

VI 150  
WEIGHING INDICATOR

MANUAL

PLEASE READ THIS MANUAL VERY CAREFULLY  
BEFORE USE

Dec 2006

*Specifications subject to change without prior notice*

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## APPENDIX

## 1. GETTING STARTED

### CAUTION

- *This is not a toy. Keep out of reach of children;*
- *This indicator is not an explosion proof device;*
- *This indicator is not a water proof device;*
- *Do not open this indicator, no user serviceable parts inside. Always contact supplier for service.*

### 1.1 Introduction

Weighing indicator VI 150 adopts high precision  $\Sigma$ - $\Delta$  A/D conversion technology, widely applied in electronic floor scale, electronic truck scale, static railroad truck scale and so on alike static weighing system equipped with 1~8 load cell.

### 1.2 Features

- Good consistency, no need to re-calibrate a scale if change the former indicator, just input the recorded former calibration parameter is OK
- Software on-line update and modification locally or by ISP
- Printing content and format user-defined
- Aluminum alloy housing with strong anti-disturbance ability, ESD method for printer and communication interface
- Password settable for operation of parameter setting, record check, record clear;
- Password revisable for time power off function

- Able to save data in operation mode of one time weighing or two times weighing, with selection of print or not;
- Able to save 100 customer records, one record consists of customer ID, customer name, note info;
- Able to save 201 goods records, one record consists of goods ID, goods name;
- Able to save 1500 truck records, one record consists of truck ID, truck tare weight, and weighing data able to print out all weighing records or weighing records that accord to user's requirement, or weighing records that group by date, truck ID, goods ID, customer ID
- Able to save 1501 weighing records
- Standard RS232 communication interface with selectable baud rate and communication method
- Standard scoreboard interface with current loop method
- Standard parallel print interface, able to connect with 9-pin or 24-pin wide-line printer
- With built-in printer for D10P

## 2. TECHNICAL PARAMETERS AND SPECIFICATIONS

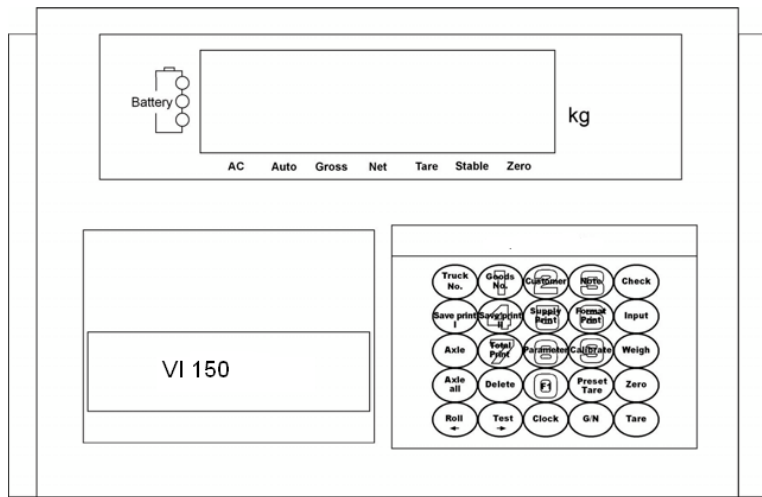
- Model: VI 150
- Accuracy: Class III, N=5000
- A/D Conversion Method:  $\Sigma - \Delta$
- Input Signal Range:  $-15\text{mV} \sim 30\text{mV}$
- A/D conversion speed: 200 times/sec.
- Nonlinearity:  $\leq 0.0015\% \text{FS}$
- Load Cell Excitation: DC5V; I: 120mA
- Max. connection number of load cell: 8 at 350 ohm or 16

at 700 ohm

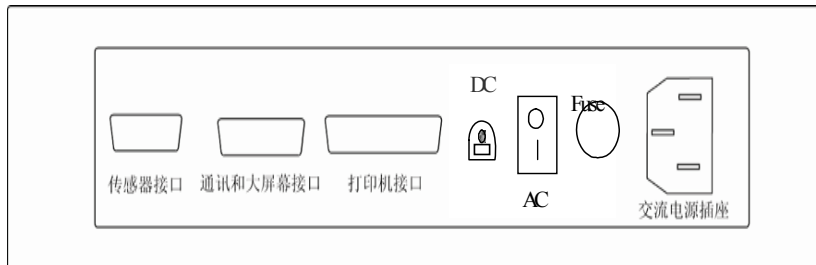
- Load cell connection mode: 6 wire, auto compensation for long distance
  - Max. sensitivity: 0.5uV/d
  - Display: 7bits LED, 7 status indications, 3 battery indications
  - Clock: real clock without effect on power off
  - Scoreboard interface (Standard)
- Serial sending signal by current loop with baud rate 600.  
Transmission distance: Current loop  $\leq 2000$  meters;
- Communication interface( RS232 C standard; RS422 optional)
- Serial communication interface, with selectable baud rate by continuous sending method or on command method  
Transmission distance: RS232C  $\leq 30$  meters; RS422  $\leq 1200$  meters
- Print interface (Standard)
- Parallel sending, able to connect with wide-line printer KX-P1121, KX-P1131, LQ300K;
- Power supply: AC 187~242V, 49~51HZ; DC: 6V/10Ah
  - Fuse: 0.5A

## 3. LAYOUT AT FRONT AND BACK

### 3.1 Front view of the indicator



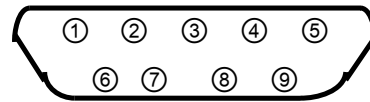
3.2 Back view of the indicator



4. Connecting to Other Devices<sup>1</sup> through various interfaces

4.1 Connection to load cell

Connect this indicator to load cell through the 9-pin load cell connector located at the back. Refer to the below table for load cell pin assignment.



PIN #	ASSIGNMENT
1	E-
2	S-
5	SHIELD
6	E+
7	S+
8	IN-
9	IN+

Short connect PIN 1 AND PIN 2, PIN 6 and PIN 7 when connected to load cell with a 4-wire cable;

**CAUTION**

- Connection between load cell and indicator must be reliable; shield-wire must be connected to ground reliably;

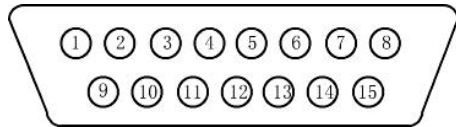
<sup>1</sup> Turn scale off and cut off power before making any connections or disconnections.

- *Load cell and indicator are all static-electricity-sensitive devices, measures must be taken to ensure safety.*

**4.2 Connection to PC or SCOREBOARD**

From the 15-pin interface located at the back, you could

- Connect indicator to computer via RS232 output or RS422 output (optional);
- Connect indicator to scoreboard via 20mA current loop output;



15-pin connector

PIN #	ASSIGNMENT	PIN #	ASSIGNMENT
1	RS422 OUTPUT+	9	SCOREBOARD OUT+
2	RS422 OUTPUT-	10	SCOREBOARD OUT-
3	RS422 IN+		
4	RS422 IN-		
6	RS232 RXD		
7	RS232 TXD		
8	GND		

Notel: RS422 output is optional;

**4.2.1 Connect to PC**

Data format for RS232 or RS422 is the same. Data is transmitted in ASCII code. Data format is as listed below(one group):

1	2	3	4	5	6	7	8	9	10
START	DATA								STOP

There are two modes to communicate with PC:

- Continuously send, and (when TF set as 0)
- Command mode (when TF set as 1)

**A. Continuously send**

Data transmitted is tare weight from the display of the indicator. Each time it sends one frame data to pc, one frame consists of 12 groups while the data format of one group is as listed above. Below is the content for one frame:

GROUP NO.	CONTENT	NOTES		EXAMPLE			
		CONTENT	CODE	CONTENT	CODE (HEX)		
1	START	(XON)	02	XON	02		
2	+ OR -	SIGN BIT	2B/2D	+	2B		
3	WEIGHING DATA	Highest	30~39	0	30		
4				0	30		
5				2	32		
6				0	30		
7				0	30		
8		Lowest		0	30		
9		DECIMAL POINT		0~4(from right to left)	30~34	2	32
10		XOR		HIGH 4 BITS		XOR=0X1	31
11	RESULT	LOW 4 BITS		B	42		
12	STOP	XOFF	03	XOFF	03		
XOR=2A 3A 4A 5A 6A 7A 8A 9							

### B. Command mode

Indicator will act according to instruction from computer, one instruction from PC will trigger one operation at indicator, please refer to following table for instruction format from PC:

GROUP NO.	CONTENT NOTES		EXAMPLE	
	CONTENT	NOTE	CONTENT	CODE (HEX)
1	START	XON(02)	XON	02
2	ADDRESS	A~Z	ADD=1	41
3	COMMAND (FROM A~H)	A:FOR SHARKE B:FOR GROSS W C:FOR TARE W D:FOR NET W E:FOR TRUCK NO. F:FOR GOODS NO. G:FOR CUSMR NO. H: FOR NOTE NO.	FOR EXAMPLE: COMMAND A	41
4	VERIFY	HIGH 4 BITS	XOR	30
5		LOW 4 BITS		30
6	STOP	03(XOFF)	XOFF	03
NOTE: XOR=2⊕3				

Indicator will response PC as followed format:

GROUP NO	NOTES		EXAMPLE	
			CONTENT	CODE(HEX)
1	START XON (02)		XON	02
2	ADDRESS : A~Z		A	41
3	A~H	A:To SHARKE	A	41
		B:To send GROSS W		
		C:To send TARE W		
		D:To send NET W		
		E:To send TRUCK NO.		
		F:To send GOODS NO.		
		G:To send CUSTOMER NO.		
		H:To send NOTE NO.		
	EOT(0X04):			
4	COORESPONDING DATE ACCORDING		REFER TO FOLLOWED	
...	TO COMMAND		TABLE	
N				
N+1	HIGH 4 BITS OF XOR		XOR=00	30
N+2	LOW 4 BITS OF XOR			30
N+3	03(XOFF) STOP			03
NOTE1: XOR=2⊕ 3⊕ .....(N-1)⊕				

NOTE: Address 1~26 corresponds ASCII CODE of A~Z, that is to say, when PC communicates with indicator, the address in the instruction from PC just corresponds ACSII code of A~Z as followed table listed:

Adr No.	ADDRESS			Adr No.	ADDRESS		
	Address	ACSII CODE			ADDRESS	ACSII CODE	
		HEX	DECIMAL			HEX	DECIMAL
01	A	41	65	14	N	4E	78
02	B	42	66	15	O	4F	79
03	C	43	67	16	P	50	80
04	D	44	68	17	Q	51	81
05	E	45	69	18	R	52	82
06	F	46	70	19	S	53	83
07	G	47	71	20	T	54	84
08	H	48	72	21	U	55	85
09	I	49	73	22	V	56	86
10	J	4A	74	23	W	57	87
11	K	4B	75	24	X	58	88
12	L	4C	76	25	Y	59	89
13	M	4D	77	26	Z	5A	90

Content of 4~N is as followed table according to different command:

COMMAND A	NO DATA	ONE FRAME (6 GROUPS)
COMMAND B B:To send GROSS W	A: Sign bit(+/-)	ONE FRAME (14 GROUPS)
	B: Highest bit (6 BITS)	
	...(from high to low)	
	G:	
	H:DECIMAL POINT(0~4)	
COMMAND C C:To send TARE W	A: Sign bit(+/-)	ONE FRAME (14 GROUPS)
	B: Highest bit (6 BITS)	
	...(from high to low)	
	G:	
	H:DECIMAL POINT(0~4)	
COMMAND D D:To send NET W	A: Sign bit(+/-)	ONE FRAME (14 GROUPS)
	B: Highest bit for g.w	
	...(from high to low)	
	G:	
	H:DECIMAL POINT(0~4)	
COMMAND E E:To send TRUCK NO..	A:First bit for truck no.	ONE FRAME (11 GROUPS)
	B:...	
	C:...	
	D:...	
	E:Last bit for truck no.	
COMMAND F To send GOODS NO.	A:First bit for goods no.	ONE FRAME (9 GROUPS)
	B: ...	
	C: Last bit for goods no.	

COMMAND G To send CUSTOMER NO.	A:First bit for customer no.	ONE FRAME (9 GROUPS)
	B: ...	
	C:Last bit for customer no.	
COMMAND H To send NOTE NO.	A:First bit for note no.	ONE FRAME (9 GROUPS)
	B: ...	
	C: Last bit for note no.	
ERROR(0X04)	NO DATA	1 FRAME(6 GROUPS)

Note1:For verify of XOR

High 4 bits and low 4 bits of XOR is defined: if high 4 bits or low 4 bits of XOR is  $\leq 9$ , then add 30h and transmit in ASCII code; if high 4 bits or low 4 bits of XOR is  $>9$ , hen add 37h and transmit in ASCII code

Note2:

**Parameter setting at indicator for communication with PC**  
**There are mainly three parameters to be set for communication with PC, they are address, baud rate and communication method.**  
**Refer to followed table for setup parameter for communication:**

Step	Operation	Display	Note
1		[PSt 00]	Press[parameter] and



	Press[parameter] Press[1] Press[INPUT]	[PSt 01]	1, directs to communication parameter type set
2	Press[INPUT]	[P1 00]	Input parameter no. (0~2) For example:00
3 No.00	Press[1] Press[INPUT]	[Adr **] [Adr 01]	Parameter NO.00 is for set address
4 No.01	Press[3] Press[INPUT]	[bt *] [bt 3]	Baud rate(0~3) 0:600;1:1200 2:2400;3:4800
5 No.02	Press[0] Press[INPUT]	[tF *] [tF 0]	Communication method (0~1) 0:Continuous 1:On command
6			Set for parameter type communication finish, return to weighing status;

#### 4.2.2 Connect to Scoreboard

Data is transmitted serially in binary code with baud rate 600.

Data format is as listed below (one group):

0	1	2	3	4	5	6	7	8	9	10
START	DATA(Low is prior to high)								SIGN	STOP

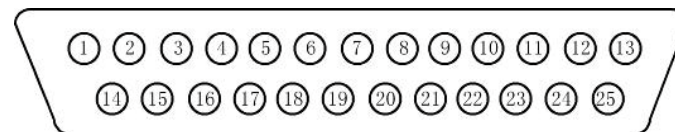
Indicator sends one frame data to scoreboard per 100ms, one frame consists of 3 groups while the data format of one group is as listed above. Below is the content for one frame:

Group 1	0	1	2	3	4	5	6	7	8	9	10
	Start	D0	D1	D2	D3	D4	D5	D6	D7	SIGN	STOP
		X			Y		G18	G16	G17	0	1
Group 2	0	1	2	3	4	5	6	7	8	9	10
	Start	D0	D1	D2	D3	D4	D5	D6	D7	SIGN	STOP
		G8	G9	G10	G11	G12	G13	G14	G15	0	1
Group 3	0	1	2	3	4	5	6	7	8	9	10
	Start	D0	D1	D2	D3	D4	D5	D6	D7	SIGN	STOP
		G0	G1	G2	G3	G4	G5	G6	G7	1	1

For group one, Sign bit is 0; X(D0,D1,D2)means decimal point (0~4); Y (D3) means sign(1 for negative while 0 for positive); Y (D4) for back up; G18,G17 and G16 is binary code;  
For group two, Sign bit is 0; G15~G8 is binary code;  
For group three, Sign bit is 1; G7~G0 is binary code;

From G0~G18 consists of 19 bit binary code,low prior to high with content of weighing data(net weight)

#### 4.3 Connection to Printer



25-pin interface

PIN #	ASSIGNMENT	PIN #	ASSIGNMENT
1	ST	7	D5
2	D0	8	D6
3	D1	9	D7
4	D2	11	BUSY
5	D3	25	GND
6	D4		

Description for each pin is as listed in above table. Before print operation, first set up parameter for print function, then connect indicator to printer with printer cable. Because printer parameter set will effect print content and data save format, be sure to refer to followed table carefully for parameter setting:

Step	Operation	Display	Note
1	Press[parameter] Press[2] Press[INPUT]	[PSt 00] [PSt 02]	Press[parameter] and 2, directs to print parameter type
2	Press[INPUT]	[P2 00]	Input parameter no. For example:00
3 No.00	Press[0] Press[INPUT]	[Aut0 *] [Aut0 0]	Select Auto/Manual(0~2) 0-Manual 1-Auto(invalid when turn on next time) 2-Auto(valid when turn on text time)

4 No.01	Press[2] Press[INPUT]	[tyPE *] [tyPE 1]	Print type selection 0:Print invalid 1:Built-in printer 2:EPSON LQ-300K(Recom) 3:Panasonic KX-P1131; 4:Panasonic KX-P1121
5 No.02	Press[99] Press[INPUT]	[HL **] [HL 99]	Print only when: 00-Back to zero 25-Back to <25% F.S. 50- Back to <50% F.S. 75- Back to <75% F.S. 99- Even it's F.S
6 No.03	Press[3] Press[INPUT]	[Arr *] [Arr 3]	Page <sup>2</sup> at linked-format (1~3) 1:1 page 2:2 page 3:3 page
7 No.04	Press[1000] Press[INPUT]	[L *****] [L 001000]	Min. weight for auto printing(no less than 10 d)
8 No.05	Press[3] Press[INPUT]	[b **] [b 03]	Printing rows in linked format (0~30)
9 No.06	Press[1] Press[INPUT]	[odE *] [odE 1]	Print format(0~6) 0:Record format 1:Linked-format(upright) 2:Linked-format(across) 3:Record format(user defined)

<sup>2</sup> This set is valid when No.06 parameter (print format) is set as 1,2,4,5

			4 : Linked-format (upright, user defined) 5 : Linked-format (across, user defined) 6 : Filled-in format
10 No.07	Press[0] Press[INPUT]	[dct *] [dct 0]	Discount rate select in filled-in format (0~1) 0 : Without discount rate 1 : With discount rate
11 No.08	Press[1111] Press[INPUT]	[Uy *****] [Uy 11111]	Save option, (Non 0 number will be regarded as 1 when set the value of this parameter <sup>3</sup> )
12 No.09	Press[1111] Press[INPUT]	[Hy *****] [Hy 11111]	Print content selection: to print out no. or detailed content <sup>4</sup>
13 No.10	Press[110000] Press[INPUT]	[y *****]	Print control parameter <sup>5</sup>
14 No.11	Press[0] Press[INPUT]	[Ut *] [Ut 0]	Weigh unit select (0~1) 0 : kg; 1 : t
15 No.12	Press[1] Press[INPUT]	[Pd *] [Pd 1]	Brightness of font at built in printer, more bigger, more bright

<sup>3</sup> For parameter Uy, there are 5 bits, from left to right, it corresponds 1~5, definition for each bit is as followed:

Bit 1 for company name: 0 not use; 1 use

Bit 2 for note: 0 not use; 1 use

Bit 3 for customer: 0 not use; 1 use

Bit 4 for cargo no.: 0 not use; 1 use

Bit 5 for truck no.: 0 not use; 1 use

<sup>4</sup> For parameter Hy, there are 5 bits, from left to right, it corresponds 1~5, definition for each bit is as followed:

Bit 1 for company name: 0 not print; 1 print company content

Bit 2 for note: 0 print note no.; 1 print note content

Bit 3 for customer: 0 print customer no.; 1 print customer content

Bit 4 for cargo no.: 0 print cargo no.; 1 print cargo content

Bit5: back up

<sup>5</sup> For parameter y, there are 6 bits, from left to right, it corresponds 1~6, definition for each bit is as followed:

Bit 1 for print speed: 0 normal; 1 fast

Bit 2 for tableframe: 0 not print table frame.; 1 print table frame

Bit 3 for note when save and print: 0 current note no.; 1 input note no.

Bit 4 for customer when save and print: 0 current customer no.; 1 input cust no.

Bit5: for cargo when save and print: 0 current cargo no.; 1 input cargo no.

Bit 6: for truck when save and print: 0 current truck no.; 1 input truck no.

16 No.13	Press[0111 1] Press[INPU T]	[yA WXYZ] [yA 0111]	Working mode selection: W bit: power save 0=Close 1=Open X bit:Print or not 0=Save but not print 1=Save and print Y bit:Save time 0=First time weighing 1=Second time weighing Z bit: axle weighing mode 0=Close 1=Open
17 No.14	Press[01] Press[INPU T]	[AC XX] [AC 01]	( 00~99 ) ,
18	Set for parameter type print finish, return to weighing status;		

### 5. Calibration and password setting

#### A, Calibration

First connect indicator to load cell properly so that indicator will work properly, it's better to calibrate after 15~30 minutes when it is powered on. Then open the calibration board at the back of indicator, you will see the calibration switch, turn the switch to top, then you could calibrate as followed table:

step	Operation	Display	Note
1	Press [cali]		

2	Press [888888] Press [input]	[c000000] [c*****]	888888 is password for calibration, you could change refer to followed table
3	Press [10] Press [input]	[E *** ] [E 010 ]	Input division 1/2/5/10/20/50/100
4	Press [0] Press [input]	[ dc * ] [ dc 0 ]	INPUT decimal point (0-4) Example:0without Decimal point
5	Press [124] Press [input]	[Pn VWXYZ] [Pn 00124]	INPUT Parameters value: <sup>6</sup> V: Application (0-1) 0: Non Commercial 1: Commercial W:Zero track speed(0~3) X: Zero track range (0~9) Y:Manual zero range(1~5) Z:Auto zero range(1~5)

6

W	0	1	2	3						
/S	0.4	0.3	0.2	0.1						
X	0	1	2	3	4	5	6	7	8	9
	NO	0.5e	1.0e	1.5e	2.0e	2.5e	3.0e	3.5e	4.0e	4.5e
Y,Z	1	2	3	4	5					
F.S	2%	4%	10%	20%	100%					

6	Press [1] Press [input]	[Flt * ] [Flt 1]	Flt for filter intensity(0~4)  Normally, choose 0, more serious the weighing environment it is, the bigger value it should be		]		For example:10000
7	press [ 6 ] [ 0 ] [ 0 ] [ 5 ] [ 0 ] press [input]	[F ***** ] [ F 060000 ]	F value is full capacity If need calibration, INPUT F value, then press [ Input ]; Directly to step 11 if press [ Input ];back to weighing status if press[weigh ] <sup>7</sup>	10	Press [20000] Press [input]/[check]	[AloAd2] [20000]	Load the weight, and input the value of weight when stable light is on,be sure weight loaded at this step must be more than the last one,press [<-] to the former calibration point For example:20000
8	press [ Input ]	[ noLoadn]	Zero point calibration, press [input] when the stable light is on and assure it's unloaded,wait for 5~10 seconds	...	...	...	Point 2,3,4,5 must be higher than the former one
9	Press [10000] Press [input]/[check]	[AloAd1] [10000]	Load the weight, and input the value of weight when stable light is on.	12	Press [input] Press [input] Press [input] Press [input] Press [input] Press [input] Press [input]	[A *****] [L *****] [LH **. **] [b *****] [o *****] [oH **. **] [C *****] [t *****] [tH **. **] [d *****] [U *****]	Show calibration rate,don't modify it,press [weigh] to exit calibration status

<sup>7</sup> If full capacity is more than 65000, then division must be no less than 5

	Press [input] Press [input] ...	[UH **.**] [E *****] [Y *****] [yH **.**]	
13	Press[1] Press[INPUT]	[Adr **] [Adr 01]	For communication address
14	Press[1] Press[INPUT]	[bt *] [bt 1]	Baud rate(0~4) 0:600; 1:1200;2:2400;3:4800;4:9600
15	Press[0] Press[INPUT]	[tF *] [tF 0]	0-Continuous sending 1-On command
16		Weighing status	Calibration finish Turn the calibration switch to bottom so that it would work properly
<p>Note: Calibration rate could be printed out when finished, press[report], press [8][0], press [input] to save and print. Keep these data in case calibration rate is lost, you could just input without recalibration again.</p>			

Operation for password administration:

Password administration includes three parts:

- ◆ Encrypt operation
- ◆ Password change
- ◆ Password unlock

Password change is for calibration and encrypt. The default password for calibration and other function is "888888", user could change any other password except "000000", operation is as followed table:

!Be sure to keep the calibration password you set. Lost of calibration password will lend no way to calibrate. When the calibration is lost, you could solve as followed:

- ◆ Step 1, get a temporary unlock code

step	Operation	Display	Note
1	Press [parameter] Press [20] Press [input]	[ PSt 00] [ PSt 20]	Input parameter type 20 for change for calibration password
2	Press [888888] Press [input]	[o 000000] [o 888888]	Input old calibration password 888888
3	Press [1111] Pres [input]	[ UP WXYZ] [ UP 1111]	Input value for encrypt parameter <sup>8</sup>
4	Press [123456] Press [input]	[n 000000] [n 123456]	Input new password, password can be any no. except 000000
5	Press [123456] Press [input]	[r 000000] [r 123456]	Reconfirm
		[ PASS]	Weighing status

Turn the calibration switch to top, and operate as followed table:

- ◆ Step 2, Forward this code this sales staff, then sales staff could offer you a temporary password with the code you offer
- ◆ Step 3, Calibrate or change the password again with the

step	Operation	Display	Note
1	Press [parameter] Press [22] Press [input]	[ PSt 00] [ PSt 22]	Input parameter type 22 for unlock code view
2	Press [input]	[r *****]	Write down this code
3		Weighing status	

temporary password.

## B. Parameter setting

### - Parameter Review

Press [parameter] key, indicator displays [PST 00], input the parameter type one want to set, then press [INPUT] key, it will directs you to the corresponding parameter setting.

Press [INPUT] key to confirm the set up and directs to the next parameter (if there is no more parameter for a certain parameter type, then indicator returns to weighing status);

Press [WEIGH] key to exit parameter setting and back to weighing status, the last parameter setting won't be saved;  
Press [CHECK] key to the last parameter without saving the current parameter setting;

-Followed table is the parameter type list:

Type no.	Type
00*	For calibrate
01	For communication
02	For printing
03	Back up
04	Back up
05~09	Back up
10	Edit content of a certain goods no.
11	Edit content of a certain customer no.
12	Edit content of a certain note no.
13	Edit to be printed customer name
14	For user-defined data format
15	For define for format of weighing bill
16~19	Back up
20*	For change of calibration password
21~27	Back up
28	For display for inner code
29	Back up
30	Download from PC
31~39	Back up
40	Clear all goods content for all no.
41	Clear all customer content for all no.
42	Clear all note content for all no.
43	Clear content for to be printed customer
44~48	Back up
49	For clear all content (goods, customer...)
50	Back up
51	For initial communication parameter
52	For initial printer parameter

Type no.	Type
53~99	Back up
Parameter with * needs calibration password before set up	

- Parameter initialization:

Due to various parameters, it's better to do initialization for all parameters, then set the parameter user concerned according to the manual:

Step	Operate	Display	Note
1	Press[parameter] Press[51] Press[INPUT]	[PSt 00] [PSt 51]	Input parameter type no. 51 : Communication parameter 52 : Print parameter
*2	Press[888888] Press[INPUT]	[c 000000] [c 888888]	Turn on calibration switch, input calibration password "888888" Note: calibration password can be changed default is "888888"
3	Press[1] Press[INPUT]	[surE 0] [surE 1]	Confirm initialize or not 0 : Not initialize 1 : Initialize
4		Weighing status	Initialization finish, exit parameter setting mode

## 6. Operation

### 6.1 Power on and auto zero

A, Turn on, indicator will perform "999999-000000" self check and display [ver \*.\*] then come into weighing status.

B, When power on, if weighs on platform deviates from zero point but within auto zero range, indicator will perform auto zero.

### 6.2 Manually zero

A, Press [Zero], indicator will be back to zero, and zero light will be on;

B, Zero key will only be valid when weighs on platform is within manual zero range;

C, Zero operation is valid only when stable light is on

### 6.3 Tare operation

There are three methods to tare:

Method 1, Normal tare

Press [tare] key when weighing data is positive and stable, the displayed weighing data will be regarded as tare weight, then indicator will display 0 and tare light is on

Method 2, Pre-tare

Press [Pre tare] key at weighing status, indicator will display [P \*\*\*\*\*], the displayed data is the former tare weight. If need to set new tare weight, just input by numeric key, press [input] to confirm.



Method 3, Call tare weight according to truck no.

Press [truck no.] at weighing status, indicator display [0 \*\*\*\*\*], input truck no. by numeric key, press [tare] key, then indicator will find the corresponding tare weight of the truck no. for use.

-At weighing status, continuous tare operation is permitted. When tare weight is 0, then tare light will be off; when indicator within manual zero range, press [zero] to make tare weight as 0, the tare light is also off.

-Press [gross/net] key to switch between gross weight display and net weight display

#### 6.4 Set for date and time

A, Indicator displays the present date and "date" light is on if you push [Date ] key at weighing status. If the date is correct, you can exit by pressing [Input] or [weigh ] key. If the date is not correct, input the correct date by numerical key, then press [Input ] key for confirm. Then indicator will display current Time, then

B, If the time is correct, you can exit by pressing [Input ] or [weigh ] key. If the time is not correct, input the correct time by numerical key, then press [Input] key for confirm.

#### 6.5 Internal code display

A, The indicator will display the internal code if you press [parameter ] key and input [2 ], [8 ] at weighing status, at this time the decimal point after the last number is on. You can exit the "internal code" status by pressing [parameter] key again, and input [2 ], [8 ], the decimal point after the last number will be off.

B, At internal code display status, all other keys are invalid except [zero], [parameter]

C, 20 internal codes is equal to one division

#### 6.6 Static axis weighing

Please refer to followed table about how to set the indicator so that it could work in axis weighing work mode. Before set, assure to set parameter yA as 1 to activate axis weighing function:

Step	Operate	Display	Note
1	Press [axle]	[*****]	Single axle or axles are all at scale and truck stop, weighing data is stable
2	Press [axle]	[L*****] [*****] [L*****]	Current axle weight is locked, next axle or axles come to scale, weighing data change is more than Ac%*loaded

			weight, former lock is cancelled, truck stops
3	Repeat step 2, until all axles are passed through, press [axle all]	..... ..... [L*****]	Display weight for total, able to save and print
4	Press [axle all]	[*****]	Unlock the data, back to weighing status

## 7. Save and print

### 7.1 Save for weighing records

- ◆ For truck no., it's 5-bit number (1~99999), for goods no., it's 3-bit number (0~200), for customer no., it's a 2-bit number (0~99), for note no., it's a 2-bit number (0~99).
- ◆ Max. weighing records is 1501, when it's full, the first one will be auto deleted;
- ◆ Max. truck no. and corresponding quantity is 1500, when it's over, it will display [Err 10]
- ◆ For goods name, customer name, note info, the length is 10 English character
- ◆ Each time one weighing record is saved, then indicator will print out one weighing record (when print set up is valid)

- ◆ There are three methods to save:

- Method 1, two times weighing to consist of one weighing record, use [save print 2] to save
- Method 2, one time weighing to consist of one weighing record when tare weight is known, use [save print 1] to save
- Method 3, what weighs is just goods, then one time weighing consist of one weighing record, use [save print 2] to save

Rule for differ for above 3 methods is as followed:

- When truck no. is 00000, then save method is 3
- When tare light is on, then save method is 2
- When truck no. is any no. except 00000 and tare weight is off, then save method is 1

### 7.2 Save operation for [save print 1] and [save print 2]

- ◆ [save print 1], one time weighing, save and print, operate as followed table:

step	Operation	Display	Note
1	Press [save print 1]		Weighing status and data stable
2	Input truck no. Press [input]	[ o *****] [ o 03217]	Input truck no. : 03217
3	Input goods no. Press [input]	[hn **] [hn 35]	Input goods no. : 35
4	Input customer no. Press [input]	[cn **] [cn 45]	Input customer no. : 45
5	Input note no. Press [input]	[bn **] [bn 67]	Input note no. : 67
6	Input [10] Press [input]	[BFL **] [BFL 10]	Input discount rate in percentage: 10%
7		[prnt] or [saue]	[prnt] for print; [saue] for not print
Note1: When weighing data is unstable, or gross weight is $\leq 0$ or net weight is $\leq 0$ , data can't be saved			

◆ [save print 2], two times weighing, save and print, operate as followed table:

step	Operation	Display	Note
1	Press [save print 2]		Weighing status
2	Input truck no. Press [input]	[ o *****] [ o 03217]	Input truck no. : 03217
3	Input goods no. Press [input]	[hn **] [hn 35]	Input goods no. : 35
4	Input customer no. Press [input]	[cn **] [cn 45]	Input customer no. : 45
5	Input note no. Press [input]	[bn **] [bn 67]	Input note no. : 67
6	Input [10] Press [input]	[BFL **] [BFL 10]	Input discount rate in percentage: 10%
7		[prnt] or [saue] or [load]	[prnt] for print; [saue] for not print; [load] save for first time during two times weighing
Note1: When weighing data is unstable, or gross weight is $\leq 0$ or net weight is $\leq 0$ , data can't be saved			
Note2: Please refer to appendix for more operations			

### 7.3 Save for truck no. and tare weight

Method1,

step	Operation	Display	Note
1	Press [ truck no.]		Weighing status
2	Input truck no. Press [input]	[ o *****] [ o 35790]	Example: To send 35790
3	Input tare weight Press [input]	[ p *****] [ p 01000]	Example: To send 1000
			Save finish

Method2,

Press[truck no.] and input truck no. when unloaded truck is on and stable light is on, then press [preset tare]

-Method 3,

When save a weighing record,if the tare weight for the truck no. isn't saved before, then regard tare weight at this record as the tare weight of the truck.

#### 7.4 Print operation

- ◆ Before print, first set up the parameter concerned to printing
- ◆ Print while save, press [save print 1] or [save print 2], it will save one weighing record and print this record(if print set up is valid, that is to say, print type is not zero and choose print while save
- ◆ Press [supply print] to print out current record in memory after problem for former print is solved
- ◆ Press [total print] to print out the accumulation value after a period's weighing is finished
- ◆ If press [print save 2], first unload then load or first load then unload, for the first time record is saved, it just display [load] for 1.5 seconds but not print, but if press [supply print], it can print out the uncomplete record
- ◆ When FS is  $\leq 65000$ ,then max.accumulation is 16777214(no decimal point)

◆ When FS is  $>65000$ ,then max. accumulation is 83886070(no decimal point)

◆ For more examples, please refer to appendix

◆ User-defined print format:

There are two user-defined formats, one is linked format, the other is record format, set step as followed table:

Step	Operate	Display	Note
1	PRESS[Parameter] PRESS[1][4] PRESS[INPUT]	[PSt 00] [PSt 14]	Input parameter type no. 14: User-defined, record format (linked-format, across; general lists) 15: User-defined, linked format-upright)
2	PRESS[input]	[P14 00]	Row(column) number to set 00 for first row(column)
3	PRESS[1] PRESS[INPUT]	[AL0 **] [AL0 01]	Input print content for first row(column)

4	PRESS[2] PRESS[INPUT]	[AL1 **] [AL1 02]	Input print content for second row(column)
5	PRESS[3] PRESS[INPUT]	[AL2 **] [AL3 03]	Input print content for third row(column)
...	...	...	...
6	PRESS[0] PRESS[INPUT]	[AL9 **] [AL9 00]	Input print content for tenth row(column)
7			Back to weighing status

Note: Indicator supports max.10 rows(columns) user-defined input, print content defined as followed:

00 : Not print  
01 : Serial no.  
02 : Date  
03 : Time  
04 : Truck no.  
05 : Goods no.  
06 : Gross weight  
07 : Tare weight  
08 : Net weight

09 : Customer

10 : Note

11 : Date/Time ( Valid only when user-defined situation )

For example:

Serial no.	Time	Truck no.	Net weight
0001	12.00.00	12345	3.000kg

Then set parameter AL0 AS "01", AL1 as "03", AL2 as "04", AL3 as "08", AL4~AL9 as "00"

◆ Print for stat. report

Indicator can print report include all weighing records, report include weighing records that meet some requirement or report include weighing records group by some key words(only outside printer support this function)

◆ Procedure for set stat. report

A, Press [format print], indicator display [Pb 00], select the report format code(refer to followed table), then press [INPUT], then input requirement such as date, truck no. and so on. Then indicator begins to print.

Code	Code note
00	Report include all weighing records
01	Report include weighing records for one date
02	Report include weighing records for one date period
03	Report include weighing records for one truck no.
04	Report include weighing records for one goods no.
05	Report include weighing records for one customer
06	Report include weighing records for one note
09	Report include weighing records that meet requirement for date,date period,truck no.goods no.customer and note)
10	Report include all weighing records in user defined format
11	Report include weighing records for one date in user defined format
12	Report include weighing records for one date period in user defined format
13	Report include weighing records for one truck no. in user defined format
14	Report include weighing records for one goods no. in user defined format
15	Report include weighing records for one customer in user defined format
16	Report include weighing records for one note in user defined format
19	Report include weighing records that meet requirement for date,date period,truck no.goods no.customer and note) in user defined format
20	Report include all truck no.
21	Report include all goods no.
22	Report include all customer
23	Report include all note
30	Report include all truck no.for one date
31	Report include all goods no. for one date

32	Report include all customer for one date
33	Report include all note for one date
40	Report include all truck no.for one date period
41	Report include all goods no. for one date period
42	Report include all customer for one date period
43	Report include all note for one date period
80	Print calibration parameter
81	Print communication parameter
82	Print print parameter
83	BACK UP
84	
89	Print all parameters
90	Print goods no. and goods name
91	Print customer no. and customer name
92	Print note no. and note info.
93	Print company name
99	Print all info. and company name

◆ Example for print above reports

-Operation to print report code 9 as listed in above table

Step	Operate	Display	Note
1	PRESS [format report] PRESS[9] PRESS[INPUT]	[Pb 00] [Pb 09]	Input "9" to print weighing records that meet requirement
2	PRESS[111111] PRESS[INPUT]	[E 000000] [E 111111]	Select requirement Note 1
3	PRESS[40101] PRESS[INPUT]	[d **.**.**.]. [d 04.01.01]	Input date or date period start day
4	PRESS[40201] PRESS[INPUT]	[A **.**.**.]. [A 04.02.01]	Input date period stop day
5	PRESS[1234] PRESS[INPUT]	[o *****] [o 01234]	Input truck no.
6	PRESS[123] PRESS[INPUT]	[Hn 000] [Hn 123]	Input goods no.
7	PRESS[45] PRESS[INPUT]	[cn 00] [cn 45]	Input customer no.
8	PRESS[67] PRESS[INPUT]	[bn 00] [bn 67]	Input note no.
9		[Prnt ]	Begin to print report

Note 1: Parameter E has 6 bits, from left to right, each bit is defined as followed:

Bit 1 for note no.: 0 not input ; 1 input  
 Bit 2 for customer no.: 0 not input; 1 input  
 Bit 3 for goods no.: 0 not input; 1 input  
 Bit 4 for truck no.: 0 not input; 1 input  
 Bit 5 for date period: 0 not input; 1 input  
 Bit 6 for date: 0 not input; 1 input

If one of above bit chosen as not input, then concerning step in above table will be skipped;

#### 7.5 Check operation

◆ Press [check] to view all kinds of memorized information, operation is as followed:  
 ◆ Press [check] at weighing status (if encrypt is required for check operation, then indicator display [c 000000] to indicate user to input password). If password is input correctly, indicator display [rEAd 1] to indicate information type:

[rEAd 1]	Check by date	[rEAd 2]	Check by truck no.
[rEAd 3]	Check by goods no.	[rEAd 4]	Check by customer no.
[rEAd 5]	Check by note no.	[rEAd 6]	Check truck no.

After input check method(1~6 as listed above), indicator would indicate user to input requirement, then it would display the record one by one. Press [`<-`] or [`->`], it would display next record.

## 7.6 Delete operation

There are several ways to delete:

- Method 1, delete all records (include truck no. and tare weight)
- Method 2, delete one truck no. and corresponding tare weight, and all weighing records related to this truck no.
- Method 3, Delete the last saved records
- Method 4, Delete records related to a certain date
- Method 5, Delete weighing records related to one certain truck no., but save record for truck no. and tare weight of it
- Method 6, Delete weighing records related to one certain goods no.
- Method 7, Delete weighing records related to one customer no.
- Method 8, Delete weighing records related to one note no.
- Method 9, Delete any weighing record
- ◆ Any method to delete the record, indicator would display [Sure 0] to let user confirm. If sure is non zero, press [input] to confirm; if sure is zero, press [input] to exit
- ◆ Operation

-For method 1, press [delete] at weighing status, (if delete encrypt is required, then it indicates to input the password), it would display [sure 0], press 1 and [input] to delete all records:

-For method 2, press [truck no.], indicator display [o \*\*\*\*\*], input truck no. and [delete]

-For method 3, press [delete], indicator display [sure 0], press [9] and [input]

-For method 4, press [check], indicator display [rEAd 1], press [input], indicator display [d \*\*\*\*\*], input the date you want to delete, press [delete]

-For method 5, press [check], indicator display [rEAd 1], press [2] and [input], indicator display [o \*\*\*\*\*], input the truck no. you want to delete, press [delete]

-For method 6, press [check], indicator display [rEAd 1], press [3] and [input], indicator display [Hn \*\*\*], input the goods no you want to delete, press [delete]

-For method 7, press [check], indicator display [rEAd 1], press [4] and [input], indicator display [Cn \*\*\*], input the customer no you want to delete, press [delete]

-For method 8, press [check], indicator display [rEAd 1], press [5] and [input], indicator display [bn \*\*\*], input the note no you want to delete, press [delete]



-For method 9, when indicator displays one record, press [delete] to delete the displayed record.

◆ Method 2~9, doesn't lead real deletion to release the memory size it takes, only method 1 leads to real deletion.

◆ Pay attention when act delete operation

C	ASCII		C	ASCII		C	ASCII		C	ASCII	
	DEC	HEX		DEC	HEX		DEC	HEX		DEC	HEX
NUL	00	00	SP	32	20	@	64	40	,	96	60
SOH	01	01	!	33	21	A	65	41	a	97	61
STX	02	02	"	34	22	B	66	42	b	98	62
ETX	03	03	#	35	23	C	67	43	c	99	63
EOT	04	04	\$	36	24	D	68	44	d	100	64
ENQ	05	05	%	37	25	E	69	45	e	101	65
ACK	06	06	&	38	26	F	70	46	f	102	66
BEL	07	07	'	39	27	G	71	47	g	103	67
BS	08	08	(	40	28	H	72	48	h	104	68
HT	09	09	)	41	29	I	73	49	i	105	69
LF	10	0A	*	42	2A	J	74	4A	j	106	6A
VT	11	0B	+	43	2B	K	75	4B	k	107	6B
FF	12	0C	,	44	2C	L	76	4C	l	108	6C
CR	13	0D	-	45	2D	M	77	4D	m	109	6D
SO	14	0E	.	46	2E	N	78	4E	n	110	6E
SI	15	0F	/	47	2F	O	79	4F	o	111	6F
DLE	16	10	0	48	30	P	80	50	p	112	70
DC1	17	11	1	49	31	Q	81	51	q	113	71
DC2	18	12	2	50	32	R	82	52	r	114	72
DC3	19	13	3	51	33	S	83	53	s	115	73
DC4	20	14	4	52	34	T	84	54	t	116	74
NAK	21	15	5	53	35	U	85	55	u	117	75
SYN	22	16	6	54	36	V	86	56	v	118	76
ETB	23	17	7	55	37	W	87	57	w	119	77
CAN	24	18	8	56	38	X	88	58	x	120	78
EM	25	19	9	57	39	Y	89	59	y	121	79
SUB	26	1A	:	58	3A	Z	90	5A	z	122	7A
ESC	27	1B	;	59	3B	[	91	5B	{	123	7B
FS	28	1C	<	60	3C	\	92	5C		124	7C
GS	29	1D	=	61	3D	]	93	5D	}	125	7D
RS	30	1E	>	62	3E	^	94	5E	~	126	7E
US	31	1F	?	63	3F	—	95	5F	DEL	127	7F

### 7.7 Edit text operation and delete operation

◆ There are two methods to edit the text, one is by direct input according to the table, the other is by PC

◆ Indicator could save 20 characters for company name(16 characters for built in printer); 10 characters for goods name, customer name

-Method 1, by direct input

▲Each character corresponds one decimal numeric,

▲4 bits 0000 means edit finish

▲Save only when edit finish, press [weigh] while edit, then edit won't be saved

▲While edit, the highest 2 bits(left) indicates the character number one has edited( one character takes up 0.5 size)

◆ Example: Operation for edit goods no. and name

Step	Operation	Display	Note
1	Press [parameter]	[PSt 00]	Indication to input parameter type
2	Press[10] Press[INPUT]	[PSt 10]	To edit goods name, press [10]
3		[Hn ***]	Indication to input goods no.
4	Press[001]	[Hn 001]	To input goods no.

Step	Operation	Display	Note
	Press[INPUT]		
5		[0 ****]	Indication to input the first letter of the goods name
6	Press[0034] Press[INPUT]	[0 0034]	To input code of "A"
7		[0.5 ****]	Indication to input the second letter of the goods name[Note ]
8	Press[0081] Press[INPUT]	[0.5 0081]	To input code of "p"
9		[1.0 ****]	Indication to input the third letter of the goods name
10	Press[0081] Press[INPUT]	[1.0 0081]	To input code of "p"
11		[1.5 ****]	Indication to input the forth letter of the goods name
12	Press[0077] Press[INPUT]	[1.5 0077]	To input code of "l"
13		[2.0****]	Indication to input the fifth letter of the goods name

Step	Operation	Display	Note
14	Press[0] Press[INPUT]	[2.0 0000]	To input "0" to finish edit the goods name
15	Press[WEIGH]	[Hn 002]	Indication to input the next goods no.
16		[ *****]	Return to weighing status

Method 2, by PC

◆ There are 6 commands that can be executed by PC, two are for control, the other 4 are for transfer from no. to text info. All commands begin with @ and end with ;

**-Control command**

**@S;** (Begin execution command, when indicator receive this command, then it begins to execute the following command)  
**@E;** (Finish execution command, when indicator receive this command, then it finishes executing)

**-Transfer command**

**l,**To transfer goods no to goods name

**@A\*\*\*:'\$\$\$\$';**

**\*\*\*** is the goods no.(000~200),it must be a 3-bits no.'\$\$\$\$'

**is** the goods name,goods name in English must with set of ``

2,@B\*\*\*:'\$\$\$\$';

\*\*\* is the customer no.(000~099),it must be a 3-bits no.'\$\$\$\$'  
is the customer name, customer name in English must with set  
of ``

3,@C\*\*\*:'\$\$\$\$';

\*\*\* is the note no.(000~099),it must be a 3-bits no.'\$\$\$\$' is  
the note text, note text in English must with set of ``

4,@D:'\$\$\$\$';

'\$\$\$\$' is the company name

◆ Example: one programe

@S;

@A001:'apple';

@B001:'Coco cola';

@C001:'Drink field';

@D:'Shanghai Yaohua';

Save the file as .txt format,

@E;

Then operate as followed steps:

1,Prepare the txt. File first;

2,Connect the indicator to PC;

3,Open serial port communication software(Hyper terminal is  
WINDOWS OS) and configure the parameter such as baud rate;

4,Press [parameter], indicator displays [PSt 00], input 30,  
then press [input], indicator display [L 00000], input download  
password "31901", then press [input], indicator display [ld  
-----] to download

5,Open the .txt file, indicator display [ld\*\*\*] (\*\*\*) indicates  
the string indicator has downloaded)

6,When download finished, indicator display [End], then  
indicator returns back to weighing status.

7.8 Delete operation for the text info

Step	Operate	Display	Note
1	PRESS[Parameter] PRESS[40] PRESS[INPUT]	[PSt 00] [PSt 40]	Input parameter type no. 40:Delete all goods name; 41:Delete all customer name 42:Delete all note text 43:Delete company name 49:Delete all info
2	PRESS[888888] PRESS[INPUT]	[C 000000] [C 888888]	If encrypt is required
3	PRESS[1] PRESS[INPUT]	[SurE 0] [SurE 1]	0-not delete 1-delete
4			Delete finish

Wait a moment, data transmitted between indicator and printer

- LoAd

Fist time save in two times weighing mode

-SAUE:

No choice for printer of printer type is 0

-EnD

Operation finish

-PASS

Password change success

8.2 Error code display

- Err 03

Overload warning

- Err 08

No weighing records under this requirement

- Err 09

Not exit this truck no.

- Err 10

Truck no. number more than 1500

- Err 12

Can't print with built in printer

- Err 13

## 8.CODE DISPLAY

### 8.1 Normal information

-.....

Wait a moment, and this is a normal display;

- Prnt

Wrong selection for parameter type

-Err 14

Without limit of the character number you can input

-Err 15

Wrong selection for parameter no.

-Err 16

Wrong input for password

-Err 17

Parameter set not meet requirement

-Err 19

Can't print due to 0 or negative value

-Err 28

Date for print is less than saved date in indicator

8.3 Code for wrong set up

- Err P

Wrong connection for printer or problem at printer

- Err 01

Load cell problem or load cell connection problem

- Err 05

Problem at A/D conversion

8.4 Code for components error

-Err 18

Key board has problems

-Err 21

Calibration data lost

-Err 22

Real clock damaged

-Err 23

E<sup>2</sup>PROM has been damaged

-Err 21

Calibration data lost

8.5 Code for others

-Err 25

Illegal software, or E<sup>2</sup>PROM was damaged

- ctnu 0

Indicator will display this if it can not receive the stable data within 25 seconds during step 8 or step 9 of the calibration process. At this time, the operator can input 0, 1 or 2:

0: (Abort) The indicator will not do this step and INPUT next step

1: (Retry) Try again

2: (Ignore) The unstable data can be used

-ISP

Indicator is at ISP status

## APPENDIX

### Appendix 1: Calibration rate

E:001

dc:3

Pn:10123

Flt:1

F:5.000

A:22081

L:681589

LH:54.08

b:270394

o:681589

oH:54.08

c:999999

t:794484

## Appendix 2: Print format

-Linked format(3 page, upright)

COCO COMPANY

COCO COMPANY

COCO COMPANY

WEIGHING BILL

WEIGHING BILL

WEIGHING BILL

NO.	001
Date	1999-07-28
Time	12.02.31
Tr no	12345
Ca no	022
Gross	2.000(kg)
Tare	0.3000(kg)
Net	1.7000(kg)
Cuto	FAS.CO
NOT	CHARK

NO.	001
Date	1999-07-28
Time	12.02.31
Tr no	12345
Ca no	022
Gross	2.000(kg)
Tare	0.3000(kg)
Net	1.7000(kg)
Cuto	FAS.CO
NOT	CHARK

NO.	001
Date	1999-07-28
Time	12.02.31
Tr no	12345
Ca no	022
Gross	2.000(kg)
Tare	0.3000(kg)
Net	1.7000(kg)
Cuto	FAS.CO
NOT	CHARK

-Linked format(1 page, across)

COCO COMPANY

WEIGHING BILL

DATE: 2004-03-05

NO.	Time	T no.	Cg no.	GW(kg)	TW(kg)	NW(kg)	Cust	NOTE
0001	12.02.24	12222	022	2.000	0.300	1.700	FAS CO.	CHARK

**-Record format****COCO COMPANY****Weighing bill****Date:** 2004-03-05

NO.	Time	T no.	Cg no.	GW(kg)	TW(kg)	NW(kg)	Cust	NOTE
0001	12.02.24	12222	022	2.000	0.300	1.700	FAS CO.	CHARK
0002	12.03.24	12223	023	2.000	0.300	1.700	FAS CO.	CHARK
Accum Gross W: 4.000(kg) Net W: 3.400(kg)								

**-Filled-in format**

WEIGHT BILL	
Fist bill for operator	
SERIAL No.	123
DATE	1999-07-28
TIME	12.35.28
VEHICLE No.	
GOODS No.	
GROSS	1580 kg
TARE	80 kg
DISCOUNT	10 %
NET	1350 kg
CUSTOMER	FAS CO.
NOTE	CHARK

**-General Report****General Report**

NO.	Date	Time	Truck	Cago	Gro W(kg)	Ta W(kg)	Net W(kg)
0001	1999-05-28	12.02.24	12222	022	2.000	0.300	1.700
0002	1999-06-28	12.03.24	12345	033	2.000	0.300	1.700
0003	1999-07-28	12.03.24	00888	033	2.000	0.300	1.700
0004	1999-08-28	12.04.11	00888	022	2.000	0.300	1.700
Accum:To send Gross W:To send8.000(kg) Net W:To send7.800(kg)							

**-Report by time**

Report 1(by time)				Date:1999-07-28		
NO.	Time	Truck no.	Cago no.	Gro W(kg)	Ta W(kg)	Net W(kg)
0001	12.02.24	12222	022	2.000	0.300	1.700
0002	12.03.24	12345	033	2.000	0.300	1.700
0003	12.03.24	00888	033	2.000	0.300	1.700
0004	12.04.11	00888	022	2.000	0.300	1.700
Accum Gross W: 8.000(kg) Net W: 6.800(kg)						

**-Report by truck no.**

Report 2(by truck no.)			Date: 1999-07-28		
NO.	Truck no.	Ta W(kg)	Time	Gro W(kg)	Net W(kg)
0001	12222	0.300	0002	4.000	3.400
0002	12345	0.300	0002	4.000	3.400
0003	00888	0.300	0002	4.000	3.400

-Report by goods no

Report 3 Date: 1999-07-28

NO.	Goods no.	Time	Net W(kg)
0002	022	0002	3.400
0003	033	0002	3.400

### Appendix 3: Example for edit

1, Edit the goods name according to a goods no.(Now to define goods no. "001" as "Apple")

Step	Operation	Display	Note
1	Press [parameter]	[PSt 00]	Indication to input parameter type
2	Press[10] Press[INPUT]	[PSt 10]	To edit goods name, press [10]
3		[Hn ***]	Indication to input goods no.
4	Press[001] Press[INPUT]	[Hn 001]	To input goods no.
5		[0 ****]	Indication to input the first letter of the goods name
6	Press[0034] Press[INPUT]	[0 0034]	To input code of "A"
7		[0.5 ****]	Indication to input the second letter of the goods name[Note ]
8	Press[0081]	[0.5 0081]	To input code of "p"

Step	Operation	Display	Note
	Press[INPUT]		
9		[1.0 ****]	Indication to input the third letter of the goods name
10	Press[0081] Press[INPUT]	[1.0 0081]	To input code of "p"
11		[1.5 ****]	Indication to input the fourth letter of the goods name
12	Press[0077] Press[INPUT]	[1.5 0077]	To input code of "l"
13		[2.0****]	Indication to input the fifth letter of the goods name
14	Press[0] Press[INPUT]	[2.0 0000]	To input "0" to finish edit the goods name
15	Press[WEIGH]	[Hn 002]	Indication to input the next goods no.
16		[ *****]	Return to weighing status

2, Edit the customer name according to a customer no.(Now to define customer no. "001" as "Shanghai Yaohua")

Step	Operation	Display	Note
1	Press[parameter]	[PSt 00]	Indication to input parameter type
2	Press[11]	[PSt 11]	To edit customer name, press



	Press[INPUT]		[11]
3		[cn **]	Indication to input customer name
4	Press[001] Press[INPUT]	[Cn 001]	To input customer no.
5		[0 ****]	Indication to input the first letter of the customer name
6	Press[0052] Press[INPUT]	[0 0052]	To input code of "S"
7		[0.5 ****]	Indication to input the second letter of the customer name
8	Press[0073] Press[INPUT]	[0.5 0073]	To input code of "h"
9		[1.0 ****]	Indication to input the third letter of the customer name
	...	...	...
	Press[0000] Press[INPUT]	[7.5 0000]	To input "0" to finish edit the customer name
	Press[WEIGH]	[cn 02]	Indication to input the next customer no.
		[ *****]	Return to weighing status

3, Edit the text info according to a text no. (Now to define text no. "001" as "John"

Step	Operation	Display	Note
1	Press[parameter]	[PSt 00]	Indication to input parameter type
2	Press[12] Press[INPUT]	[PSt 12]	To edit text info, press [12]
3		[bn **]	Indication to input text no.
4	Press[01] Press[INPUT]	[bn 01]	To input text info
5		[0 ****]	Indication to input the first letter of the text info
6	Press[0043] Press[INPUT]	[0 0043]	To input code of "J"
7		[0.5 ****]	Indication to input the second letter of the text info.
8	Press[0070] Press[INPUT]	[0.5 0070]	To input code of "o"
9		[1.0 ****]	Indication to input the third letter of the text info.
	...	...	...
	Press[0000] Press[INPUT]	[2.0 0000]	To input "0" to finish edit the text info.

	Press[WEIGH]	[bn 02]	Indication to input the next text no.
		[ *****]	Return to weighing status

			customer name
	...	...	...
	Press[0000] Press[INPUT]	[4.0 0000]	To input "0" to finish edit the printed customer name
	Press[WEIGH]	[ *****]	Return to weighing status

4, Edit the printed customer name(Now to edit "GE GROUP")

Step	Operation	Display	Note
1	Press[parameter]	[PSt 00]	Indication to input parameter type
2	Press[13] Press[INPUT]	[PSt 13]	To edit printed customer name
3	Press [INPUT]	[dn ]	Indication to input printed customer name
4		[0 ****]	Indication to input the first letter of the printed customer name
5	Press[0040] Press[INPUT]	[0 0040]	To input code of "G"
6		[0.5 ****]	Indication to input the second letter of the text info.
8	Press[0038] Press[INPUT]	[0.5 0038]	To input code of "E"
9		[1.0 ****]	Indication to input the third letter of the printed

#### Appendix 4: Example for print

One-time weighing, manually pre-tare weighing bill print

Step	Situation	Operation	Display	Note
1	Truck pass the scale	Press[TARE parameter]	[P00.000]	Indication to input tare value
2		Press[1000] Press[INPUT]	[P01.000]	To input the tare value
3			[-1.000]	Display the gross/net weight, tare light is on(Press[gross/net] key to switch the display)
4	Wait until stable	Press[Save1] or Press[Save2]	[o *****]	Indication to input new truck no.
5	Input truck no.	Press [00123] Press [INPUT]	[o 00123]	
6			[Hn ***]	Indication to input new cargo no..

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7	Input cargo no.	Press[011] Press[INPUT]	[Hn 011]	
8			[cn **]	Indication to input new customer no.
9	Input customer no.	Press[11] Press[INPUT]	[cn 11]	
10			[bn **]	Indication to input new text info no.
11	Input text info no.		[bn 05]	
12			[Prnt]	To print out the weighing bill