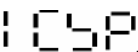
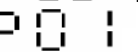




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INDICATOR HOUSING

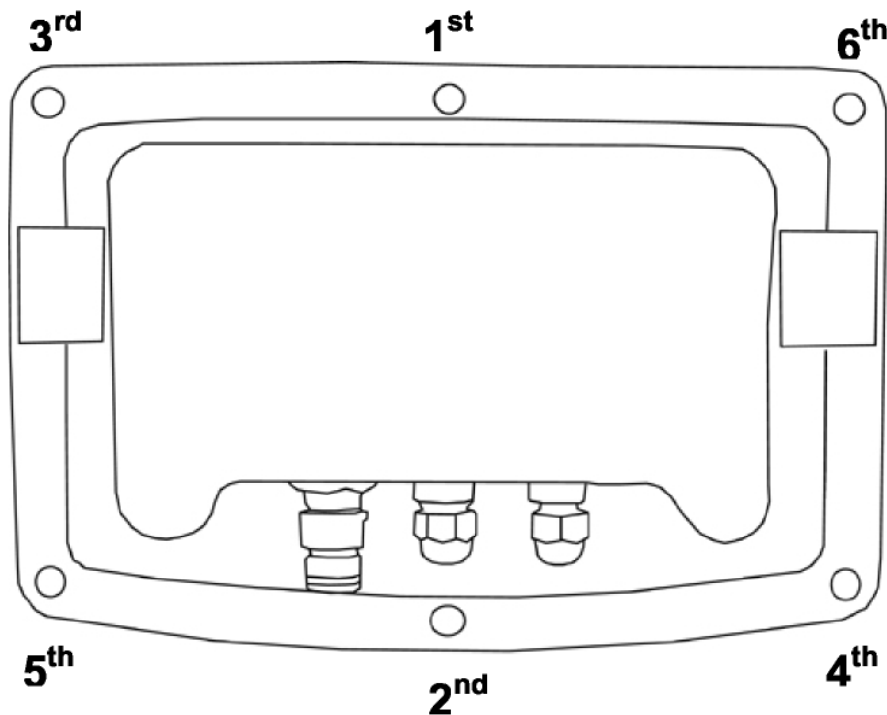
Before opening the stainless steel indicator housing, make sure it is dry. If necessary wipe the housing dry paying particular attention to the joint between the front panel and rear housing.

The re-assembly instructions should be accurately followed to ensure the IP rating is maintained in service. NOTE: There are no user serviceable parts inside the indicator and all service work should be carried out by the technical staff of your supplier.

RE-ASSEMBLY INSTRUCTIONS:

Position the front panel onto the rear housing and fit all six fixing screws finger tight. Tighten the screws in the order shown in the diagram below to a torque of 9 lb/ft 12 kgf-cm. NOTE: Over tightening the screws could impair the IP rating.

Tightening order:



BEFORE USING THE SCALE

To enable you to use this scale correctly, we suggest that you read this manual carefully.

INSTRUCTIONS FOR USE

1. The load placed on the weigh pan must NOT exceed the maximum weighing capacity of the scale.
2. Protect the scale from high temperatures.
3. Avoid objects impacting with the scale. Do not drop loads onto the scale or subject the weigh pan to any strong shock loads.

PREPARING TO USE THE SCALE

1. Locate the scale on a firm level surface free from vibration for accurate weight readings.
2. Adjust the four leveling feet (if fitted) to set the scale pan level.
3. Avoid operating the scale in direct sunlight or drafts of any kind.
4. If possible avoid connecting the scale to ac power outlet sockets which are adjacent to other appliances to minimize the possibility of interference affecting the performance of the scale.
5. Remove any weight that might be on the weigh pan before the scale is switched on and avoid leaving weight on the pan for long periods of time
6. All goods weighed should be placed in the centre of the weigh pan for accurate weighing. The overall dimensions of the goods being weighed should not exceed the dimension of the weigh pan.
7. Once the scale has been powered on, it will go through an LCD display test and it is ready for use when the display shows zero.
8. The scale requires 15~20 minutes warm up before operation to ensure best accuracy
9. Please note when the symbol keeps flashing on the screen, the batteries need to be recharged.

CHAPTER 1 INTRODUCTION

1-1 Features and Specifications

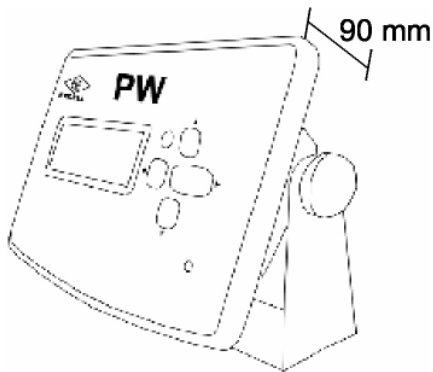
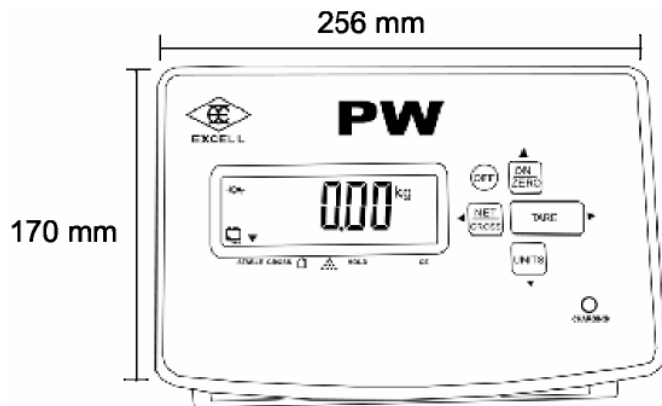
Features:

- n Sealed to IP67, Waterproof and dust proof (Only use cables of 3mm~5.5mm diameter to ensure correct sealing of the cable glands)
- n Up to 1/1 5,000 display resolution (Internal 1/300,000) (10,000 divisions NTEP)
- n Large LCD display with LED backlight
- n Kilogram (kg) and pound (lb) weighing modes
- n Auto calibration; Full range tare; Auto-zero tracking; Simple counting; Gross/Net indication
- n Hold function; Check mode Lo/Hi/OK
- n Adjustable gravity value
- n Low power indication
- n Built-in RS-232 Serial Output

Specifications:

- n Analogue Input: Input Sensitivity 0.3m V/d (Min.)
- n Input Signal Range: -1mV~+14mV
- n Input Zero Range: -1 mV~+5mV
- n Load Cell Excitation: 5V DC
- n Load Cell Drive Capacity: up to 4 x 350W / load cells
- n Non-linearity: 0.01% of full scale
- n A/D Resolution: 500,000 counts (Maximum)

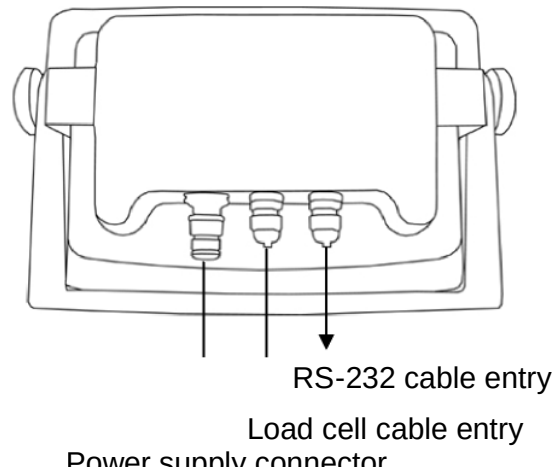
1-2 Scale Appearance



The package includes:

- | | |
|-----------------|-------|
| 1. Indicator | 1 off |
| 2. Power supply | 1 off |
| 3. User Manual | 1 off |

When you first unseal the product package if you find any of the items above are missing, contact your supplier.



(RS-232 and load cell cables size 3mm~5.5mm diameter to ensure correct sealing of the cable glands)

1-3 Power Supply

Power Supply Selection

1. 6V / 4.5Ah Rechargeable battery
2. Adaptor DC 9V

Power Consumption

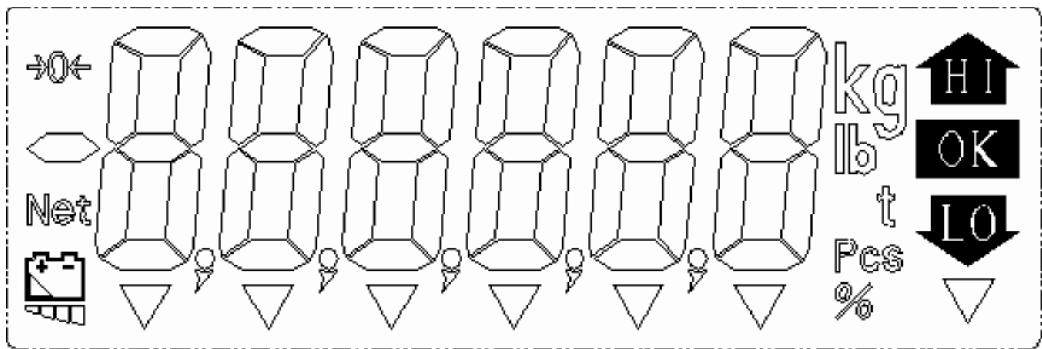
Approximately DC 14 mA (Indicator)

Approximately DC 24 mA (Indicator + Display backlight)

Low Battery Warning

Please note when the () symbol keeps flashing on the display, the internal battery should be recharged.

1-4 Display



HI
OK
LO
kg

1 : The weight on weigh pan is greater than the high limit :
2 The weight on weigh pan is equal to the OK limit : The
3 weight on weigh pan is less than the lower limit : kg
4 units. When "kg" is displayed, it means the weight
5
6
7





1-5 Keyboard Function

ON/ZERO KEY

Press the **ON/ZERO** key to switch the indicator on. When switched on the **ON/ZERO** key acts as the zero balance function.

OFF KEY

When the indicator on, press the **OFF** key to switch it off.

TARE KEY

The tare function will not operate during the following conditions:

- (1) When the scale powers on if the weight is negative and after a container is placed on the weigh pan if the weight is still below zero.
- (2) The tare value is over the full scale capacity.

UNITS KEY

Press the **UNITS** key to switch weight units; the display icons will indicate the active units.

N ET/G ROSS KEY

In the Tare mode, the screen displays the "TARE

1-6 Error Messages

fi The EEPROM is not working correctly.

E1 fi Zero is higher than the zero range when switching the indicator [on. fi](#)

E2 Zero is lower than the zero range when switching the indicator [on. fi](#)

E4 A/D value is unstable.

E5 fi A/D value is below Zero.

E9 fi A/D IC malfunction (cannot read A/D value). The load cell may not be connected to the indicator correctly.

OL fi The weight of the object is over the maximum capacity + 9 [divisions. fi](#)

OF A/D value is over the maximum range.

1-7 Weight Units

(kg)	1 g = 0.001 kg
(g)	1 g = 1 g
(lb)	1 g = 0.002204623 lb
(lb/oz)	1 g = 0.03527396 oz
(oz)	1 g = 0.03527396 oz
(GN)	1 g = 15.432358 GN
(dwt)	1 g = 0.6430 149 dwt
(ct)	1 g = 5 ct

CHAPTER 2 SERVICE MODE ACCESS

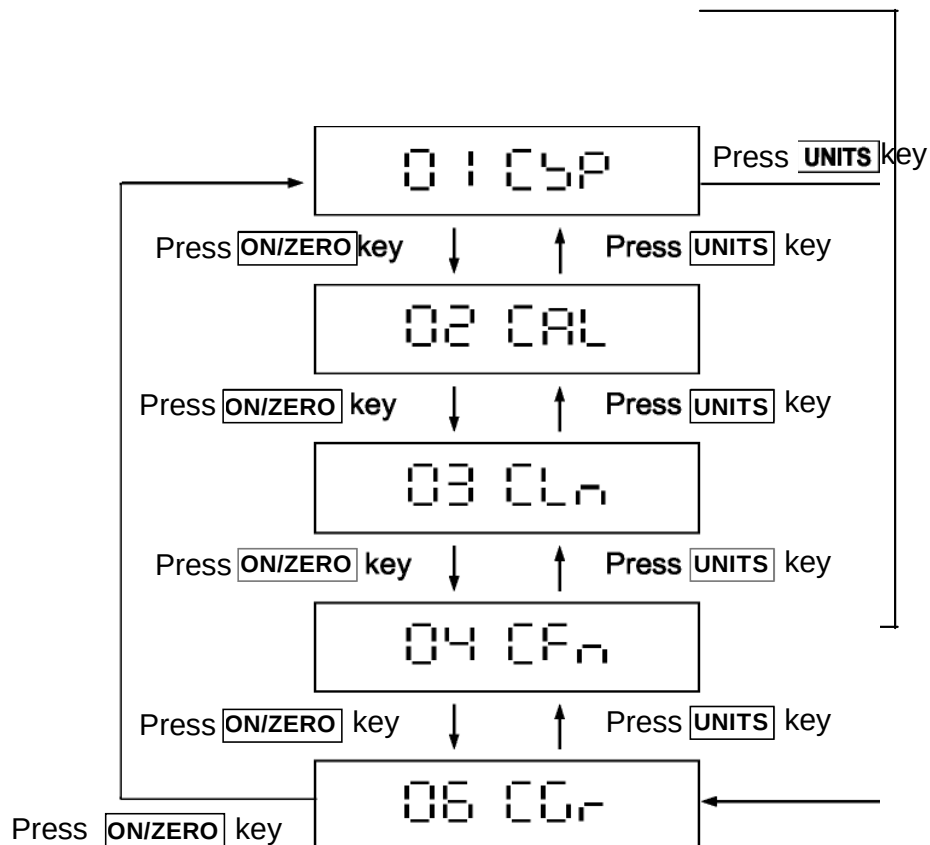
- n Set the jumper SWA1 on the main

board to the ADJ position (EEPROM 01 C5P.

UNLOCKED). Switch the PW on. The

display shows

- n When finished, set the jumper SWA1 back to the LOCK position.
- n If the jumper SWA1 is returned to the LOCK position during calibration, the PW exits the service mode automatically.



01 [SP] ⇒ Capacity Configuration

04 [Fn] ⇒ Function Setting

02 [AL] ⇒ Weighing Calibration

05 [Gr] ⇒ Gravity Setting

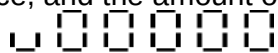
03 [Ln] ⇒ Linearity Calibration

Input a parameter "00

Refer to “Note 3

Press **TARE** key

NOTE 1 The users can set up the different weight units in various orders according to their preference, and the amount of the chosen weight units can be up to 5



(a) (b) (c) (d) (e) (f)

(a) fi The first weight unit (only “kg



Press **TARE** key

Refer to "Note 4



Press TARE key

Refer to "Note 5

NOTE 4

U7 1200
(a) (b)

- (a) fi The number of the weight units (Max: 5, key in 1 ~ 5)
- (b) fi The weight unit for weight calibration (choose from “kg”, “g”)



B. Choose “kg

NOTE 6

000003

(o) (p) (q) (r) (s)

(o) fi Minimum division

Parameter description:

Decimal system:

Input 1, 2, or 5 as the minimum division for the weight value

(p) fi Decimal point position

Parameter description:

Decimal system:

0 fi 0
1 fi 0.0
2 fi 0.00
3 fi 0.000
4 fi 0.0000
5 fi 0.00000

(q) fi Weight unit displayed

Parameter	0	1	2	4	5	6	7	8
Unit	kg	g	lb	lb,oz	oz	GN	dwt	ct
Notation system	10	10	10	16	10	10	10	10
symbol	kg	g	lb	lb	Icon 7 6 indication	Icon 6 6 Indication	Icon 6 6 indication	Icon 6 6 indication

(r) fi Scale change point (Input the parameter 0, 1, 2, or 3)

Parameter description:

0 fi full range

1 fi full range

2 fi dual range (changes at 1/2 of full scale)

3 fi triple range (changes at 1/6 of full scale and 2/3 of full scale)

(s) fi Save the weight units at preferred positions (no more than the number of set weight units)

Parameter description:

1 fi the first position (the weight calibration unit)

2 fi the second position

3 fi the third position

4 fi the fourth position

5 fi the fifth position



Refer to “Note 4



After inputting “00



2-2-1 Weight Calibration Setting

For the most accurate weight calibration it is recommended that the indicator is calibrated at full load where possible, although calibration at less than full load is also possible.

CAL 01

Press the **TARE** key

kg

The display shows the calibration weight value and the weight unit set at the first position

Ensure the weigh pan is empty

Press the **TARE** key

4 The calibration weight value can be changed if required

CEnter

30.00 kg

The indicator calibrates the zero point. When the weight is stable, the display shows the calibration weight value.

Place full load (30kg in this example) on the weigh pan then press the

TARE key

30.00 kg

The indicator shows the weight value. The buzzer sounds "beep, beep, beep"

kg

Remove the weights from the weigh pan and press any key to exit.

CAL 01

CAL 00

Press the **TARE** key to complete weight calibration

02 CAL

ON/ZERO key $\uparrow$ Increment number by 1

UNITS key $\downarrow$ Decrement number by 1

TARE key $\leftarrow$ Move cursor one place to the right

NET/GROSS key $\rightarrow$ Move cursor one place to the left



2-2-2 Manufacturing Location Gravity Setting

7102

The gravity value is set between that at the equator and the polar regions.

Gravity value at the equator $G_E = 9.7803184558 \text{ m/sec}^2$ Gravity

value at the polar regions $G_P = 9.8321772792 \text{ m/sec}^2$ Taipei

9.78914 m/sec^2

Shanghai

9.79585 m/sec^2

Factory: Taipei

Factory: shanghai

Factory: others

NOTE

NOTE

Press the **TARE** key

Displays the gravity
value set previously
Re-set the gravity
value

Press the **TARE** key

Press the **TARE** key

Press the **TARE** key to



Remove all weight from the pan,
press TARE to enter linearity
calibration mode.

Remove the steel weigh pan, leaving
the plastic one, ensure the pan is
empty, press TARE key to record the
“first point”.



The weight factor is arranged as follows:-

1 = The weights are equal.

2 = The next weight is twice as big as the first weight

3 = 3 times as big as the first weight

4 = 4 times...

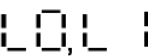
5 = 5 times ...

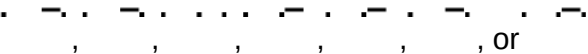


Ex4: 30kg (1kg, 2kg, 5kg, 10kg, 2kg, 10kg)

Display	Key Press	Note
03 CLn	TARE	Into linearity calibration
L0	TARE	First point (zero), remove weigh pan and press the Tare key
L1 1	TARE	Put 1kg on and press the Tare key
L2 2	TARE	Put 2kg on and press the Tare key
L3 5	TARE	Put 5kg on and press the Tare key
L4 A	TARE	Put 10kg on and press the Tare key
L5 2	TARE	Put 2kg on and press the Tare key
L6 A	TARE	Put 10kg on and press the Tare key
L7 1	NET/GROSS	To finish linearity adjustment (7 points linearity calibration)
03 CLn		

Notes:

4 In the process of , press  key to abort the calibration adjustment.

4 In the process of , or , press  key to finish and save the 2, 3, 4, 5, 6, 7, or 8 points calibration adjustment.

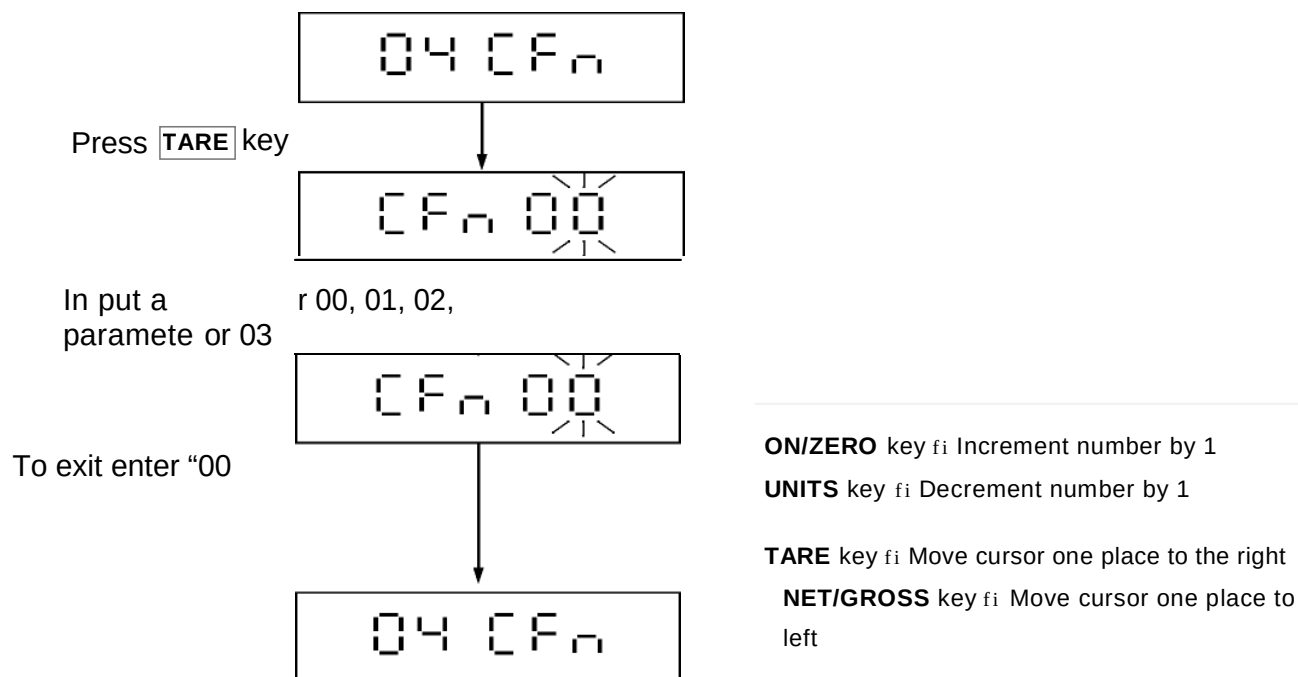
4 In the process of , press  key to finish and save the 9 points calibration adjustment.

2-4. Function Setting 04 CF_n

n Environment CF_n 01 parameters

n Approval configuration CF_n 02

n Buzzer type , 03



CF_n 00 $\Rightarrow$ Back to the upper level
 CF_n 01 $\Rightarrow$ Environment parameters
 CF_n 02 $\Rightarrow$ Approval configuration
 CF_n 03 $\Rightarrow$ Keyboard buzzer type

2-4-1 Environment parameters CFn 01

4 If parameters are changed in CFn 01, then CFn 05 will be revised automatically

CFn 01

Press TARE
Err 0

Using ON/ZERO or UNITS
to enter

Err 1

Return to zero point

Using ON/ZERO or UNITS to enter

Default = 0

0 fi show all 5 fi within 5 d

1 fi within 1 d 6 fi within 6 d

2 fi within 2 d 7 fi within 7 d

3 fi within 3 d 8 fi within 8 d

4 fi within 4 d 9 fi within 9 d

4 Weight value must over 1/3 full scale
F L 0

Using ON/ZERO or UNITS
to enter

F L 1

Stabilization range

Display shows the current setting

3db 5

Filter setting

Display shows the current setting

Using ON/ZERO or UNITS
to
enter

3db 4
CFn 01
ON/ZERO key fi Step Up key

(Selects number 0,1,2,3,4,5,6,7,8,9)

UNITS key fi Step Down key

(Selects number 0,1,2,3,4,5,6,7,8,9)

TARE key fi Right key, flashing digit move to the right

NET/GROSS key fi Left key, flashing digit move to the left

Enter "00

CFn 00

Press TARE to exit the
environment parameters

04 CFn

2-4-2 Approval configuration CFn 02

Press **TARE** key

CFn 02
Pr o ũ E 0

Using **[ON/ZERO or UNITS]**
to input a parameter

Pr o ũ E 1
CFn 02

Input the parameter "00

CFn 00

Press **TARE** key
to complete the setting

04 CFn

Approval con figuration

Display shows current setting

ON/ZERO key $\rightarrow$ Increment number by 1

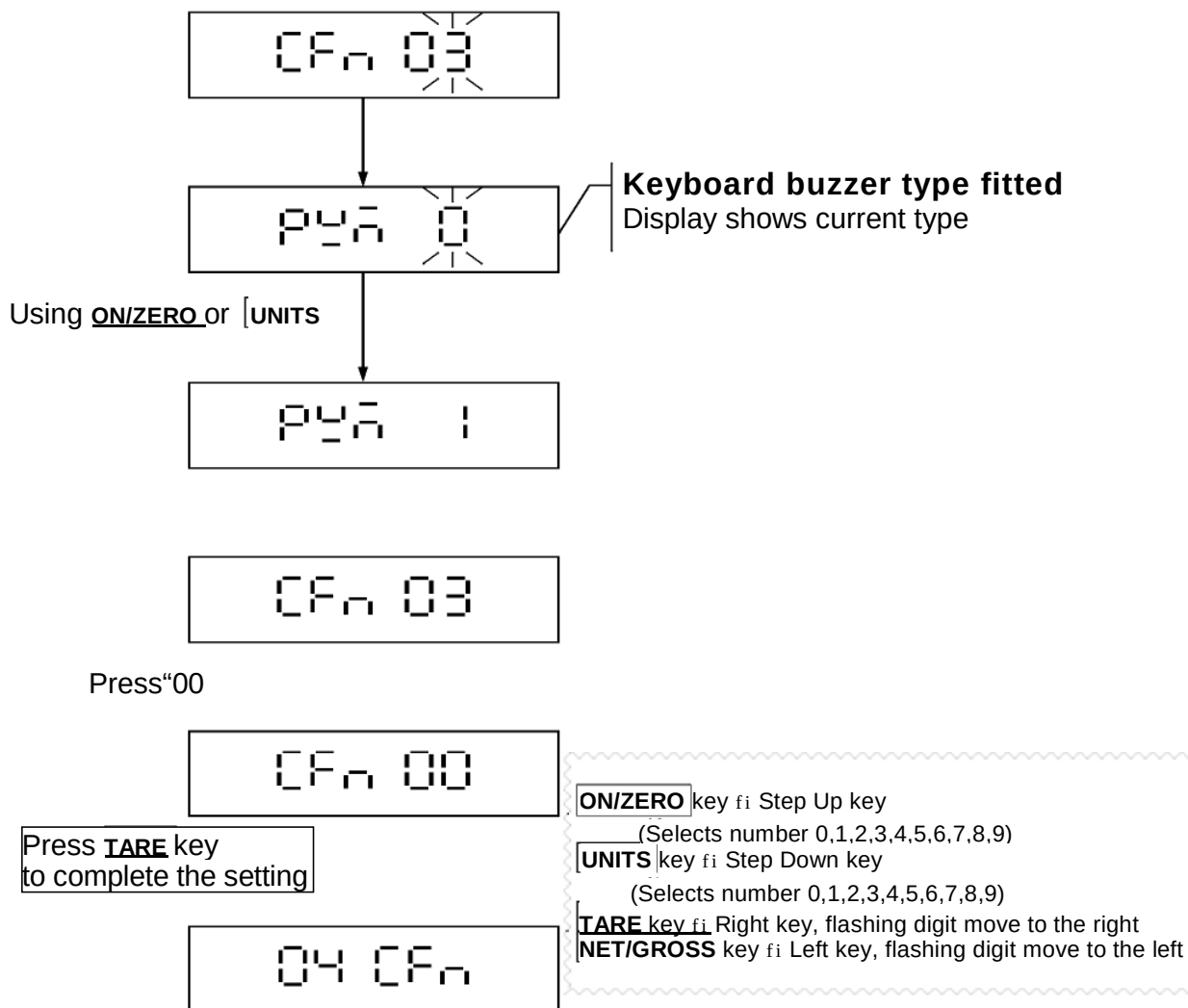
UNITS key $\rightarrow$ Decrement number by 1

TARE key $\rightarrow$ Move cursor one place to the right

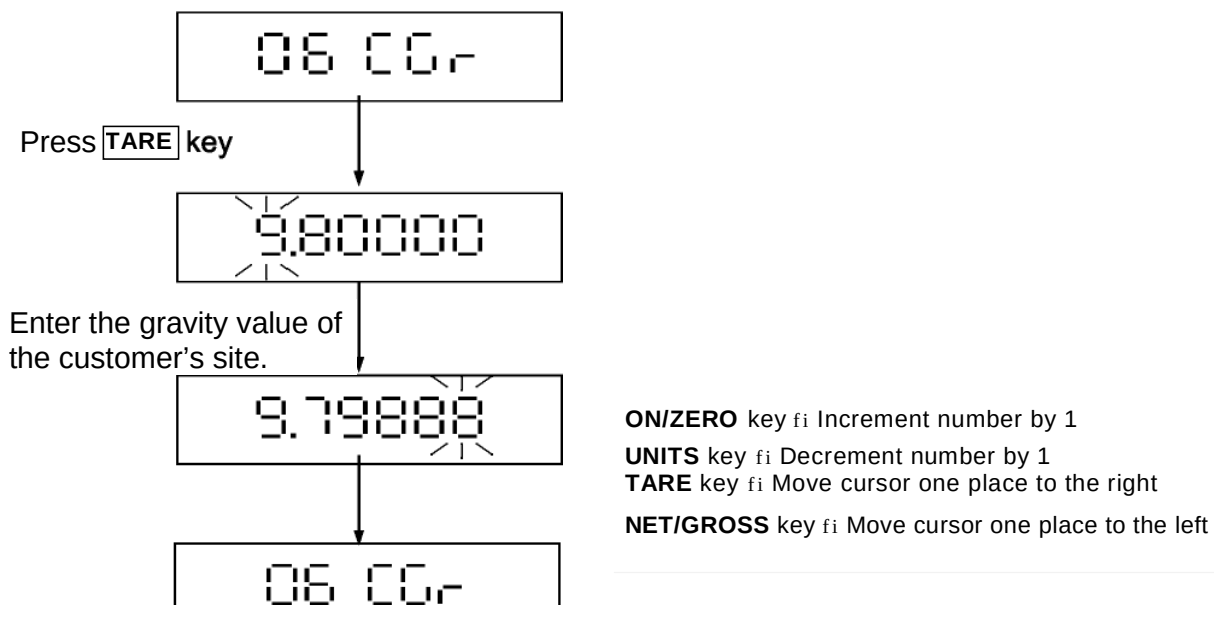
NET/GROSS key $\rightarrow$ Move cursor one place to the left

„Brazil approved model: In the counting mode, the indicator is not able to calculate the count value if the unit weight is less than 0.1e.

2-4-3 Keyboard buzzer type [F n 0 3]



2-5 Gravity zone compensation 06 00 r



- 4 The compensation entered has to be between the value of gravity acceleration at the equator and acceleration at the poles.

Acceleration of gravity at the Equator: $G_E = 9.7803184558 \text{ m/sec}^2$

Acceleration of gravity at the Poles: $G_P = 9.8321772792 \text{ m/sec}^2$

Taipei	9.78914 m/sec^2	Shanghai 9.79585 m/sec^2
--------	--------------------------	-----------------------------------

CHAPTER 3 ADVANCED FUNCTIONS

3-1 Advanced Function Setting Table

The advanced functions are listed below. For detailed settings refer to the following sections.

DISPLAY	LEVEL 1 FUNCTION	DISPLAY	LEVEL 2 FUNCTIONS
	Exit the ADVANCED FUNCTION setting mode	---	---
	General Function setting mode		Return to the ADVANCED FUNCTION setting menu
			Automatic backlight settings
			Automatic power-off timer settings
			HI/LO/OK settings
			Restore the default settings
			Noise filter settings
			Hold function settings
			Auto unit weight averaging setting
	External Weight Calibration	---	---
	RS232 Bi-direction Function settings		Return to the ADVANCED FUNCTION setting mode menu
			Baud rate settings
			Communication protocol settings
			Output format settings
			Continuous Transmission settings

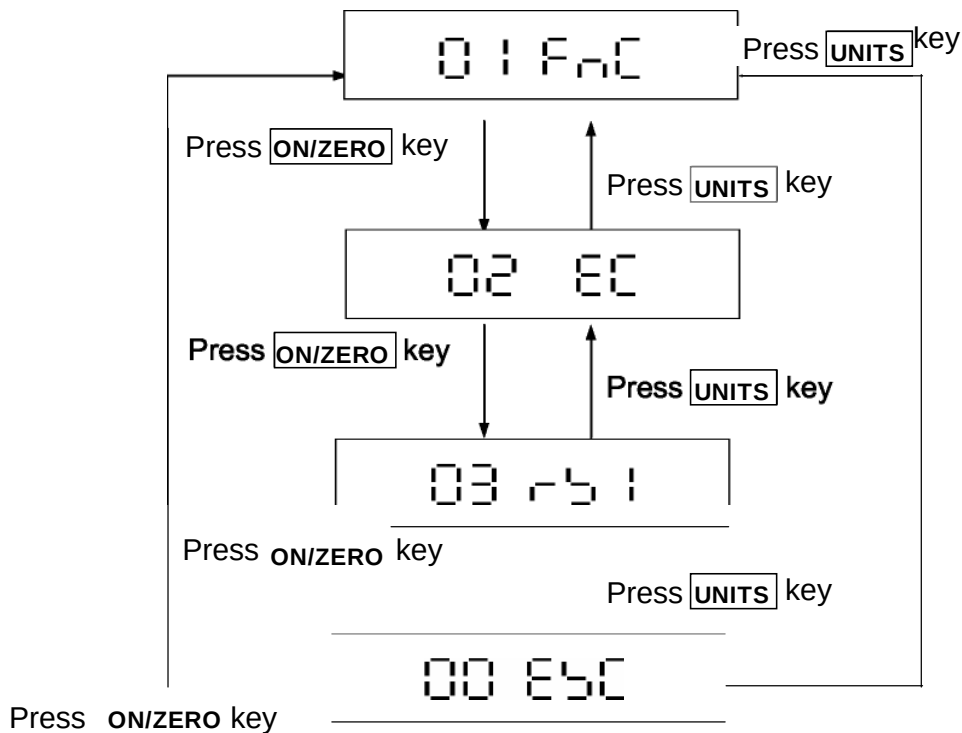
DISPLAY	LEVEL 1 FUNCTION	DISPLAY	LEVEL 2 FUNCTIONS
			Continuous data transmission rate
			Auto transmission at Zero
			Reset of auto transmission
			Output condition settings

3-2 Advanced Function Setting Workflow

In the weighing mode, press the **NET/GROSS** and **ON/ZERO** keys at the same time to enter the **Advanced Function** setting mode. The LCD shows

01 F_{nc}

Overall workflow of the Advanced Function setting mode:



01 F _{nc}	fi General Function Setting Mode
02 EC	fi External Weight Calibration
03 r51	fi RS232 Bi-direction Function Setting
00 E5C	fi Exit the Advanced Function Setting Mode

Refer to the following sections for the detailed operation procedures of each function setting.

3-3 General Function Setting 0 1 F n C

There
are 7

functions in the general function setting mode from to.

F n C 0 1

Workflow of the General Function setting:

Press **TARE** key



Use the keys to select
the function



Key in "00



ON/ZERO key fi Increment number by 1

UNITS key fi Decrement number by 1

TARE key fi Move cursor one place to the right

NET/GROSS key fi Move cursor one place to the left

3-3-1 Automatic Backlight Function Setting

F n C 0 1

Select    in the general function setting mode   to change the backlight function setting.

Press TARE key



LCD displays the last status

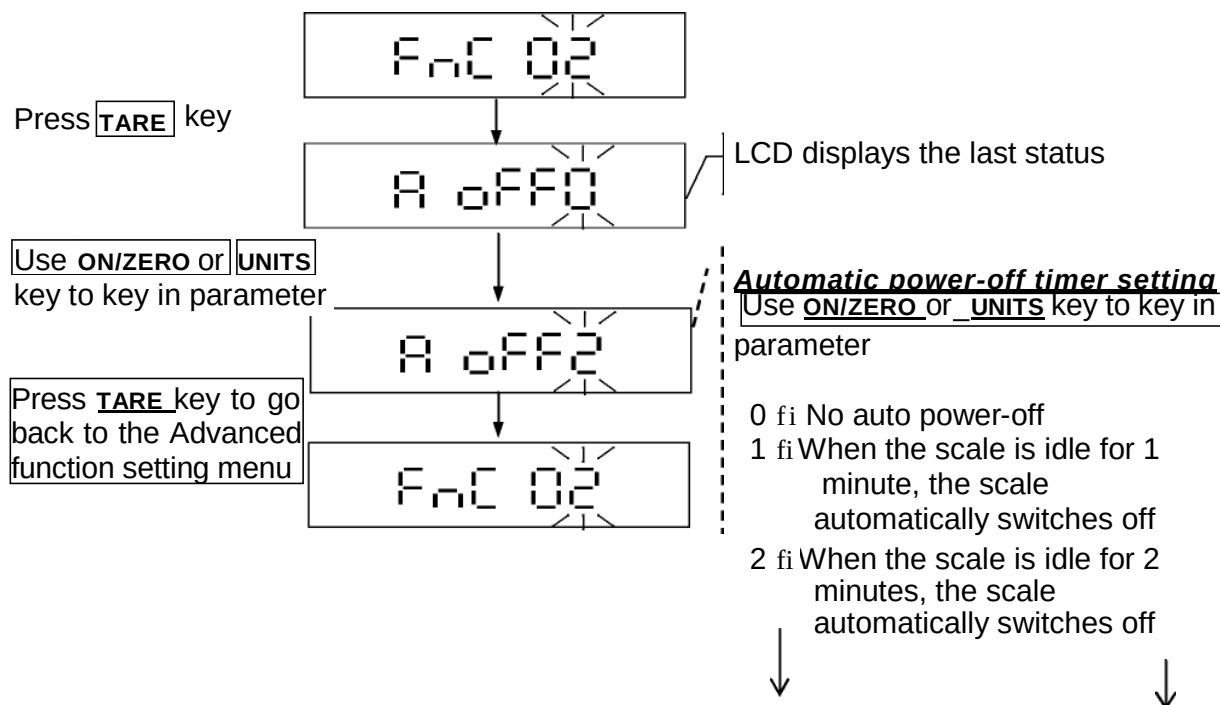
Use ON/ZERO or UNITS key
to select function “on

Automatic backlight function

When the weight is over 10d, the display backlight will be on. After the weight is stable for 10 seconds or when the scale returns to zero, the display backlight switches off.

3-3-2 Automatic Power-off Timer Setting F_nC 02

Select F_nC 02 in the general function setting mode F_nC 02 to change the automatic power-off timer setting.



ACTIONS

DISPLAY

NOTE

9 fi When the scale is idle for 9 minutes, the scale automatically switches off

ON/ZERO key fi Increment number by 1

UNITS key fi Decrement number by 1

TARE key fi Move cursor one place to the right

NET/GROSS key fi Move cursor one place to the left

Automatic power-off function

When the weight on weigh pan is less than 10d or keeps idle for the set time, the scale will automatically switch off.



3-3-3 HI/LO/OK Settings 03

Select  in the general function setting mode  to set the HI/LO/OK function.

4 When the high limit and low limit are both set as "0

Press TARE key

lb
LC .

Key in the desired high
limit value

lb

lb

lb

3-3-4 Restore to the Default



Settings

Select  in the general function setting mode  to restore to the default settings.

ACTIONS

SPLAY

TE

DI

NO



Return fi Return (Cancel the restoration)

Press **TARE** key

Use **ON/ZERO** or **UNITS** keys to select "return"


Format fi Restore the default setting

ON/ZERO key fi Increment number by 1

UNITS key fi Decrement number by 1

TARE key fi Move cursor one place to the right

NET/GROSS key fi Move cursor one place to the left

4 The defaults include the following:

4 In approved models,  set as 1 or 3,  setting is not available.

- 1) External weight calibration
- 2) HI/LO/OK setting values
- 3) Noise filter setting (External)
- 4) Sampling settings for the counting function

3-3-5 Noise Filter Settings Fnc 05

Select Fnc 05 in the general function setting mode Fnc 05 to set the noise filter

ACTIONS

DISPLAY

NOTE

4 When modifying Fnc 05, the parameters of Fnc 05 remain un-altered.

Press **TARE** key

Use **ON/ZERO** or **UNITS** key to key in the parameters

Press **TARE** key

Use **ON/ZERO** or **UNITS** key to key in the parameters

Press **TARE** key

Use **ON/ZERO** or **UNITS** key to key in the parameters

Press **TARE** key

Fnc 05

Zero 0

Zero 1

FIL 0

FIL 1

3db 5

3db 4

Fnc 05

Returning to zero point setting

LCD displays the last status

Returning to the zero point setting

Use **ON/ZERO** or **UNITS** key to key in the parameters or zero point

Default setting = 0

0 fi No skip	5 fi skip 5d
1 fi skip 1d	6 fi skip 6d
2 fi skip 2d	7 fi skip 7d
3 fi skip 3d	8 fi skip 8d
4 fi skip 4d	9 fi skip 9d

When the weight on the scale is over 1/3 full capacity, the function is on.

Digital switch & Stabilization range setting

LCD displays the last parameter setting

Digital switch & Stabilization range setting

Use **ON/ZERO** or **UNITS** keys to key in the parameters. Default setting = 0 Parameter 0 ~ 9, the larger the number the more stable the weight.

Filter parameter setting

LCD displays the last parameter setting

Filter parameter setting

Use **ON/ZERO** or **UNITS** keys to key in the parameters. Default setting = 5 Parameter 0 ~ 9.

The larger the number is, the faster the filter responds. Fast response can lead to weighing instability.

4 In approved models, Cfn 0E set as 1 or 3, Fnc 05 setting is not available

3-3-6 Hold Function Settings FNC 06

Select FNC 06 in the general function setting mode FNC 06 to set the hold function

hold 0

Hold function setting

Use **ON/ZERO** or **UNITS** keys to key in the parameters

Default setting = 0

0 fi Hold function disabled

1 fi "Peak hold" mode

ON/ZERO key fi Increment number by 1

UNITS key fi Decrement number by 1

TARE key fi Move cursor one place to the right

NET/GROSS key fi Move cursor one place to the left



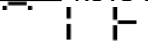
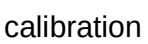
Press **TARE** key

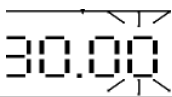
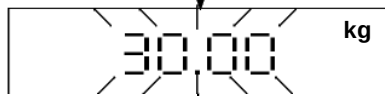
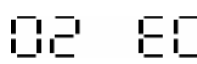
Use **ON/ZERO** or **UNITS** key
to key in the parameters

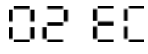
Press **TARE** key

Key in the parameter "00

3-4 Weight Calibration 02 EC

In the weighing mode, press the **NET/GROSS** and **ON/ZERO** keys at the same time to enter the **Advanced Function** setting mode. The LCD shows  and use the **NET/GROSS** or **UNITS** key to select  to enter the weight calibration mode.

ACTIONS	DISPLAY	NOTE
Press TARE key		
When the digit on the right flashes, ensure that the weigh pan is empty. Then Press the TARE key.		The LCD displays the calibration weight value (the maximum capacity of 1 st unit) and the unit. The digit on the right side keeps flashing.
When stable		The scale is calculating the internal value of the zero point. After stabilization, the LCD shows the calibration weight value.
Place the displayed weight on the weigh pan. Press the TARE key. The scale calculates the full capacity and stabilization, the buzzer beeps 3 times. Unload the pan and the zero procedure is completed.		
		ON/ZERO key $\uparrow$ Increment number by 1 UNITS key $\downarrow$ Decrement number by 1 TARE key $\rightarrow$ Move cursor one place to the right NET/GROSS key $\leftarrow$ Move cursor one place to the left

n In approved models,  set as 1 or 3, then  is disabled.

n Weight calibration conditions:

The calibration weight value placed on the weight pan must be over 100d, and the standard deviation of the weight must be within 10%.



Press **TARE** key

Key in the parameter 00 ~
08

Key in the parameter "00

3-5-2 Communication Protocol Settings

Select **03** in the RS232 serial interface setting mode to set the Communication Protocol.

Press **TARE** key

Communication protocol setting

LCD shows the last setting value.
 Default setting: n 8 1

Use ON/ZERO or UNITS key to select the protocol setting

Communication protocol setting

Use ON/ZERO or UNITS keys to select the protocol setting: n 8 1, E 7 1, O 7 1

Press **TARE** key

03 02

Key in the parameter "00

ON/ZERO key fi Increment number by 1

UNITS key fi Decrement number by 1

TARE key fi Move cursor one place to the right

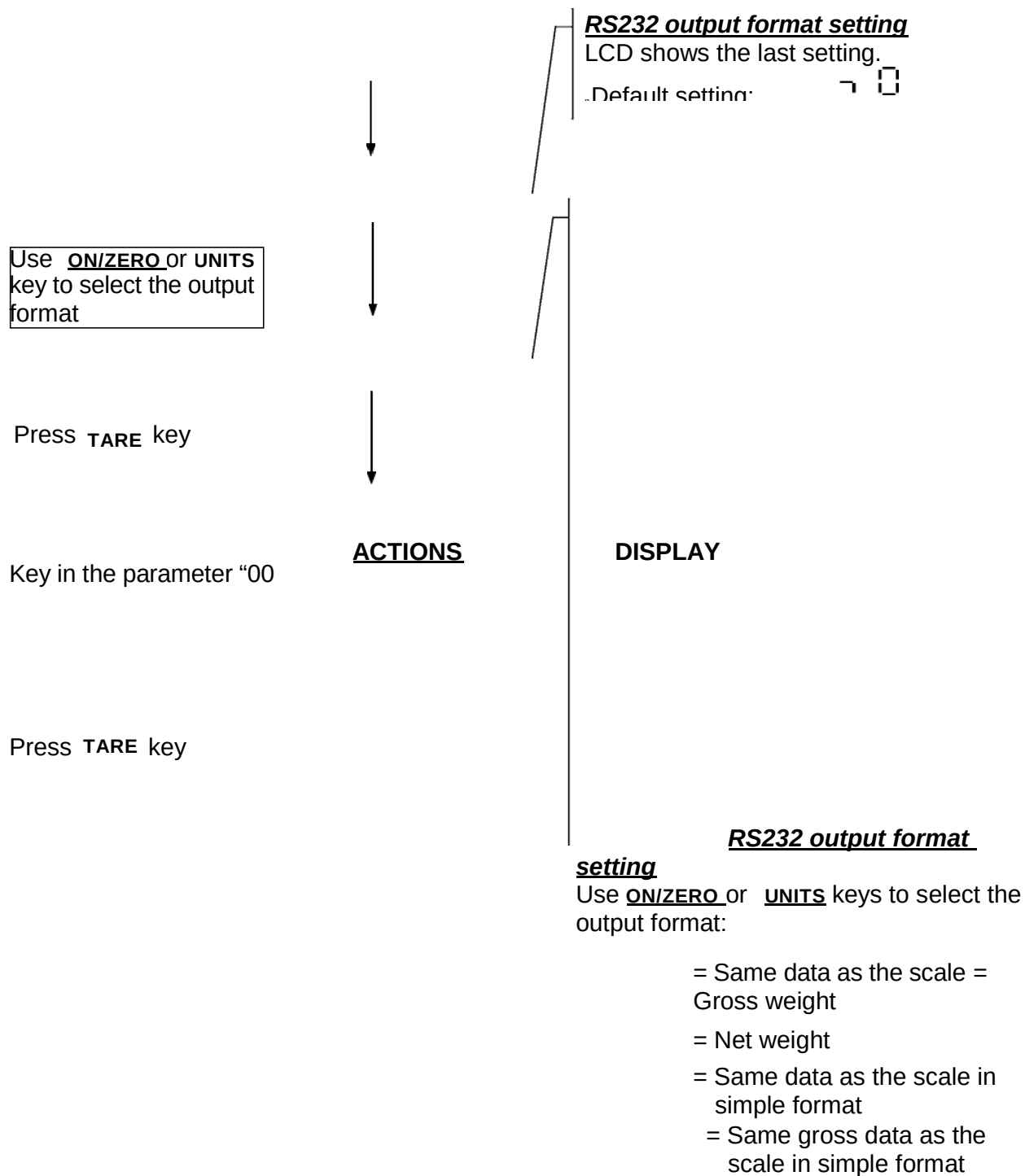
NET/GROSS key fi Move cursor one place to the left

3-5-3 Output Format Settings 5 1 03

Select in the RS232 serial interface setting mode to set the Output Format.

03 75 1

NOTE



- = Same net data as the scale in simple format
- = Hi/Lo/OK status + Same data as the scale in simple format
- = Hi/Lo/OK status + Simple gross weight
- = Hi/Lo/OK status + Simple net weight
- = Tare value

ON/ZERO key $\uparrow$ Increment number by 1

UNITS key $\downarrow$ Decrement number by 1

TARE key $\rightarrow$ Move cursor one place to the right

NET/GROSS key $\leftarrow$ Move cursor one place to the left



3-5-4 Continuous Transmission Settings r5 1 04

Select 03 r5 1 in the RS232 serial interface setting mode to set the Continuous Transmission status.

ACTIONS

DISPLAY

NOTE

Press TARE key

Transmission setting

LCD shows the last setting

Default setting: ind

Use ON/ZERO or UNIT S keys to select the transmission type

Transmission setting

Use ON/ZERO or UNIT S keys to select the transmission type:

CONF = Command mode

STEREA = Continuous transmission

Auto = Constantly auto transmission

r5-off = Shut down RS232

Press TARE key

r5 1 04

Key in the parameter "00

ON/ZERO key fi Increment number by 1

UNIT S key fi Decrement number by 1

TARE key fi Move cursor one place to the right

NET/GROSS key fi Move cursor one place to the left



3-5-5 Selection of the Continuous Transmission Rate r5 105

Select r5 105 in the RS232 serial interface setting mode 03 r5 1
to set the Continuous Transmission Rate.

ACTIONS

DISPLAY

NOTE

Press TARE key

Use the **ON/ZERO** or **UNITS** keys to select the continuous transmission rate

Continuous transmission rate setting

The LCD shows the last setting.

„Default setting: r5 105

Press TARE key

Key in the parameter “00

ON/ZERO key $\rightarrow$ Increment number by 1

UNITS key $\rightarrow$ Decrement number by 1

TARE key $\rightarrow$ Move cursor one place to the right

NET/GROSS key $\rightarrow$ Move cursor one place to the left

Contin
Use o
the co



3-5-6 Auto Transmission at Zero 5 1 06

Select in the RS232 serial interface setting mode to
set the Auto Transmission at Zero.

4 When the value of “Auto transmission at zero



3-5-7 Reset Auto Transmission

Select   in the RS232 serial interface setting mode   to Reset Auto Transmission.

4 When the value of “Auto transmission at zero

3-5-8 Output Condition Settings r 5 1 08

Select _ _ _ _ in the RS232 serial interface setting mode _ _ _ _ to Reset of Auto Transmission.

Press **TARE** key

Use **ON/ZERO** or **UNITS** keys to select the desired setting

Press **TARE** key

Key in the parameter "00

Output condition settings

The LCD shows the last setting.

Default setting: _ - 1

Output condition settings

Use **ON/ZERO** or **UNITS** keys to select the desired setting:

= Output all the time

= Stable weight output only (No output when under/overload or unstable)

ON/ZERO key $\uparrow$ Increment number by 1

UNITS key $\downarrow$ Decrement number by 1

TARE key $\rightarrow$ Move cursor one place to the right

NET/GROSS key $\leftarrow$ Move cursor one place to the left

2 Command mode

Command Format A

Host _____ Command

Slave

Command

MZ	Zero	SO	Command mode
MT	Tare	UA	Switch to the first unit
MG	Gross weight	UB	Switch to the second unit
MN	Net weight	UC	Switch to the third unit
CT	Clear TARE value	UD	Switch to the forth unit
SC	Continuous transmission	UE	Switch to the fifth unit
SA	Auto transmit	UF	Switch to the sixth unit
%	Stop continuous transmission and enter the command mode		

Note: UA ~ UF settings are dependent the model of the scale

Command Format B

Host _____ Command

Slave

Data

RW	Read current weight	RH	Read Gross (simple)
RG	Read Gross weight	RI	Read Net (simple)
RN	Read Net weight	RJ	Read comparison situation + current display of weight (simple)
RT	Read TARE	RK	Read comparison situation + Gross (simple)
RB	Read current display of weight (simple)	RL	Read comparison situation + Net (simple)

Note: a. add % before the command to read continuously
b. add # before the command to transmit a stable value

Read weight comparison setting value RS $\hat{\circ}$ $\hat{\circ}$ £ £

$\hat{\circ}$ $\hat{\circ}$: Groups(00 ~ 09) £ £ : Setting Items

HI **Show "HI"**



Command Format C

Host _____ Command+ Data
Slave

Command+ Data

Write weight comparison setting value WSô ô £ £ XXXXXX

ôô: Groups(00 ~ 09) ££: Setting Items XXXXXX: Setting Value **HI**

Write “HI” settin^g value



2 Output data format

Weight format

Gross	S	T	,	G	S	,	+	0	1	2	3	4	5	6	7	S	S	P	o	z	P	C P	L R				
Ne	t	T	,	N	S	T	,	+	1	.	2	3	.	4	5	6	t	I	.	g							
Tare	S	T	,	T	R	,	+	0	1	2	.	3	4	5	6	S	S	P	k	g	P						
Pl		u	L	,	s	G	S	,	+	S	O	S	S	P	S	S	S	P	S	S	S						
Mi	n	O	u	L	s	,	G	O	S	L	,	-	S	S	P	S	P	S	S	S	S						
Un	s	U	t	S	a	b	,	G	I	S	e	,	+	0	1	2	3	4	.	5	6			S	S	P	P

Simple

G/N	+	1	.	2	3	.	4	5	6		
G /		0	N	1	2	3	4	+	5	.	6
G /		0	N	1	2	.	3	+	4	5	6
P I		S	u	S	S	P	S	P	S	P	P
Min	-	u	S	S	S	P	S	P	S	P	P

Comparison status + Simple

Byte0	Byte 1	Byte2	+/	1	.	2	3	.	4	5	6	CR	LF
-------	--------	-------	----	---	---	---	---	---	---	---	---	----	----

Byte0 : HI 30H/31H

Byte1 : OK 30H/31H

Byte2 : LO 30H/31 H

2 Serial Data Transfer/Receive Format

n . 8 .	LSB				8-bit data	MSB				1
	S									0
e . 7 . 1	7-bit data				7-bit data	P S				1
	S									0
n . 7 . 1	7-bit data				7-bit data	P S				1
	S									0

Note:

P : Parity bit

S : Start bit STOP: Stop bit

APPENDIX I: ASCII CODE TABLE

Symbol	ASC II	Symbol	ASC II Code	Symbol	ASC II Code
A	41H	a	61H	0	30H
B	42H	b	62H	1	31H
C	43H	c	63H	2	32H
D	44H	d	64H	3	33H
E	45H	e	65H	4	34H
F	46H	f	66H	5	35H
G	47H	g	67H	6	36H
H	48H	h	68H	7	37H
I	49H	i	69H	8	38H
J	4AH	j	6AH	9	39H
K	4BH	k	6BH	Ø	0DH
L	4CH	l	6CH		
M	4DH	m	6DH		
N	4EH	n	6EH		
O	4FH	o	6FH		
P	50H	p	70H		
Q	51H	q	71H		
R	52H	r	72H		
S	53H	s	73H		
T	54H	t	74H		
U	55H	u	75H		
V	56H	v	76H		
W	57H	w	77H		
X	58H	x	78H		
Y	59H	y	79H		
Z	5AH	z	7AH		

APPENDIX II: 7 SEGMENT DISPLAY CHARACTERS

Digit	7 segment letter	Alphabet	7 segment letter	Alphabet	7 segment letter
0		A		N	
1		B		O	
2		C		P	
3		D		Q	
4		E		R	
5		F		S	
6		G		T	
7		H		U	
8		I		V	
9		J		W	
		K		X	
		L		Y	
		M		Z	