SA-15K

Price Computing Scale

INSTRUCTION MANUAL

A&D

A&D MERCURY PTY. LTD.

Thank you for your purchase

Thank you for your purchase of the SA-15K Price Computing Scale. We designed the SA-15K to give the user excellent precision. This design adopts the latest advances in electronic and mechanical engineering. The SA-15K was manufactured in ISO-9001 facilities, ensuring high quality standards. Great care has been taken to ensure that your new scale is in good working order.

This manual will try to tell you in simple language how this scale works and how to get the most out of it in terms of performance.

We appreciate your purchase of the SA-15K and are confident of your satisfaction in using this new Price Computing Scale.

Compliance with FCC Rules

Please note that this equipment generates, uses and can radiate radio frequency energy. This equipment has been tested and has been found to comply with the limits of a Class A computing device pursuant to Subpart J of Part 15 of FCC rules. These rules are designed to provide reasonable protection against interference when equipment is operated in a commercial environment. If this unit is operated in a residential area it might cause some interference and under these circumstances the user would be required to take, at his own expense, whatever measures are necessary to eliminate the interference.
(FCC = Federal Communications Commission in the USA.)

Contents

Unpacking and Inspecting

Caution: *The SA-15K is a precision instrument, please handle with care.*

Inspect your new equipment.
Please inspect your new SA-15K 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:

SA-15K Price Computing Scale

AC adaptor

Optional Batteries

INSTRUCTION MANUAL
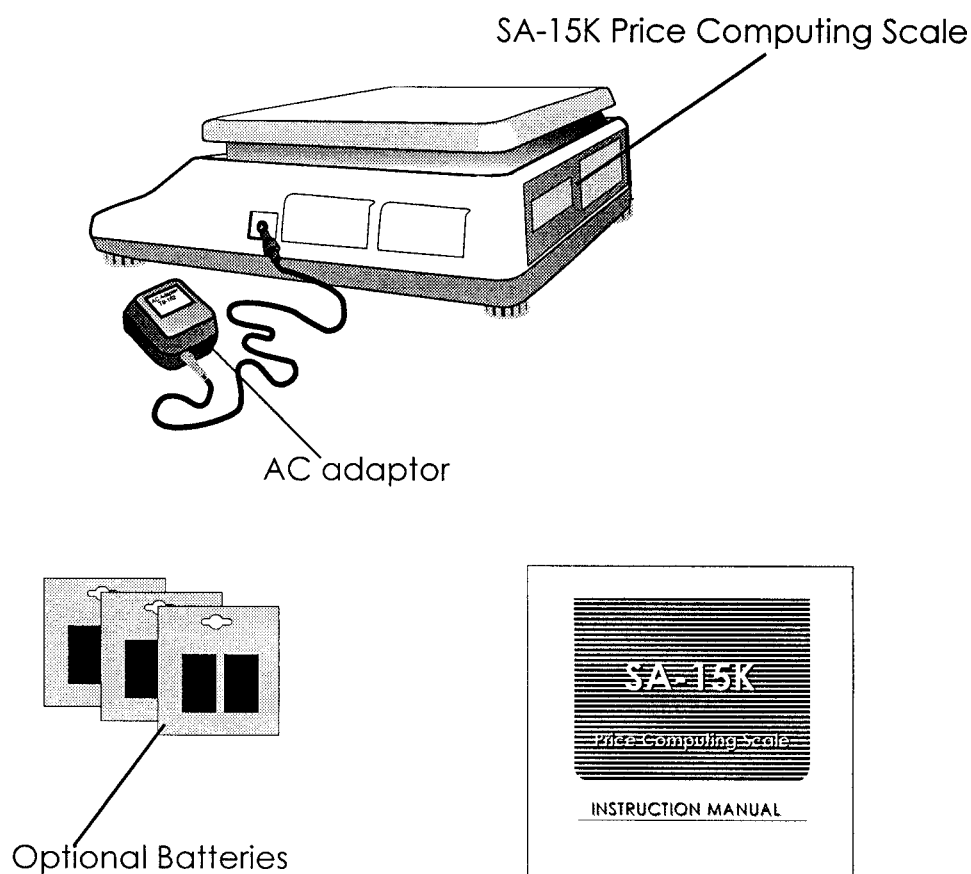
Also available is the optional AD-1681 rechargeable NiCd battery pack

Introduction

Please read this section of the manual to familiarise yourself with the range of excellent features incorporated into the SA-15 price computing scale.

1.1 Features

Price / kg Entry

Enter the price / kg by typing the value on the keypad and the total price is automatically calculated.

Hold Function

When the Hold is active the price / kg is retained for the next weighing. If it has not been activated the price / kg is automatically cleared after each weighing.

Price Over-ride Function

Entering a new price / kg automatically over-rides the previous price / kg , 3 seconds after it has been entered, or after weighing.
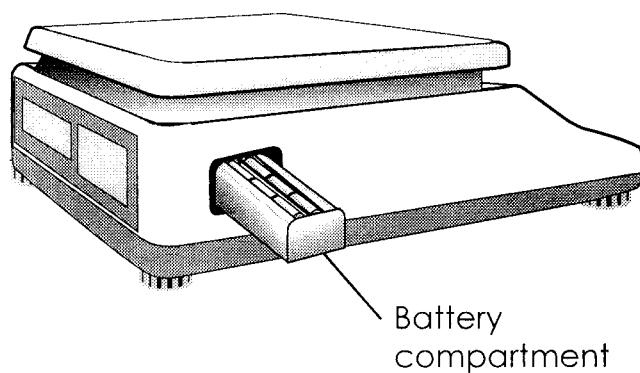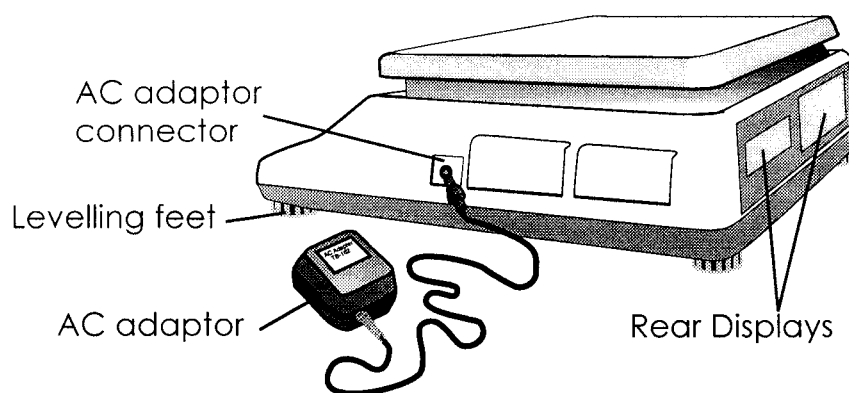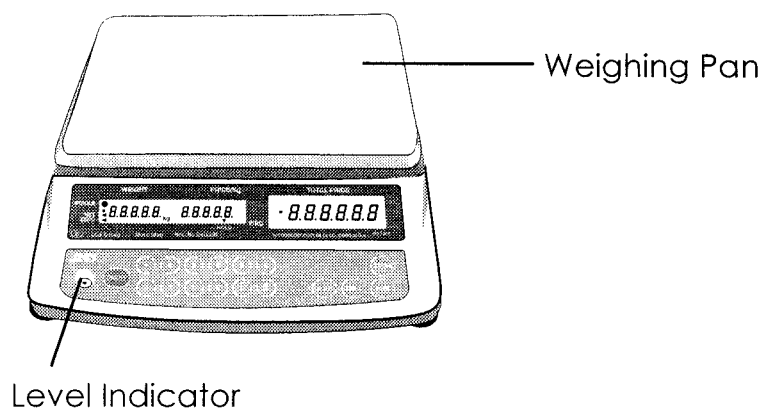
Three Power Sources

The SA-15K is designed to be operated with an AC adaptor, optional disposable "C" type dry cell batteries or with an optional rechargeable battery pack AD-1681.

1.1 Specifications (SA-15K Price Computing Scale)

Capacity:	Low Range 6kg	High Range 15kg
Resolution:	Low Range 2g	High Range 5g
Maximum price / kg:	999.99 $ / kg	
Maximum total price:	9999.99 $	
Operating Temperature	-10°C to +40°C <85% R.H. non condensing	
Display Indications:	Weight 5 digits Price / kg 5 digits Total Price 6 digits.	
Power:	AC Adaptor 240V input	
	Optional 6 x "C" size 1.5V dry batteries	
	Rechargeable battery pack AD-1681	
Battery Life:	Manganese batteries: 100 hours	
	Alkaline batteries 200 hours	
	AD-01681 NiCd pack 20 hours	
Dimensions:	320mm (W) x 330mm (D) x 118mm (H)	
Pan Size:	216mm (W) x 294mm (D)	
Weight:	Approximately 3kg	

Operating Features

1.3 Main Unit

Weighing Pan

Level Indicator

AC adaptor
connector

Levelling feet

AC adaptor

Rear Displays

Battery
compartment

1.4 Display

	Function	Use
1.	STABLE Indicator	Indicates when the load platform is stable
2.	NET Indicator	Indicates net mode *(net weight displayed)*
3.	ZERO Indicator	Indicates centre of zero
4.	HOLD Indicator	Indicates hold in use *(price/kg held)*

1.5 Keyboard
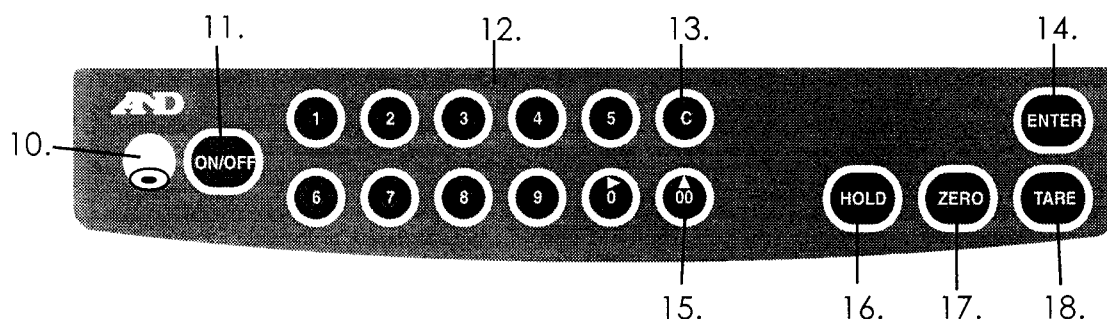
| Function	Use
10. Level Indicator	Indicates that the scale is level ensuring maximum accuracy
11. ON/OFF key .	Turns the scale on and off
12. 10 key pad	Used to enter price/kg
13. [C] key	Clears price *(also clears errors)*
14. [ENTER] key	Used for function setting
15. [00] key	Used to enter 00 in price/kg
16. [HOLD] key	Enables or disables the price/kg hold function
17. [ZERO] key	Adjusts the present zero point and switches to gross mode
18. [TARE] key	Tares the scale and switches to net mode

Installation

2.1 Installation Conditions

Following are the best conditions for weighing and price computing:

● The scale must be level, check the level indicator.
● The weighing table must be of solid construction and not subject to movement or vibration where possible.
● Ensure a stable AC power source when using the AC adaptor. "C" type dry cell batteries and the optional AD-1681 rechargeable battery pack are recommended for portable applications and areas which are subject to wide power variations and black outs.
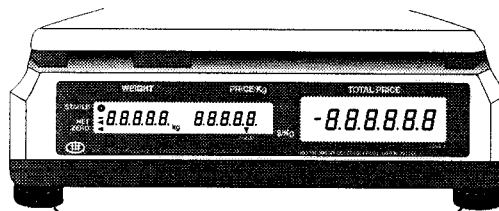
2.2 Installation Procedures

Levelling the Scale

Place the scale on a firm weighing table and turn the adjustable feet until the level indicator, located on the left side of the keyboard, is centred. The scale must be level to ensure accurate operation.
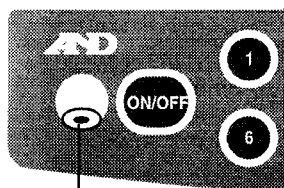
Centre bubble
inside red circle

Assure that the feet
of the scale are level

Applying Power

AC adaptor: Plug the AC adaptor into the AC adaptor socket on the side of the scale. The AC adaptor should match the power supply that is used. Usually 240VAC. If you purchased your scale in another country to that where it will be used, it is particularly important to read the requirements on the AC adaptor.

AC adaptor socket

AC adaptor
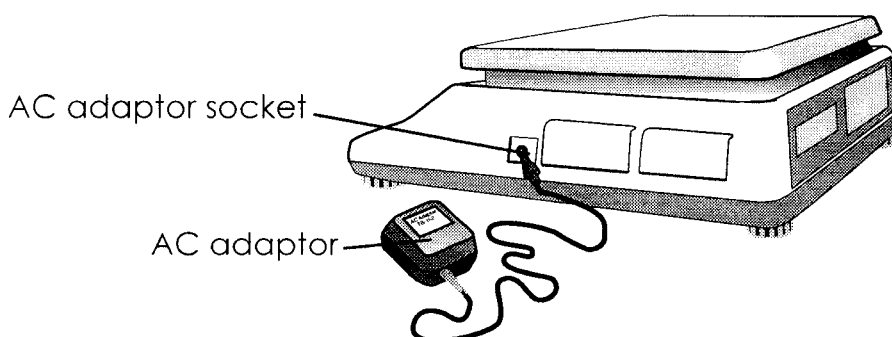
Dry Cell Batteries

Remove the cover of the battery compartment by sliding the cover straight up from the side of the scale and remove the battery holder. Place 6 x "C" size 1.5V dry cell batteries into the holder, taking care to observe correct polarities. Insert the holder into the battery compartment and replace the cover *(refer to the drawing below)*.
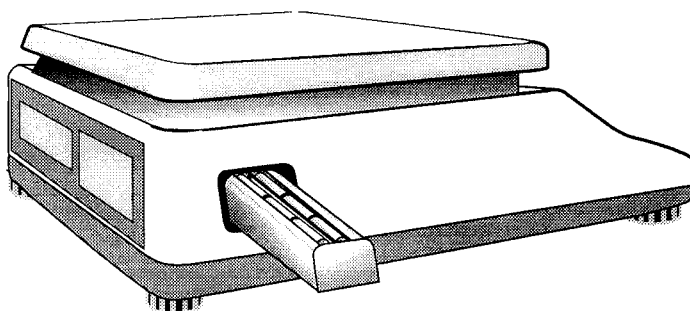
Note: *When removing the battery holder it is necessary to push the end of the holder in a little and lift up to unlatch it from inside of the compartment. When replacing the battery holder it is necessary to insert it all the way, push slightly to insert it beyond the edge of the compartment and then push down slightly to latch it.*

AD-1681 Rechargeable NiCd Battery Pack:

The optional AD-1681 rechargeable battery pack is the same size and shape as the dry cell battery holder. Insert it and remove it in the same way.

Caution: ● Do not mix the type of batteries that you are using in the battery holder. *(e.g. standard batteries with alkaline batteries)*
● Replace all the batteries at the same time.
● Use only an approved AC adaptor with the SA-15K Price Computing scale.

Calibration

3.1 Calibration

Calibration may only be carried out by a qualified and registered service technician. The Weights and Measures inspector for your area will check the calibration of your scale at regualr intervals. Under no circumstances must you break the seal applied to the calibration cover.

Calibration Steps

Step 1: Turn on the scale and allow it to warm up for 30 minutes.
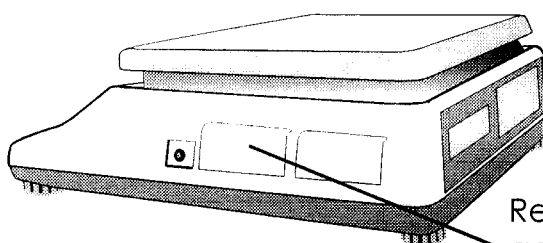
Remove cover for access to CAL switch

Step 2: Remove the cover and press CAL - CAL will be displayed.

Step 3: Press ZERO and C15 will be displayed. If 15kg will be used to calibrate the scale press ENTER to store the selected calibration mass value and go to Step 5 to complete the calibration.

Step 4: If you intend to calibrate the scale with less than 15kg, press the (00) button to enter the proper calibration mass value. Each time this button is pressed the value will decrease by one kg. Press ENTER to store the selected calibration mass value and go to Step 5 to complete the calibration.

Step 5: CAL 0 is displayed. Ensure that the weighing pan is empty and press ENTER to enter the zero point. The display will show CAL F.

Step 6: Place the chosen calibration mass onto the weigh pan and press ENTER to complete the calibration.

Step 7: When calibration is complete the display will show End.

Step 8: Remove the calibration mass and press CAL to store the data.

Operation

4.1 Basic Operation

Zero Adjustment

The zero point is automatically adjusted when the power is turned on, however, should the display be other than zero with nothing on the weigh pan, press [ZERO] *(refer to section 4.2 for further details)*.

Tare Function *(Subtracting the weight of a container used during weighing)*

When weighing with a container, it is necessary to TARE out the weight of the container. Place the empty container onto the scale and press the [TARE] key. *(Refer to section 4.3 for further details)*.

Entering Price/kg

Price/kg is the price per kg that you would like to use for a specific item. It can be entered any time a weight value is displayed. The price/kg can be cleared by pressing [C]. *(Refer to section 4.4 for further details)*.

Price Computing

When the price/kg is entered while there is a displayed weight on the platform, the total price will be displayed automatically *(Refer to section 4.4 for further details)*.

Hold Function

When the hold function is on, the price/kg will be retained after weighing. When it is not on, the price/kg will be cleared automatically.

4.2 Zero Adjustment

If a weight value is displayed but tare has not been entered and there is no weight on the weighing pan, the zero point has drifted. Zero is adjusted automatically when the power is turned on, however, it is possible for the zero point to shift slightly during operation. If this is the case, press [ZERO] to re-establish the correct zero point.

Note: ● *The [ZERO] key will only operate within zero ±2% of the maximum capacity.*
● *Any previous tare operations will be cancelled when the [ZERO] key is pressed.*

4.3 Tare Function

When using a container, the weight of the container can be subtracted from the total weight by using the TARE function as follows:

● Make sure the scale is stable and the ZERO indicator is displayed.
● Place the empty container onto the pan and press [TARE]. Verify that the scale displays zero kg and that the NET indicator has appeared.
● Begin weighing or price computing.

4.4 Price Computing

The SA-15K Price Computing Scale calculates the price of an item by multiplying the weight of an item by the price/kg. For example, if 5kg of a product is weighed on the scale and the price/kg is $1.00, then a total price of $5.00 will be displayed on the total price display. This scale takes all of the trouble out of price computing and has many features which will make price computing simple and precise.

4.4.1 Normal Operation:

Step 1: Ensure that the weight is zero with nothing on the pan. If a weight value is displayed with nothing on the pan then the scale needs to be re-zeroed. *(refer to section 4.2)*

Step 2: If a container is to be used, it is necessary to TARE the scale *(refer to section 4.3)*

Step 3: Enter the price/kg using the 10 key pad.

Note: *A price calculation will normally take approximately 3 seconds after the final entry has been made. Pressing any of the 10 keys will override the existing price/kg and enter the last entry as a new price/kg.*

Step 4: After the STABLE indicator appears, the weight and total price will be displayed.

Step 5: When the item, that was weighed, is removed from the weighing pan the price/kg will reset automatically.

**Step 6**: Return to step 2 to weigh and compute additional items.

Note: *If the price/kg does not clear automatically, it may be necessary to re-set the Hold function. Please refer to the following section.*

4.4.2 Hold Function:
The [HOLD] key is used to turn the hold function on and off. Hold is inactive at power on.
To turn on the hold function (when the hold function is off) press the [HOLD] key.
To turn off the hold function (when the hold function is on) press the [HOLD] key again, the hold indicator will disappear.
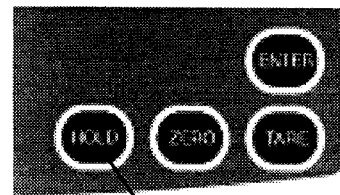
[HOLD] key

Step 1: Turn the hold function on if it is off.

Step 2: Ensure that the weight is zero with nothing on the pan, if it does not read zero then re-zero the scale (refer to section 4.2).
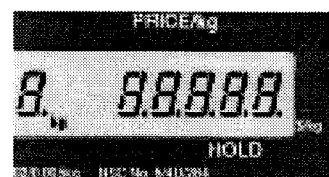
Step 3: If a container is to be used, tare the scale (refer to section 4.3).

Step 4: Enter the price/kg using the 10 key pad. If the wrong price is entered, press [C] to clear the price/kg and enter the proper price.

Note: A price calculation will normally take place approximately 3 seconds after the final entry has been made. Pressing any of the 10 keys will override the existing price/kg and enter the last entry as the new price/kg.

Step 5: Place the item to be weighed and calculated on the weighing pan. Wait until the STABLE indicator appears, and the weight and total price will be displayed.

4.5 Other Functions (See page 13 for details on how to set the functions)

4.5.1 Price/kg Input Timeout Disable (F12)
With F12 set to 0 (default value) price/kg entry is automatically terminated 3 seconds after a numeric key is pressed (i.e. subsequently pressing a numeric key will override the previous price/kg)
With F12 set to 1 the price/kg input timeout is disabled.

4.5.2 Auto Power Off (F11)
This scale is designed with an auto power off function to conserve battery life. If the scale is not used for 5 minutes it will turn off automatically.
Setting F11 to 0 disables this function.

4.5.3 Return to Factory Settings (F15)
When F15 is set to 1, all F settings will be restored to their factory defaults. there are many other F settings available in this scale, please refer to section 5 for details.

Function Settings
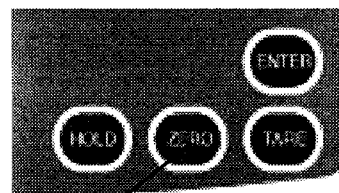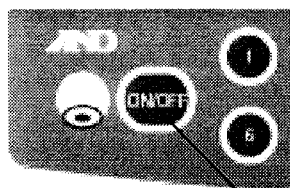
5.1 Function Settings

5.1 Function Settings

The SA-15K price computing scale has a number of features that can be set by means of function settings. These settings are stored in non-volatile memory which allows the scale to retain these settings even when there is a power failure, the AC adaptor is removed or the batteries are replaced.

5.1.1 Changing the F-Settings

Step 1: Turn off the power.

Step 2: Press and hold the [ZERO] key then press the [ON/OFF] key. The software version number will be displayed for a short time, and the F setting will then be displayed, for example F11-0
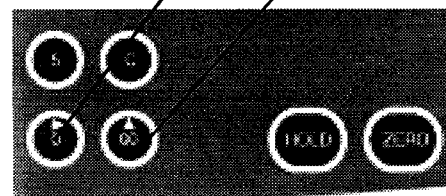

With the power off, press ON/OFF and ZERO simultaneously.

F11-0 is the first setting in the Functions library. It will appear at this time.

Step 3: There are 5 F functions (F11 ~ F15)
Use the [0] key to move through these settings. Each F setting may be toggled between 0 and 1. Use the [00] key to toggle between 0 and 1.

Step 4: Press [ENTER] when you have completed your entries to save them.

Note: To exit the F settings mode without changing the F settings from their previous values, press [ON/OFF] instead of [ENTER].

5.2.1 F Settings

Function Number			Toggle	Description of Function

F	1	1	0
			1
				Auto power Off
				      Disabled
				      Enabled

		2	
			0
			1
				Terminate price/kg entry 3
				seconds after keyboard entry
				      Yes
				      N o

		3	0	Should always be set to "0"

		4	0
			1
				Disable Calibration switch
				      Enabled
				      Disabled

		5	0
			1
				Restore Factory Defaults
				      Retain Current Settings
				      Restore Default Settings

Maintenance

6.1 Cleaning
Caution:

● Before cleaning the scale, turn the scale off and disconnect the AC adaptor.
● DO NOT IMMERSE the scale in water.
● A dry or slightly moist cloth is recommended for cleaning. A mild detergent may be used.
● DO NOT USE SOLVENTS when cleaning plastic or resin parts.
● After cleaning the weighing pan, ensure that it is replaced back in its correct position.

6.2 Problem Solving
Caution:
Do not disassemble the scale unless you are a qualified service technician.

Error Message	Probable Cause & Corrective Action
No Display	Confirm that the AC adaptor is correctly connected. Replace the batteries. Recharge the AD-1681 battery pack.
E	Overload Repeat the operation with smaller quantity
-E	Zero point has shifted Check pan installation & press [ZERO]
LobAt	Low Battery Replace Batteries
Err-	Check installation of the weighing pan
Erri	Zero out of range
Err EP	E^2PROM Checksum error

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