

Service Manual

Model : PW-200

ACOM Inc.

Chapter I Installation

1. Requirements

- a. This equipment measures mass, locate the equipment on the flat and rigid level
- b. Locate it out direct sunlight, free of vibration
- c. Equipment has enough immunity against various kinds of noises however 'Do not use' like radio devices which emits a strong electromagnetic fields near by.
- d. Equipment should be operated within a temperature range -10°C to 40°C . (14°F to 104°F).
- e. When the equipment is used in direct selling to customer, it must be positioned to the customers.
- f. Equipment should be calibrated by a qualified person prior to being used.

2. The others

- a. Turn on the power 10 minutes before use the equipment.

Chapter II Introduction

This manual has been written for guide for span calibration, for technical services and for parts orderings.

Span calibration and other technical supporting can be done in calibration procedure as differ with normal operation.

1. Setting Calibration Procedures

This procedure is only activated when the power on while a calibration switch has been pressed.

2. Mode Explanation

There are three modes in calibration procedure and modes are shifted as Fig 1.

Mode 1 -> SPAn (Span calibration)

Mode 2 -> tESt (Self tests)

Mode 3 -> PARa (Parameters)

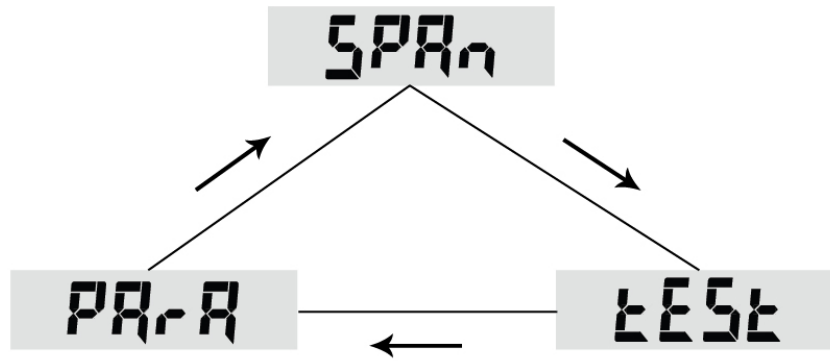


Fig. 1

3. Alternative Keys Using

The “*” key acts as “Yes” and “TARE” key acts as “No” in calibration mode.

And “TARE” key acts as Increment and “ZERO” key acts as Shift in numeric entering.

4. Finishing Calibration Procedures

After any procedure has been finished, turn off power switch and turn it on.

**Chapter III
Span calibration**

CAL switch is located underneath of body.

1. Span Setting

1. Press “ON/OFF” key while CAL switch is being pressed SPAn

2. Press “*” (Yes) key
 Gravity adjustment mode GrAV
 Gravity adjustment can be skipped by pressing “TARE” (No) Key, go to step 4

3. Press “*” (YES) key 9.7994
 Original gravity of the factory set is displayed
 Enter your local gravity
 Pressing “TARE” key increases the last digit,
 Pressing “ZERO” key shifts last digit to the left digit

4. Reading Zero

ZErO

Place the platter empty

Press "*" (YES) key checking "STABLE" designator on

rEAd

5. Span calibration

FULL

Press "*" (YES) key, "STABLE" designator will be on

Place the full load (max capacity) on the platter

Press "*" (YES) key, "STABLE" designator will be on

Span calibration is finished.

End

tEst

**Chapter IV
Self testing**

1. Test 1

The test 1 is used to reading a raw ADC data for manufacturing and servicing.

1. Choose the mode "TEST"

tEst

2. Press "*" Key

tEst 1

3. Raw ADC data is displaying

xxxxxx

4. Press "TARE" (NO) key to exit

tEst 2

2. Test 2

The test 2 is used to reading calibrated ADC data, fine internal ADC reading of 60,000 count assists the precise metrological performance testing procedures.

1. Choose the mode "TEST"

tEst

2. Press "*" key

tEst 1

tEst 2

3. Press "TARE" key

4. Press "*" key

xxxxxx

The initial zero value is displayed

Pressing "ZERO" key enables displaying net count of ADC

5. Press "Tare" key(Exit)

tEst 3

3. Test 3

The test 3 is used to checking a voltage.

1. Press "*" key

tEst 3

x.x

2. Press "TARE" key to exit

PArA

Chapter V

Setting Parameters

This setting parameter has been provided for various kinds of initializations which related weighting and measurement parameters.

In setting parameters, three following keys have different functions

1. "*" key -> Entering key
2. "TARE" key -> Increasing key
3. "ZERO" key -> Shifting key

1. Setting Parameters

a. Choose the mode "Para"

PArA

b. Enter code of step 1 and Press "*" key

1 xx

c. Enter code of step 2 and Press "*" key

2 xx

d. Enter code of step 3 and Press "*" key

3 xx

e. Enter code of step 4 and Press "*" key

4 xx

f. Enter code of step 4 and Press “*” key

5 xx

g. Enter code of step 5 and Press “*” key

6 xx

Repeat more than 3 times

End

2. Parameters Table

Parameter ; 1/3,000 Resolution

G ⇔ lb conversion type, LB calibration (Pound mass)

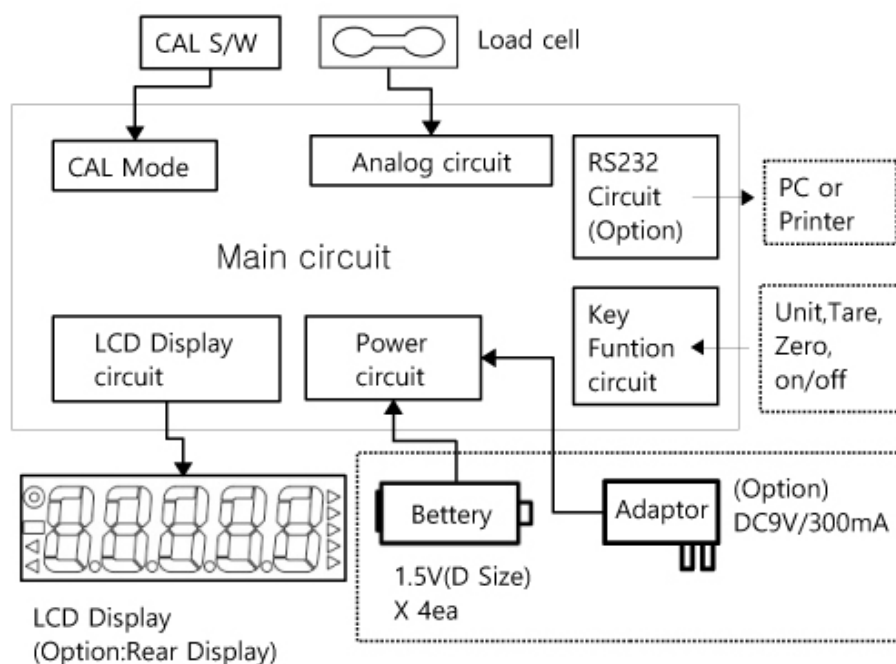
	6 lb	15 lb	30 lb	60 lb	Remak
Para1	8 0	8 0	8 0	8 0	NTEP
Para2	0 1	0 2	0 0	0 1	
Para3	8 8	8 8	8 8	8 8	Battery
Para4	0 3	0 3	0 2	0 2	
Para5	0 0	0 0	0 0	0 0	
Para6	0 0	0 0	0 0	0 0	

- **Para6** ‘00’ = Tare key works, ‘01’ = Tare key not works

Note ; “*” key is used as Mode key, Hold key function is not activated

Chapter VI

Wiring Diagrams



Chapter VII Appendix

1. Protocol

-Command-

“NUL”=00H, “SOH”=01H, “STX”=02H, “ETX”=03H, “EOT”=04H

“ENQ”=05H, “ACK”=06H, “NAK”=15H, “DC1”=11H, “DC2”=12H

-Communication Protocol (Weight)-

Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7	Byte8	Byte9	Byte10	Byte11	Byte12	Byte13	Byte14	Byte15
SOH	STX	STAT	SIGN	W6	W5	W4	W3	W2	W1	UW2	UW2	BCC	ETX	EOT

STATUS : Weighing status “S” for Stable

SIGN : “-” = 2dH, Over Flow = 4dH, The others = 20H

W6~W1 : weight 6 digits

UW1~UW2 : kg (UW2='k', UW1='g')

BCC : (STATUS) XOR (SIGN) XOR (W6) XOR (W5) XOR (W4) XOR (W3) XOR (W2) XOR
(W1) XOR (UW1) OR (80H)

2. Part List

● PW-200 Part List

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No.	Parts Name	Specification	Qty	Location	Remark
	Main P.C.B	PW-MP0-0100	1		
	Rear P.C.B	PW-DP0-0100	1		Option
	RS-232 P.C.B	PC-OP0-0010	1		Option
	CAL S/W Assy		1		
No.	Parts Name	Specification	Qty		
Body Packing List					
	Body	ABS	1		
	Platter	ABS	1		
	Battery Cover	ABS	1		
	Foot BRK (L,R)	ABS	2		
	Main Cover	ABS	1		
	Cover-A		1		

	Cover-B	ABS	1		
	ADJ Bolt	ABS	4		
	Rear Cover		1		
	Load Cell BRK		2		
	Load Cell	6 lb	1		
	Load Cell	15 lb	1		
	Load Cell	30 lb	1		
	Load Cell	60 lb	1		
	Battery Spring +		1		
	Battery Spring -		1		
	Battery Wire	2P*350	1		
	Level Gauge		1		
	Level Gauge Cover		1		
	Adapter Jack		1		
	Adapter Wire		1		
	Key Pad		1		
	D/P Cover		1		
	Capa Sticker	6 lb	1		
	Capa Sticker	15 lb	1		
	Capa Sticker	30 lb	1		
	Capa S ticker	60 lb	1		
	Spec plate		1		
	Wrench screw	M5*15	4		
	Tapping Screw	M3*6	2		
	Tapping Screw	M3*8	10		
	Tapping Screw	M3*12	4		
	Tapping Screw	M4*12	4		
	Vud washer	5*1t	4		
Packing Parts List					
	Carton Box	1 C/T	1		
	Polybag		1		
	Silicagel	10g	2		
	Adapter	9V/300mA	1		Option
	Operating Manual		1		
	Dry Battery	DM1.5 X 2	2		

	Spanhole Cover		1		
	Sealing Screw		1		
	Sealing Solder		1		
	Sealing Wire	150mm	1		
	RS-232 Cable				Option