k
TL062
8
20k
R65
U61B
ACTIVE HIGH
BAT CHK(BAT OFF)
TO MAIN CIRCUIT(BAT OFF)
Vin
To EL Power
V12+
VA+
VD+
U60
7805(TO252)
IN
OUT
GND
CN60
ON PW(+)
ON PW(-)
FROM
RS232C PCB
CON1
472u
330uF/25V(Elec)
Q60
KTA1298Y
L60
C60
C0.1u
C61
C0.1u
C62
R60
10k
R61
2k
L61
472u
SHIELD
To L/C Braket
100uF/16V(ELEC)
C63
C64
C0.1u
C65
10uF/16V(elec)
D60
KDS184
ON CHK
TO MAIN
CIRCUIT
JP60/JUMPER
Q61
2N2222AS
R62
100k
R63
100k
AUTO PW(+)
FROM MAIN
CIRCUIT
PWR S/W
TO MAIN CIRCUIT
: POWER GND
: DIGITAL GND
: ANALOG GND
: SHIELD GND
Title
MW2 SeriesPOWER CIRCUIT
Size
A3
Document Number
6100-PMW-0400-A
Rev
00
Date:
Monday, June 04, 2001
Sheet
2
of
5


To Main PCB
PWR GND
접지
WIRE
LOADCELL
EX+
EX-
S+
S-
LC1
300g ; 1mV/V
3Kg ; 1mV/V
CN1
CON8
VA+
VA-
VO+
C2 0.1u
C1 10uF/10V(Tantal)
L1 TDK221
R1 120k**
C29 0.1u
C4 0.1u
C18-1 10uF/10V(Tantal)
OP177
IC1A
R3 49.9k*
105 MMY5 C6
IC2A
C8 0.1u
C19 10uF/10V(Tantal)
R4 49.9k*
105 MMY5 C7
C18
C9 0.1u
C3 0.1u
C19-1 10uF/10V(Tantal)
R2 120k**
C5 30pF
L2 TDK221
L3 TDK221
L4 TDK221
C28 0.1u
GND Return
C27 0.1u
C12 0.1u
C13 10uF/10V(Tantal)
IC3
CS5522
AGND
VA+
AIN1+
AIN1-
NBV
A0
CPD
SDI
CS
XIN
VREF+
VREF-
AIN2+
AIN2-
A1
SCLK
VD+
DGND
SDO
XOUT
C15 0.1u
C14 10uF/10V(Tantal)
C16 0.1u
C17 10uF/10V(Tantal)
D1 1N4148
D2 1N4148
D3 1N4148
C10 10uF/10V(Tantal)
C11 0.01uF(103)
Y1 32.768KHZ
L7 TDK221
L8 TDK221
L9 TDK221
L10 TDK221
SCLK
SDO
CS
SDI
TO MAIN CIRCUIT CPU
GND Return
ICL7660
IC4
BOOST
VIN
OSC
LV
CAP+
GND
CAP-
VOUT
C24 0.1u
C25 10uF/10V(Tantal)
C22 100uF/16V(ELEC)
C23 10uF/16V(ELEC)
L6 TDK221
C21 0.1u
C20 10uF/10V(Tantal)
L5 TDK221
C26 0.1u
VD+
AGND
P/W Gnd
GND Return
SHIELD CASE
GND Return
Title
MW2 series ANALOG CIRCUIT (AMP, FILTER, A/D,Power)
Size A3
Document Number 6100-PMW-0400-A
Rev 00
Date: Monday, June 04, 2001
Sheet 3 of 5

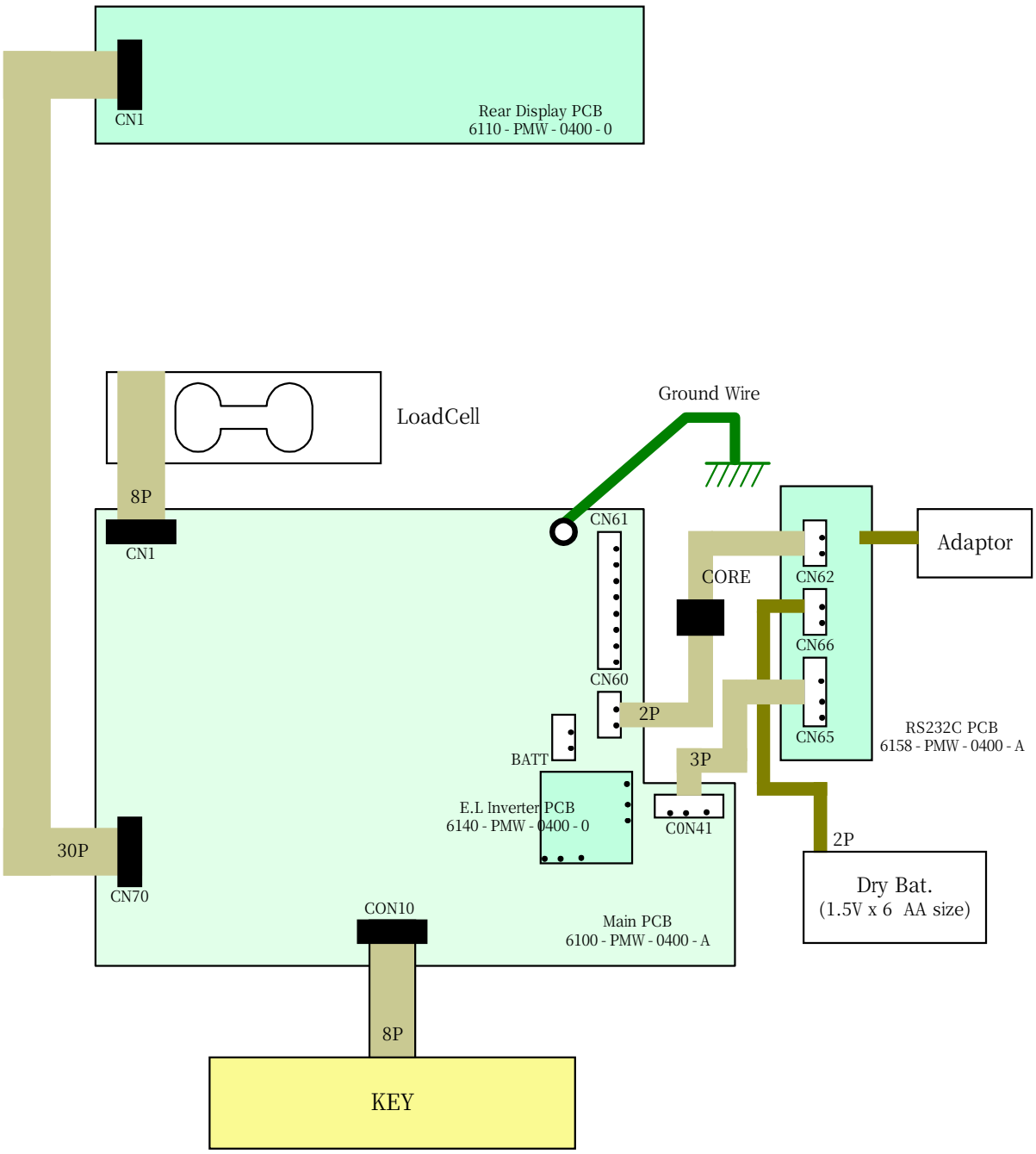

E.L INVERTER PCB
To EL Power
Vin
0.1u
C36
DISPLATY BACK LIGHT OPTION
Q30
A1266
IC31
S81350HG
IN
OUT
GND
R36
10k
R61
1k
C37
100uF/16V(Elec)
T30
01
02
E.L30
FROM MAIN CIRCUIT
EL ON/OFF
R37
100k
R38
100k
Q31
C3198
EL PCB
T30
02
01
Vin
ON/OFF
GND
LD30
LCD
COM0
COM1
COM2
COM3
(1)/-/(2)/(3)
ST/ZERO/NET/HOLD
*/LO/OK/HI
1F/G/E/D
1A/B/C/H
S1
2F/G/E/D
2A/B/C/H
S2
3F/G/E/D
3A/B/C/H
S3
4F/G/E/D
4A/B/C/H
S4
5F/G/E/D
5A/B/C/H
S5
6F/G/E/D
6A/B/C
%/DWT/KG
OZ/T/L/LB
PCS/MOM/CT/GN
BAT
Vdo+
0.1 u
0.1u
0.1u
C33
C34
C32
R35
10K
R31
30K
R33
R34
10K
10K
R32
1K
IC30
upd7225
_sync
Vlc1
Vlc2
Vlc3
Vss
Vdd
_sck
si
_cs
_busy
C/_D
reset
SCK
SI
CS
BUSY
C/D
FROM MAIN CIRCUIT CPU
s19
s18
(1)/-/(2)/(3)
s17
ST/ZERO/NET/HOLD
s16
*/LO/OK/HI
s15
BAT
s14
PCS/MOM/CT/GN
s13
s12
s11
OZ/T/L/LB
s10
%/DWT/KG
s9
6A/B/C
s8
6F/G/E/D
5A/B/C/H
5F/G/E/D
CN70
CON28C
REAR DISPLAY OPTION
VD+
C30
0.1u
C31
10uF/10V(Tantal)
R30
49.9K
TO CPU 12PIN
C35
1uF/50V(ELEC)
Title
MW2 Series DISPLAY CIRCUIT
Size
A3
Document Number
6100-PMW-0400-A
Rev
00
Date:
Monday, June 04, 2001
Sheet
4
of
5



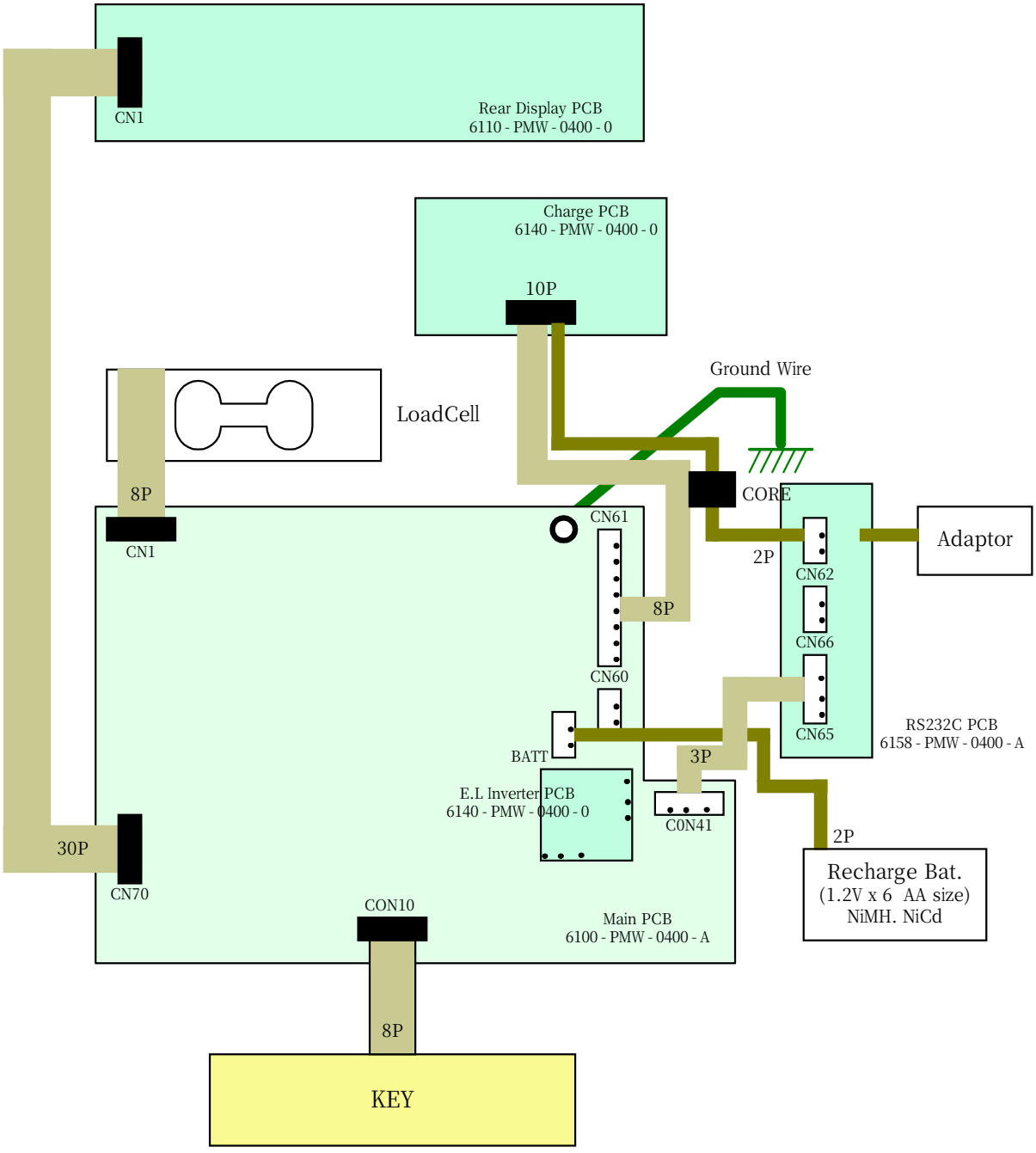
Title	MW2 series CHARGE CIRCUIT	
Size A3	Document Number 6140-PMW-0400-0	Rev 00
Date: Monday, June 04, 2001	Sheet 5 of 5	

C. Wiring Diagram

1. Without Recharge Option.

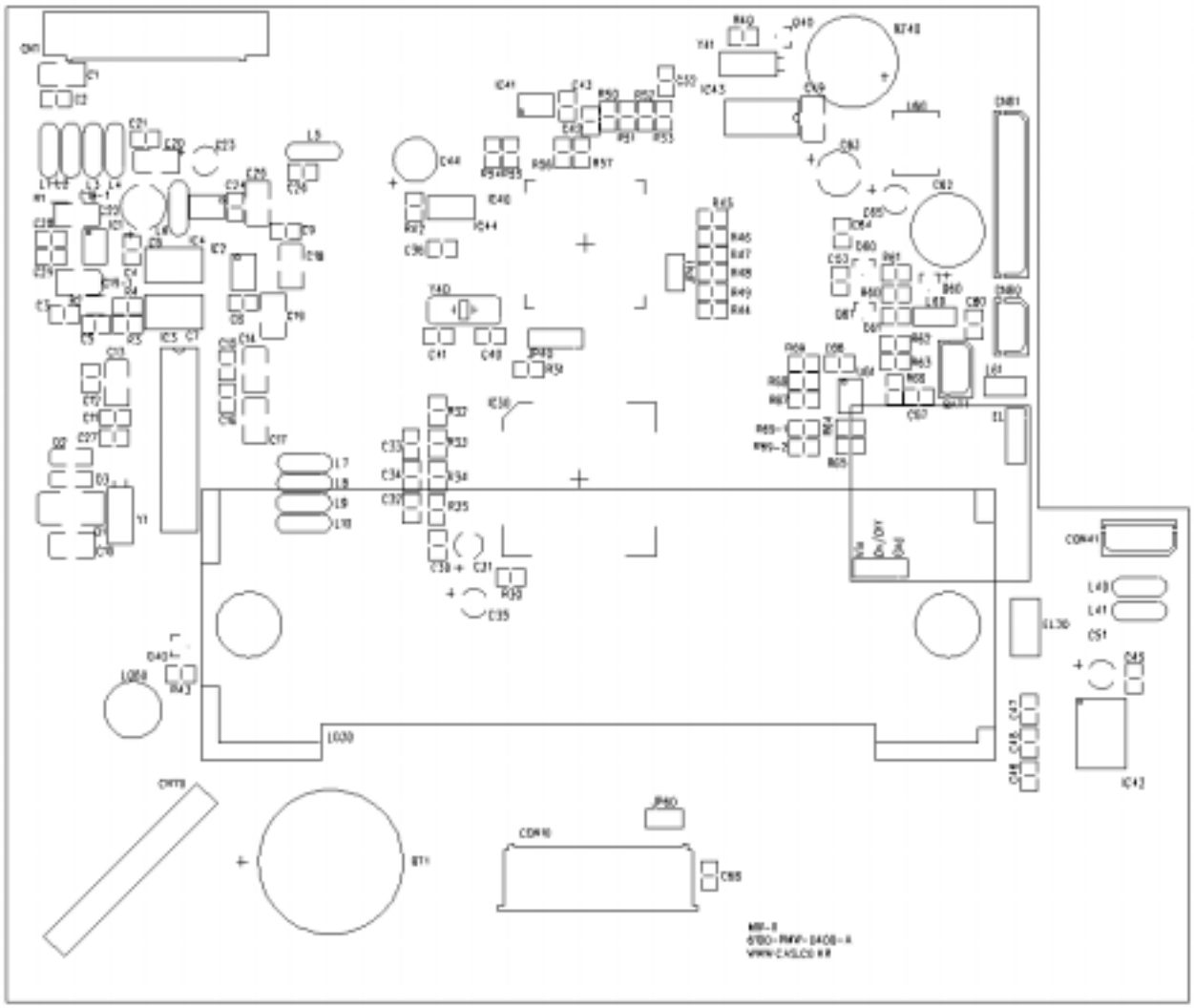


2. With Recharge Option

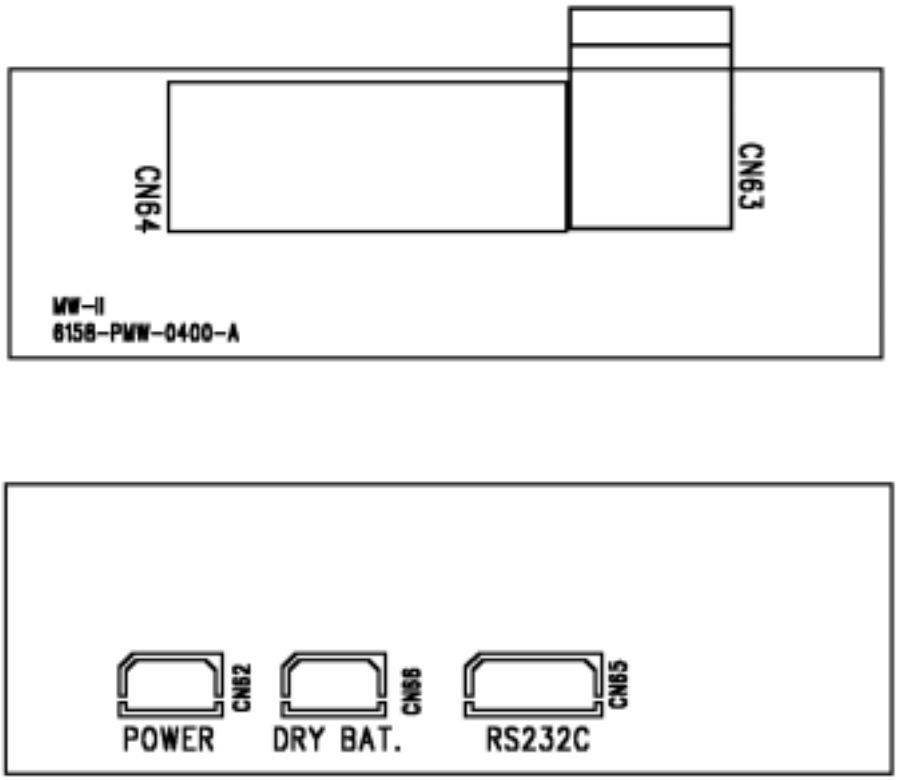


D. Parts Location

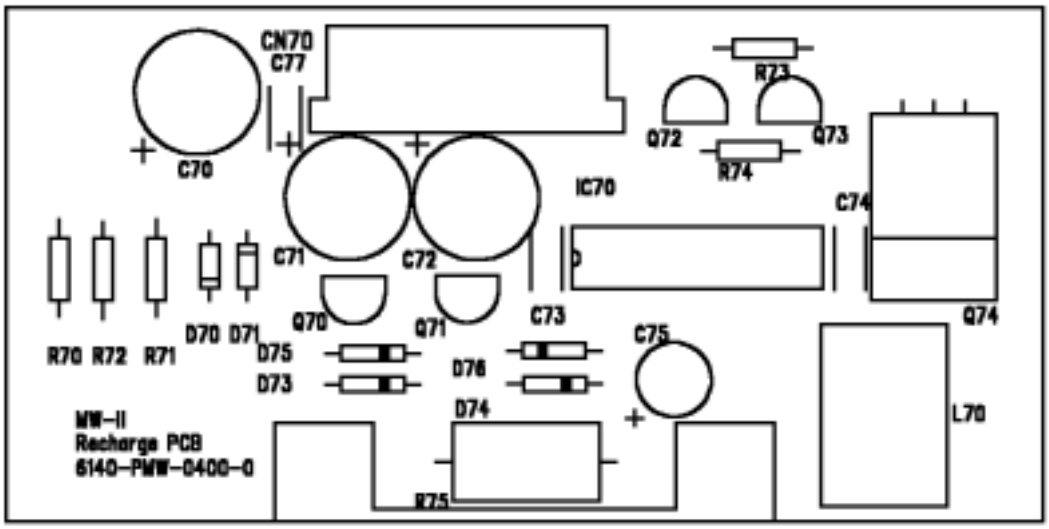
1. Main PCB Part Location



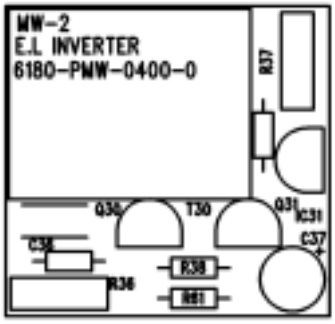
2. RS232C PCB Part Location



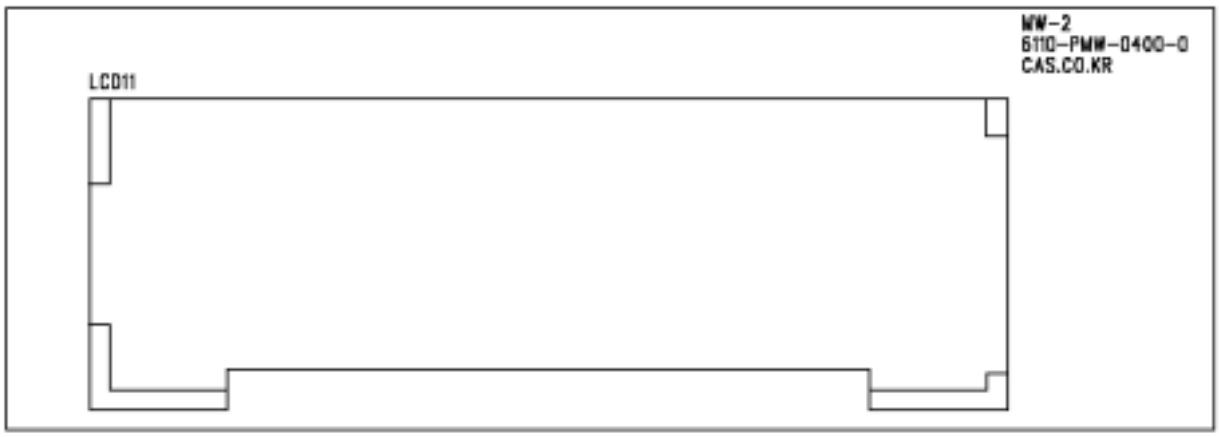
3. Recharge PCB Part Location



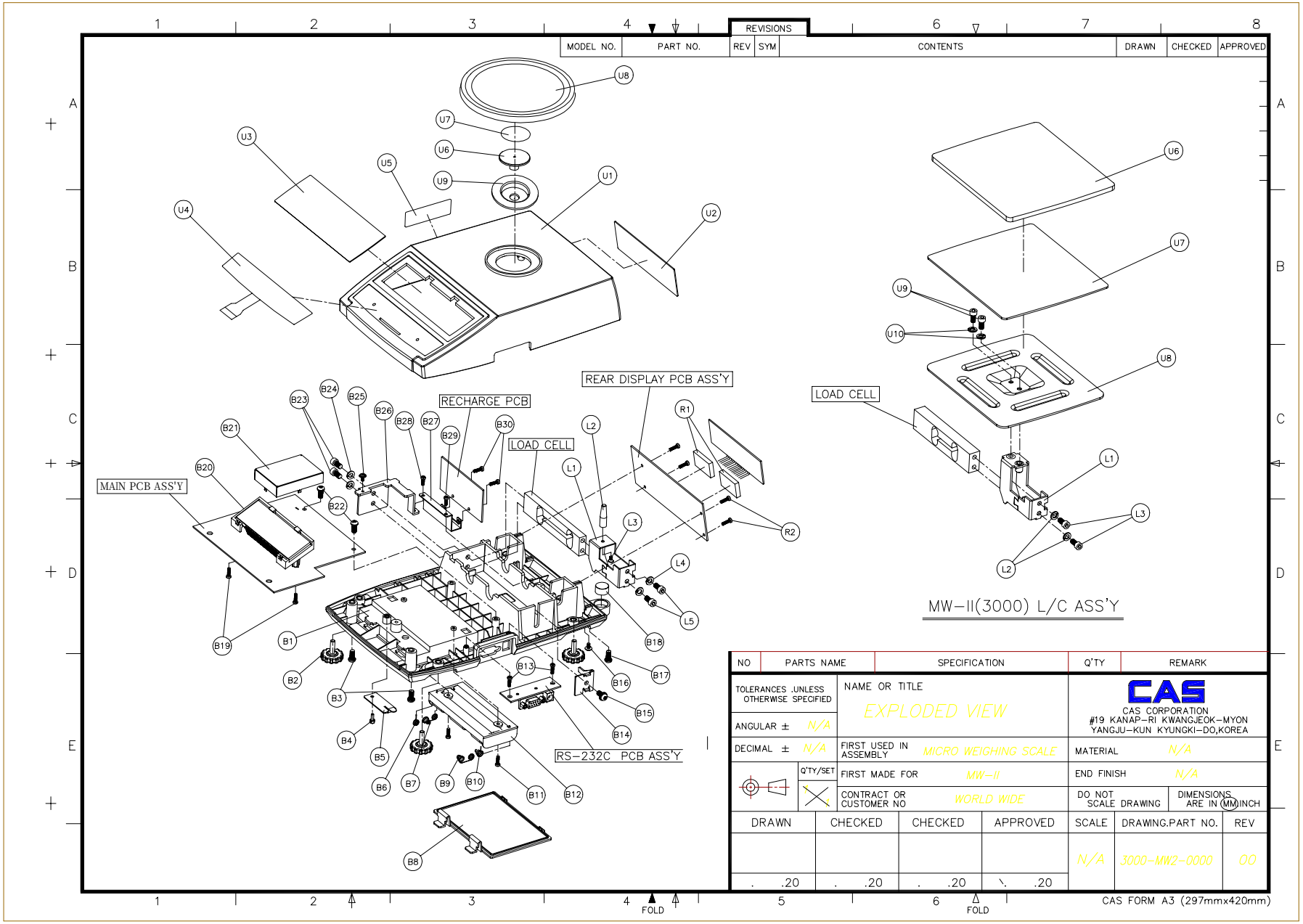
4. E.L Inverter PCB Part Location



5. Rear Display PCB Part Location



E. Exploded View



4. The Error Message

A. Error Message

Error	Reasons & Solutions	Note
C A L. E r	- Span calibrate the scale, if this error is still displayed, check EEPROM.	Calibration Error
r t c. E r	- Check Real Time Clock.	Real Time Clock Error
O L - L	- Check for platter or platform obstruction. - Sample weight is lower than standard weight in counting and percent mode. ※ Standard weight(MW -II 300) Counting mode : 2g Percent mode : 5g	Underload Error
O L - H	- Remove all items from platter and turn on the power.	Overload Error
I n i t ?	- If you want to initialize EEPROM, press the SET key.	EEPROM Initializing
L A c k	- Minimum unit weight is lower than 0.005g when you set sample in counting mode and percent mode.	Lack Unit Weight

B. Troubleshooting

1. " CAL. Er "

1) Go to calibration mode. **CAL** Switch is located in the battery cover at the bottom of the scale. While pressing the switch, turn on the power then you will go to calibration mode.
2) Span calibrate the scale on **" C.SPAN "** menu. Refer to Span Calibration on page 6.
3) Press the **MODE** key twice, the display shows **" C.trim "** .
4) When the display shows **" C.trim "** , press the **CAL** switch and **SET** key.
5) The display shows AD value, this value is flickering because it is not filtered. If it is not flickering, it means a failure of AD part.
6) Make sure that there is nothing on the platter and press the **TARE** key.
7) Place the weight of maximum capacity on the platter.
8) If the value is lower than 200.000, check the output of load cell. This value should be greater than 200.000.
9) Turn the power off and on. You will go to normal mode. If the display shows **" CAL. Er "** , check EEPROM.

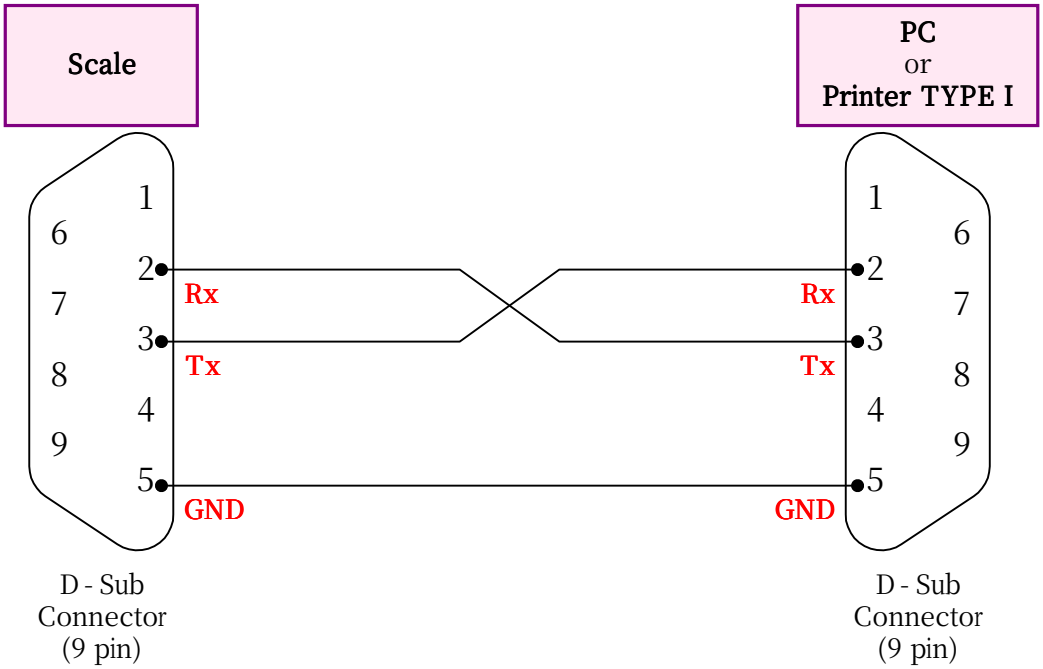
2. " Init ? "

1) If the display shows **" Init ? "** , press the **SET** key. If you press another key, EEPROM is not initialized and go to next step.
2) **" CAL.Er "** is displayed in 10 seconds.
3) Span calibrate the scale again. Turn the power off and on.
4) If the display shows still **" Init ? "** , check EEPROM.

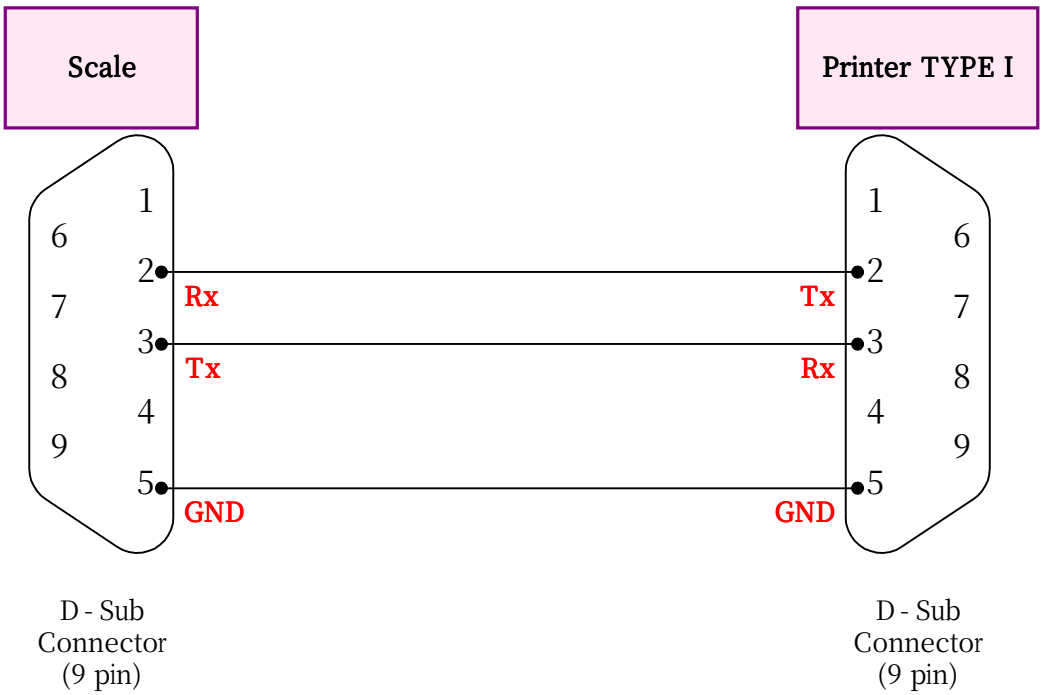
5. Serial Interface

A. RS232C connector

1. **Scale** ⇔ **PC** or **Printer Type I** (2:Rx, 3:Tx)



2. **Scale** ⇔ **Printer Type II** (2:Tx, 3:Rx)



B. Data Transmission Frame

PRNCON(3)	DATE(15)	SP(1)	TIME(8)	SP(1)	WEIGHT(10)	SP(1)	UNIT(3)	CR(1)	LF(1)

Total Length : 24~44 bytes

ITEM	Size(bytes)	DESCRIPTIONS
CR	1	- Carriage Return, 0x0D
LF	1	- Line Feed, 0x0A
SP	1	- Space, 0x20
PRNCON	0~3	**C1 C2 C3** - If you set P.conch to On in Setup menu, 3 bytes is transmitted. - If you select OFF, transmission is not performed. C1: 0x1B, C2: 0x21, C3: 0x30
DATE	14~15	**CR LF D0 D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 CR LF** - Date format is different depends on the setting of " P.PdAtE " in Setup menu. - If you select OFF, transmission is not performed. 2001/12/01 (14 bytes): CR LF '2' '0' '0' '1' '/' '1' '2' '/' '0' '1' CR LF Dec/01/2001 (15 bytes): CR LF 'D' 'e' 'c' '/' '0' '1' '/' '2' '0' '0' '1' CR LF
TIME	8	**T0 T1 T2 T3 T4 T5 T6 T7** - In the transmission. - " HH:MM:SS " 14: 24: 36 sec: '1' '4' ':' '2' '4' ':' '3' '6'
WEIGHT	10	**ST ':' SG G0 G1 G2 G3 G4 G5 G6** - ST : stability. 'W' (stable) or 'w' (unstable) - SG : sign. '-' (negative) or ' ' (positive, SP) - G0~G6 : weight , " Overload " or " Invalid " W: 128.35 : 'W' ':' SP SP '1' '2' '8' '.' '3' '5'
UNIT	1~3	**U0 U1 U2** - Unit weight : g, ct, oz, lb, tl, dwt, mom, gn, pcs., % U0: 'p', U1: 'c', U2: 's'

6. Parts list

A. ELECTRONIC PARTS

NO	MAT'L NEW CODE	PART NAME	SPECIFICATION	UNIT	Q'TY	LOCATION
	MAIN PCB ASS'Y	[240-M21-EMAP-UN01-01]				
1	6100-PMW-0400-B	MAIN PCB	6100-PMW-0400-B(MW-II)	EA	1	
2	6200-IS0-8951-A	IC (CPU)	P89C51RD2HBA	EA	1	IC40
3	6205-IS0-9346-A	IC(EEP-ROM)	CAT93C46S(SMD)	EA	1	IC41
4	6214-I00-5522-0	A/D CONVERTER	CS5522-AP(MW-300)	EA	1	IC3
5	6220-IS0-7805-0	IC(REGULATOR)	KA7805(D-PACK)	EA	1	U60
6	6224-I00-7225-0	IC(DRIVER)	UPD 7225G00	EA	1	IC30
7	6228-I00-8563-0	IC(TIMMER)	PCF8563P/F4	EA	1	IC43
8	6240-IS0-0062-0	IC(OP-AMP)	NJM062-JRC	EA	1	U61
9	6240-IS0-0177-0	IC(OP-AMP)	OP-177GS	EA	2	IC1,2
10	6240-IS0-0232-0	IC(LINE DRIVEER)	ICL232CBE(SMD)	EA	1	IC42
11	6242-IS0-7660-0	IC	TC-7660ICL(S)	EA	1	IC4
12	6271-I00-7180-0	SIDAC(VARISTOR)	INR7D180	EA	5	RV1,2,3,4,5
13	6281-I00-1298-0	CHIP-TRANSISTOR	KTA1298Y	EA	2	Q60,40
14	6281-I00-2222-0	CHIP TRANSISTOR	2N2222AS	EA	1	Q61
15	6294-ICP-0184-0	CHIP DIODE	KDS184	EA	2	D40,60
16	6294-ISW-4148-A	SWITCHING-DIODE	PMLL4148L(LP-CONT')	EA	3	D1,2,3
17	6527-ID3-0300-0	CHIP RE' 1/10W	RR1220P-303D(30 kΩ)	EA	3	R64,67,31
18	6527-ID3-0499-0	CHIP RE' 1/10W	RR1220P-4992D(49.9K)	EA	4	R3,4,30,69-2
19	6527-IJ0-2200-0	CHIP RE' 1/10W	FTR 0805 221 JR(220)	EA	1	R70
20	6527-IJ3-0010-0	CHIP RE' 1/10W	FTR 0805 102 JR(1K)	EA	5	R32,50,51,52,53
21	6527-IJ3-0020-0	CHIP RE' 1/10W	FTR 0805 202 JR(2K)	EA	1	R61
22	6527-IJ3-0047-0	CHIP RE' 1/10W	FTR 0805 472 JR(4.7K)	EA	4	R54,55,56,57
23	6527-IJ3-0100-0	CHIP RE' 1/10W	FTR 0805 103 JR(10K)	EA	6	R43,40,60,33,34,35
24	6527-IJ3-0200-0	CHIP RE' 1/10W	FTR 0805 203 JR(20K)	EA	2	R65,71
25	6527-IJ3-0470-0	CHIP RE' 1/10W	FTR 0805 473 JR(47K)	EA	2	R68,69-1
26	6527-IJ3-1000-0	CHIP RE' 1/10W	FTR 0805 104 JR(100K)	EA	10	R44,45,46,47,48,49,62,63,66,69
27	6540-LB3-1200-0	PRECISOIN RESISTOR	FLBY 120K	EA	2	R1,2
28	6670-T00-0470-0	INDUCTANCE	470μH	EA	2	L60,61
29	6702-CAP-0106-0	CHIP TANTAL	10MCS 106 MB TER	EA	12	C49,1,20,25,18-1,18,19,19-1,13,14,10,17
30	6704-C25-0330-0	ELECTRIC-CONDENSER	330UF/25V	EA	1	C62
31	6706-C16-0010-0	CHIP ELECTRIC CONDENSER	10uF/16V	EA	5	C51,65,31,23,69
32	6706-C16-0100-0	CHIP ELECTRIC CONDENSER	100uF/16V Φ6.3	EA	2	C22,63
33	6706-C50-0001-0	CHIP ELECTRIC CONDENSER	1uF/50V Φ4.0	EA	1	C35
34	6712-CHP-0103-0	CHIP CONDENSER	CL21F 103 KBNC	EA	1	C11
35	6712-CHP-0104-0	CHIP CONDENSER	CL21F 104 KBNC	EA	32	C2,8,9,12,15,16,21,24,26,27,28,29,30,32,33,34,36,42,43,45,46,47,48,52,53,60,61,64,66,67,68,
36	6712-CHP-0200-0	CHIP CONDENSER	CL21C 200 JBNC(20PF)	EA	2	C40,41

NO	MAT'L NEW CODE	PART NAME	SPECIFICATION	UNIT	Q'TY	LOCATION	
37	6712-CHP-0300-0	CHIP CONDENSER	CL21F 300 JBNC	EA	1	C5	
38	6720-CAP-0105-A	POLYESTER-CONDENSER	1UF/63V-J(BOX)	EA	2	C6,7	
39	6800-F00-0220-0	EMI FILTER	220PF(TDK)	EA	12	L1,2,3,4,5,6,7,8,9,10,40,41	
40	7002-Z00-0070-0	PIEZO BUZZER	EFM-250A	EA	1	BZ40	
41	7010-ZK0-3276-0	CRYSTAL	32.768KHZ	EA	2	Y1,41	
42	7010-ZM0-1105-A	CRYSTAL	11.0592 MHZ(ATS-49/U)	EA	1	Y40	
43	7212-D00-9758-A	LCD(MW-2)	9758A(TRANSFLECTIVE)	EA	1	LD30	
44	7520-P00-2032-A	BATTERY	CR2032-3V(PIN TYPE)	EA	1	BT1	
45	7600-STA-1902-0	TACT S/W	11902(DJTA-1102)	EA	1	SW41	
46	7805-CCN-6702-0	CONNECTOR(WAFER)	5267-02	EA	1	CN67	
47	7805-CCN-6703-0	CONNECTOR(WAFER)	5267-03	EA	1	CN41	
48	7805-CCN-6708-0	CONNECTOR(WAFER)	5267-08	EA	1	CN61	
49	7807-CFP-0008-0	FPC-CONNECTOR	FCZ254-8S	EA	1	CN1	
50	7807-CFP-0008-A	FPC-CONNECTOR	FCZ254-8R	EA	1	CON10	
51	7821-CJM-0002-0	JUMPER	2PIN	SET	1	JP41	
52	7821-CJM-0003-0	JUMPER	3PIN	SET	1	JP40	
53	7806-YDA-0030-0	CONNECTOR(WAFER)	YDAW200-30(MW-2)	EA	1		**Option(D)**
54	7222-D00-0001-0	EL BACK LIGHT	SPEL-01-001H(MW-2)	EA	1		**Option(B)**
55	7232-DRG-0004-0	LED LAMP	Φ5-(R,G) BL-BVT 204(ANODE)	EA	1		**Option(R)**
56	2090-H00-0007-0	LED HOLDER	10mm*6mm*5mm(MW-2)	EA	1		**Option(R)**
	RS232C PCB ASS'Y	[240-M21-ERSP-UN01-01]					
1	6158-PMW-0400-B	RS232C PCB	6158-PMW-0400-B(MW-II)	EA	1		
2	7610-STA-0302-0	ADAPTOR JACK	HS-302	EA	1	CN63	
3	7805-CCN-6703-0	CONNECTOR(WAFER)	5267-03	EA	1	CN65	
4	7805-CCN-6704-0	CONNECTOR(WAFER)	5267-04	EA	1	CN66	
5	7812-C00-0009-B	D-SUB CONNECTOR	RD9S	EA	1	CN64	
6	7840-W00-0905-0	CONNECTOR WIRE	3P*3P*50mm(MW-2)	EA	1		
	POWER ASS'Y	[240-M21-EPWP-UN01-01]					
1	7840-W00-1216-0	CONNECTOR WIRE	8P*4P*160mm-CORE(MW-2)	EA	1		
	7840-W00-2221-0	CONNECTOR WIRE	10P*8P*4P*210mm-CORE	EA	1		**Option(R)**
2	7860-GND-0210-0	GROUND WIRE	1P*210mm(MW-2)	EA	1		
3	7860-GND-0040-0	GROUND WIRE	1P*40mm(MW-2)	EA	1		
	E.L INVERTER PCB ASS'Y	[240-M25-EELP-UN01-01]					**Option(B)**
1	6180-PMW-0400-0	E.L INVERTER PCB	6180-PMW-0400-0	EA	1		
2	6220-I00-1350-0	IC(REGULATOR)	S-81350 HG	EA	1	IC31	
3	6280-I00-1266-0	TRANSISTOR	2SA1266	EA	1	Q30	
4	6280-I00-1815-0	TRANSISTOR	2SC1815A (3198)	EA	1	Q31	
5	6506-MF3-0010-0	RESISTOR 1/8W	MFR 1K (±1%)-F	EA	1	R61	
6	6506-MF3-0100-0	RESISTOR 1/8W	MFR 10K (±1%)-F	EA	1	R36	
7	6506-MF3-1000-0	RESISTOR 1/8W	MFR 100K (±1%)-F	EA	2	R37,38	
8	6704-C25-0100-0	ELECTRIC-CONDENSER	100UF/25V	EA	1	C37	

NO	MAT'L NEW CODE	PART NAME	SPECIFICATION	UNIT	Q'TY	LOCATION
9	6710-CAP-0104-0	CERAMIC-CONDENSER	0.1UF/25V(50V)	EA	1	C36
10	7244-D00-0005-0	E.L INVERTER	SPEL-I-5C(NC,BI,CI-2001B)	EA	1	T30
11	7810-C00-9295-0	CONNECTOR	FW0254-30	EA	0.2	
	RECHARGE PCB ASS'Y [240-M25-ERCP-UN01-01]					**Option(R)**
1	6140-PMW-0400-0	RECHARGE PCB	6140-PMW-0400-0	EA	1	
2	6232-I00-0713-0	IC	MAX713CPE	EA	1	IC70
3	6273-I00-9530-0	MOSFET	IRF9530	EA	1	Q74
4	6280-I00-1266-0	TRANSISTOR	2SA1266	EA	1	Q73
5	6280-I00-1815-0	TRANSISTOR	2SC1815A (3198)	EA	2	Q70,71
6	6280-I00-1959-0	TRANSISTOR	2SC1959	EA	1	Q72
7	6291-IP0-5819-0	POWER DIODE	1N5819	EA	4	D73,74,75,76
8	6294-ISW-4148-0	SWITCHING-DIODE	1N4148P	EA	2	D70,71
9	6505-MB0-0500-0	RESISTOR 1/4W	MFR 50Ω(±0.1%)-B	EA	2	R71,73
10	6512-CJ0-0006-6	RESISTOR 2W	CFR 0.66Ω (±5%)	EA	1	R75
11	6515-CJ3-0010-0	RESISTOR 1/4W	CFR 1K (±5%)	EA	1	R74
12	6515-CJ3-0020-0	RESISTOR 1/4W	CFR 2K (±5%)	EA	1	R70
13	6515-CJ3-1000-0	RESISTOR 1/4W	CFR 100K (±5%)	EA	1	R72
14	6670-T00-0220-0	INDUCTANCE	220uH	EA	1	L70
15	6704-C16-0100-0	ELECTRIC-CONDENSER	100uF/16V	EA	1	C75
16	6704-C25-0330-0	ELECTRIC-CONDENSER	330UF/25V	EA	3	C70,71,76
17	6704-C25-0470-0	ELECTRIC-CONDENSER	470uF/25V	EA	1	C72
18	6710-CAP-0104-0	CERAMIC-CONDENSER	0.1UF/25V(50V)	EA	1	C77
19	6710-CAP-P221-0	CERAMIC-CONDENSER	220PF/50V	EA	1	C74
20	6720-CAP-0104-A	POLYESTER-CONDENSER	0.1UF/63V-J(BOX)	EA	1	C73
21	7809-CAL-0010-0	CONNECTOR(WAFER)	LAL 0640-10	EA	1	CN70
	REAR DISPLAY PCB ASS'Y [240-M24-ERDP-UN01-01]					**Option(D)**
1	2631-A00-0002-0	VFD CUSHION	30*20*6T	EA	2	
2	6110-PMW-0400-A	DISPLAY PCB	6110-PMW-0400-A	EA	1	
3	7212-D00-9758-0	LCD	9758A-R/F(MW-II)	EA	1	LCD11
4	7806-YDW-0030-0	CONNECTOR(WAFER)	YDW200-30(MW-2)	EA	1	CN1
5	7830-W00-3023-0	REAR DISPLAY WIRE	30P*30P*230(MW-2)	EA	1	

B. MECHANICAL PART

MODEL : MW-II(300) REV:01

NO	MAT'L NEW CODE	PART NAME	SPECIFICATION	UNIT	Q'TY	LOCATION	
	ASS'Y UPPER COVER (240-M21-MUPC-UN01-01)						
1	2000-A00-0100-0	UPPER COVER	ABS 750 190*291*55	EA	1		
	2000-A00-0117-0	UPPER COVER	ABS 750 190*291*55(CE용)	EA	1		**CE**
2	2050-MW2-0000-0	DISPLAY COVER	MW-II (후면)	EA	1		
	2050-MW2-0333-5	DISPLAY COVER	MW-II (300g) 영공 REAR	EA	1		**Option(D)**
3	2050-MW2-0333-4	DISPLAY COVER	MW-II (300g) 영공	EA	1		
	2050-MW2-0333-5	DISPLAY COVER	MW-II (300g) 영공 충전	EA	1		**Option(R)**
4	2100-MW2-0000-0	MEMBRANE S/W	LEXAN MW-II	EA	1		
5	1810-MW0-0033-2	SPEC PLATE	MW-120,1200,II 공용 영공	EA	1		
6	1210-A00-0020-0	PLATFORM	Φ35*Φ10*15	EA	1		
7	2631-A00-0021-A	DOUBLE TAPE	Φ34	EA	1		
8	1000-A00-0115-0	TRAY	Φ130*0.5t	EA	1		
9	2000-A00-0108-0	L/C HOLE COVER	Φ59*Φ39.6*11.5	EA	1		
10	1590-A00-0036-0	CONDUCTIVE SPRING	Φ12*Φ8*4*0.3t	EA	1		
	ASS'Y L/C BRACKET (240-M21-MLCB-UN01-01)						
1	1050-A00-0038-0	L/C BRACKET	AL 1.2t,61*22*36	EA	1		
2	1210-A00-0089-0	LOAD SHAFT	AL Φ7.3*19	EA	1		
3	1501-A00-0306-0	MACHINE SCREW(FH)	M3*6	EA	1		
4	1551-MSU-0500-0	WASHER(SPR)	Φ5-SUS	EA	2		
5	1530-MSU-0510-0	WRENCH BOLT	M5*10-SUS	EA	2		
	ASS'Y BODY (240-M21-MBOD-UN01-01)						
1	2000-A00-0099-A	BODY	ABS750 190*291*45	EA	1		
	2000-A00-0118-0	BODY	ABS750 190*291*45(CE용)	EA	1		**CE**
2	2008-A00-0002-0	FOOT	PVC 25*6	EA	4		
3	1502-A00-0408-0	MACHINE SCREW(PH)	M4*8	EA	2		
4	1265-A00-0001-0	SEALING BOLT	M3*0.5*5(BsBn)	EA	1		
5	1000-A00-0202-0	SEALING PLATE	SUS 42*17*1t	EA	1		
6	1590-A00-0032-0	BATTERY SPRING-A	φ9*φ0.6*3 (MW-II)	EA	1		
7	1590-A00-0033-0	BATTERY SPRING-B	φ9*φ0.6*6*3 (MW-II)	EA	1		
8	2000-A00-0101-0	BATTERY COVER	ABS750 119.6*75.6*2t	EA	1		
9	1590-A00-0034-0	BATTERY SPRING-C	φ9*φ0.6*3*6 (MW-II)	EA	1		
10	1590-A00-0035-0	BATTERY SPRING-D	φ9*φ0.6*6 (MW-II)	EA	1		
11	1512-A00-0306-0	TAPPING SCREW(PH)-2	3*6	EA	2		
12	2013-A00-0005-A	BATTERY HOLDER	HDPE	EA	1		
13	1512-A00-0310-0	TAPPING SCREW(PH)-2	3*10	EA	2		
14	1030-A00-0148-0	LIMIT BRACKET	SPC 1.5t, 30*14*15	EA	1		
15	1503-A00-0512-0	MACHINE SCREW(WPH)	M5*12	EA	1		
16	1503-MPN-0310-0	MACHINE SCREW(WPH)	M3*10	EA	1		
17	1512-A00-0420-0	TAPPING SCREW(PH)-2	4*20	EA	2		
18	2022-A00-0005-0	W/L GAUGE	Φ15*8(RED)	EA	1		

NO	MAT'L NEW CODE	PART NAME	SPECIFICATION	UNIT	Q'TY	LOCATION	
19	1512-A00-0310-0	TAPPING SCREW(PH)-2	3*10	EA	2		
20	2000-A00-0107-A	LCD BRACKET	ABS750	EA	1		
21	1040-A00-0006-0	SHIELD CASE	SPTE 0.5t,63*45*13.5	EA	1		
22	1512-A00-0412-0	TAPPING SCREW(PH)-2	4*12	EA	2		
23	1530-MSU-0515-0	WRENCH BOLT(WPH)	M5*15	EA	2		
24	1503-MPN-0304-0	MACHINE SCREW(WPH)	M3*4	EA	1		
25	1030-A00-0150-0	L/C PLATE	SPC 2t	EA	1		
26	1030-A00-0152-0	PCB BRACKET	SPC 1t	EA	1		
27	1502-A00-0305-0	MACHINE SCREW	M3*5	EA	1		
28	1512-A00-0310-0	TAPPING SCREW(PH)-2	3*10	EA	1		
29	1503-A00-0310-0	MACHINE SCREW	M3*10	EA	2		
30	7840-W00-0224-0	CONNECTOR WIRE	2P*70*170(MW-II)	EA	1		
31	2631-A00-0023-0	BATTERY COVER CUSHION	80*26*2t(EVA)	EA	1		
	ASS'Y C/T BOX (240-M21-MCTB-UN01-01)						
1	7510-P12-1122-0	AC ADATOR	110/220-12V/300mA	EA	1		
	7510-P12-1122-G	AC ADATOR	110/220-12V/850mA	EA	1		**Option(R)**
	7510-P12-0220-H	AC ADATOR	220V 12V/850mA	EA	1		**CE**
2	9100-MW2-0100-0	C/T BOX-1	MW-2	EA	1		
3	9202-APE-0003-0	POLY ETHYLENE PAD	268*200*110	EA	1		
4	9203-APE-0001-0	POLY ETHYLENE BOX	345*208	EA	2		
5	9310-A00-0003-0	MANUAL POLY BAG	170*250*0.05t	EA	1		
6	9302-A00-0003-0	TRAY POLY BAG	200*250*0.05t	EA	1		
7	9302-A00-0005-A	SET POLY BAG	270*350*0.04t	EA	1		
8	9400-A00-0046-0	SILICAGEL	10g	EA	2		
9	7520-P00-0170-0	NI-MH BATTERY	GP130AAHC(1.2V)	EA	6		**Option(R)**
	LOAD CELL ASS'Y (LLA-BMW-301G-0000-0N)		MW-2 L/C(200/300g)	EA	1		

MODEL : MW-II(3000) REV:01

NO	MAT'L NEW CODE	PART NAME	SPECIFICATION	UNIT	Q'TY	LOCATION	
	ASS'Y UPPER COVER (240-M23-MUPC-UN01-01)						
1	2000-A00-0100-0	UPPER COVER	ABS 750 190*291*55	EA	1		
	2000-A00-0117-0	UPPER COVER	ABS 750 190*291*55(CE용)	EA	1		**CE**
2	2050-MW2-0000-0	DISPLAY COVER	MW-II (후면)	EA	1		
	2050-MW2-3033-5	DISPLAY COVER	MW-II (3kg) 영공 REAR	EA	1		**Option(D)**
3	2050-MW2-3033-4	DISPLAY COVER	MW-II (3kg) 영공	EA	1		
	2050-MW2-3033-6	DISPLAY COVER	MW-II (3kg) 영공 충전	EA	1		**Option(R)**
4	2100-MW2-0000-0	MEMBRANE S/W	LEXAN MW-II	EA	1		
5	1810-MW0-0033-2	SPEC PLATE	MW-120,1200,II 공용 영공	EA	1		
6	1000-A00-0203-0	TRAY	SUS 0.5t,158*145*0.5t	EA	1		
7	1050-A00-0039-0	PLATFORM	AL 2t,156*143	EA	1		
	ASS'Y L/C BRACKET (240-M23-MLCB-UN01-01)						
1	1030-A00-0147-0	L/C BRACKET	SPC 2t,65*24*53	EA	1		
2	1551-MSU-0500-0	WASHER(SPR)	Φ5-SUS	EA	2		
3	1530-MSU-0510-0	WRENCH BOLT	M5*10-SUS	EA	2		
	ASS'Y BODY (240-M21-MBOD-UN01-01)						
1	2000-A00-0099-A	BODY	ABS750 190*291*45	EA	1		
	2000-A00-0118-0	BODY	ABS750 190*291*45(CE용)	EA	1		**CE**
2	2008-A00-0002-0	FOOT	PVC 25*6	EA	4		
3	1502-A00-0408-0	MACHINE SCREW(PH)	M4*8	EA	2		
4	1265-A00-0001-0	SEALING BOLT	M3*0.5*5(BsBn)	EA	1		
5	1000-A00-0202-0	SEALING PLATE	SUS 42*17*1t	EA	1		
6	1590-A00-0032-0	BATTERY SPRING-A	φ9*φ0.6*3 (MW-II)	EA	1		
7	1590-A00-0033-0	BATTERY SPRING-B	φ9*φ0.6*6*3 (MW-II)	EA	1		
8	2000-A00-0101-0	BATTERY COVER	ABS750 119.6*75.6*2t	EA	1		
9	1590-A00-0034-0	BATTERY SPRING-C	φ9*φ0.6*3*6 (MW-II)	EA	1		
10	1590-A00-0035-0	BATTERY SPRING-D	φ9*φ0.6*6 (MW-II)	EA	1		
11	1512-A00-0306-0	TAPPING SCREW(PH)-2	3*6	EA	2		
12	2013-A00-0005-A	BATTERY HOLDER	HDPE	EA	1		
13	1512-A00-0310-0	TAPPING SCREW(PH)-2	3*10	EA	2		
14	1030-A00-0148-0	LIMIT BRACKET	SPC 1.5t, 30*14*15	EA	1		
15	1503-A00-0512-0	MACHINE SCREW(WPH)	M5*12	EA	1		
16	1503-MPN-0310-0	MACHINE SCREW(WPH)	M3*10	EA	1		
17	1512-A00-0420-0	TAPPING SCREW(PH)-2	4*20	EA	2		
18	2022-A00-0005-0	W/L GAUGE	Φ15*8(RED)	EA	1		
19	1512-A00-0310-0	TAPPING SCREW(PH)-2	3*10	EA	2		
20	2000-A00-0107-A	LCD BRACKET	ABS750	EA	1		
21	1040-A00-0006-0	SHIELD CASE	SPTE 0.5t,63*45*13.5	EA	1		
22	1512-A00-0412-0	TAPPING SCREW(PH)-2	4*12	EA	2		
23	1530-MSU-0515-0	WRENCH BOLT(WPH)	M5*15	EA	2		
24	1503-MPN-0304-0	MACHINE SCREW(WPH)	M3*4	EA	1		
25	1030-A00-0150-0	L/C PLATE	SPC 2t	EA	1		
26	1030-A00-0152-0	PCB BRACKET	SPC 1t	EA	1		

NO	MAT'L NEW CODE	PART NAME	SPECIFICATION	UNIT	Q'TY	LOCATION	
27	1502-A00-0305-0	MACHINE SCREW	M3*5	EA	1		
28	1512-A00-0310-0	TAPPING SCREW(PH)-2	3*10	EA	1		
29	1503-A00-0310-0	MACHINE SCREW	M3*10	EA	2		
30	7840-W00-0224-0	CONNECTOR WIRE	2P*70*170(MW-II)	EA	1		
31	2631-A00-0023-0	BATTERY COVER CUSHION	80*26*2t(EVA)	EA	1		
	ASS'Y C/T BOX (240-M21-MCTB-UN01-01)						
1	7510-P12-1122-0	AC ADATOR	110/220-12V/300mA	EA	1		
	7510-P12-1122-G	AC ADATOR	110/220-12V/850mA	EA	1		**Option(R)**
	7510-P12-0220-H	AC ADATOR	220V 12V/850mA	EA	1		**CE**
2	9100-MW2-0100-0	C/T BOX-1	MW-2	EA	1		
3	9202-APE-0003-0	POLY ETHYLENE PAD	268*200*110	EA	1		
4	9203-APE-0001-0	POLY ETHYLENE BOX	345*208	EA	2		
5	9310-A00-0003-0	MANUAL POLY BAG	170*250*0.05t	EA	1		
6	9302-A00-0003-0	TRAY POLY BAG	200*250*0.05t	EA	1		
7	9302-A00-0005-A	SET POLY BAG	270*350*0.04t	EA	1		
8	9400-A00-0046-0	SILICAGEL	10g	EA	2		
9	7520-P00-0170-0	NI-MH BATTERY	GP130AAHC(1.2V)	EA	6		**Option(R)**
	LOAD CELL ASS'Y (LLA-BMW-302G-0000-0N)		MWN L/C(2kg/3kg)	EA	1		