9007-C2S-2433-0

2000. 8

Weighing Indicator

CI-2400BS

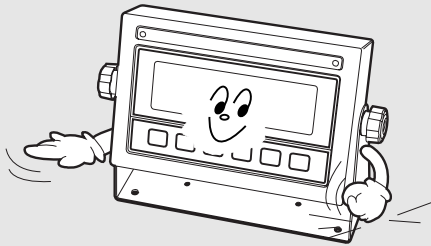**OWNER'S MANUAL**

CONTENTS

PRECAUTIONS
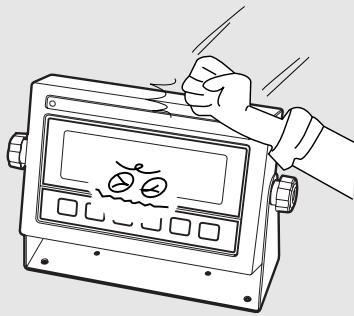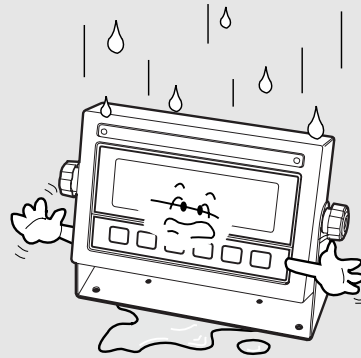

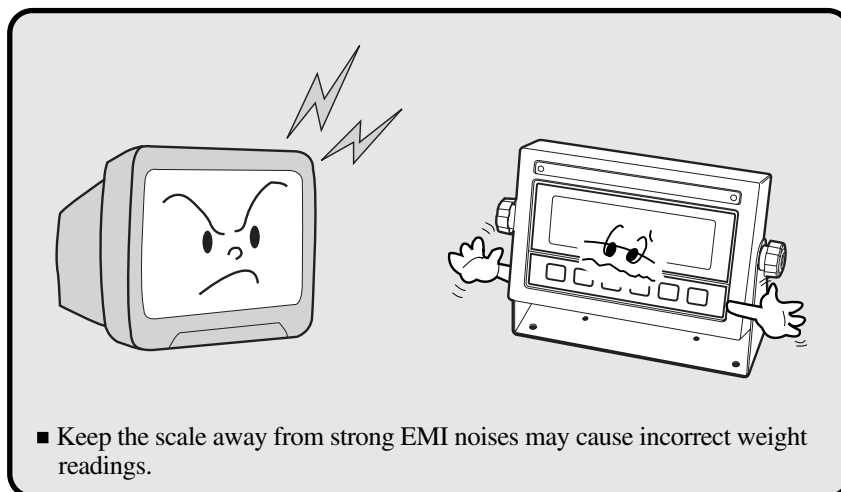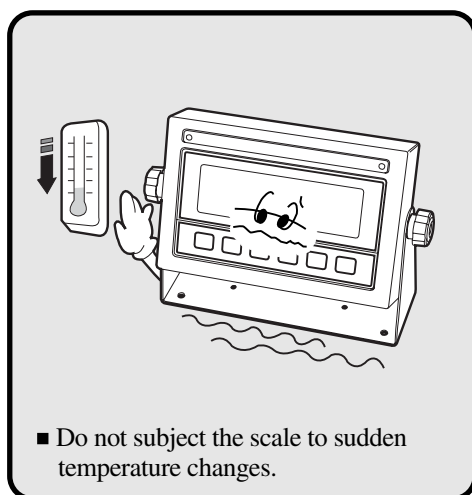■ Place the indicator on a flat and stable surface.

■ Do not use inflammable materials in cleaning.

■ Do not severely press because the light pressing of keys can incite the operation.

■ Keep the main body from rain and keep in dry area.

■ Do not subject the scale to sudden temperature changes.

■ Keep the scale away from strong EMI noises may cause incorrect weight readings.

INTRODUCTION

We greatly appreciate your purchase of the CI-2400BS weighing indicator. These goods perform excellently and exhibit splendid properties through strike tests. CAS indicator is delicately designed to coincide with the special requirements of several industrial fields and includes many functions and various external interfaces. Also, it is programmed for the user's convenience and contains display functions that are easily accessible.

Before using CI-2400BS, it is recommended that you read this manual carefully so you may use this device to its full potential.

CI-2400BS FEATURES

1. Features

■ Water proof(IP65)
■ Appropriate for weight and measurement system
■ Easy operation and various functions
■ Simple calibration
 (Full digital calibration, installing the automatic weight at a time)
■ Watchdog circuitry(System restoration)
■ The construction of stainless steel
■ Standard fixed bracket type

2. Main Function

■ Adjustable display rate(Digital filter function)
■ RS232C serial communication function
■ Serial printer function
■ Count function
■ Weight/Count comparing function
■ Automatic power off function
■ Back light function(Auto/Manual)
■ Independent zero calibration function
■ Unit conversion/Hold function
■ Self test hardware function - You can test the condition about the condition of every parts in circuit by module.

3. Option

Option-1	RS422/RS485 Function
Option-2	Charging Circuit + NiCd Battery(DC 7.2V,
Option-3	2000mAh)
Option-4	Relay Output Function (Max. DC 30V, 100mA – Zero, Under, Ok,
Option-5	Over)
Option-6	FS-7000D Serial Printer

TECHNICAL SPECIFICATION

| Analog Part & A/D Conversion	
Load cell excitation voltage	DC 5V, (up to 6 load cells) 100mA
Zero adjust range	$0.05mV \sim 5mV$
	$2~\mu V$/D (NTEP, OIML)
Input sensitivity	$0.5~\mu V$/D (Non NTEP, OIML)
	0.01% F.S.
Nonlinearity	1/200,000
A/D internal resolution	1/10,000(Max.)
	10 times/sec

Digital Part	
Span calibration	Full Digital Calibration: SPAC^{T M} (Single pass automatic span calibration)
Display	LCD(5 digit)
Size of letter	25mm(Height)
Display below	"—" minus display
zero	Zero, Tare, Net, Print, Stable, Hold
Status display	AC 110V/220V(DC 12V, 850mA)
Power	1 2 W
P o w e r	−10℃～＋40℃(＋14℉～＋104℉)
consumption	2 0 0 mm×1 3 0 mm×5 3 mm
Temperature	Approx. 1kg(2.2lb)

MEASURE OF APPEARANCE

Fixed Bracket Type (CI-2400BS) - Standard
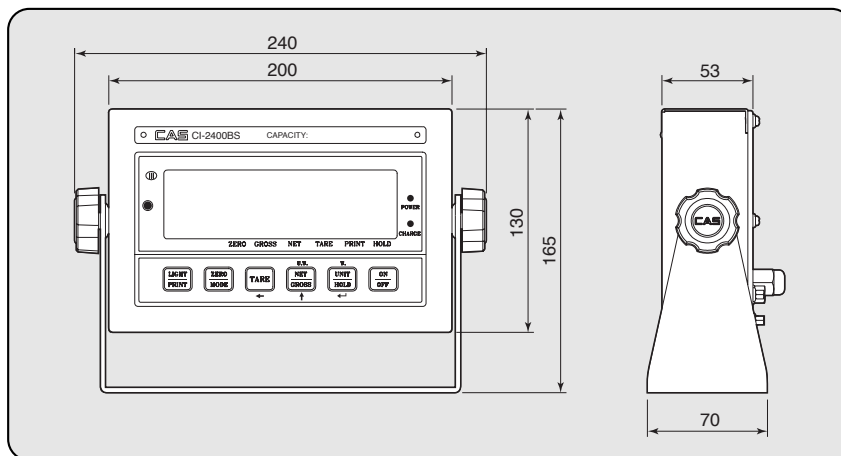
FRONT PANEL DESCRIPTION
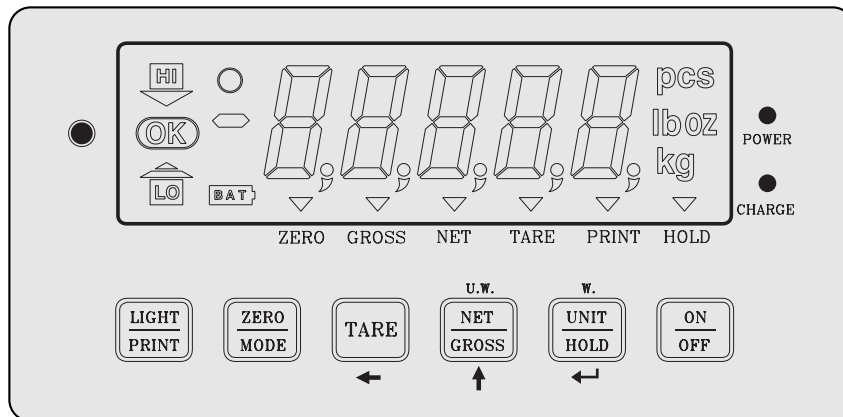
1. Display Part Lamp

- ○ lamp: ON when the weight is stable.
- ZERO lamp: ON when the current weight is 0kg.
- GROSS lamp: ON when the weight is the total weight.
- NET lamp: ON when the weight is the pure weight.
- TARE lamp: ON when the tare weight is stored.
- PRINT lamp: ON when any data is printed.
- HOLD lamp: ON when you weigh the moving object.
- BAT lamp: In case of using rechargeable battery, it is displayed the battery recharging time.
- POWER lamp: ON when it is connected to power.
- ⬇HI lamp: ON when the current weight exceeds normal weight.
- ⊚OK lamp: ON with alert when the current weight is normal.
- △ lamp: ON when the current weight is 90 - 100% of normal weight.
- ⬡ lamp: ON when the current weight is 80 - 90% of normal weight.
- LO lamp: ON when the current weight is below 80% of normal weight.

2. Key Part

Key functions in simple weighing mode & in weight comparing mode.

- LIGHT / PRINT Used to turn ON/OFF BACK LIGHT, → F03-00.
  Used to print.   → F03-01 ∼ 04.
  Used to enter the SET MODE by pressing for 5 sec.

- MODE / ZERO Used to return the display to the zero.
  (Within 2% of Max. capacity)
  Used to enter the system mode by pressing for 3 sec.

- TARE Used to weigh item by using tare.

- NET / GROSS Used to display NET weight or GROSS weight
  In case tare weight is registered, tare plus item's weight is GROSS
  weight and only item's weight is NET weight.

- UNIT / HOLD Used to change weight units (kg, lb, oz) to weigh the moving object.
  (Auto / Manual).

- ON / OFF Used to power ON/OFF.

Key functions in COUNT mode.

- U.W. Used to display the unit weight (for approx 5 sec).

- W. Used to display the current weight (for approx 5 sec).

Key functions in SET mode (Digit input method).

- Input the digit with using the below keys.
- ↑ key: Change the set value.
  Increase the first place value to 1.
- ← key: Change the digit of the set value.
  Used to set current value ×10.
- ↵ key: Used to complete the input and move to the next mode.

- MODE / ZERO Used to set the inputted value to "0".

- LIGHT / PRINT Used to escape from this mode.

REAR PANEL DESCRIPTION
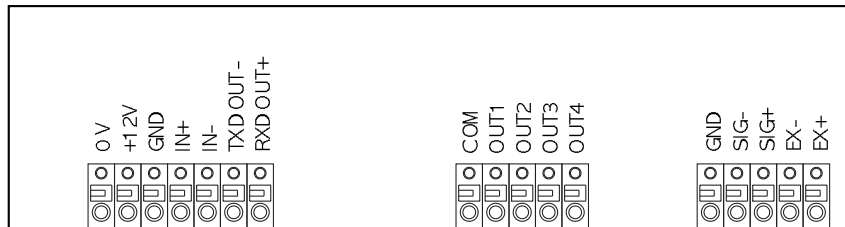
- Power(0V, +12V) : Connect to DC 12V
- RS-485/422 Interface(IN+, IN-, OUT+, OUT-) : Refer to option
- RS-232 Interface(TXD, RXD, GND)

- Connect RS-232C Port of Computer

RS-232C port of CI-2400BS	25pin port (Female) RS-232C port of Computer
RXD o	o 2 Transmit Data
TXD o	o 3 Receive Data
GND o	o 7 Signal Ground
	o 4 Request To Send
	o 5 Clear To Send
	o 6 Data Set Ready
	o 8 Carrier Detect
	o 20 Data Terminal Ready

25pin port (Female)
RS-232C port of Computer

RS-232C port of CI-2400BS	9pin port (Female) RS-232C port of Computer
RXD o	o 3 Transmit Data
TXD o	o 2 Receive Data
GND o	o 5 Chassis Ground
	o 1 Carrier Detect
	o 4 Data Terminal Ready
	o 6 Data Set Ready
	o 7 Request to Send
	o 8 Clear to Send

9pin port (Female)
RS-232C port of Computer

■ Connect Sub-display

```
┌─────────────┐                    ┌─────────────────────┐
│ RXD    o ───┼──────────────┐  ┌──┼─ o  2 Transmit Data  │
│ TXD    o ───┼───────────┐  │  └──┼─ o  3 Receive Data   │
│ GND    o ───┼────────┐  │  └─────┼─ o  7 Signal Ground  │
└─────────────┘                    └─────────────────────┘
```

RS-232C port of CI-2400BS   9pin port(Male)
                                    RS-232C port of Sub-display
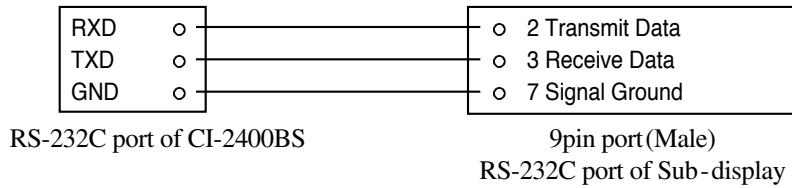
■ Transmit Data Format(22 bytes)

```
┌──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬─────────┬──┬──┬──┬──┬──┐
│  │  │ ,│  │  │ ,│  │  │ ,│  Data(8 bytes) │  │  │  │CR│LF│
└──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴─────────┴──┴──┴──┴──┴──┘
```

US(Unstable)   GS(Gross)   Space UNIT
ST(Stable)   NT(Net)   │
OL(Over load)   Device ID   kg
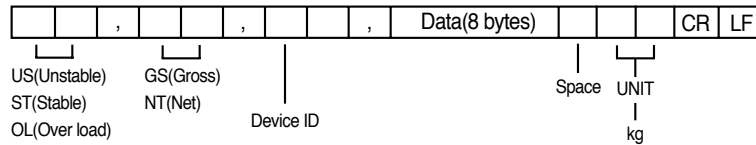
▶ Device ID
   1 byte device ID is output to allow the receiver side to selectively receive
   information supplied from the indicator.
   Example : When host transmit device ID 01(ASCII code), the indicator of
             device 01 answers.
   (Device ID is able to set at F10.)

▶ Data(8 bytes) : Weight data with decimal point
   1. 13.5 kg : '0', '0', '0', '0', '1', '3', '.', '5'
   2.   135 kg : '0', '0', '0', '0', '1', '3', '5', '0'
   3. -135 kg : '-', '0', '0', '0', '1', '3', '5', '0'

■ Simple Transmit/Receive Program(Language : BASIC)
   10 OPEN "COM1:9600,N,8,1" As #1
   20 IF LOC(1) = 0 THEN 60
   30 A$ = INPUT$(1,1)
   40 PRINT A$; " ";
   50 GOTO 20
   60 B$=INKEY$: IF B$ =" " THEN 20
   70 PRINT B$; " ";
   80 PRINT #1,B$;
   90 GOTO 20

■ Simple Transmit/Receive Program (Language C)

```c
#include <bios.h>
#include <conio.h>

#define COM1          0
#define DATA_READY  0×100
#define TRUE          1
#define FALSE          0

#define SETTINGS     0×E3

int main(void)
{
   int in, out, status, DONE = FALSE;

   bioscom(0, SETTINGS, COM1);
   cprintf("... BIOSCOM [ESC] to exit ... \ n");
   while (!DONE)
   {
      status = bioscom(3, 0, COM1);
      if (status & DATA_READY)
        if ((out = bioscom(2, 0, COM1) & 0×7F) != 0)
            putch(out);
      if (kbhit( ))
      {
         if ((in = getch( )) == ' \ ×1B')
            DONE = TRUE;
         bioscom(1, in, COM1);
      }
   }
   return 0;
}
```

■ Connection FS-7000D Printer

RXD	o ——————— o	2 Transmit Data
TXD	o ——————— o	3 Receive Data
GND	o ——————— o	14 Signal Ground

RS-232C port of CI-2400BS   15pin port (Female)
Serial port of FS-7000D Printer
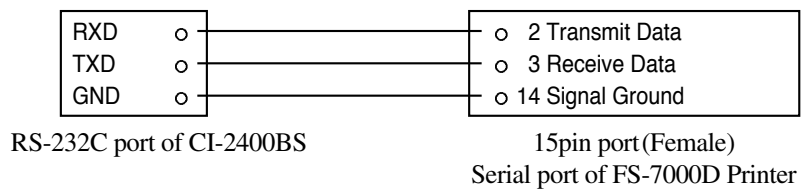
■ Connection ND-T102, ND-192 Printer

```
RXD    o                          o   3 Transmit Data
TXD    o                          o   2 Receive Data
GND    o                          o   7 Signal Ground
```

RS-232C port of CI-2400BS   9pin port(Female)
                                  Serial port of ND-T102(THERMAL),
                                         ND-192(DOT)
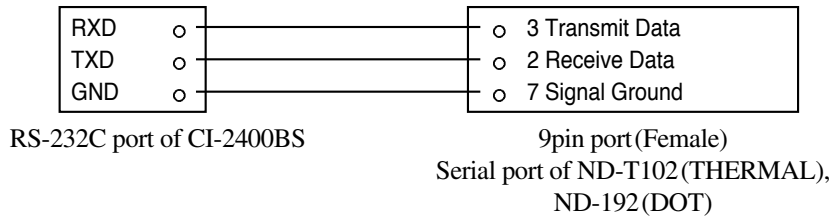
▶ Load cell Connection(EX+, EX-, SIG+, SIG-, GND)
  EX+: Excitation voltage+,   EX-: Excitation voltage-
  SIG+: Sense voltage+,   SIG-: Sense voltage-,   GND: Shield ground

■ Connecting method
  Ref 1. Each load cell manufacturer's or model's wire color could be different.
          In that case, please note the following diagram.

■ Manufacturer's wire colors

Connector \ Company	N0. 1 (EX +)	No. 2 (EX -)	No. 3 (SIG +)	No. 4 (SIG -)	No.5 (GND)
CAS	Red	White	Green	Blue	Shield
KYOWA	Red	Black	Green	White	Shield
INTERFACE	Red	Black	Green	White	Shield
P.T	Red	Black	Green	White	Shield
BLS	Green	Black	White	Red	Yellow
SHOWA	Red	Blue	White	Black	Shield
SHINKOH	Red	Black	Green	White	Shield
TMI	Red	White	Green	Blue	Yellow
TML	Red	Black	White	Green	Shield
TFAC	Red	Blue	White	Black	Yellow
HUNTLEIGH	Green	Black	Red	White	Shield
RTI/RTE 5wires	Green	Black	White	Red	Yellow/Shield
RTI/RTE 7wires	Red	Black	Green	White	Shield

■ Resolution to load cell output rate

5V impression to Load cell Max. Load cell output	Recommended resolution
2mV	1/1,000 (Max)
4mV	1/2,000 (Max)
10mV	1/5,000 (Max)

▶ Relay Output (COM, OUT1, OUT2, OUT3, OUT4) : Refer to option
   COM : Connect to external ground.
   OUT1,2,3,4 : The output circuit is an open collector type. If you hook up
                this line to TTL level & logic, please add a pull-up resistor.

SEALING METHOD

Perform the sealing as shown in the below figure after the calibration is completed.

■ Screw CAL switch sealing
   bolt.
■ Connect to the sealing wire
   as the follows and compress
   the sealing lead.
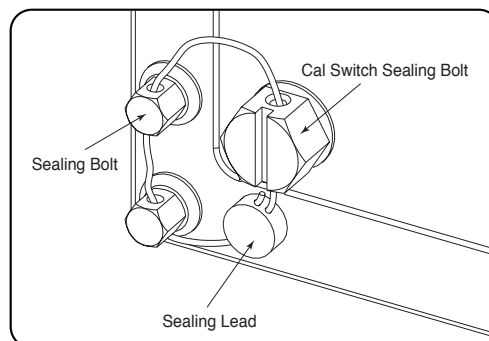
■ How to Enter CAL Mode/TEST Mode
   : Turn on the power while pressing the "CAL" switch on the back side.

■ How to Enter SET Mode
   : Turn on the power while pressing the "LIGHT/PRINT" key.
     Also press "LIGHT/PRINT" key for 5 sec in the weighing mode.

■ How to Enter SYSTEM Mode
   : Press "ZERO/MODE" key for 3 sec in the weighing mode.

SYSTEM MODE

- Simple weighing mode: Display the weight after weighing.
- High. Low weight comparing mode: Decide that the weight is high, normal or low value and perform the display.
- Count mode: Display the quantity by setting the unit or sample weight.
- Count comparing mode: Perform the display after discrimination by setting HIGH/LOW quantity.

1. Mode Conversion

- Press $\boxed{\substack{\text{ZERO}\\\text{MODE}}}$ key for 3 sec and it is displayed the following message.

$$\boxed{5 \, 4 \, 5}$$
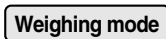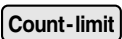
- Execute depending on the below mode conversion and setting method.

2. Digit Input Method

- Input the digit in use of the below keys.
- $\boxed{\substack{\text{LIGHT}\\\text{PRINT}}}$ key: Used to escape from mode.
- ↑ key: Used to increase the first place of value by one.
- ← key: Used to set current value $\times 10$.
- ↵ key: After completing the input, it is moved to next mode.
- $\boxed{\text{ZERO}}$ key: Used to set the inputted value to '0'.

- Conversion method

  As you press $\boxed{↑}$, the mode change.

  $\boxed{\text{Weighing mode}} \rightarrow \boxed{\text{W-limit}} \rightarrow \boxed{\text{Count}} \rightarrow \boxed{\text{Count-limit}} \rightarrow \boxed{\text{Enter}} \rightarrow \boxed{\text{End}}$

  If it is completed, it will start the mode which is set by mode conversion.

Ex) In case of inputting 20.5

	Display	Key	Description
Step 1	*0.0*	ZERO / MODE	Press one. (Set input value to '0'.)
Step 2	*0.2*	↑	Press twice. (Input 2 as the first place ~~place~~ value.)
Step 3	*2.0*	←	Press once. (Used to set current value ×10.)
Step 4	*20.0*	←	Press once. (Used to set current value ×10.)
Step 5	*20.5*	↑	Press once. (Used to set current value ×10.)
Step 6		↵	Press five times. (Input 5 as the first place value.)

▶Note. The decimal point automatically is set to location which is set in CAL mode.

3. Simple Weighing Mode Conversion
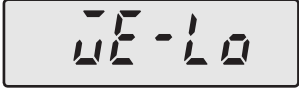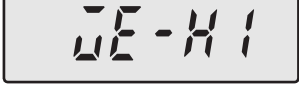
	Display	Key	Platform	Description
Step 1	𝐽𝐸 𝐼𝐺𝐻	↑		Press once.
Step 2	End	↵		Press once.
Step 3	0.0 kg		Empty	It is operated generally.

4. High/Low Comparing Mode Conversion

■ In case of no resetting the High/Low value.

	Display	Key	Platform	Description
Step 1	𝐽-𝐿 𝐼𝐻	↑		Press twice.
Step 2	End	↵		Press once.
Step 3	0.0 kg LO		Empty	It is operated generally.

■ In case of resetting the High/Low value.

	Display	Key	Platform	Description
Step 1	ʊ-L In	↑		Press twice.
Step 2	ʊE-Lo	ZERO MODE		Press once. (Input low weight value.)
Step 3	10.0 kg	↵		Refer to digit input method.
Step 4	ʊE-H1			Input high weight
Step 5	20.0 kg			value.
Step 6	End	↵		Refer to digit input method.
Step 7	Lo 0.0 kg		Empty	

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5. Count Mode Conversion

■ In case of no setting the unit/sample weight.

	Display	Key	Platform	Description
Step 1	$CoUnt$	↑		Press there times.
Step 2	End	↵		Press once.
Step 3	0 pcs		Empty	It is operated generally.

■ In case of setting the unit weight(Min. range of unit weight : Min. Div.)

	Display	Key	Platform	Description
Step 1	$CoUnt$	↑		Press three times.
Step 2	$Un lt$	MODE		Press once.
Step 3	10.0 kg	MODE		Display the set weight.
Step 4	0.532 kg	After completing the digit input,		Input unit weight.
Step 5	End			

Display		Key	Platform	Description
Step 6	0 ᵖᶜˢ	MODE	Empty	It is operated generally.

▶Note. If minimum division is 0.1kg in CAL mode, you can input to 0.00kg which
increased a digit place than minimum division.
If minimum division is 0.1kg in CAL mode, you can input to 0.00kg which
increased a digit place than minimum division.

■ In case of setting the unit weight by sample.
  (Samples : 10 ~ 200, 10 unit)

	Display	Key	Platform	Description
Step 1	CoUnt	↑		Press three times.
Step 2	Unit	MODE		Press once.
Step 3	SAMPL	↑		Press once.
Step 4	Pt 10 ᵖᶜˢ	MODE		Press once.
Step 5	Pt 50 ᵖᶜˢ	↑	Empty	Press five times. Input unit: 10pcs
Step 6	LoAd	↵	Sample	Press once with loading.
Step 7	- - - - - -			Under setting the

	Display	Key	Platform	Description
Step 8	$Good$			Set the unit weight.
Step 9	0.532 kg	↵		Display unit
Step 10	End			weight. Press once.
	0 pcs		Empty	

▶ Note 1. In case of setting the unit weight by sample count, the min. unit weight shall be more than min. division value.
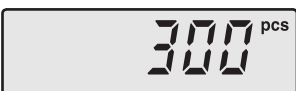
Note 2. It can be input to 200pcs as 10pcs of input unit.

6. Count Comparing Mode Conversion

■ In case of no setting the High/Low quantity.

	Display	Key	Platform	Description
Step 1	$C-L$ in	↑		Press four times.
Step 2	End	↵		Press once.
Step 3	0 pcs LO			It is operated generally.

■ In case of setting the High/Low quantity.

	Display	Key	Platform	Description
Step 1	C-L $\overline{I}n$	↑		Press four times.
Step 2	Co-Lo	MODE		Press once. Low quantity setting.
Step 3	200 pcs	Press ↵ key.		Input low quantity.
Step 4	Co-HI	MODE		Press once. High quantity setting.
Step 5	300 pcs	Press ↵ key.		Input high quantity.
Step 6	End			
Step 7	0 pcs		Empty	

GENERAL FUNCTION & DESCRIPTION

1. Zero Compensation Function (Use in changing zero point.)

■ The zero range: Within 2% of Maximum capacity.
  (Only available in weighing, weight-limit mode)

```
 ○              0.5 kg
    ▽
   ZERO
```
Zero point changed.

```
 ○              0.0 kg
    ▼
   ZERO
```
Press ZERO key.
Zero compensation.

2. Tare Function (Use in weighing with tare.)

■ Maximum TARE range: Maximum capacity
▶Note. The weight including TARE weight can't exceed the maximum capacity.

```
 ○             10.0 kg
   ▽    ▽    ▽    ▽
  ZERO GROSS NET  TARE
```
Put the TARE on
platform.

```
 ○              0.0 kg
   ▼    ▽    ▼    ▼
  ZERO GROSS NET  TARE
```
Press 'TARE' key.
(The TARE weight is

```
 ○             20.0 kg
   ▽    ▽    ▼    ▼
  ZERO GROSS NET  TARE
```
Put the object on
platform.

■ In case to want to know the GROSS weight.

```
 ○             30.0 kg
   ▽    ▼    ▽    ▼
  ZERO GROSS NET  TARE
```
Press 'NET / GROSS' key.
(Display: Object + TARE

■ In case to want to know the NET weight.

```
 ○             20.0 kg
   ▽    ▽    ▼    ▼
  ZERO GROSS NET  TARE
```
Press 'NET / GROSS' key.
(Display object weight)

```
 ○             10.0 kg
 ─
   ▼    ▽    ▼    ▼
  ZERO GROSS NET  TARE
```
Remove the TARE and
object
from platform.
And it will be displayed

```
┌─────────────────────┐
│ ○        ⊓.⊓  kg    │     Remove the TARE and
│     ▼  ▽  ▽  ▽       │     object
│   ZERO GROSS NET TARE│     from platform and then
└─────────────────────┘
```

3. Hold Function (Use in weighing the moving object.)

■ Auto hold function (Hold function operates whenever it is weighed)

```
┌──────────────┐  ┌──────────────┐  ┌──────────────┐
│ ○      ⊓.⊓ kg│  │  AH-on       │  │ ○      ⊓.⊓ kg│
│  ▼       ▽   │  │              │  │  ▼       ▽   │
│ ZERO    HOLD │  │              │  │ ZERO    HOLD │
└──────────────┘  └──────────────┘  └──────────────┘
```

Empty the platform.   Press 'HOLD' key.   The Hold lamp is ON.
                       'AH-ON' message is
                       displayed

```
┌──────────────┐  ┌──────────────┐  ┌──────────────┐
│   HoLd        │  │   -  -  -    │  │ ○     20.0 kg│
│               │  │              │  │  ▽       ▽   │
│               │  │              │  │ ZERO    HOLD │
└──────────────┘  └──────────────┘  └──────────────┘
```

When the weight change   The weight is averaged   The hold weight is
is
stable after putting the
object(20kg)   on

■ Empty the platform to release the hold key, and it is performed the normal
operation.

Auto hold function release (It is executed at emptying the platform)

```
┌──────────────┐  ┌──────────────┐
│ ○      ⊓.⊓ kg│  │  AHoFF       │
│  ▼       ▼   │  │              │
│ ZERO    HOLD │  │              │
└──────────────┘  └──────────────┘
```

Empty the platform.   Press 'HOLD' key.
                         After showing 'AHOFF'
                         message
                         for 1 sec, it is normally

Manual hold function (It is executed at pressing 'HOLD' key)

```
┌──────────────┐  ┌──────────────┐  ┌──────────────┐
│ ○     10.0 kg│  │   HoLd        │  │   -  -  -    │
│  ▽       ▽   │  │              │  │              │
│ ZERO    HOLD │  │              │  │              │
└──────────────┘  └──────────────┘  └──────────────┘
```
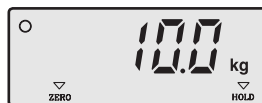
Put the object(10kg) on Press 'HOLD' key.   The weight is averaged
                         'Hold'   message   is   for
                         displayed for

The hold weight is

Empty the platform or press
'HOLD' key to release the hold
weight and then it will be

4. Print Method

1) General Print (To print F13=1 or 2)

- F14=0 (Manual Print) - If you press 'LIGHT/PRINT' key, print current net weight.
  Print format is decided by F15 of set mode.
- F14=1 (Auto Print) - If the weight status is stable, print current net weight.
  Print format is decided by F15 of set mode.
- The weighing number from 1 to 200.

2) SUM Print (It can be printed normally in selecting 1 or 2 of F13)

- If you press 'LIGHT/PRINT' key for 2 sec, it will be printed as the follows.
- After performing Sum-print function, the weighing number and sum-value is automatically released.
- After power turning on, the weighing number and sum-value is automatically released.

[SUM PRINT FORM]
 Data, Time
 Weighing number, Net weight

```
-----------------------------
    SUB   TOTAL
-----------------------------
DATE: 2000.  1.  1
TIME:    12: 12: 12
COUNT:       200
TOTAL:  12345.5kg
```

SET MODE

1. How to Enter

If you press "LIGHT/PRINT" for 5 sec, it will be moved to SET MODE.
It is display "SET" message for 1 sec, and then automatically moved to F1.

2. Available Keys

- ↑ key: Used to increase the first place of value by one.
- ← key: Used to move the input value to the left by one place.
- Enter key: Used to move next menu after completing input value.
- LIGHT/PRINT: Used to escape from SET mode.

3. Set Menu

- **GENERAL FUNCTION**
  - F1 Set weight unit
  - F2 Auto power off
  - F3 LIGHT/PRINT key usage
  - F4 Weight backup
  - F5 Auto zero compensation range
  - F6 Digital filter

- **RS232C COMMUNICATION FUNCTION**
  - F10 Designation of serial interface baud rate
  - F11 Designation of serial interface method
  - F12 Device ID

- **PRINTER FUNCTION**
  - F13 Using printer set
  - F14 Auto/manual print
  - F15 Print format setting

- **AUTOMATIC HOLD FUNCTION**
  - F16 Set start delay time
  - F17 Set initialization division

- **RELAY FUNCTION**
  - F20 Relay mode

■ **DATE, TIME**
　C1　Year
　C2　Month
　C3　Day
　C4　Time
　C5　Minute
　C6　Second

GENERAL FUNCTION

F01	FUNCTION	Weight unit (It is set only in CAL mode)	
	SET (00 ～ 01)	DISPLAY	DESCRIPTION
		F1-00	kg
		F1-01	lb

▶Note. Use this function depending on unit of weights which is used in CAL mode.

F02	FUNCTION	Auto power OFF function	
	SET (00 ～ 03)	DISPLAY	DESCRIPTION
		F2-00	Auto power OFF is not used
		F2-01	Power off when the weight is not changed or no key pressing for 3 min.
		F2-02	Power off when the weight is not changed or no key pressing for 5 min.
		F2-03	Power off when the weight is not changed or no key pressing for 10 min.

▶Note. This function performs when the weight is stable or key isn't pressed.

F03	FUNCTION	LIGHT / PRINT key usage	
	SET (00 ~ 04)	DISPLAY	DESCRIPTION
		F3-00	Only use as a BACK LIGHT key. Not use PRINT key.
		F3-01	BACK LIGHT always turns off. Only use as a PRINT key.
		F3-02	BACK LIGHT always turns on. Only use as a PRINT key.
		F3-03	If the weight change, BACK LIGHT will turn on. Only use as a PRINT key.
		F3-04	BACK LIGHT automatically operates depends on external light. Only use as a PRINT key.

F04	FUNCTION	Weight backup	
	SET (00 ~ 01)	DISPLAY	DESCRIPTION
		F4-00	Weight backup OFF
		F4-01	Weight backup ON

▶Note 1. In case occurring sudden power failure, it can be memoried the moment value by this function.

　Note 2. If the AC power is OFF suddenly and weight backup is ON, the scale recovers previous weight after the power is ON.

　Note 3. On and Off are alternately displayed by pressing the numeric keys.

F05	FUNCTION	Automatic zero compensation	
	SET (00 ~ 09)	DISPLAY	DESCRIPTION
		F5-00	No compensation
		F5-05	Compensation if it is gradually changed below 5 digit for 2 sec.
		F5-09	Compensation if it is gradually changed below 9 digit for 2 sec.

F06	FUNCTION	Digital filter	
	SET (01 ~ 09)	DISPLAY	DESCRIPTION
		F6-01	high speed, weak vibration
		F6-09	low speed, strong vibration

RS232C COMMUNICATION

F10	FUNCTION	RS232C baud rate set	
	SET (00 ~ 03)	DISPLAY	DESCRIPTION
		F10-00	2400
		F10-01	4800
		F10-02	9600
		F10-03	19200

F11	FUNCTION	Output method RS232C data	
	SET (00 ~ 03)	DISPLAY	DESCRIPTION
		F11-00	No data output
		F11-01	Output data in state of stable & unstable
		F11-02	Output data only in stable state
		F11-03	Output data when data is required

▶ Note 1. The default value is set to 0 at factory.

Note 2. It is available in case of setting 0 in F13.

Note 3. If device ID (F12) is received in case of setting 3 in F11, weight data will be transmitted.

F12	FUNCTION	Device ID (Identification number of each indicator)	
	SET (00 ~ 09)	DISPLAY	DESCRIPTION
		F12-01	Device ID 01
		F12-99	Device ID 99

PRINTER FUNCTION

F13	FUNCTION	Using printer set	
	SET (00 ~ 02)	DISPLAY	DESCRIPTION
		F13-00	Printer is not used
		F13-01	FS-7000D, 7040P serial
		F13-02	ND-T102 (thermal), ND-192 (DOT)

F14	FUNCTION	Automatic print	
	SET (00 ~ 01)	DISPLAY	DESCRIPTION
		F14-00	Manual print - whenever you press the key, it will be printed.
		F14-01	Automatic print - when the weight is stable or you press the key, it will be printed.

F15	FUNCTION	Print form	
	SET (00 ~ 02)	DISPLAY	DESCRIPTION
		F15-00	Form 0
		F15-01	Form 1
		F15-02	Form 2

[Form 0]
Date, Time
Weighing No, Net weight

```
1999. 1. 1  13:15
No. 001        50.0kg
No. 002       100.0kg
No. 003       200.5kg
```

[Form 1]
Date, Time
Net weight

```
1999. 1. 1  13:15
NET   :        50.0kg
NET   :       100.0kg
NET   :       200.5kg
```

[Form 2]
Date, Time
Weighing No, Net weight

```
1999. 1. 1  13:17
001 :        1000.0kg
1999. 1. 1  13:18
001 :        1000.0kg
1999. 1. 1  13:19
001 :        2000.0kg
```

AUTOMATIC HOLD FUNCTION

F16	FUNCTION	Hold start delay time (Only available in automatic hold)	
	SET (00 ~ 15)	DISPLAY	DESCRIPTION
		F16-00	Hold operates without delay time.
		F16-07	If the weight change, hold will operate after 14 sec.
		F16-15	If the weight change, hold will operate after 30 sec.

F17	FUNCTION	Set initializing division (Only available in automatic hold)	
	SET (01 ~ 15)	DISPLAY	DESCRIPTION
		F17-01	If it is swang over 2 division, it will be initialized.
		F17-07	If it is swang over 14 division, it will be initialized.
		F17-15	If it is swang over 30 division, it will be initialized.

RELAY FUNCTION

F20	FUNCTION	Relay mode	
	SET (00 ~ 01)	DISPLAY	DESCRIPTION
		F20-00	Limit mode
		F20-01	Limit type checker mode

■ F2000 Limit Mode

RELAY \ WEIGHT	0kg	(LOW limit) 80kg	(HIGH limit) 100kg	
ZERO (OUT 1)				ON OFF
LOW (OUT 2)				ON OFF
STABLE (OUT 3)				ON OFF
HIGH (OUT 4)				ON OFF

▶Note 1. ZERO RELAY(OUT 1) : If weight is under 5 division, this will be turned on.

  Note 2. LOW, HIGH RELAY(OUT 2, 3, 4) : When weight is over 5 division,
    comparing with setting weight value and displaying weight value, it will be
    turned ON/OFF.

■ F2001 Limit Type Checker Mode

RELAY \ WEIGHT	0kg	(LOW limit) 80kg	(HIGH limit) 100kg	
ZERO (OUT 1)				ON OFF
LOW (OUT 2)				ON OFF
NORMAL (OUT 3)				ON OFF
HIGH (OUT 4)				ON OFF

DATE, TIME SET

C1	FUNCTION	Set year	
	SET (00 ~ 99)	DISPLAY	DESCRIPTION
		C1-00	2000 year

C2	FUNCTION	Set month	
	SET (01 ~ 12)	DISPLAY	DESCRIPTION
		C2-01	January month

C3	FUNCTION	Set day	
	SET (01 ~ 31)	DISPLAY	DESCRIPTION
		C3-01	1st day

C4	FUNCTION	Set time	
	SET (00 ~ 23)	DISPLAY	DESCRIPTION
		C4-00	AM 00 hour

C5	FUNCTION	Set minute	
	SET (00 ~ 59)	DISPLAY	DESCRIPTION
		C5-59	59 minute

C6	FUNCTION	Set second	
	SET (00 ~ 59)	DISPLAY	DESCRIPTION
		C6-59	59 second

▶ Note 1. If you press "Enter" key after completing set mode, it will be moved to the initial menu of Set Mode.

Note 2. Press LIGHT/PRINT key, it will be moved to the Normal Mode.

TEST MODE

1. How to Enter

■ Turn on while pressing CAL switch on the back side.
■ Press ZERO/MODE key, and it will be moved to Test Mode.

2. Keys Usage

■ ↵ key: Used to move to the next menu.

3. TEST Menu

TEST 1 : LCD Screen Test
TEST 2 : A/D Converter Test
TEST 3 : Key Test
TEST 4 : Serial Communication Test

TEST 1

■ Function: LCD Screen Test

Key	Display	Description
↵ Key : Move to the next menu	**ZERO=tESt** **Tare=Cal** *t E S t 1* *8 8 8 8 8 8*	The mode and key are displayed. Press ZERO key, and then it will be moved to Test mode. TEST 1 condition. All lamps on LCD SCREEN is turned on for testing. Press ↵

TEST 2

■ Function: A/D Converter Test (Load Cell Test)

Key	Display	Description
↵ Key : Move to the next menu	⊦ ⴹ ⴝ ⴹ 2	TEST 2 condition.
ZERO Key : Used to set the current value to '0'.	Digital value of current weight.	This value means converting value under actual condition. Press ↵

▶Note. Check whether digital value is changing.
　　　 If the digital value is fixed or zero is displayed, please check the connection of load cell.

TEST 3

■ Function: Key Test

Key	Display	Description
↵ Key : Move to the next menu	⊦ ⴹ ⴝ ⴹ 3	TEST 3 condition.
Others Key : Test execution.	2	Press the key to be tested and the No of key mode should be identify with code of key as the follows.

〈KEY CODE〉

KEY	CODE	KEY	CODE	KEY	CODE
LIGHT/PRINT	6	TARE	4	UNIT/HOLD	2
ZERO	5	NET/GROSS	3	CAL	1

▶Note. If you press UNIT/HOLD key, after checking key number, it will be automatically moved to TEST 4.

TEST 4

■ Function: RS-232C Test with Computer (Serial Port)

Key	Display	Description
↵ Key : Move to the next menu Others Key : Execute data transmission to a computer.	*tESt 4*	TEST 4 condition.
	- - - - - -	Waiting for transmission and reception.
	- - - - - 1	Received : none, Transmitted : 1
	2 - - - - 1	Received : 2, Transmitted : 1
	End	Press ↵
	888888	When this test is completed, it is automatically moved to NORMAL MODE.

▶Note 1. Do this test after the connection of serial port of computer and serial port of indicator is done.

Note 2. Send No. 2 in computer keyboard and check if indicator receives No.2
Send No. 1 in indicator keyboard and check if computer receives No.1

Note 3. Do this test after baud rate is specified in SET MODE (F10).

CALIBRATION MODE

1. How to Enter

- Turn on while pressing CAL switch on the back side.
- Press TARE key and UNIT/HOLD key, and it will be moved to Calibration Mode.

2. Keys Usage

- ↑ key: Increase the first place value by 1.
- ← key: Move to the left by 1 place.
- ↵ key: Used to be moved to the next menu.
- ZERO/MODE key: Used to set the current value to '0'.
- LIGHT/PRINT key: Used to escape at CAL mode.

3. CAL Menu (CAL 1∼CAL 5)

CAL 1 : Maximum Capacity
CAL 2 : Minimum Division
CAL 3 : Setting Weight
CAL 4 : Zero Calibration
CAL 5 : Span Calibration

CAL 1

- Function: Maximum Capacity Set
  Range → 1 ∼ 99,999

Key	Display	Description
↑ Key : Control division	CAL $\mathit{1}$	CAL 1 condition.
← Key : Control digit	ex) $\mathit{100}$	Existing maximum capacity
↵ Key : Store and move to the next menu	$\mathit{10000}$	Setting maximum capacity Press ↵ key

▶Note 1. The maximum capacity means the maximum weight that scale can measure.

Note 2. Do not input the resolution, there is no need to input the resolution which is automatically calculated.

Note 3. If you press ↵ key, it will be moved to CAL 2.

CAL 2

■ Function: Minimum Division Set
Range →0.001 ～ 50kg

Key	Display	Description
↑ Key : Control division	*CAL 2*	CAL 2 condition.
← Key : Control digit	*1*	Existing minimum division
↵ Key : Store and move to the next menu	*0.01*	Setting minimum division Press ↵ key

▶Note 1. The minimum division means the value of one division.

Note 2. External resolution is obtained by dividing the min. division
by the maximum capacity. Set the resolution to be within 1/10,000.

Note 3. The maximum capacity/minimum division is over 10,000, Error
message ("CH 11") will occur.

Note 4. If you press ↵ key, it will be moved to CAL 3.

CAL 3

■ Function: Setting Weight in Span Calibration
Range →1 ～ Maximum Capacity of CAL 1

Key	Display	Description
	CAL 3	CAL 3 condition.
↑ Key : Control division	Maximum capacity value of CAL 1. Setting maximum capacity value	
← Key : Control digit	ex) *100*	100kg
↵ Key : Store and move to the next menu	*10000*	10000kg Press ↵ key
	ULoAd	

▶Note 1. The setting weight shall be within the range of 10%～100% of maximum
weight.

Note 2. If the setting weight over the maximum capacity or under the 10% of the
maximum weight, Error message ("CH 12") will occur.

CAL 4

■ Function: Zero Calibration

Key	Display	Description
↵ Key : Move to the next menu after completing zero calibration.	*ULoAd*	Not being displayed CAL 4. Empty the platform and when LCD screen shows "ULOAD", Press ↵ key.
	- - -	Under zero calibration.

▶Note 1. After completing zero calibration, it will be automatically moved to CAL 5.

 Note 2. If the zero value is too low or high, "CH 13" will occur.
 You lower the resolution and reset the zero calibration.

CAL 5

■ Function: Span Calibration

Key	Display	Description
↵ Key : Move to the initial menu	*LoAd*	Load the weight which was set in CAL 3 and Press ↵ key.
	- - -	Under span calibration.
	End	Span calibration is terminated.
	ZERO=tESt **Tare=Cal**	It is automatically escaped from CAL mode. Press ↵ key.
	End	CAL mode is completed.
	888888	Move to the initial menu automatically.

▶Note 1. "END" message is displayed and move to the initial menu when span calibration is completed.

 Note 2. If the span value is too low or high, "CH 14" will occur.
 You lower the resolution and reset the span calibration.

 Note 3. After completing CAL mode, it will be moved to initial menu.

SIMPLE CALIBRATION MODE

This mode is available for simply executing ZERO & SPAN calibration mode.

1. How to Enter

- Turn on while pressing CAL switch on the back side, and it will be moved to TEST/CAL selecting mode.
- Press TARE key twice, and it will be moved to simple calibration mode.
- And then, it will be started from zero calibration.

- Function: Zero Calibration

Key	Display	Description
↵ Key : Move to the next menu	*ULoAd* - - - *Good*	Empty the platform and when LCD screen shows "ULOAD". Press ↵ key. Under zero calibration. After completing zero calibration, it will be automatically moved to span calibration.

▶Note. If the zero value is too low or high, "CH 13" will occur.
        You lover the resolution and reset the zero calibration.

■ Function: Span Calibration

Key	Display	Description
← Key : Move to the initial menu	*LoAd*	Load the maximum capacity weight and Press ← key.
	- - -	Under SPAN calibration.
	End	Span calibration is terminated.
	ZERO=tESt **Tare=Cal**	It is automatically escaped from CAL mode. Press ← key.
	End	CAL mode is completed.
	888888	Move to the initial menu automatically.

▶Note 1. "END" message is displayed and move to the initial menu when span calibration is completed.

Note 2. If the span value is too low or high, "CH 13" will occur.
You lower the resolution and reset the span calibration.
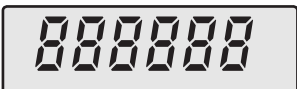
Note 3. After completing CAL mode, it will be moved to initial menu.

ONLY ZERO CALIBRATION

1. How to Enter

■ Turn on while pressing CAL switch on the back side.
■ Press TARE key and UNIT/HOLD key, it will be moved to calibration mode.

	Display	Key	Platform	Description
Step 1	CAL 1 / 1000 kg	↵		Displaying maximum capacity.
Step 2	CAL 2 / 0.2 kg	↵	Empty	Displaying minimum division.
Step 3	CAL 3 / 1000 kg	↵	Empty	Displaying the setting weight.
Step 4	ULoAd	ZERO/MODE	Empty	
Step 5	ULoAd	↵	Empty	Press once.

	Display	Key	Platform	Description
Step 6	- - - - - -		Empty	Under zero calibration.
Step 7	_Good_		Empty	Zero calibration is completed.
Step 8	**zero=tESt** **Tare=Cal**	↵	Empty	It is escaped from
Step 9	_End_			zero calibration.
Step	_888888_			CAL mode is completed.
				Move to the

▶Note 1. If the zero value is too low or high in STEP 6, "CH 13" will occur.

Note 2. If you find "CH 14", check the platform and the connection of load-cell, and do this test again.

GRAVITY COMPENSATION & THE OTHERS SET MODE

This mode set gravity compensation, dual range hold/unit conversion & decimal specification.

1. How to Enter

- Turn on while pressing CAL switch on the back side.
- Press LIGHT/PRINT key and it will be moved to this mode.

2. Keys Usage

- ↑ key: Increase the first place value by 1.
- ← key: Used to set the current value ×10.
- ↵ key: Used to be moved to the next menu.
- ZERO/MODE key: Used to set the current value to zero.

3. Description

Gravity Compensation Function:
This function allows it to be calibrated in one location and then adjusted to match the acceleration of gravity at another location where it will be used.

Multi-interval (Dual range):
EX 1) If you calibrated minimum division to 1 kg and maximum capacity to 3000 kg
       0∼1500 kg - minimum division is 0.5 kg.
     1500∼3000 kg - minimum division is 1 kg.

EX 2) If you calibrated minimum division to 2 kg and maximum capacity to 5000 kg
       0∼2500 kg - minimum division is 1 kg.
     2500∼5000 kg - minimum division is 2 kg.

EX 3) If you calibrated minimum division to 5 kg and maximum capacity to 10000 kg.
       0∼4000 kg - minimum division is 2 kg.
     4000∼10000 kg - minimum division is 5 kg.

HOLD/UNIT conversion: Select whether HOLD or UNIT conversion.

Decimal point: Select whether ' . ' or ' , '

4. Menu

Gravity Compensation Set
- GRCAL : Gravity acceleration of calibrating location
- GRSET : Gravity acceleration of using location

Multi-interval: Dual

HOLD/UNIT conversion: Hold

Decimal point: Comma

■ GRCAL

FUNCTION	Gravity acceleration of calibrating location	
	DISPLAY	DESCRIPTION
SET (9700 ∼ 9900) Unit: m/s^2	GRCAL 9798 9790	GRCAL condition 9.798 m/s^2 9.790 m/s^2 Press ↵ key.

▶Note. If you press ↵key, it will be moved to GRSET mode.

■ GRSET

FUNCTION	Gravity acceleration of using location	
	DISPLAY	DESCRIPTION
SET (9700 ∼ 9900) Unit: m/s^2	GRSET 9798 9778	GRSET condition 9.798 m/s^2 9.778 m/s^2 Press ↵ key.

▶Note 1. If the GRCAL value is same with GRSET, it doesn't need to do gravity
compensation set.

  Note 2. The gravity value of each country is inputted refering to the following
diagram.

Amsterdam	$9.813 \, m/s^2$	Manila	$9.784 \, m/s^2$
Athens	$9.800 \, m/s^2$	Melbourne	$9.800 \, m/s^2$
Auck land NZ	$9.799 \, m/s^2$	Mexico City	$9.779 \, m/s^2$
Bangkok	$9.783 \, m/s^2$	Milan	$9.806 \, m/s^2$
Birmingham	$9.813 \, m/s^2$	New York	$9.802 \, m/s^2$
Brussels	$9.811 \, m/s^2$	Oslo	$9.819 \, m/s^2$
Buenos Aires	$9.797 \, m/s^2$	Ottawa	$9.806 \, m/s^2$
Calcutta	$9.788 \, m/s^2$	Paris	$9.809 \, m/s^2$
Capetown	$9.796 \, m/s^2$	Rio de Janeiro	$9.788 \, m/s^2$
Chicago	$9.803 \, m/s^2$	Rome	$9.803 \, m/s^2$
Copenhagen	$9.815 \, m/s^2$	San Francisco	$9.800 \, m/s^2$
Cyprus	$9.797 \, m/s^2$	Singapore	$9.781 \, m/s^2$
Djakarta	$9.781 \, m/s^2$	Stockholm	$9.818 \, m/s^2$
Frankfurt	$9.810 \, m/s^2$	Sydney	$9.797 \, m/s^2$
Glasgow	$9.816 \, m/s^2$	Taichung	$9.789 \, m/s^2$
Havana	$9.788 \, m/s^2$	Taiwan	$9.788 \, m/s^2$
Helsinki	$9.819 \, m/s^2$	Taipei	$9.790 \, m/s^2$
Kuwait	$9.793 \, m/s^2$	Tokyo, Korea	$9.798 \, m/s^2$
Lisbon	$9.801 \, m/s^2$	Vancouver, BC	$9.809 \, m/s^2$
London (Greenwhich)	$9.812 \, m/s^2$	Washington DC	$9.801 \, m/s^2$
Los Angeles	$9.796 \, m/s^2$	Wellington NZ	$9.803 \, m/s^2$
Madrid	$9.800 \, m/s^2$	Zurich	$9.807 \, m/s^2$

■ DUAL

FUNCTION	Multi‑interval	
SET (0 ～ 1)	DISPLAY	DESCRIPTION
	DUAL	DUAL condition
	S1　0	Not use multi‑interval function
	S1　1	Use multi‑interval function
		Press ↵ key.

▶Note 1. In case of setting S1-0, standard division set in CAL mode is used.
　　　　 maximum capacity.

　Note 2. In case of setting S1-1, the following division is used in the following range.
　　　　　 0～1/2 of MAX. capacity: one lower division from the standard division
　　　　　 Over 1/2 of MAX. capacity: standard division set in CAL mode
　　　　　　• Division: 0.001, 0.002, 0.005, 0.01, 0.02, 0.05, 0.1, 0.2, 0.5, 1, 2, 5, 10, 20, 50

　Note 3. If you press ↵ key, it will be moved to HOLD function.

■ HOLD

FUNCTION	HOLD／UNIT conversion	
SET (0 ～ 1)	DISPLAY	DESCRIPTION
	HOLD	HOLD condition
	S2　0	Use UNIT／HOLD to UNIT conversion key.
	S2　1	Use UNIT／HOLD to HOLD key.
		Press ↵ key.

■ COMMA

FUNCTION	Decimal Point Select	
SET (0 ～ 1)	DISPLAY	DESCRIPTION
	COMMA	COMMA condition
	S3　0	Use decimal point to ' . '
	S3　1	Use decimal point to ' , '
		Press ↵ key.
	End	Gravity compensation & the others set mode are completed.
	888888	When this test is completed, it is automatically moved to NORMAL MODE.

OPTIONS

OPTION 1 | RS-422/485 Serial Interface

■ Transmit mode: Same as RS-232C interface

■ Data format: Same as RS-232C

■ Signal format: Same as RS-232C

■ Connecting method of RS-485/422 PORT

```
IN(+)    o ─────────────── o  Transmit Data(+)
IN(-)    o ─────────────── o  Transmit Data(-)
OUT(+)   o ─────────────── o  Receive Data(+)
OUT(-)   o ─────────────── o  Receive Data(-)
```

RS485 Port of CI-2400BS   Serial port of Computer

```
IN(+)    o ─────────────── o  6  Transmit Data(+)
IN(-)    o ─────────────── o  4  Transmit Data(-)
OUT(+)   o ─────────────── o  5  Receive Data(+)
OUT(-)   o ─────────────── o  7  Receive Data(-)
```
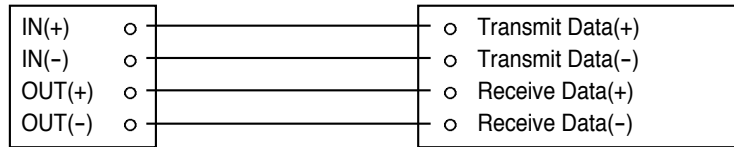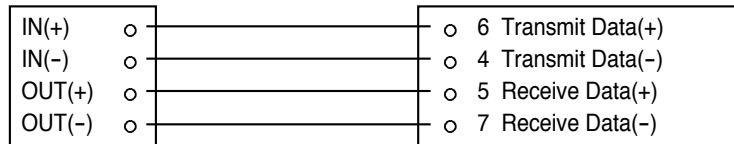
RS485 Port of CI-2400BS   Serial port of Sub-display

OPTION 2	Charge Board + Ni-Cd Battery

1) Charge Board: This board can charge Ni-Cd DC 7.2V, 2000mAh battery

2) Ni-Cd Battery: DC 7.2V, 2000mAh battery pack

3) Install

- Connect output port of Ni-Cd battery pack to CN3 of charge board.
- Connect output port of adapter to CN1 of charge board after confirming polarity of adapter.
- Connect CN2 of charge board to CN1 of CI-2400BS main board.

4) Method

- If adapter code is connected to AC power to charge the battery power lamp is ON.
- When charging battery, charging lamp(RED lamp) is ON.
- When the charging is completed, charging lamp(GREEN lamp) is ON.
- It takes approximately 3-4 hours to charge in full.

OPTION 3	Relay Output Function (Max. DC30V, 100mA - ZERO, LOW, OK, OVER)

- COM : Connect to external GND terminal.
  OUT 1,2,3,4 : This signal output circuit is open-collector output of a transistor. Use external power source(up to DC 30V) for driving relay.
- In case to need the signal of TTL, connect to pull-up resistance as the follows.

ERROR MESSAGE & TROUBLE-SHOOTING

1. In Weighing Mode

CH 01
- ■ Reason: The calibration isn't executed or the data of internal memory is lost by a electrical shock.
- ■ Trouble shooting: Perform the required specification again in calibration mode.

CH 02
- ■ Reason: The load cell is connected wrongly or A/D conversion part has a fault.
- ■ Trouble shooting: Check that the load cell is well connected with main unit.

CH 03
- ■ Reason: The indicator can't be initialized due to platform shaking.
- ■ Trouble shooting: Put the platform on a flat place without shaking and power on.

CH 04
- ■ Reason: The initial zero range exceeds above 10% of maximum capacity.
- ■ Trouble shooting: Check the platform.

CH 05
- ■ Reason: Pressing any key for long time or having problems in key part.
- ■ Trouble shooting: If it can't be found problems in key part, please call A/S.

noprt
- ■ Reason: When it is setting F13=0 or when you press print-key to print current and unit weight at count mode.
- ■ Trouble shooting: If you want to print, do it in setting F13=1. And don't print unit weight, current weight at count mode.

Over
- ■ Reason: The gross weight is over maximum capacity.
- ■ Trouble shooting: Don't load the article whose weight is heavier than the maximum capacity.

CH 15
- ■ Reason: The display value is over 99999.

2. In Calibration Mode

CH 11
- ■ Reason: Resolution (maximum capacity/minimum division) is over the limit (1/10,000).
- ■ Trouble shooting: Lower the resolution in any of the below ways.
  Modify maximum capacity in CAL 1 of CAL mode.
  Modify minimum division in CAL 2 of CAL mode.

CH 12
- ■ Reason: Span setting weight is set under 10% or over 100% of the maximum capacity.
- ■ Trouble shooting: Set span setting weight to 10% ~ 100% range of maximum capacity in CAL 3 of CAL mode.

CH 13
- ■ Reason: Load cell output voltage (span value) is too high at span calibration.
- ■ Trouble shooting: Check if weighing platform is in contact with something.
  Or set external resolution to lower external resolution.

CH 14
- ■ Reason: Load cell output voltage (zero value) is too high or too low at zero calibration.
- ■ Trouble shooting: Confirm that there is nothing on the weighing platform.
  Or check if weighing platform is in contact with something.

▶ Notice: Specifications are subject to change for improvement without notice.