# MAINTENANCE MANUAL

## AXM SERIES

## CONTENTS



OCT 2009 REV 2

*Specifications and Function Subject to Change without Notice*

## 1. INTRODUCTION

The AXM series is designed and programmed according to the OIML R-76 Class III requirements.

This scale is sealed to prevent unauthorized access to internal parts. Ender users should be advised not to undertake any trouble shooting except those listed on the operation manual.

This maintenance manual contains of certain information that may result in fraudulent use. Do not release any part of this manual to any end users or un-authorized persons.

The internal mini jumper should be so set to prevent un-authorized settings or alternations.

Should a load cell has been replaced, make sure that the protection devices are properly set.

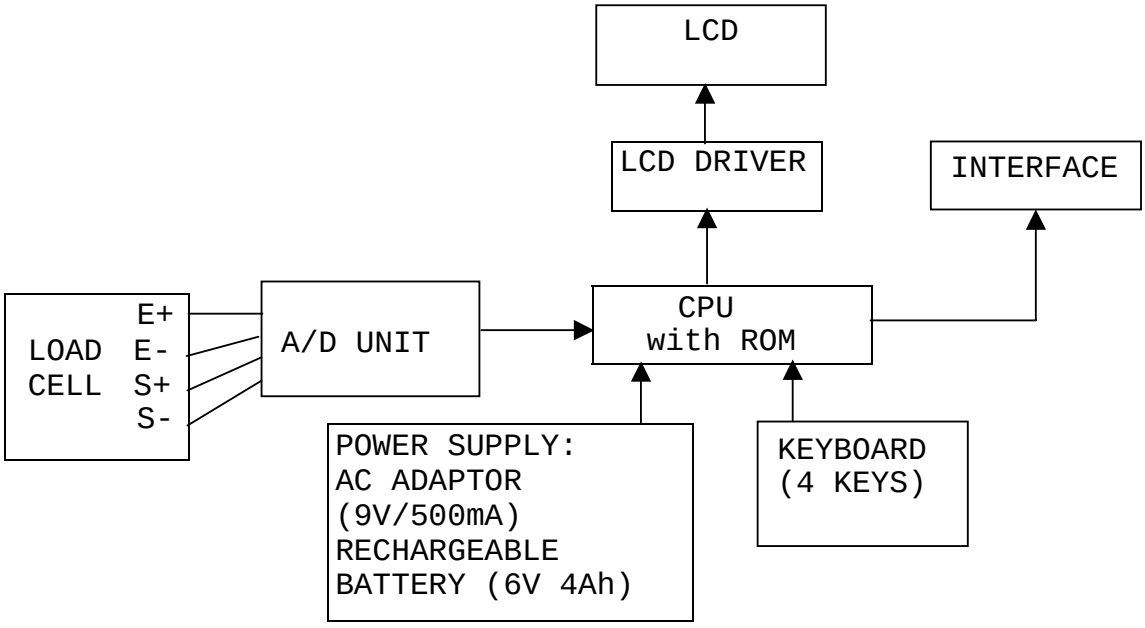
After servicing, it is necessary to go through all tests and procedures to ensure the scale meets all the meteorological and approval requirements.

Here are some features of the AXM series

1. Designed to meet OIML-R76 class III requirements.
2. Zero Indicator.
3. Net Indicator.
4. Negative Value Indicator.
5. Auto Tare Function.
6. Power on Zero Function.
7. Manual Zero Function.
8. Extended Display Function.
9. Auto Power Saving Function.
10. Metric/Avoirdupois Conversion Function.
11. Low battery warning signal.
12. 2 points Calibration.
13. Mini jumper to prevent end-user calibration.
14. Optional EL backlights.
15. Optional RS232C interface.
16. Optional Rear Display
17. Built-in rechargeable battery operated.
18. Battery operating time: 200 hours plus after charged.

## 2. SPECIFICATION

### 2.1 SYSTEM BLOCK DIAGRAM

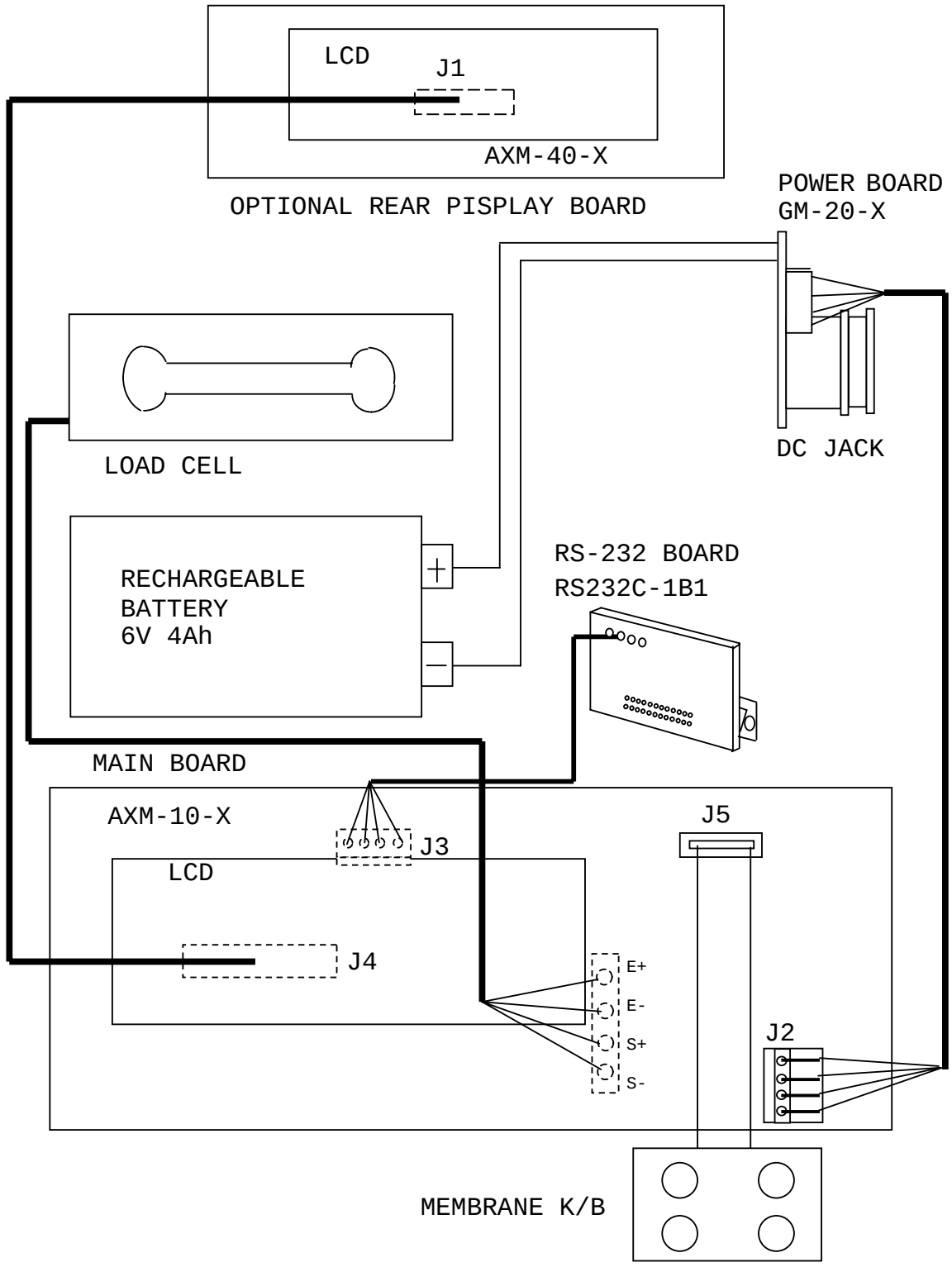



**Description:**
When a mass is placed on the platform, the load of the article is applied to the load cell inside it.

The resistance to the excitation current in the strain gauge will then changed and the analog output signal varies.

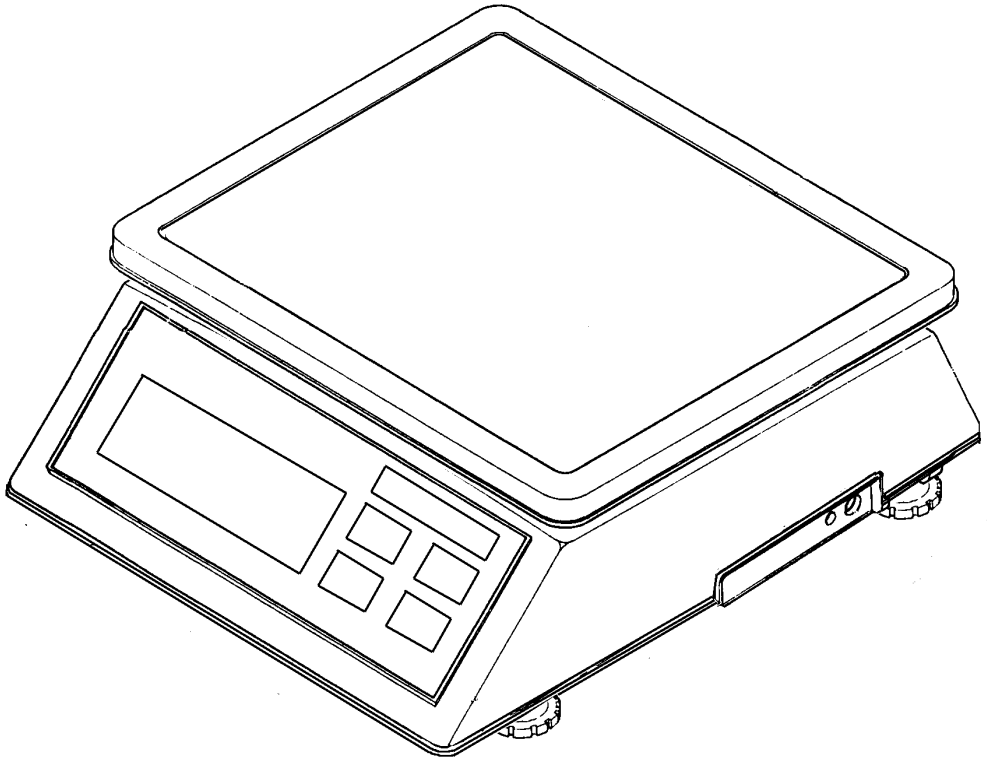
It is amplified and digitized continuously by the A/D converter into a digital signal. Subsequently, the resulting count is processed and managed by the CPU. The CPU refers to the instructions from the keyboard, and then conveys the output data to LCD driver, which formats the data into readout on the display panels.

## 2.2 PHYSICAL LAYOUT OF ELECTRICAL CONNECTION



## 2.3 GENERAL SPECIFICATION

### 2.3.1 Overall View



### 2.3.2 Dimension:

Platter size：250 x 215mm
Overall size：250(W) x 285(D) x 105(H)mm

### 2.3.3 Model Specifications

| Model Number | Capacity (Max) | Division (e) |
|---|---|---|
| AXM-1500 | 1500g | 0.5g |
| AXM-3000 | 3000g | 1g |
| AXM-6000 | 6000g | 2g |
| AXM-15K | 15kg | 0.005kg |
| AXM-30K | 30kg | 0.01kg |
| SOFTWARE NUMBER | CE019 | |
| Approval Class | III | |
| Maximum Tare Range | 1/3 Max -1e | |
| Power on Zero Range | ±10% Max | |
| Manual Zero Range | ±2% Max | |
| Min. Load | 20e | |
| Operation Environment | $0^{o}$~$40^{o}$C ($32^{o}$~$104^{o}$F), Non-condensed. R.H.≦85% | |
| Power Consumption | 0.5W (when charged) | |

### 2.3.4 Main Components Used

Microprocessors: SM8958
Crystal Oscillator: 11.0592MHz
Display Device: WTN Liquid Crystal Display

### 2.3.5 Analog Specification

- The maximum number of verification scale intervals will be:
  n ≤ 3000 for class (III) instruments
- Power supply of 5 V DC;
- 16 bits serial digital output;
- Excitation power supply for the load cell is 5 V DC;
- Input impedance of the load cell is 350 Ω;
- The analog data processing unit is built in a closed metal box.

# 3. INITIAL SETUP

## 3.1 INTERNAL FUNCTIONS AND SETTING METHODS

**INTERNAL FUNCTION TABLE**

| Function | Symbol | Description |
|---|---|---|
| 1 | F1 | Span value reading |
| 2 | F2 | Full display segment check |
| 3 | F3 | Scale configuration |
| 4 | F4 | Auto power off setting |
| 9 | F9 | Auto tare setting |
| 19 | F19 | 1/30000 Verification Mode** |
| 20 | F20 | Gravity Compensation-place of calibration** |
| 21 | F21 | Gravity Compensation-place to be used** |

**HOW TO ENTER THE REQUIRED FUNCTION MODE**

a. Turn scale off.
b. Press and hold TARE, then turn scale on. Scale display F.1
c. Press TARE until the required function number appears.
d. Press MODE
e. Press MODE until the required setting appears.
f. Press TARE to confirm.
g. Repeat step c to f for other function setting, or
h. Press ON/ZERO to save settings and return to normal operation.

**F1 Span Value Reading**

a. Simply enter F1 to read the A/D counts.
b. Press ON/ZERO to clear the A/D counts, apply test mass onto platter, the span value of test mass will be displayed.

**F2 Full Display Segment Check**

When function is entered, scale will firstly display the software version, and then displays all segments later.
Check and make sure that no segments are missed.

**F3 Scale Configuration**

a. Enter F3, scale displays the offset value.
b. Press and hold MODE, available scale capacity and min. division appears.

**SELECT DISPLAY RESOLUTION**

c. Press and hold MODE to change the display resolution.

**SELECT WEIGHT UNITS**

d. when desired display resolution is selected, press MODE

to select weight units.
--To employ all (metric and pound/oz) weight units, press MODE until ‘g’(kg), ‘lb’ indicators appear.
--To disable ‘lb’ weight unit, press MODE until ‘g’(kg) indicator appears only.

**SELECT SCALE CAPACITY**

e. Press MODE to select the capacity, Press TARE to save setting.
f. Re-calibration will be required after scale capacity changed.

**F4 Auto Power Off Setting**

Two modes are available: (Default=4_OFF)
Press MODE until desired setting appear, press TARE to save setting.

0_OFF = Auto Power Off function is disabled.
4_OFF = Scale will automatically turns it off after 4 minutes unused.

**F9 Auto Tare Setting**

Two modes are available: (Default=TroFF)
TroFF = Auto tare function is disabled.
Tr_on = Scale will automatically tare off the initial weight that places on the platter.

**
**F19~F21 Reserved**

## 3.2 CALIBRATION

**Dealer Calibration Procedures:**

1. Turn scale off.
2. Press and hold TARE, then turn scale on.
3. Scale displays F1
4. Press MODE
5. Scale displays offset value
6. Press and hold MODE, Scale displays YES.
7. Scale will self calibrate zero point before proceed to the first point calibration.
8. After zero point calibration is done, scale displays LOAD XXXX or XXXX
9. Load calibration load as request.
10. Wait until scale displays LOAD XXXX(second point).
11. Load calibration load as request or press MODE to abandon second point calibration, wait until scale displays DONE.
12. Calibration completed and scale is ready for operation.

**Auto Calibration Procedures:**

1. Turn scale off.
2. Press and hold MODE, then turn scale on.
3. Scale displays CAL.?
4. Press MODE again, Scale displays YES.
5. Scale will self calibrate zero point before proceed to the first point calibration.
6. After zero point calibration is done, scale displays LOAD XXXX or XXXX
7. Load calibration load as request.
8. Wait until scale displays LOAD XXXX(second point).
9. Load calibration load as request or press MODE to abandon second point calibration, wait until scale displays DONE.
10. Calibration completed and scale is ready for operation.

***Note***：*Auto calibration can only be performed when the span value Is within +/-10% tolerance of dealer calibration.*

## 3.3 DISABLE CALIBRATION AND INTERNAL FUNCTIONS SETTING WITH JUMPER SW.(JP1)

The JP1 is used to control calibration and internal functions setting(F1 and F3). move this jumper to CAL-LOCK position to disable calibration and internal functions setting.

**CAUTION:**
**IF THE SCALE WILL BE SOLD TO AN APPLICATION THAT IS LEGAL FOR TRADE. IT IS HIGHLY RECOMMEND SETTING THE JUMPER TO CAL-LOCK POSITION TO DISABLE THE CALIBRATION AND INTERNAL FUNCTION SETTING.**

### 3.4 OFFSET AND SPAN VALUE DATA

**OFFSET AND SPAN VALUE DATA TABLE**

| Offset Value (Thousand) | Span Value(Thousand) | Offset Control | Span Control(Ohm) R9 |
|---|---|---|---|
| 10~14 | 30~60 at 33% of Max. | R1, R2 | 150 |

**READING OFFSET VALUE**

1 Turn scale off
2 Remove all load from platter
3 Enter F3 and read the offset value

**READING SPAN VALUE**

1 Turn scale off
2 Remove all load from platter
3 Enter F1
4 Press ZERO
5 Apply load to platter. Span value according to load applied will be displayed.

**HOW TO ADJUST OFFSET VALUE**

In case the offset value is out of range, change the resistors R1,R2 to obtain correct offset value.

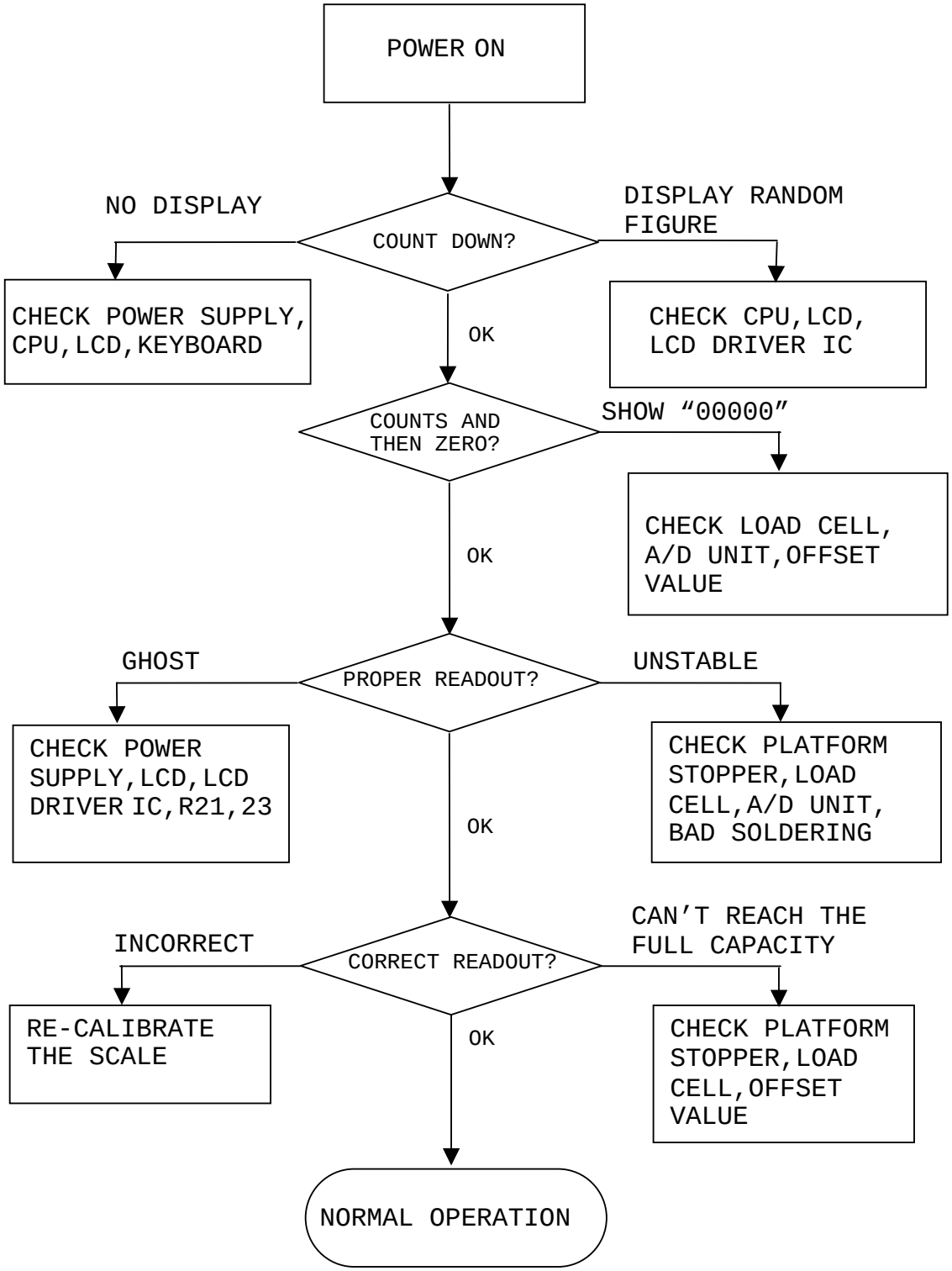
**HOW TO ADJUST SPAN VALUE**

The span value is controlled by the resistor locating at R9, standard resistor value of R9 is listed on the above table. If the required span value is not attained, then change R9 resistor according to either case below:

Span value too low: Decrease the resistance of R9.
Span value too high: Increase the resistance of R9.

# 4. TROUBLE SHOOTING

## 4.1 TROUBLE SHOOTING LOOP

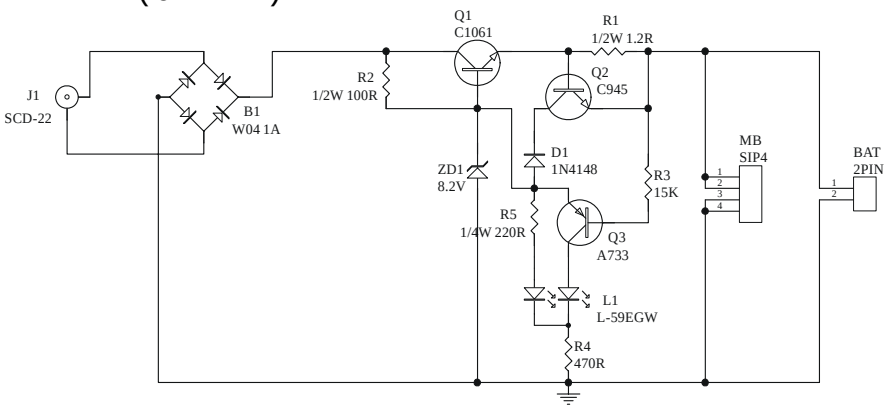


## 4.2 PARTS AND COMPONENTS TROUBLE SHOOTING

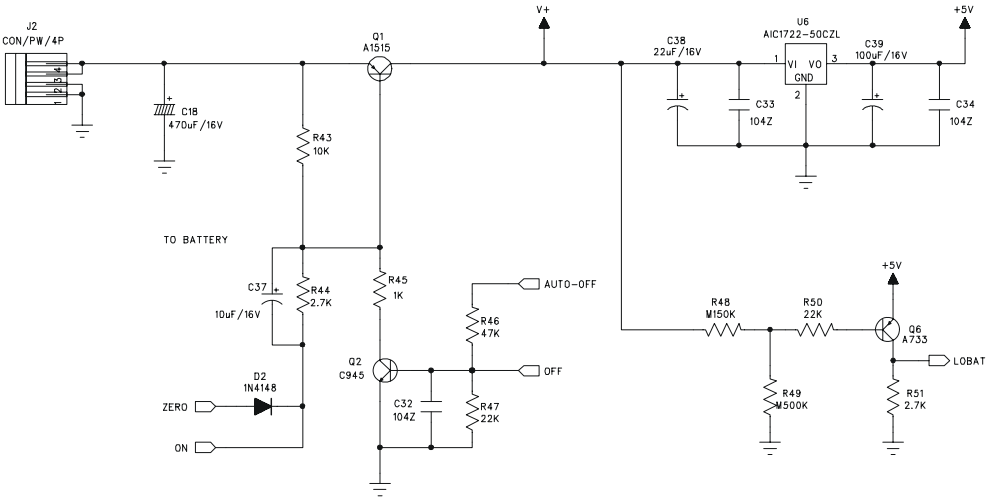
### 4.2.1 Power Supply Checking

#### 4.2.1.1 Relevant parts:

Power Board (GM-20-X)
Q1 (C1061)
Q2 (C945)
R1 (1.2R 1/2W)
ZD1(ZENER 8.2V)
DC JACK
BATTERY(6V 4Ah)




Main Board (AXM-10-X)
Q1 (A1515)
Q2 (C945)
Q6 (A733)
U6(AIC 1722-5.0)



**Description:**

1) Power source: Rechargeable Battery 6V/4Ah or AC adaptor(9V, 500mA)

2) How Battery is charged completely?
   The charging voltage is regulated by Q1 (C1061) and ZD1 (8.2V) for about 7 volts.
   The charging current will go down automatically when voltage reached.
   Q2 (C945) and R1 (1.2R, 1/2W) provide Over-Current protection.

3) +5V power drives digital circuit system.
   U6 (AIC 1722-5.0) is a 5volts Voltage Regulator.

4) +5V power drives analog circuit system.
   U4 (NS2950A) is a 5volts Voltage Regulator.

4) Auto-off:
   If the scale is set with 4_oFF or even under LO-BAT situation, after fixed time interval, CPU will release a low potential signal to draw down Q2, then Q1 cuts off, the scale will be shut down immediately.

5) Low Power Detection:
   The Q6(A733) is designed to detect the power level. When battery power is less than 5.5V, the collector pole will become high potential, then CPU will instruct LCD display to show LO-BAT symbol.

**4.2.1.2 Input voltage: 5.5V or higher**

Check and recharge battery if voltage is less than 5.5V.

**4.2.1.3 System voltage (Vcc): 5V +/- 10%**

Check that the system voltage is within 5V +/- 10%
a) less than 4.5V, the CPU may not work properly.
b) more than 6V, ghost will appear on LCD.

**4.2.2 Platform Stopper Checking**

The platform device shall not touch anything around itself during operation. Check that the platform is not contacted with the upper (no load) and/or lower (with load) stopper.

**4.2.3 LCD Display Checking**

**4.2.3.1** Check that it is soldered and connected properly between LCD and driver IC (PCF8576), driver IC (PCF8576) and CPU.

**4.2.3.2** Check whether LCD is broken.

**4.2.4 CPU Checking**

**4.2.4.1** Check that all pins are seated properly into the socket.

**4.2.4.2** Check that the Crystal Oscillator works.

**4.2.4.3** Check the RESET is normally low.

**4.2.5 A/D Unit Checking**

**4.2.5.1** Check that the +5V powers are correctly fed to the A/D unit.

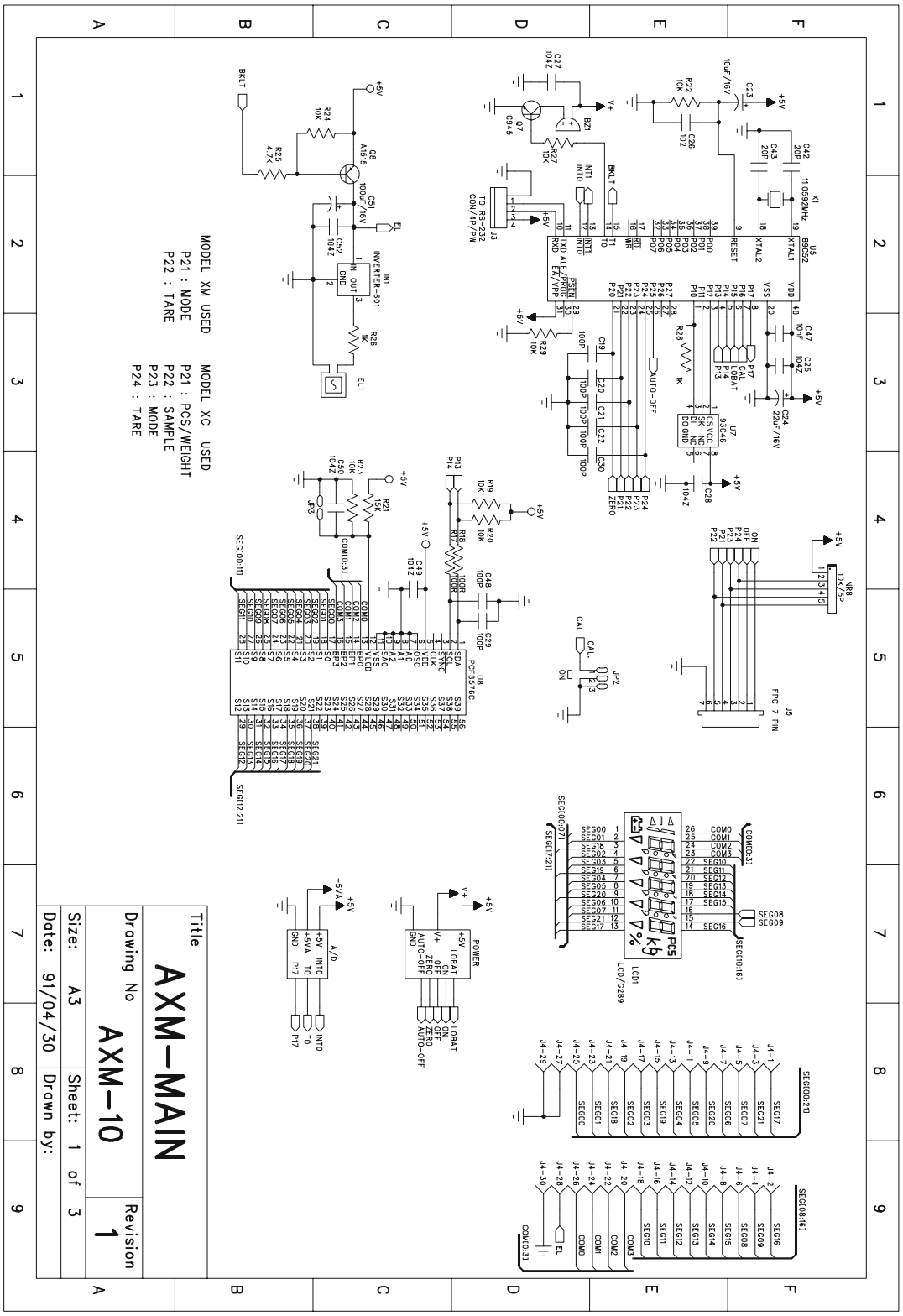
**4.2.5.2** Check that the signal output of loadcell is normal.

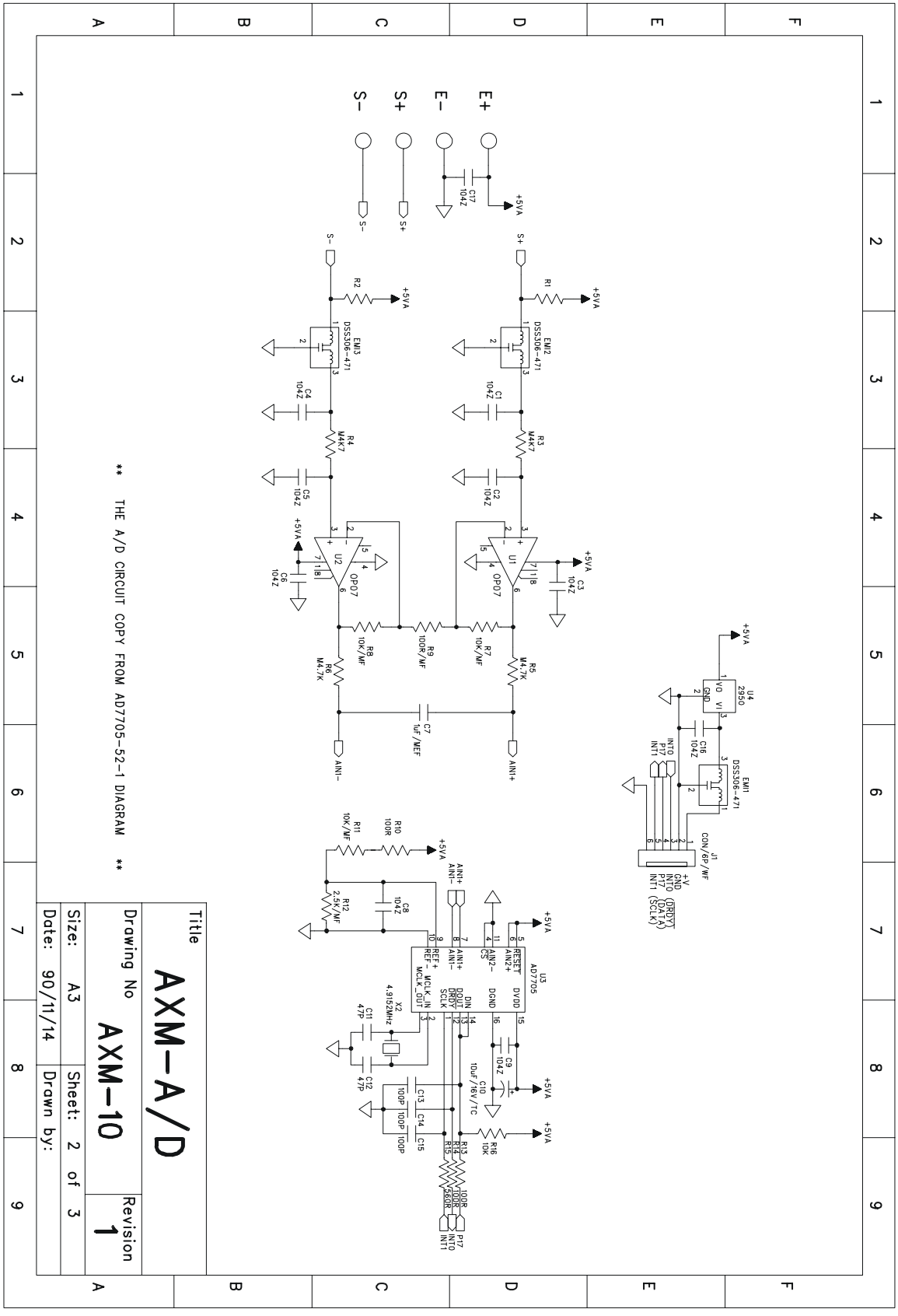
**4.2.5.3** Check OP. Amplifiers & A/D Converter (AD7705).

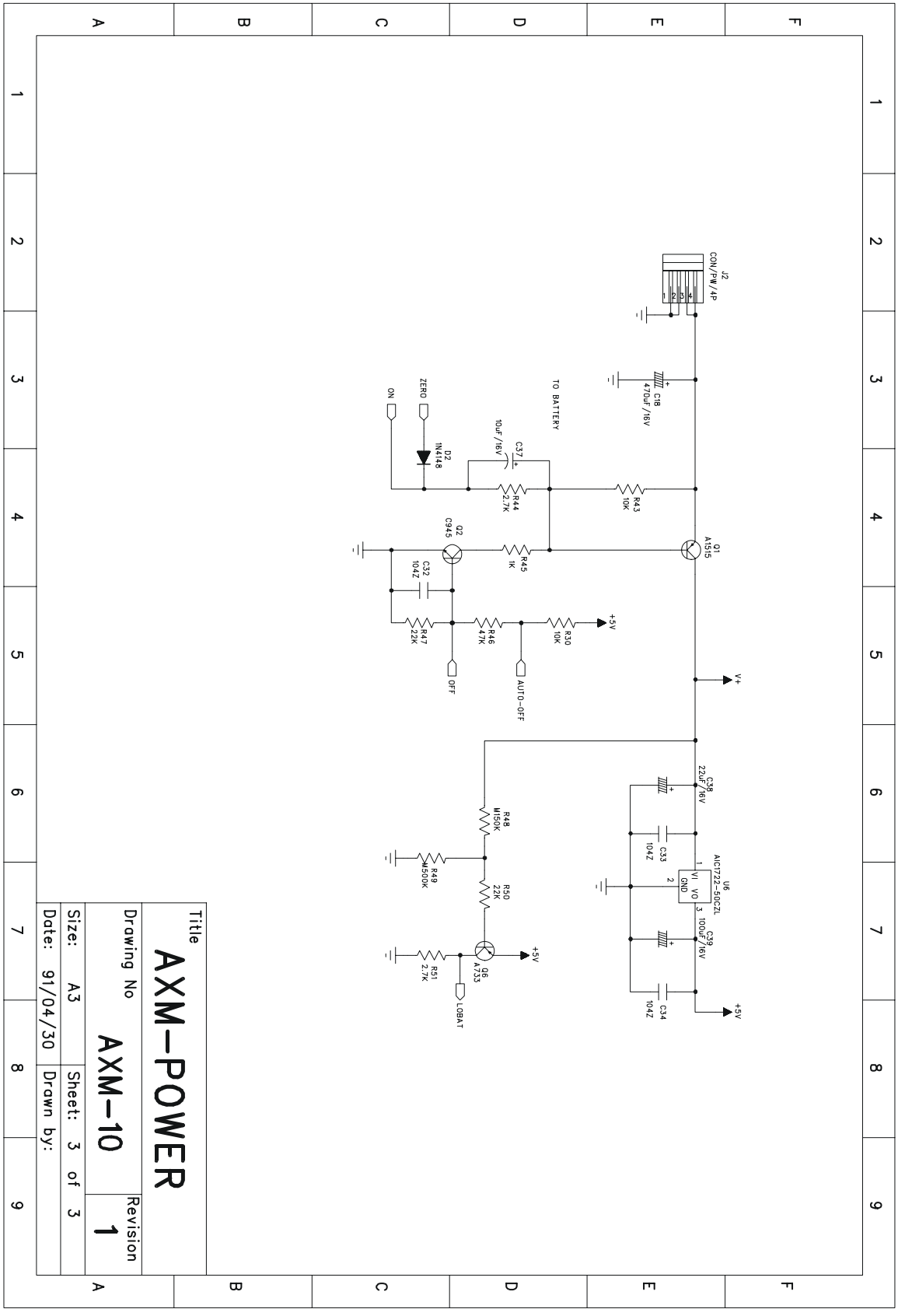
When no error is found with the above checking procedures, the trouble can be caused on the load cell or the PCB itself. Replace a new one could be better to identify the defective.
In this way, the readout of weight would be varied because of the output voltage of load cell and different span value, so re-calibration is required after this replacement.

# 5. ELECTRICAL CIRCUITRY

## 5.1 SCHEMATICS


MODEL XM USED
P21 : MODE
P22 : TARE
MODEL XC USED
P21 : PCS/WEIGHT
P22 : SAMPLE
P23 : MODE
P24 : TARE
Title
AXM-MAIN
Drawing No
AXM-10
Revision
1
Size: A3
Sheet: 1 of 3
Date: 91/04/30
Drawn by:


** THE A/D CIRCUIT COPY FROM AD7705-52-1 DIAGRAM **
Title
AXM-A/D
Drawing No
AXM-10
Revision
1
Size: A3
Sheet: 2 of 3
Date: 90/11/14
Drawn by:
E+
E-
S+
S-
+5VA
AIN1+
AIN1-
U1 OP07
U2 OP07
U3 AD7705
U4 2950
J1 CON/6P/WF
EM1 DSS306-471
EM2 DSS306-471
EM3 DSS306-471
X2 4.9152MHz
C1 104Z
C2 104Z
C3 104Z
C4 104Z
C5 104Z
C6 104Z
C7 1uF/MEF
C8 104Z
C9 104Z
C10 10uF/16V/TC
C11 47P
C12 47P
C13 100P
C14 100P
C15 100P
C16 104Z
C17 104Z
R1 M4K7
R2 M4K7
R3 M4K7
R4 M4K7
R5 M4.7K
R6 M4.7K
R7 10K/MF
R8 10K/MF
R9 100R/MF
R10 100R
R11 10K/MF
R12 2.5K/MF
R13 100R
R14 100R
R15 560R
R16 10K
INT0
INT1
P17
DRDY
DATA
SCLK


J2
CON/PW/4P
C18
470uF/16V
TO BATTERY
ON
ZERO
D2
IN4148
C37
10uF/16V
R44
2.7K
R43
10K
Q2
C945
Q1
A1015
R45
1K
C32
104Z
R47
12K
R46
47K
R30
10K
+5V
OFF
AUTO-OFF
V+
C38
22uF/16V
C33
104Z
U6
AIC1722-50CZL
VI
VO
GND
C39
100uF/16V
C34
104Z
+5V
R48
MI50K
R49
MI50K
R50
22K
R51
2.7K
Q6
A733
+5V
LOBAT
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Drawing No
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Revision
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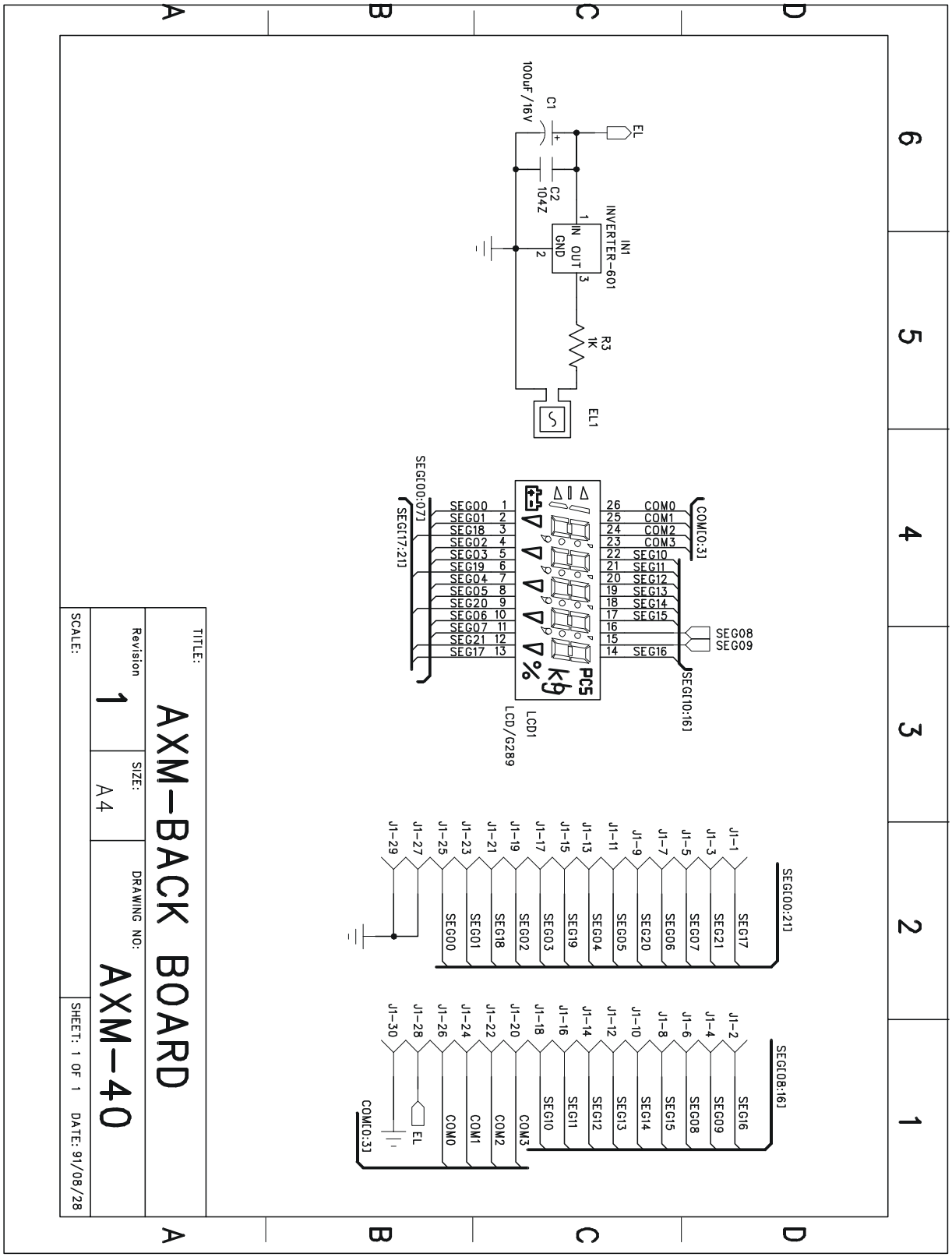
Sheet: 3 of 3
Date: 91/04/30
Drawn by:


C1
100uF/16V
C2
104Z
EL
IN1
INVERTER-601
IN
GND
OUT
R3
1K
EL1
LCD1
LCD/G289
COM0:3]
SEG10
SEG11
SEG12
SEG13
SEG14
SEG15
SEG16
SEG08
SEG09
SEG[10:16]
SEG[00:07]
SEG[17:21]
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SEG03
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SEG04
SEG05
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SEG06
SEG07
SEG21
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SEG[08:16]
COM0
COM1
COM2
COM3
EL
J1-1
J1-2
J1-3
J1-4
J1-5
J1-6
J1-7
J1-8
J1-9
J1-10
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J1-21
J1-22
J1-23
J1-24
J1-25
J1-26
J1-27
J1-28
J1-29
J1-30
TITLE:
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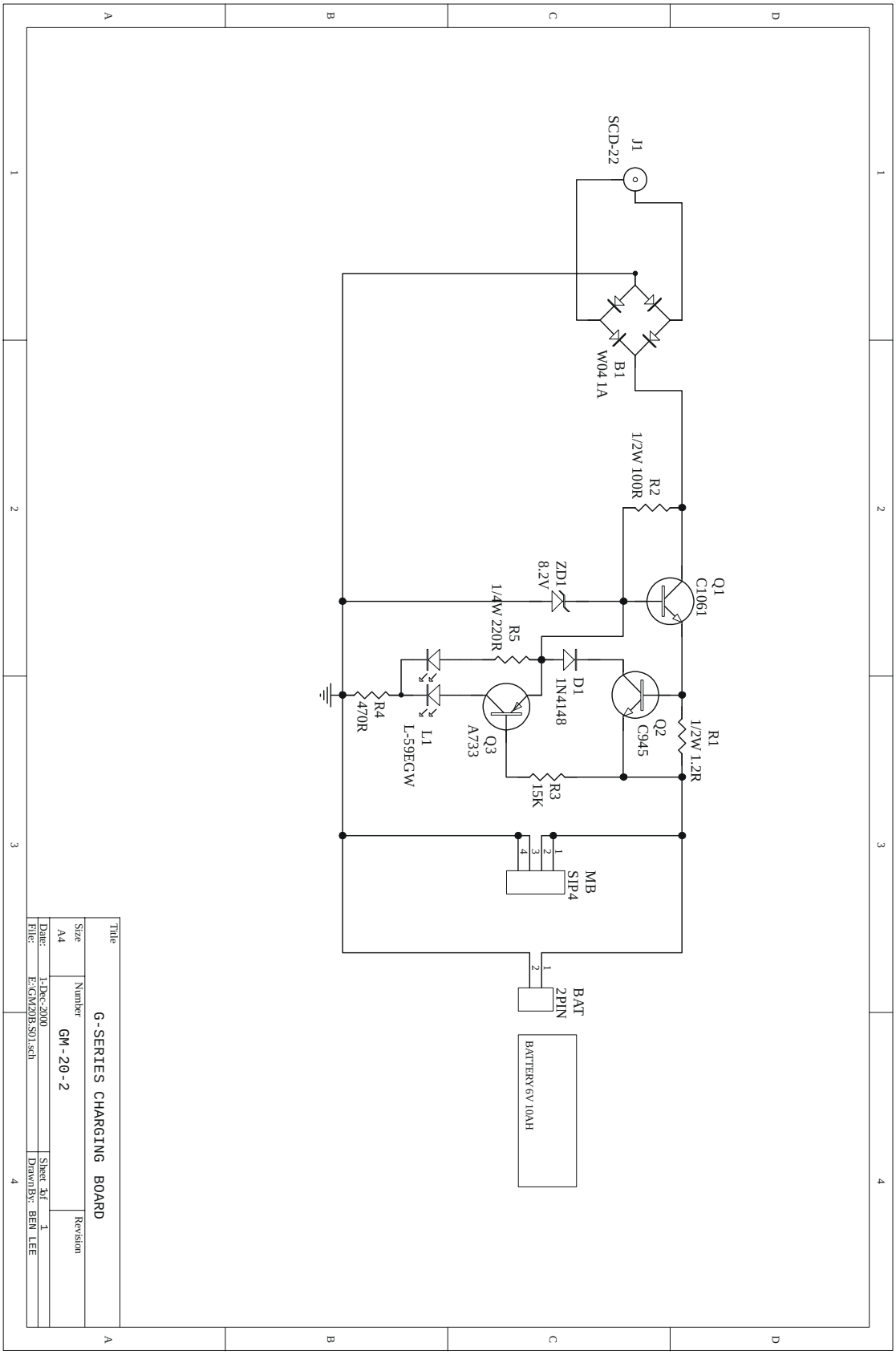
Revision
1
SIZE:
A4
DRAWING NO:
AXM-40
SCALE:
SHEET: 1 OF 1
DATE: 91/08/28


J1
SCD-22
B1
W04 1A
R2
1/2W 100R
Q1
C1061
ZD1
8.2V
R5
1/4W 220R
D1
1N4148
Q2
C945
R1
1/2W 1.2R
R4
470R
L1
L-59EGW
Q3
A733
R3
15K
MB
SIP4
BAT
2PIN
BATTERY 6V 10AH
Title
G-SERIES CHARGING BOARD
Size
A4
Number
GM-20-2
Revision
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Date:
1-Dec-2000
Sheet 1of 1
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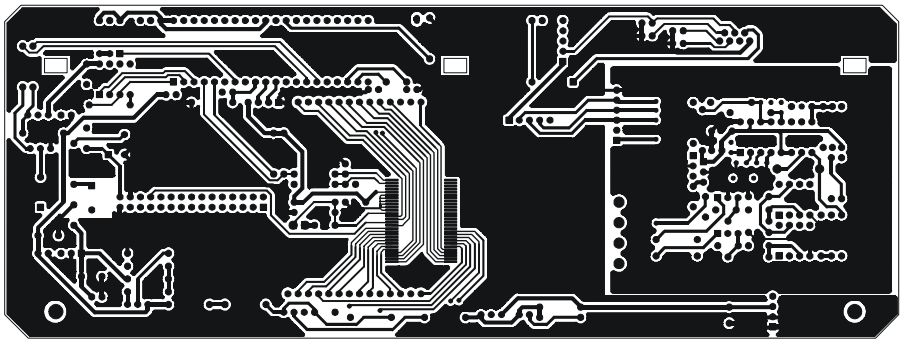
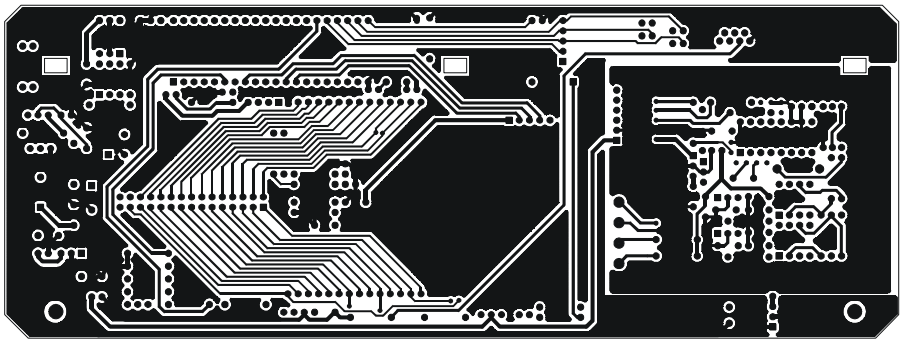
DrawnBy:
BEN LEE

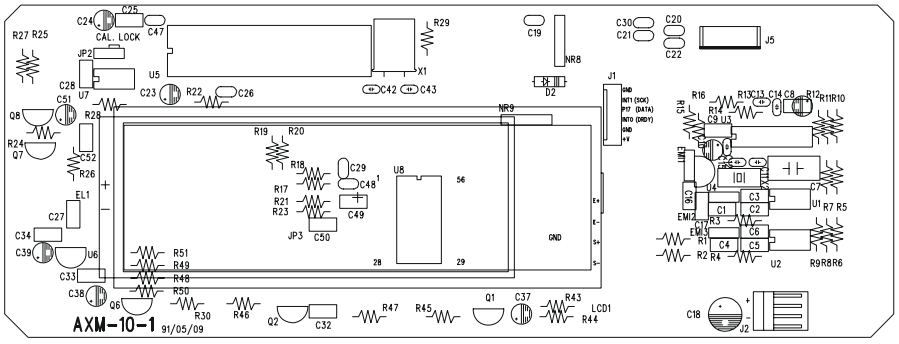
## 5.2 PCB LAYOUT



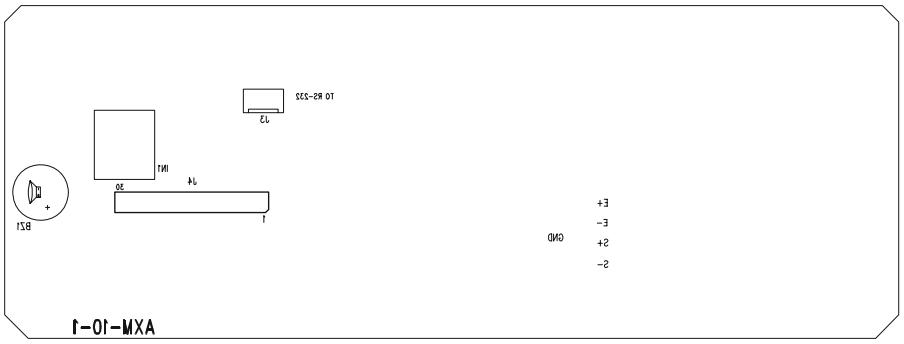
AXM-10-1 TOP LAYER



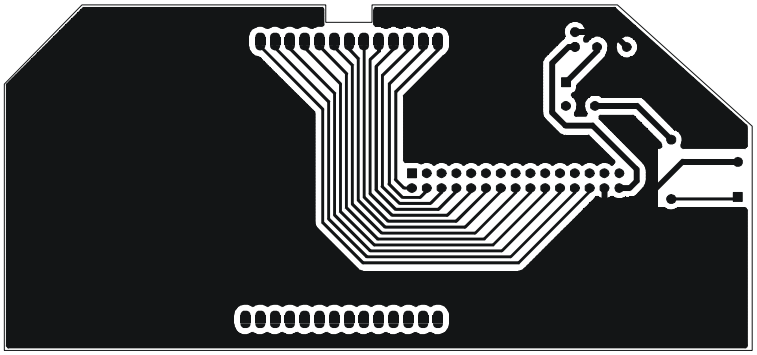
AXM-10-1 BOTTOM LAYER



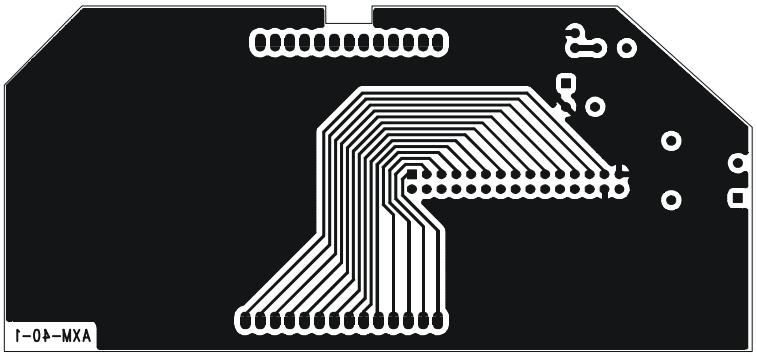

AXM-10-1 TOP OVERLAY



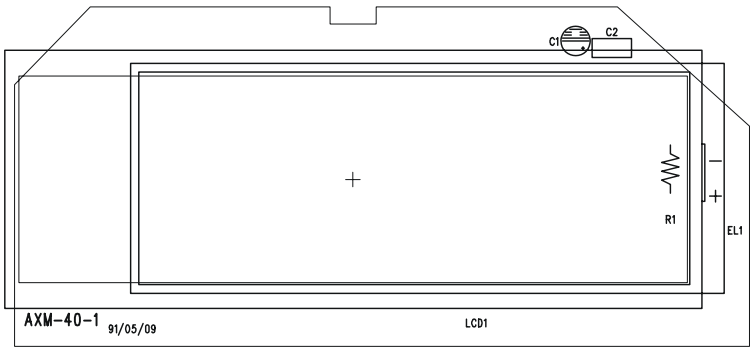

AXM-10-1 BOTTOM OVERLAY



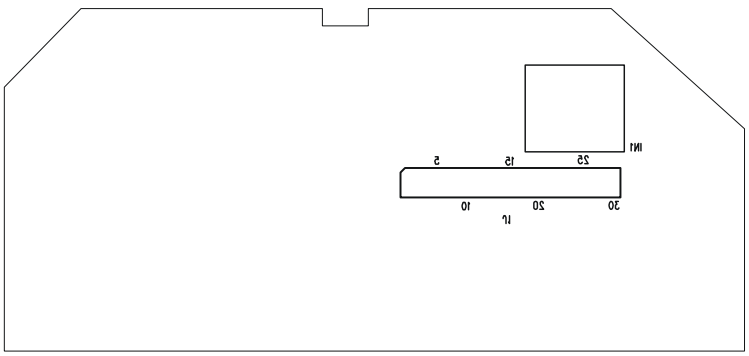
AXM-40-1 TOP LAYER




AXM-40-1 BOTTOM LAYER




AXM-40-1 TOP OVERLAY



AXM-40-1 BOTTOM OVERLAY

# 6. BILL OF MATERIAL

STRUCTURE

| Parts No. | Description | Specification | Qty | Remark |
|---|---|---|---|---|
| E1AXM000010 | P.C.B. KIT | AXM-10-1 MAIN BOARD | 1 | |
| E1AXM001000 | P.C.B. KIT | AXM-40-1 REAR BOARD | 1 | |
| E1GSP010000 | P.C.B. KIT | GM-20-1 POWER BOARD | 1 | |
| A0002030*** | LOAD CELL | C2G1 | 1 | |
| | AXM-1500 | C2G1-3kg | | |
| | AXM-3000 | C2G1-6kg | | |
| | AXM-6000 | C2G1-10kg | | |
| | AXM-15K | C2G1-20kg | | |
| | AXM-30K | C2G1-35kg | | |
| A6010230950 | ADAPTOR | 230V/ 9V 500mA | 1 | |
| C1GW0000000 | PANEL PC | GW SERIES, 135.5*45.5*0.8mm | 1 | |
| C1AXM030000 | OVERLAY | AXM SERIES | 1 | |
| C1AXM030999 | REAR PANEL | AXM SERIES, REAR DISPLAY | 1 | |
| A1205010210 | BATTERY WIRE | 21cm (BLACK) | 1 | |
| A1205010212 | BATTERY WIRE | 21cm (RED) | 1 | |
| A1600060400 | RECHARGEABLE BATTERY | GP4-6 6V 4AH | 1 | |
| A5001000301 | CABLE TIE | CV-120S | 3 | |
| A5005000090 | BUBBLE LEVEL | D14 (Dia. 14mm) | 1 | |
| F0009000032 | S/S PLATE(NO.32) | XM SERIES, 220*185*0.5mm | 1 | |
| F0003GSP100 | ALUMINUM L/C SUPPORT | GSP SERIES (C2X1 L/C) | 1 | UPPER |
| F0003GSP101 | ALUMINUM L/C SUPPORT | GSP SERIES (C2X1 L/C) | 1 | UNDER |
| G0001GSP000 | PLASTIC CABINET, UNDER | GSP SERIES (GRAY) | 1 | |
| G0001GM0000 | PLASTIC CABINET, UPPER | GM SERIES(WHITE) | 1 | |
| G0002GSP000 | PLASTIC PLATTER | GSP SERIES | 1 | |
| G0004GSP000 | RUBBER PAD | CFR-190603 (GSP SERIES) | 4 | |
| G0004MP0001 | ADJUSTABLE FEET | M SERIES | 4 | |
| G0009EM0002 | BATTERY CAP | EM SERIES(GRAY) | 1 | |
| Y0007GEC000 | PACKING MATERIAL | GEC SERIES | 1 | |
| Z7GEC000000 | DUST COVER | G SERIES | 1 | |
| A1007000002 | FERRITE CORE | TR-14.1*6.28*28.6mm | 1 | |
| A1007000001 | FERRITE CORE | TR-16*9*28mm | 1 | LOADCELL |
| A1007000011 | FERRITE CORE | 19*6.5*32(CLAMP TYPE) | 2 | POWER,RS-232 TO MAIN BOARD |

AXM-10-X MAINBOARD

| | | | | |
|---|---|---|---|---|
| E0AXM000010 | P.C.B. | AXM-10-1 | 1 | |
| A0102000289 | L.C.D. | UTN-G289JV-W | 1 | LCD1 |
| A0201089582 | I.C. | SM8958C25P | 1 | U5 |
| A0202093461 | I.C. | 93C46 | 1 | U7 |
| A0207017225 | VOLTAGE REGULATOR I.C. | AIC1722-50CZT | 1 | U6 |
| A0208085760 | I.C. | PCF8576CT | 1 | U8 |
| A0300000040 | I.C. SOCKET | 40 PIN | 1 | U5 |
| A0401007330 | TRANSISTOR | A733 | 1 | Q6 |
| A0401009450 | TRANSISTOR | 2SC945 | 2 | Q2,7 |
| A0401015150 | TRANSISTOR | 2SA1515R(2SB1116K,A950Y) | 2 | Q1,8 |
| A0501004148 | DIODE | 1N4148 | 1 | D2 |
| A0701106017 | CAPACITOR (EC) | 10uF/25V(SS TYPE) | 2 | C23,37 |
| A0701107016 | CAPACITOR (EC) | 100uF/16V | 2 | C39,51 |
| A0701226017 | CAPACITOR (EC) | 22μF/16V (SS TYPE) | 2 | C24,38 |
| A0701477016 | CAPACITOR (EC) | 470uF/16V | 1 | C18 |
| A0730104050 | CAPACITOR (MLC) | 104Z | 9 | C25,27,28,32~34,49~50,52 |
| A0740030050 | CERAMIC CAPACITOR (CC) | 30pf/50V(30) | 2 | C42,43 |
| A0740101050 | CERAMIC CAPACITOR (CC) | 100pf/50V(101) | 7 | C19~22,29,30,48 |
| A0740102050 | CERAMIC CAPACITOR (CC) | 1000PF/50V(102) | 1 | C26 |
| A0804041503 | METAL FILM RESISTOR | 150KΩ 1/4W | 1 | R48 |
| A0804045003 | METAL FILM RESISTOR | 500KΩ 1/4W | 1 | R49 |
| A0805041101 | CARBON FILM RESISTOR | 100Ω 1/4W | 2 | R17,18 |
| A0805041102 | CARBON FILM RESISTOR | 1KΩ 1/4W | 2 | R26,28 |
| A0805041103 | CARBON FILM RESISTOR | 10KΩ 1/4W | 9 | R19,20,22~24,27,29,30,43 |
| A0805041153 | CARBON FILM RESISTOR | 15KΩ 1/4W | 1 | R21 |
| A0805041223 | CARBON FILM RESISTOR | 22KΩ 1/4W | 2 | R47,50 |
| A0805041272 | CARBON FILM RESISTOR | 2.7KΩ 1/4W | 2 | R44,51 |
| A0805041472 | CARBON FILM RESISTOR | 4.7KΩ 1/4W | 2 | R25,45 |
| A0805041473 | CARBON FILM RESISTOR | 47KΩ 1/4W | 1 | R46 |
| A0802010305 | RESISTOR NETWORK | 10KΩ 5 PIN | 2 | NR8,9 |
| A0901011040 | CONNECTOR | 4 PIN WAFER 90° | 1 | J2 |
| A0907020300 | CONNECTOR (PIN PLUG) | 2 x 15 PIN 180° | 1 | J4 |
| A0910000070 | CONNECTOR (FPC) | 7 PIN 180° | 1 | J5 |
| A0910100130 | SOCKET STRIPS | SIP 1*13(FEMALE) | 1 | LCD1 |
| A0910100140 | SOCKET STRIPS | SIP 1*14(FEMALE) | 1 | LCD1 |
| A0907010030 | CONNECTOR | 1 * 3 PIN 180° | 1 | JP2 |
| A0910111020 | MINI JUMPER | PITCH 2.54 | 1 | JP2 |

| | | | | |
|---|---|---|---|---|
| A1100211059 | CRYSTAL | 11.0592MHZ | 1 | X1 |
| A1500000004 | BUZZER | OBO-15210 | 1 | BZ1 |

## A/D SECTION

| | | | | |
|---|---|---|---|---|
| A0203077050 | I.C. | AD7705AN | 1 | U3 |
| A0206000072 | I.C | OP177 | 2 | U1-2 |
| A0207029500 | VOLTAGE REGULATOR I.C. | AS2950AW | 1 | U4 |
| A0702226016 | CAPACITOR (TC) | 22uF/16V(226) | 1 | C10 |
| A0713105063 | POLYESTER FILM CAPACITOR(MEF) | 1uF/63V (105) | 1 | C7 |
| A0730104050 | CAPACITOR (MLC) | 104Z | 10 | C1-6,C8-9,C16-17 |
| A0740047050 | CERAMIC CAPACITOR (CC) | 47pf/50V(47) | 2 | C11-12 |
| A0740101050 | CERAMIC CAPACITOR (CC) | 100pf/50V(101) | 3 | C13-15 |
| A0803041002 | METAL FILM RESISTOR | 10KΩ 1/4W | 2 | R7-8 |
| A0803041501 | METAL FILM RESISTOR | 1.5KΩ 1/4W | 1 | R12 |
| A0803043001 | METAL FILM RESISTOR | 3KΩ 1/4W | 1 | R11 |
| A0803041500 | METAL FILM RESISTOR | 150Ω 1/4W | 1 | R9 (SPAN) |
| A0804044701 | METAL FILM RESISTOR | 4.7KΩ 1/4W | 4 | R3-6 |
| A0805041101 | CARBON FILM RESISTOR | 100Ω 1/4W | 3 | R10,R13-14 |
| A0805041103 | CARBON FILM RESISTOR | 10KΩ 1/4W | 1 | R16 |
| A0805041561 | CARBON FILM RESISTOR | 560Ω 1/4W | 1 | R15 |
| A1008000001 | EMI FILTER | DSS-306-55Y5S471M100 | 3 | EMI1-3 |
| A1100249152 | CRYSTAL | 4.9152MHZ | 1 | X2 |
| F0015000012 | PROTECTION BOX | 7705-52-1 (UPPER) | 1 | |
| F0015000013 | PROTECTION BOX | 7705-52-1 (UNDER) | 1 | |
| Z0010000305 | SCREW | M3*6 | 2 | |

## AXM-40-1 REAR BOARD

| | | | | |
|---|---|---|---|---|
| E0AXM001000 | P.C.B. | AXM-40-1 | 1 | |
| A0102000289 | L.C.D. | UTN-G289JV-W | 1 | LCD1 |
| A0910100130 | SOCKET STRIPS | SIP 1*13(FEMALE) | 1 | LCD1 |
| A0910100140 | SOCKET STRIPS | SIP 1*14(FEMALE) | 1 | LCD1 |
| A0907020300 | CONNECTOR (PIN PLUG) | 2 x 15 PIN 180° | 1 | J1 |
| A0701107016 | CAPACITOR (EC) | 100uF/16V | 1 | C1 |
| A0730104050 | CAPACITOR (MLC) | 104Z | 1 | C2 |
| A0805041102 | CARBON FILM RESISTOR | 1KΩ 1/4W | 1 | R1 |
| A1203300400 | FLAT CABLE | 30PIN 40CM | 1 | J1 |

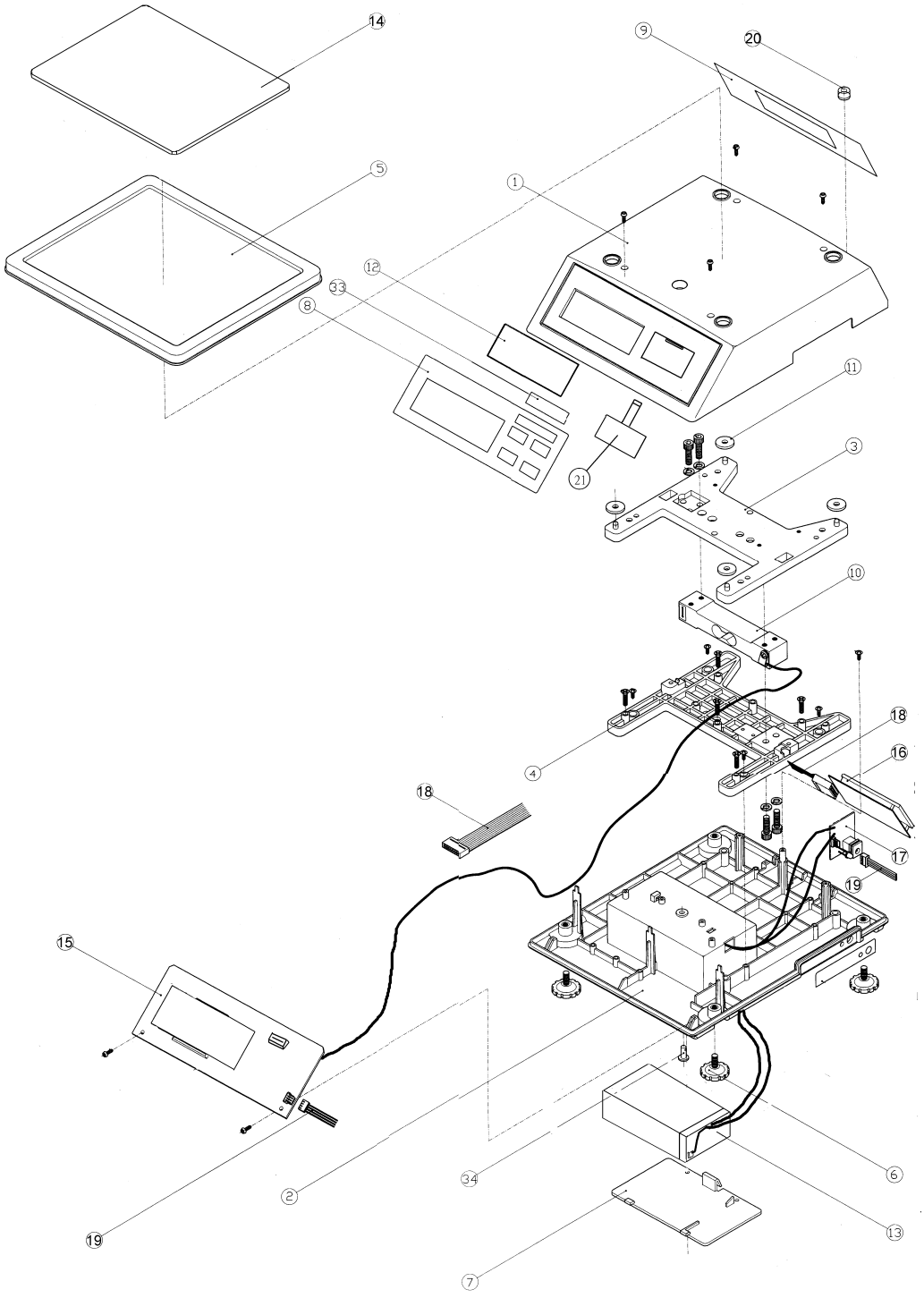
## BACK LIGHT OPTION

| | | | | |
|---|---|---|---|---|
| A1400000006 | BACK LIGHT | 130.0*44mm | 1 | EL1 |
| A1401005000 | BACK LIGHT INVERTER | 5V / 90c㎡ | 1 | IN1 |

## RS232 OPTION

| | | | | |
|---|---|---|---|---|
| E1GEC100000 | P.C.B. KIT | RS232C-1B1 RS232 BOARD | 1 | |
| A0901010040 | CONNECTOR | 4 PIN WAFER | 1 | J3 |
| A1007000002 | FERRITE CORE | TR-14.1*6.28*28.6mm | 1 | |
| A1202040401 | WIRE ARRAY | 4PIN 40cm, SINGLE HOUSING | 1 | |

# 7. APPENDIX



| ITEM | PART NAME | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | PLASTIC CABINET, UPPER | GM SERIES(WHITE) | 1 |
| 2 | PLASTIC CABINET, UNDER | GSP SERIES (GRAY) | 1 |
| 3 | ALUMINUM L/C SUPPORT(UPPER) | GSP SERIES (C2X1 L/C) | 1 |
| 4 | ALUMINUM L/C SUPPORT(UNDER) | GSP SERIES (C2X1 L/C) | 1 |
| 5 | PLASTIC PLATTER | GSP SERIES | 1 |
| 6 | ADJUSTABLE FEET | M SERIES | 4 |
| 7 | BATTERY CAP | EM SERIES(GRAY) | 1 |
| 8 | OVERLAY | AXM SERIES | 1 |
| 9 | REAR PANEL | AXM SERIES, REAR DISPLAY | 1 |
| 10 | LOAD CELL | C2G1 | 1 |
|  | LOAD CELL | C2G1 |  |
|  | AXM-1500 | C2G1-3kg |  |
|  | AXM-3000 | C2G1-6kg |  |
|  | AXM-6000 | C2G1-10kg |  |
|  | AXM-15K | C2G1-20kg |  |
|  | AXM-30K | C2G1-35kg |  |
| 11 | RUBBER PAD | CFR-190603 (GSP SERIES) | 4 |
| 12 | PANEL PC | GW SERIES, 135.5*45.5*0.8mm | 1 |
| 13 | RECHARGEABLE BATTERY | GP4-6 6V 4AH | 1 |
| 14 | S/S PLATE (NO.32) | XM SERIES, 220*185*0.5mm | 1 |
| 15 | P.C.B. KIT | AXM-10-1 MAIN BOARD | 1 |
| 16 | P.C.B. KIT | AXM-40-1 REAR BOARD | 1 |
| 17 | P.C.B. KIT | GM-20-1 POWER BOARD | 1 |
| 18 | FLAT CABLE | 30PIN 40CM | 1 |
| 19 | WIRE ARRAY | 4PIN  40cm, SINGLE HOUSING | 1 |
| 20 | BUBBLE LEVEL | D14 (Dia. 14mm) | 1 |
| 21 | MEMBRANE K/B | XM SERIES(OIML) | 1 |

| APPROVED NO. | | REV. |
|---|---|---|
| DRAWING NO.: AXM0-M-01-A | | 1 |
| DWG. NAME | AXM SERIES SEALING DIAGRAM | |

# AXM SERIES SEALING DIAGRAM

SEALING POSITION