SF/SG Series
Price Computing Scales

Instruction Manual

SG Series

SF Series

SF/SG Series Instruction Manual

Index

Thank You...

Thank you for purchasing our A&D SF/SG Series price computing scale. ***Before using your new price computing scale, please read the operating instructions.***

Warning before connecting power plug:

  – Do not place a load on the weighing pan before connecting the power supply.
  – Check the power requirement label next to the power switch on the lower left side of the body of the SF/SG to confirm that it corresponds to your local power requirements. Or when appropriate, check the AC adapter.

9V ⎓ 70mA
FUSE T 200mA
A&D Company, Limited

AC ADAPTER
TB-162
91-45273
INPUT: AC108V
OUTPUT: DC12V 250mA
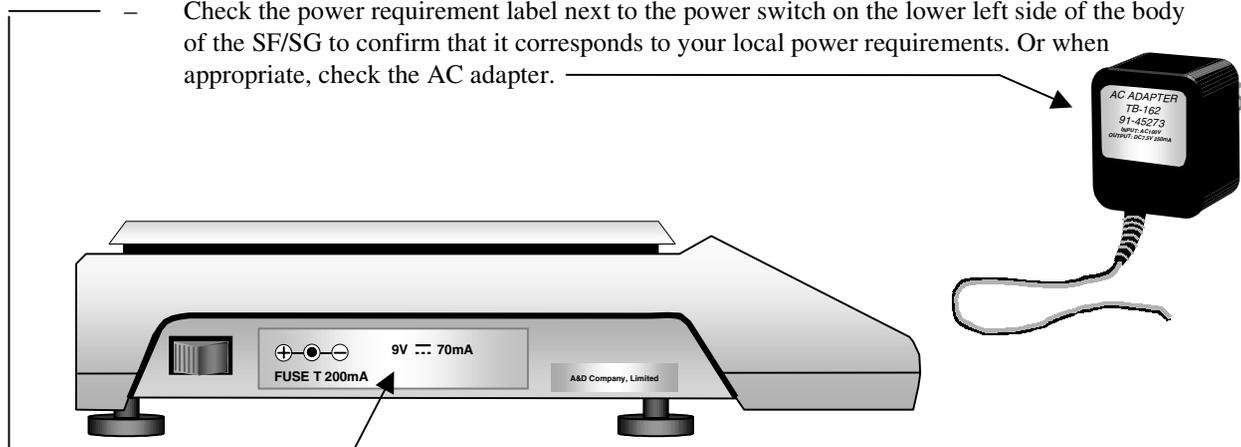
- Unpacking and inspecting
  – The SF/SG price computing scales are precision instruments, please handle them with care.
  – Please inspect your new SF/SG when unpacking, and retain the shipping container in the event that you need to return the unit to your dealer for repair.
  – The following items should be included in your shipping container:
    - SF/SG price computing scale.
    - AC power adapter (except SF-A).
    - Optional rechargeable battery (SF-C), if ordered.
    - Optional RS-232C, if ordered.
    - Instructional manual
    - Various models are capable of using rechargeable or 6 D size replaceable batteries. D size replaceable batteries are not shipped with the unit and must be purchased locally:
      – SF-6KA, 15KA, 30KA   AC only
      – SF-6KB, 15KB, 30KB   AC adapter (D size capable)
      – SF-6KC, 15KC, 30KC   AC adapter (rechargeable battery capable)
      – SG-6KA, 15KA, 30KA   AC adapter (D size capable)

SF/SG Series Specifications

Specification Table

Model	Capacity	Display	Type	AC Type	Battery Type	Price Lookup Capability	Options
SF- 6KA	6kg x 2g	VFD	Tower	AC hardwired	No	30	RS-232C
SF-15KA	15kg x 5g	VFD	Tower	AC hardwired	No	30	RS-232C
SF-30KA	30kg x 10g	VFD	Tower	AC hardwired	No	30	RS-232C
SF- 6KB	6kg x 2g	LCD	Tower	AC adapter	6 D size	30	RS-232C
SF-15KB	15kg x 5g	LCD	Tower	AC adapter	6 D size	30	RS-232C
SF-30KB	30kg x 10g	LCD	Tower	AC adapter	6 D size	30	RS-232C
SF- 6KC	6kg x 2g	VFD	Tower	AC adapter	Rechargeable*	30	RS-232C
SF-15KC	15kg x 5g	VFD	Tower	AC adapter	Rechargeable*	30	RS-232C
SF-30KC	30kg x 10g	VFD	Tower	AC adapter	Rechargeable*	30	RS-232C
SG- 6KA	6kg x 2g	LCD	Table top	AC adapter	6 D size	12	RS-232C
SG-15KA	15kg x 5g	LCD	Table top	AC adapter	6 D size	12	RS-232C
SG-30KA	30kg x 10g	LCD	Table top	AC adapter	6 D size	12	RS-232C

*Note:

1. Rechargeable batteries are sold as an option.
2. D size batteries are not included with the unit & must be purchased locally.

Display:

	Numerical Digits	
	LCD Type	VFD Type
Weight Display:	5	5
Price Display:	7	7
Unit Price Display:	6	6

Resolution: 1/3000

Sensor: Strain gauged load cell

Character Size:

Weight Display:	18mm	13mm
Price Display:	20mm	13mm
Unit Price Display:	18mm	13mm

Weighing Pan Size:

300mm x 280mm

Physical Weight of the Scale:

SF Series	Approximately 5.5kg
SG Series	Approximately 4.5kg

Operating Temperature:

-10ºC ~ 40ºC / 14ºF ~ 104 ºF; RH less than 85%

SF/SG Series Main Operating Components

Power Switch turns the power to the unit on and off.
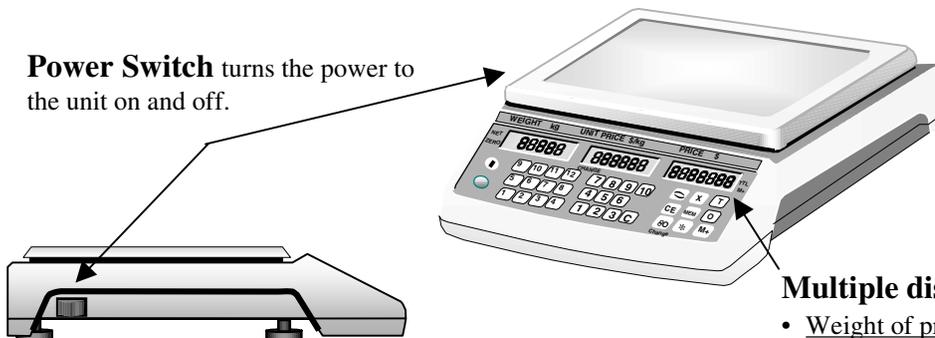
Multiple displays
- Weight of product
  - Zero & Tare
- Price of product
  - Memory & total sale
- Unit price of product ($/kg)
  - Payment received
  - Change required

WEIGHT
88888 **kg**
Net   Zero

PRICE
8888888 **$**
Total   M+

UNIT PRICE
888888 **$/kg**
Change

A&D   SF-15KA
Max. 15kg Min 0.1kg e=0.005kg

Standby/Operate turns displays on and off , but does not control power.
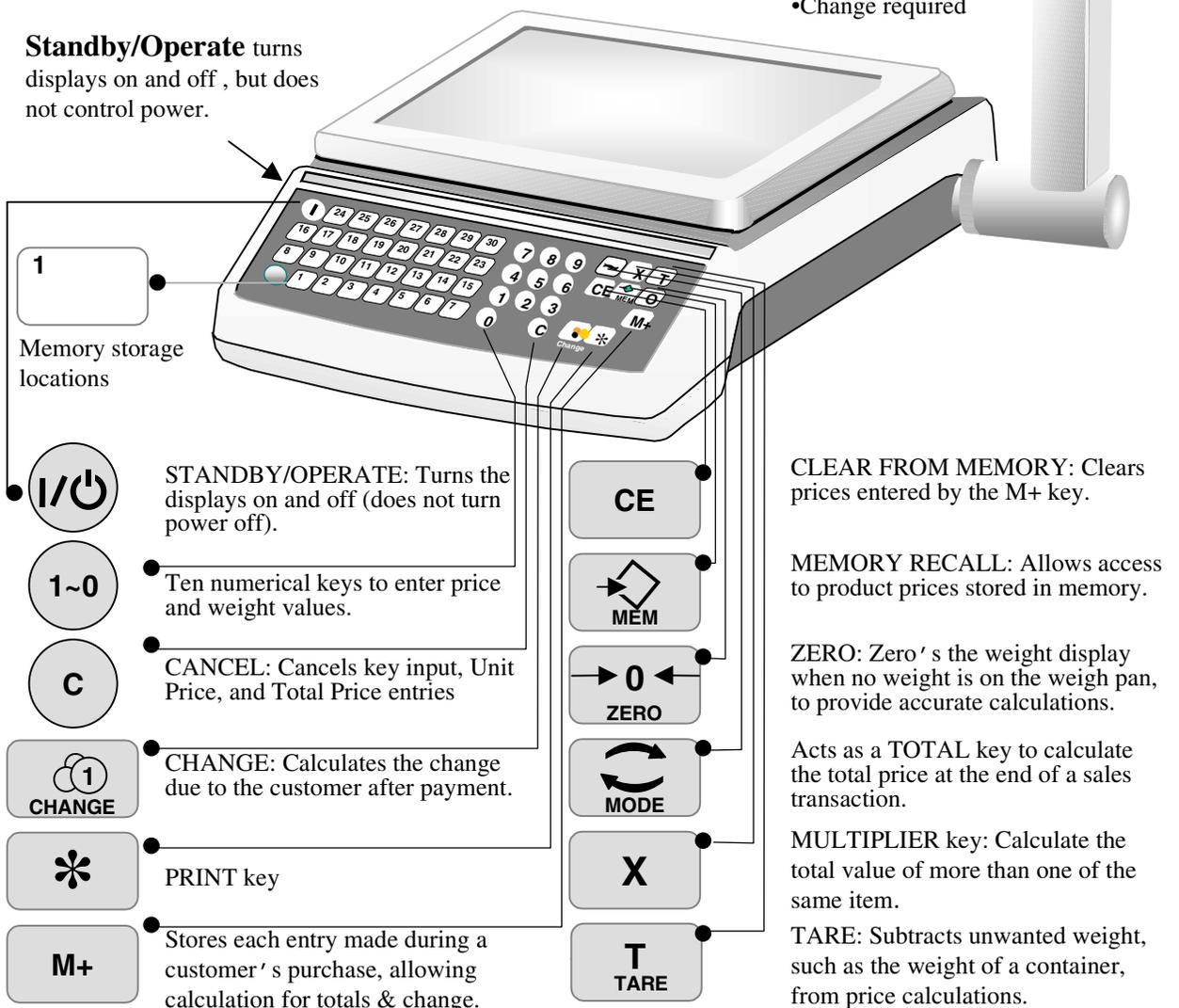
1

Memory storage locations

Key	Description
I/⏻	STANDBY/OPERATE: Turns the displays on and off (does not turn power off).
1~0	Ten numerical keys to enter price and weight values.
C	CANCEL: Cancels key input, Unit Price, and Total Price entries
⟳(1) CHANGE	CHANGE: Calculates the change due to the customer after payment.
✱	PRINT key
M+	Stores each entry made during a customer's purchase, allowing calculation for totals & change.
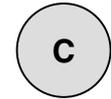
Key	Description
CE	CLEAR FROM MEMORY: Clears prices entered by the M+ key.
◇ MEM	MEMORY RECALL: Allows access to product prices stored in memory.
→0← ZERO	ZERO: Zero's the weight display when no weight is on the weigh pan, to provide accurate calculations.
⟳ MODE	Acts as a TOTAL key to calculate the total price at the end of a sales transaction.
X	MULTIPLIER key: Calculate the total value of more than one of the same item.
T TARE	TARE: Subtracts unwanted weight, such as the weight of a container, from price calculations.
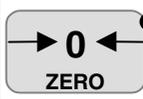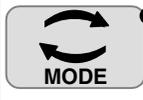
SF/SG Series Operating Instructions

1. Zero Point Adjustment

The zero point is automatically adjusted when power is turned on. If the display shows a positive or negative weight, the scale must be re-zeroed.

How to re-zero:

1. Assure that nothing is on the weigh pan.

2. Press →0← ZERO

3. " **0** " should appear on the weight display

Table top type	Tower type
NET ZERO ◄ 0.000	0.000 ▼ NET ZERO
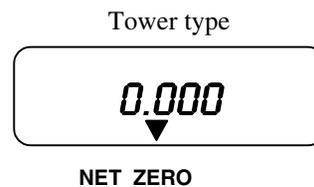
2. Tare Adjustment

When weighing with a container, it is necessary to TARE out the weight of the container in order to get an accurate price/weight reading.

How to operate TARE:

1. Place empty container (100g) on the weigh pan. Display reads " **100** " :

2. Press T TARE

3. The weight display display should read:

Table top type	Tower type
NET ZERO ◄ 0.000	0.000 ▼ ▼ NET ZERO
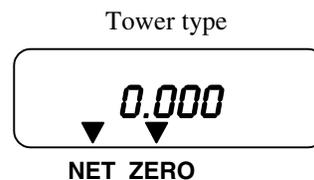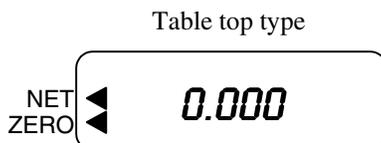
4. When removing the weight from the pan the display reads " **-100** "

Note:
When a TARE weight has been set, it is not possible to set a new TARE weight of a lower value by the instructions above. It is necessary to delete the previous TARE first, before entering a TARE of lower value.

SF/SG Series Operating Instructions

3. Keypad Tare Entry

(Usually this function is inhibited. If necessary, please ask your dealer.)

In addition to pressing **[T TARE]** to TARE out an empty container that has been placed on the

weigh pan, it is also possible to enter a TARE value with the numerical 10 key pad.

How to enter TARE using the 10 Key Pad:

Step 1:   With no weight on weigh pan, turn on the SF/SG.
Display's will read:

UNIT PRICE

    0.000

WEIGHT

    0.000   *Tower type*

▼
NET ZERO
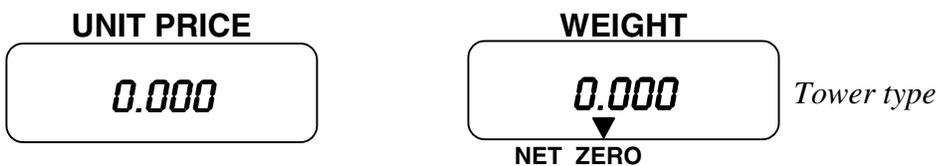
If a unit price has previously been entered, it will be displayed instead of **0.00** - example

2.00 , this is OK.

Step 2:   Enter the new TARE (e.g. 100g) with the 10 key pad.

Unit price display reads:
UNIT PRICE

    1.00

Numerical 10 Key Pad: 7 8 9 / 4 5 6 / 1 2 3 / 0 C
MODE X T TARE
CE MEM 0 ZERO
CHANGE * M+

Numerical 10 Key Pad

Step 3:   Press TARE button

WEIGHT

    -0.100   *Tower type*

Weight display shows new tare →

▼   ▼
NET ZERO
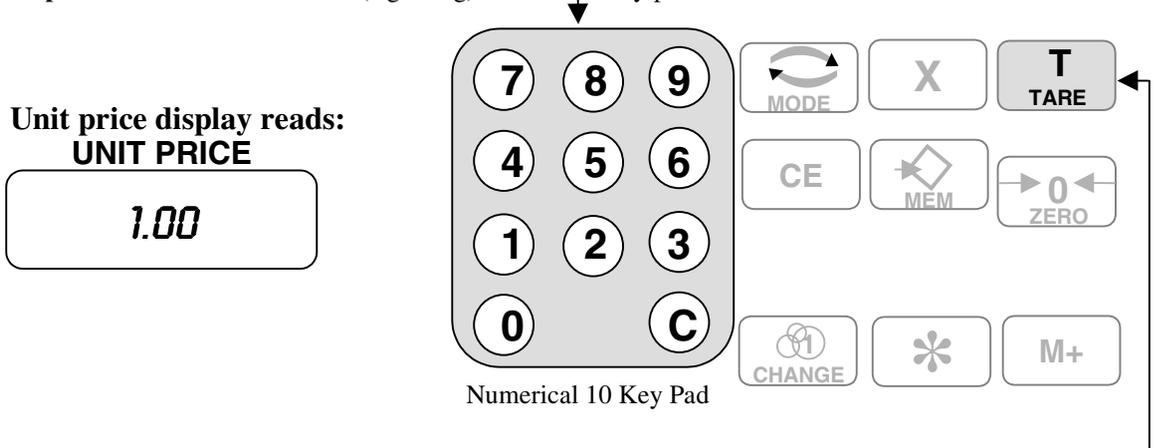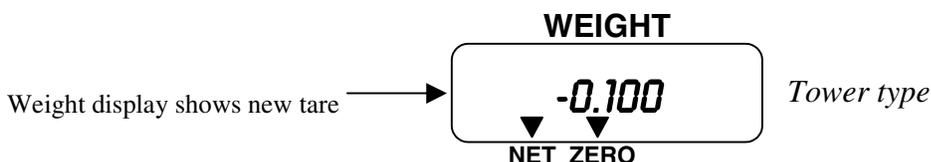
SF/SG Series Operating Instructions

## Note about keyboard TARE:

1. If you enter a tare weight greater than the weighing capacity of the scale an error message

   will display: " *Err tr* "

2. When a TARE weight has been set, it is not possible to set a new TARE weight of a lower value by the instructions above. It is necessary to delete the previous TARE first, before entering a TARE of lower value.
   Example

WEIGHT	UNIT PRICE	PRICE
0.000	------	*Err tr*
NET ZERO		

3. Any previous TARE entries will be cancelled when the [**0** / **ZERO**] key is pressed.

4. To cancel a TARE weight that has been entered, remove any weight from the weigh pan
   and press [**T** / **TARE**]

4. Setting Unit Price

1. Enter Unit Price by 10 key pad. Up to 6 digits may be entered.

The example below shows the entry of a unit price of $5.50:

WEIGHT	UNIT PRICE	PRICE
0.000	*5.50*	*0.00*
NET ZERO		

2. Unit price entry must be completed within 3 seconds. Any delay beyond 3 seconds
will require the unit price to be re-entered.

SF/SG Series Operating Instructions

5. Storing a Unit Price in Memory

It is possible to store unit prices in memory for quick recall.

      A. The SF model has 30 Price Look-Up keys (PLU).

      B. The SG model has 12 PLU's

The following instructions explain how to assign a unit price to a PLU key.

Step 1: Enter desired unit price by the 10 key pad.   **Step 2:** Press [MEM]

Step 3: Press the desired PLU key
within 3 seconds of entering
unit price in 10 key pad.
(*If you do not select this key within
3 seconds, a beep will sound*).
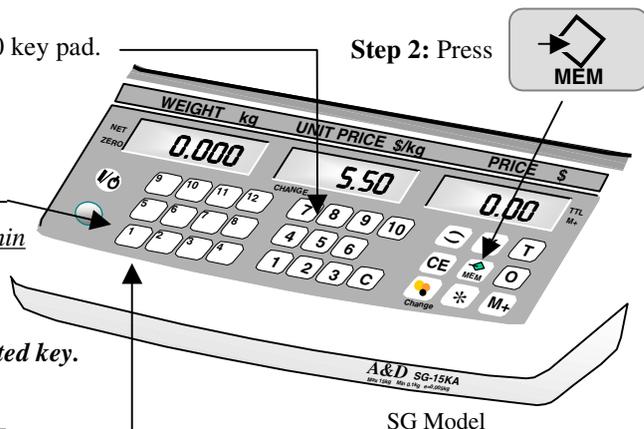
The unit price is now stored in the selected key.

SG Model

6. Recalling a Unit Price from Memory

Step 1: Press the desired PLU key

7. Totaling Multiple Items with Unit Prices Stored in PLU Memory

Example: A. Weight 1000g, Unit Price= $ 5.00 / 100g, PLU key #1

        B. Weight 5000g, Unit Price= $10.00 / 100g, PLU key #2

Step 1: With the weigh pan empty, assure that the weight display reads **0.000**.

Step 2: Place the first item on the weigh pan.

Step 3: Select desired PLU key (PLU key #1 in this example).

Step 4: Press [M+] to add to purchase total.

Step 5: Remove item from weigh platform, put second item (item b) on weigh pan and repeat
Steps 2~4, using appropriate PLU key.

    Continue this process until all of the items have been weighed and the price totals are stored in
memory.

Final Step - Recalling TOTAL.

Press [MODE] Using above example, displays read:

WEIGHT	UNIT PRICE	PRICE
TOTAL	2	550.00
Totaling Indication	Total Number of items calculated	Total Price
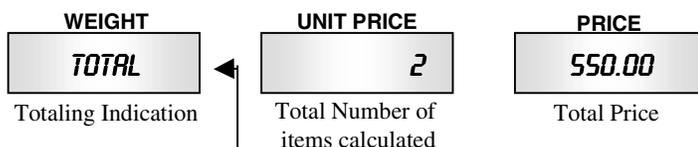
8. Clearing Totaling Memory: Push (C) when in the TOTAL mode.

SF/SG Series Operating Instructions

Note about Totaling Items:

A. The 10 key pad, PLU keys, and $\boxed{\textbf{X}}$ multiplier key may all be used during a single transaction. (See X key operation below.)

B. An item must be removed from the weigh pan before another item can be weighed & entered into totaling memory. ***The weight display must return to zero to re-set for next weighing.***

C. The SF/SG have automatic power off capability. If there is a long delay in the middle of a transaction which causes the scale to shut off, press $(\textbf{I/}\textcircled{})$, displays read $0'$ s. Press $\boxed{\substack{\circlearrowleft \\ \textbf{MODE}}}$ and the displays will show the last total calculated. Additional items may now be calculated into the total.

9. Multiplier Function: (Max. pieces allowed = 99; Max. unit price = 999999)

Not all purchased items are sold by weight, items like canned goods, milk, apples, etc. may be sold by the piece.

The SF/SG allow the operator to calculate all items purchased, those that require weigh/price calculation and those that are sold by the piece, and provides a total price for both.

The Multiplier Function allows the operator to tell the scale how many of a given item he would like to calculate.

Example: A customer is purchasing 10 cans of tuna fish at a cost of $1.00 per can.

Step 1: Enter unit price by the appropriate PLU key, or by 10 key pad. Unit price is displayed.

Step 2: Press $\boxed{\textbf{X}}$ PC is displayed.

Step 3: Enter multiplier by 10 key pad.
Example: 10 cans of tuna fish.

Result:

WEIGHT	UNIT PRICE	PRICE
PC 10	1.00	10.00
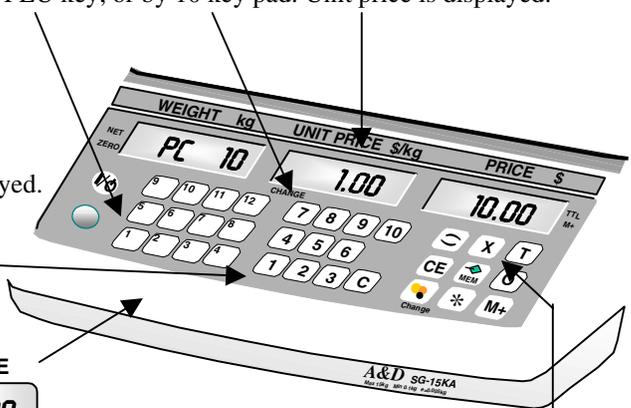
10. Calculating Correct Change for the Customer

The purpose of this function is to allow the operator to determine the correct change to return to the customer once payment has been made.

Example: There have been 4 entries and the total cost of the transaction is $80.00.

Step 1: Press [MODE]. Displays

WEIGHT	UNIT PRICE	PRICE
TOTAL	4	80.00

Step 2: Enter customer payment by 10 key pad (Example: $100)

Displays:

WEIGHT	UNIT PRICE	PRICE
RECE IU	100.00	80.00
		TOTAL M+

Step 3: Press [1 CHANGE]. Displays:

| WEIGHT	UNIT PRICE	PRICE
	20.00	CH
		TOTAL M+

Note: Push [C] if an error is made while entering the amount of money received from the customer.

11. Clear Entry Function   [CE]

The CE key is designed to clear the last entry made by the [M+] key, which places entries into memory for totaling.

Step 1: You have entered a value with the M+ key and wish to cancel it.

Example: Assume that you entered 3 values totaling $55.00. The last (3rd) entry was $10.00.

Step 2: Press the [MODE] key. Displays:

WEIGHT	UNIT PRICE	PRICE
TOTAL	3	55.00
		TOTAL M+

Step 3: Press the [CE] key. Displays:

WEIGHT	UNIT PRICE	PRICE
TOTAL	2	45.00
		TOTAL M+

Note: A. Only the last M+ entry can be cleared from memory by the CE key.

B. **Pressing the [C] key while in the <u>total mode</u> will delete <u>all</u> entries in memory.**

C. Pressing the [C] key <u>will</u> also delete:

    1. Active PLU entries.

    2. Active 10 key pad entries.

    3. Active [X] key entries.

    4. Improper entry of money received from customer.

Pressing the [C] key <u>will not</u> delete:

WEIGHT	UNIT PRICE	PRICE
PC	0.00	00.00

1.   entries.

Press [MODE] key to cancel this operation.

12. Automatic Cancellation of Unit Price

In very busy applications, it may be more convenient for the Unit Price entry to return to zero after each operation. (F2 should be "0".)

To do this, press the [① CHANGE] key while the display is in normal operation.

WEIGHT	UNIT PRICE	PRICE	
	•UT • C		Automatically clears unit price.
		TOTAL M+	

WEIGHT	UNIT PRICE	PRICE	
	UT NC		Does not automatically clears unit price.
		TOTAL M+	
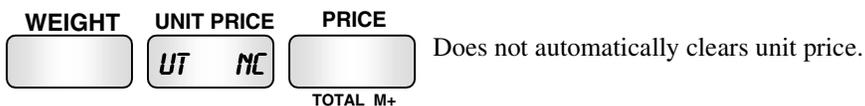
While the display shows the above, press [① CHANGE] again to change the setting.

13. Setting "F" Functions

"F" functions allow the programming of various functions of the SF/SG Price Computing scales. Following is a brief description of these functions and how to program them.

Step 1: Starting with the power off, hold [→ 0 ← ZERO] and turn on the power switch
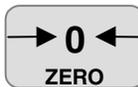
Displays

WEIGHT	UNIT PRICE	PRICE
	•F 1-••	
		TOTAL M+
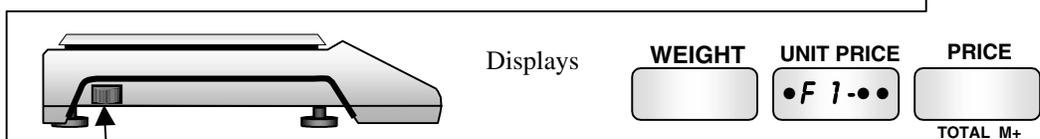
Step 2: Press [✳] to select the desired "F" function group.

UNIT PRICE
F 1- 0

F1-0 → F2-0 → F3-0 → F4-0 → F5-0 (cycle)
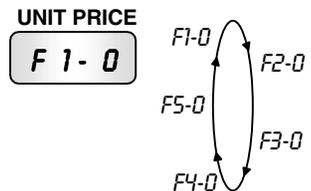
Step 3: Using the 10 key pad and the (C) key, select and cancel

the various settings for each "F" function. Press [✳] to move to the next "F" function.

Settings

Use [→◇ MEM] to store each setting selected.

Function			
F1: Auto display off	0: Yes	1: No	
F2: Cancellation of unit price	0: Selectable	1: No	2: Yes
F3: Output Data	0: Print key mode A	1: Print key mode B	
	2: Command mode	3: Stream mode	
F4: Baud Rate	0: 600 bps	1: 1200 bps	
	2: 2400 bps	3: 4800 bps	4: 9600 bps
F5: Parity Bit	0: 7 bits (Even)	1: 8 bits (No parity)	