ISHIDA

NOVA-II
Electronic Digital Scale
lb version

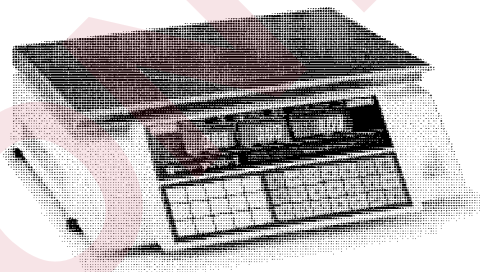# Operation Manual

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale

ISO 9001 REGISTERED

48727

Table of Contents

⚠ Saftey Considerations

To ensure safe operation, the general safety considerations below must be followed.

Grounding:

This instrument is a class 1 device which requires protective grounding for safe operation.

To avoid potential shock hazards, a protective grounding conductor for the instrument must be securely connected to the main grounding provision by qualified service personnel.

Do not remove covers or enclosures:

To avoid personal injury and schock, do not open or remove any covers or enclosures of the instrument unless specified in the manual.

Do not perform unspecified maintenance:

For your personal safety, do not perform any maintenance procedures which are not specified in the manual.

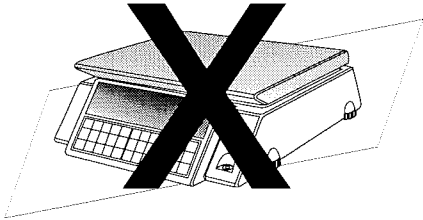### Disconnect the power supply before servicing:

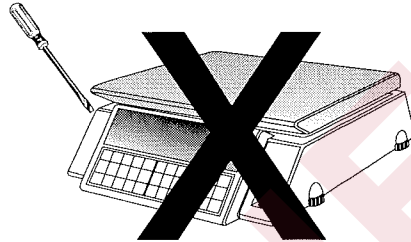To ensure your personal safety, disconnect the power supply before servicing.

⚠ **WARNING!** *Power supply to the machine is disconnected only when the electrical plug is removed from the electrical outlet. For safe operation of this machine, connect the plug to the nearest and most accessible outlet.*

⚠ Caution For Use

Always operate the scale on a level surface.

Do not disassemble the scale.
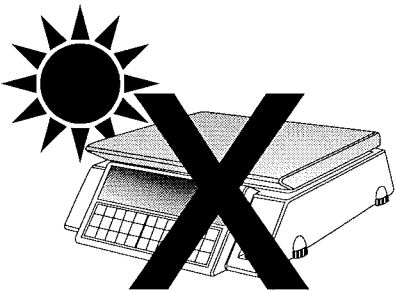
Do not expose the scale to direct sunlight for long periods.
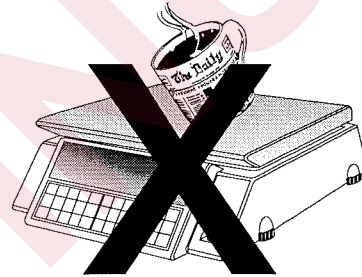
Do not allow any liquids to come into contact with the scale.
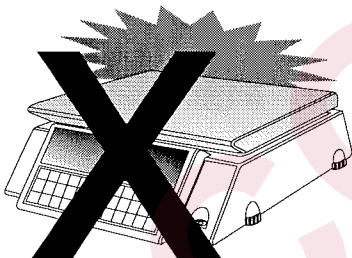
Do not drop or apply a strong shock to the scale.
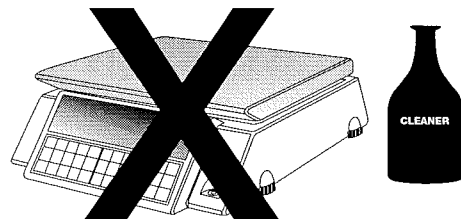
When cleaning the scale, only use a soft dry cloth wetted with a neutral cleanser. Never use thinner or other volatile liquids.

⚠ Warning
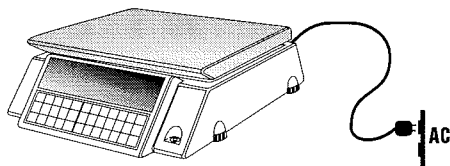
1. Always operate the scale with the same rated AC power supply shown on the specification plate.

2. To disconnect the power supply, remove the electrical outlet.

1.0 Introduction

1.1 Main Components

Weigh Platter

Digital
Display

Function
Keys

Level

Height
Adjustment

1.2 Key Functions

| WEIGHT | lb | UNIT PRICE | $/lb | TOTAL PRICE | $ |

ZERO NET   SAVE REC'D CHANGE   ADD TOTAL

ISHIDA **NOVA-II**   Capacity 30 x 0.01 lb

SAVE	TARE	7	8	9	X	ON/OFF
x4	C	4	5	6	+	ZERO
x2	0	1	2	3	CHG	*
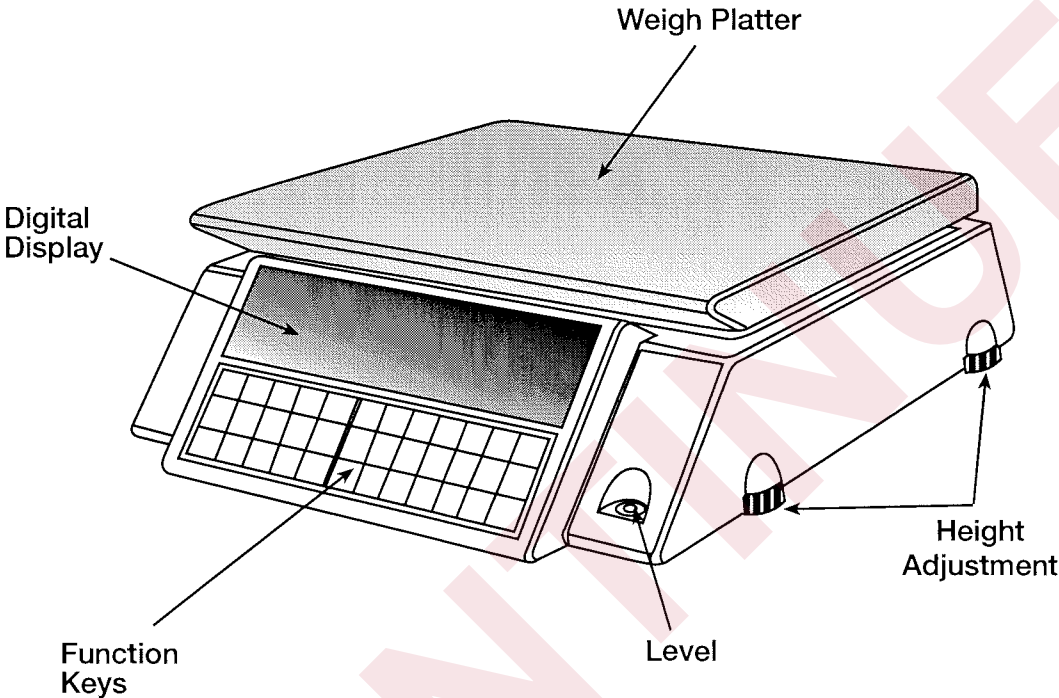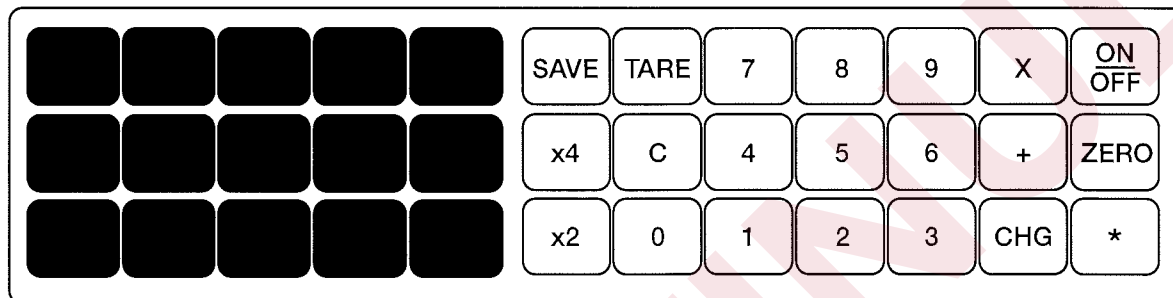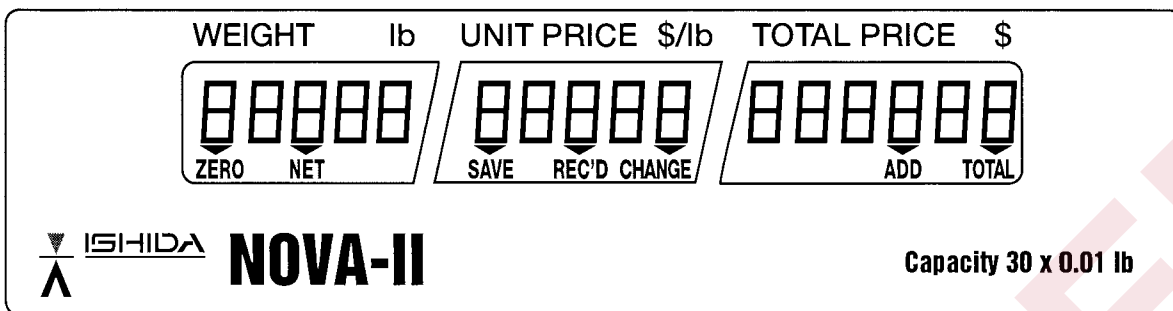
KEY	FUNCTION
ON/OFF	Used to turn scale ON/OFF (not electrical power switch).
NUMERIC KEYS [0] - [9]	Used to key in numeric data.
C	Used to clear numberic entries
ZERO	Used to adjust scale to zero
TARE	Used to engage/disengage tare subtraction operation: Weighing Tare Keyboard Tare
SAVE	Used to set or release SAVE mode
+	Used to add total for price and quantity of purchased items
CHG	Used to calculate totals of purchased items or customer change
x	Used for fixed values or multiple purchases of same item
x4	Used to multiply unit price by 4
x2	Used to multiply unit price by 2
PRESETS (PLU)	Preset Unit Price or Preset Tare (15 blank keys on left side of keyboard)
*	This key is not available for operation. (Left side of keyboard)

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2.0 Ishida NOVA-II Setup and Calibration

Follow the steps below to set up and calibrate the NOVA-II scale.

Step	Action	Display
1	Turn the scale off.	
2	Turn the scale on and immediately press the 1 key.	
3	Press the 1 key then the TARE key.	C 0
4	Press TARE after verifying the Country Code: 20 = United States (15 lb, 30 lb, and 60 lb) To change the Country Code, enter 20, then press TARE.	C1-1 20 0
5	Press TARE after verifying the Capacity Code: 2 = 30 × 0.01 lb 9 = 15 × 0.005 lb 7 = 60 × 0.02 lb **Note:** XXXX = capacity, z= code. To change, enter the code, then press TARE.	C1-2 XX.XX z
6	With no weight on the scale, press ZERO to set 2000 counts. **Note:** nnnn = any number.	10 nnnnn nnnn
7	Place the full capacity weight on the scale as determined in step 5.	10 2000 0
8	Press TARE. **Note:** nnnn = any number.	10 nnnnn nnnn
9	The center display should read 32000 ±1. If not, repeat the above starting with step 6.	10 32000 30000
10	Remove the weights and the weigh platter.	10 32000 30000
11	Tip the scale on edge and remove the brass screw. See the diagram below. **Note:** nnnn = any number.	10 nnnnn nnnn
12	Use a non-metallic device to press the memory switch on the circuit board. See the diagram below. The scale beeps and temporarily displays "ok".	10 nnnnn nnnn 10 s ok
13	Replace the brass screw and the weigh platter. Turn off the scale.	10 2000 0
14	Turn the scale on again and test the calibration by placing a known weight on the platter.	0.00 0.00 0.00
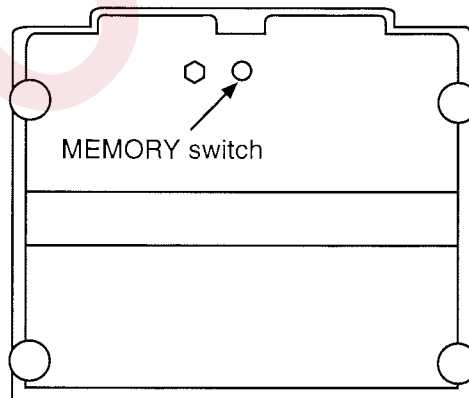
Bottom view of NOVA-II scale

3.0 Weighing Operations

3.1 Preparation for Weighing

Place the scale on a stable counter top or other flat surface. Rotate the four adjustment feet until the level's bubble is aligned in the center of the circle. This indicated that the machine is level.

Level Indicator

CORRECT   INCORRECT

Height Adjustment
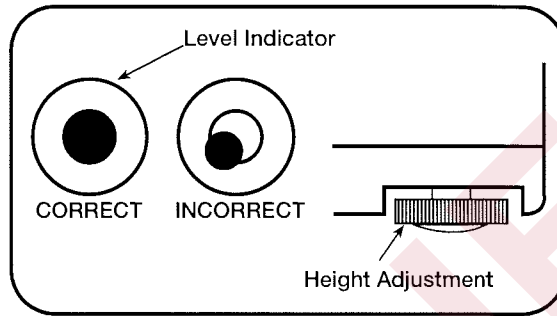
3.2 Power On

WARNING! *To disconnect the power supply, remove the electrical plug from the electrical outlet.*

Insert the electrical plug into the same rated AC outlet. A buzzer will sound once to indicate that electrical current is being supplied to the machine.

AC
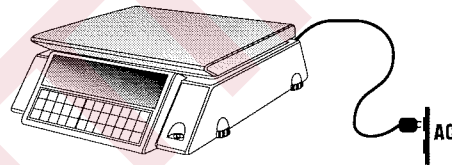
3.3 Display Start

Check to see that nothing is on the weigh platter and press

ON
OFF
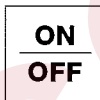
WEIGHT lb	UNTI PRICE $/lb	TOTAL PRICE $
0.000	0.00	0.00
ZERO NET FIXED REC'D CHANGE ADD TOTAL		

3.4 Zero Adjustment

The scale sould display zero with nothing on the weigh platter. Should the scale display a value other than zero, press ZERO to perform zero adjustment.

Check platter, *then* Press

ZERO

3.5 Tare Subtraction

Weighing Tare:
Place tare weight item on the weigh platter. When item is stable, press TARE to save tare setting.

Load item, *then* Press

```
TARE
```

Note: Items weighing less than previous tare setting cannot be calculated. In that case, it is necessary to reset tare value by pressing TARE with nothing on the scale.

Keyboard Tare:
With nothing loaded on the weigh platter, use numberic keys to enter data. Save setting by pressing TARE.

Enter data, *then* Press

```
TARE
```

Notes: Items weighing less than previous tare setting cannot be calculated. In that case, it is necessary to reset tare value by pressing TARE with nothing on the scale. This function is only available when the tare setting is a multiple of the scale's minimum graduation.

Example: 0.005 for 15 lb capacity
0.01 for 30 lb capacity
0.02 for 60 lb capacity

Preset Tare:
With nothing on the weigh platter, press preset tare key for tare value.

Press

```
PLU
```

(One of the left side keys programmed for a tare weight)
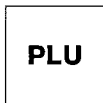
Note: Items weighing less than previous tare setting cannot be calculated. In that case, it is necessary to reset tare value by pressing TARE with nothing on the scale.

3.6 Unit Price Entry

There are two ways to enter unit price: using numeric keys or by pressing a preset key. The unit price is set for
1 pound, preset fractional pricing is not available (x2, x4)

Enter the price data by numberic keys [0]-[9] or Press one of the left side keys programmed for a price.

3.7 Single Purchase of Random Weighing Item

a. Set a tare (if needed)

   Example: 0.125 lb
   (The scale should not be in adding mode. If it is press zero.)
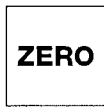
   [ZERO]

WEIGHT	lb		UNTI PRICE	$/lb	TOTAL PRICE	$
-0.125				0.00		0.00
▼						
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

b. Enter unit price using numeric keys [0]-[9]

   Price: $2.00

-0.125				2.00		0.00
▼						
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

c. Load item:
   Item: 2.125 lb

   Note: 2 lb weight display reflects subtraction of tare weight.

2.000				2.00		4.00
▼						
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

d. Press [CHG] to display total amount due.

   Amount Due: $4.00

				1		4.00
						▼
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

Note: Perform steps e and f only if customer receives change.

e. Use the numeric keys [0]-[9] to enter amount received from customer.

   Received: $10.00

				10.00		4.00
				▼		▼
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

f. Press [CHG] to display amount due to customer.

   Amount Due: $6.00

				6.00		4.00
				▼		▼
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

g. Press any key to clear accumulated data and return to weighing mode.

-0.125				2.00		0.00
▼						
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

3.8 Multiple Purchases of Random Weighing Items

a. Set a tare. (if needed)
   Weighing Tare
   Keyboard Tare

   Example: 0.125 lb

WEIGHT	lb	UNTI PRICE $/lb	TOTAL PRICE $
-0.125		0.00	0.00
▼			
ZERO	NET FIXED	REC'D CHANGE	ADD TOTAL

b. Enter unit price using
   the numbreic keys [0]-[9]
   Price: $2.00

-0.125		2.00	0.00
▼			
ZERO	NET FIXED	REC'D CHANGE	ADD TOTAL

c. Load item
   Item: 2.125 lb

   Note: 2 lb weight
   display reflect
   subtractionof tare weight

2.000		2.00	4.00
▼			
ZERO	NET FIXED	REC'D CHANGE	ADD TOTAL

d. Press [+] to calculate subtotal.

Subtotal: $4.00

2.000		2.00	4.00
▼			▼
ZERO	NET FIXED	REC'D CHANGE	ADD TOTAL

e. Repeat steps a to e as many times as necessary.

f. Press [CHG] to display total price

Total Price: $30.00

(ITEM COUNT)

		6	30.00
			▼
ZERO	NET FIXED	REC'D CHANGE	ADD TOTAL

Note: Perform steps g and h only if customer receives change.

g. Enter amount received from customer using the numeric keys [0]-[9]
   Received: $50.00

		50.00	30.00
		▼	▼
ZERO	NET FIXED	REC'D CHANGE	ADD TOTAL

h. Press [CHG] to calculate customer's change

Change: $20.00

		20.00	30.00
		▼	▼
ZERO	NET FIXED	REC'D CHANGE	ADD TOTAL

i. Press any key to clear accumulated data and return to weighing mode.

3.9 Single Purchase of Fixed Price Item

a. Enter fixed price using numberic keys [0]-[9]

Note: Weight must be at zero

WEIGHT	lb		UNTI PRICE	$/lb	TOTAL PRICE $
0.000			2.00		0.00
▼					
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

b. Press [X] to multiply for total price.

(ITEM COUNT)

				1	2.00
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

c. If more than one item, enter number of items.

Item number: 5

(ITEM COUNT)

				5	10.00
					▼
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

d. Press [CHG] to display total amount due.

				1	10.00
					▼
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

Note: Perform steps e and f only if customer receives change.

e. Use the numberic keys [0]-[9] to enter amount received from customer.

Received: $50.00

			50.00		10.00
			▼		▼
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

f. Press [CHG] to display amount due to customer.

Amount Due: $40.00

			40.00		30.00
			▼		▼
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

g. Press any key to clear accumulated data and return to weighing mode.

0.000			2.00		0.00
▼					
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

3.10 Multiple Purchases of Fixed Price Items

a. Enter fixed price using numberic keys.
    Example: $2.00

    Note: Weight must be at zero

WEIGHT	lb		UNTI PRICE $/lb		TOTAL PRICE $	
-0.000			2.00		0.00	
▼						
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

b. Press [X] to multiply for total price.

    Total Price: $2.00

					1	2.00
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

c. If more than one item, enter number of items.

    Item number: 5

					5	10.00
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

d. Press [+] to add data and return to weighing mode.

0.000			2.00		30.00	
▼					▼	
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

    or
    press [ZERO] to clear the transaction without accumulating.

e. Repeat steps a to e as many times as necessary.

f. Press [CHG] to display total price

    Total Price: $30.00

(ITEM COUNT)

					6	30.00
						▼
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

Note: Perform steps g and h only if customer receives change.

g. Enter amount received from customer using the numeric keys [0]-[9]
    Received: $50.00

			50.00		30.00	
			▼			▼
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

h. Press [CHG] to calculate customer's change

				20.00 ▼		30.00 ▼
ZERO	NET	FIXED	REC'D	CHANGE	ADD	TOTAL

Change: $20.00

i. Press any key to clear accumulated data and return to weighing mode.

3.11 Programming Preset (PLU) Keys

The preset or PLU keys can be programmed with a unit price or tare weight using the following procedure.

Note: A preset key cannot have both a price and a tare.

a. Turn scale off.

b. Turn scale on.

c. Immediately press the Preset Key to be programmed.

WEIGHT lb	UNTI PRICE $/lb	TOTAL PRICE $
1	0.00	0.00
ZERO NET FIXED REC'D CHANGE ADD TOTAL		

d. Enter the unit price value (or the tare weight value) using numberic keys.
Example: $2.59

WEIGHT lb	UNTI PRICE $/lb	TOTAL PRICE $
1	0.00	2.59
ZERO NET FIXED REC'D CHANGE ADD TOTAL		

e. Press [CHG] to set a unit price.

Example: $2.59
or

1	2.59	0.00
ZERO NET FIXED REC'D CHANGE ADD TOTAL		

Press [TARE] to set a tare weight.

1 ▼	2.59	0
ZERO NET FIXED REC'D CHANGE ADD TOTAL		

Example: 2.59 lbs tare.

Note: When a tare weight is set the NET triangle indicator will turn on.

f. Repeat steps c, d, and e to program additional preset keys.
(The unit does not need to be turned off to program additional keys.)

g. Press [ZERO] to return to normal operating mode.

4.0 Trouble Shooting

4.1 Error Conditions

PROBLEMS	Posible Solutions
Cannot enter a tare weight through the keyboard.	Tare weight must end in the smallest division of scale weight. Example: 15 lb capacity: last digit must be 0 or 5. 60 lb capacity: last digit must be even 0, 2, 4, 6, 8.
After turning on the scale there are no displays and no beeps	Check scale is plugged in to a live outlet. Unplug scale from outlet and check main fuse.
After turning on the scale there are no displays but buzzer sounds continuously	Check that weigh platter is mounted on scale correctly. Check that no objects are touching the weigh platter from above, side or below. Scale is out of calibration due to overload or shock load, contact service representative.
Weight reading are unstable	Check that no objects are touching the weigh platter from above, side, or below. Check if scale is level. Check for air currents, vibration, or unstable mounting surface.
After pressing tare, the scale does not tare and beeps.	Tried to enter tare of less value than the tare presently in the scale. Clear tare by clearing the platter and pressing tare.
Scale beeps when any key is pressed.	That key or function is not available in present mode. (Operation error.)