EL-8M

SHARP

SHARP COMPET ELSI-8M

ELECTRONIC CALCULATOR WITH ELSI

MODEL EL-8M

INSTRUCTION MANUAL

DIETZGEN ELECTRONIC DESK TOP COMPUTERS

SHARP ELECTRONIC CALCULATORS

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INTRODUCTION

Sharp's amazing Compet ELSI-8M incorporating four ELSIs (Extra Large Scale Integration) with one 4-phase clock generator marks another major advancement in the world of space-age miniaturization. Years of pioneering research and achievement in electronic engineering have enabled Sharp to develop an exceptionally remarkable the world's smallest electronic calculator with one memory register or double capacity mode, offering both maximum portability and a wide range of mathematical versatility. The ELSI-8M is thoroughly reliable and carries out calculations with amazing speed and efficiency. This booklet provides a detailed explanation of the Compet ELSI-8M's operation.

FEATURES

1. **Ultra compact. So small, it can be operated in the palm of your hand.**
   The utilization of ELSIs results in the reduction of overall dimensions and weight, increased reliability and lower operating costs.

2. **Double capacity**
   In multiplication and division, answer up to maximum numbers of 16 digits can be obtained even though ELSI-8M only has 8 digit display panel.
   In division, can divide 16 digits by 8 digits. The upper 8 significant digits of the quotient are obtained as a result and the lower part is zero. However, when the integral number of the quotient exceeds 8 digits, only the decimal position is memorized in the lower part (memory register).

3. **Operates on three separate power sources**
   AC, built-in rechargeable battery or any 12V car battery as desired.

4. **Rapid charging**
   When AC power is supplied to the ELSI-8M through the AC adaptor, with the power switch is placed in the OFF position, the battery unit can be charged in 3-hour. After charging, the ELSI-8M will operate on battery power for approximately 3-hour. When the battery voltage is below the normal limit, the charging lamp on AC adaptor will be lit and will gradually fade as the battery voltage increases. This state indicates a battery unit has been charged up to some extent. When the battery is charged in 5-hour, it is charged more perfectly.

5. **Overflow error checking system that detects miscalculations.**
   The overflow error checking system operates for the following miscalculations:
   a. If the integral number of the result exceeds 16 digits in multiplication and division or divisor is zero.
   b. If calculations are performed continuously when the decimal point is not displayed in addition or subtraction.

In both cases, the indication will become zero, the error lamp will indicate and the keyboard (with the exception of the [C] key) will lock electronically. Accordingly, to reset the overflow error checking system, depress the [C] key.

6. **Constant multiplication and division by using the memory register**

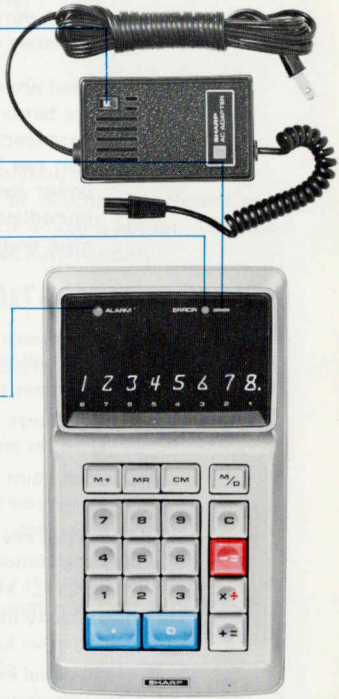
7. **Soft lighting green display**
   Our specially developed non-glare green display panel eliminates eye-strain, improves reading ease.

8. **Minus sign indicator**
   Automatically turns on when the result is negative.

9. **Convenient carrying case.**
   Always ready to go with you and assist you, whether it be in the office, school, or at home.

10. **Operation is possible even in case of momentary power failure.**
    Even when the power cord is disconnected during operation with AC power source, the operation can be continued because a battery and AC adaptor are equipped. At the same time, the operation can safely be continued even in case of momentary power failure.

EXTERNAL FEATURES



- **CHARGING LAMP**

  When operating the ELSI 8M, on AC power, this lamp indicates at all times. This lamp also indicates during rapid charging. (refer to page 2 "Rapid charging")

- **MINUS SIGN INDICATOR**

  Automatically indicates when the result becomes negative.

- **ERROR LAMP**

  Refer to page 2 "Overflow error checking system" that detects miscalculation. Also, turns on when the battery voltage is decreased. In this case, the lamp will not go out even when [C] key is touched and miscalculation occurs.

- **ALARM LAMP**

  This lamp indicates when the switch is set on the DC position and AC power is being supplied to the charger, and in turn being supplied to ELSI-8M. (the battery cannot be charged)
  When the lamp lights up, immediately set the power switch at AC position and then continue the calculation with AC power source.

- **POWER SWITCH**

  DC position: Used when the power supplied to the ELSI-8M from the battery unit. When AC power is supplied, alarm lamp turns on.

OFF position : Set the switch at OFF position when the calculator is not used.
Used during rapid charging. (refer to page 2 "Rapid charging") In this case, excessive charging is prevented.

AC position : Used when operating the ELSI-8M on AC power through AC adaptor. In this case, the battery unit will be charged during operation. Even when the power cord is disconnected during operation or in case of momentary power failure, the operation can be continued without miscalculation. In the former case, connect the power cord and continue the operation with AC power source. In the latter case, immediately shift the power switch to DC and remove the connector from the main body and continue the operation with DC power source.

KEY IDENTIFICATION

C Clear key
Clears all the working registers except memory register and corrects mistaken entry.
Summons the upper part again after recalling the lower part (by depressing MR key).

0 ~ 9 Numeral keys
Used for entering numbers.

• Decimal point key
Determine the decimal point position.

+= Plus-equal key
(Memory calculation mode) When ×÷ key is not set, addition is carried out.
When ×÷ key is set, multiplication is carried out.
(Double capacity mode) When ×÷ key is not set, addition is carried out.
When ×÷ key is set, multiplication is carried out with double capacity.

−= Minus-equal key
(Memory calculation mode) When ×÷ key is not set, subtraction is carried out.
Also has a sign change function.
When ×÷ key is set, division is carried out.

(Double capacity mode) When [×÷] key is not set, subtraction is carried out.

When [×÷] key is set, division is carried out with double capacity.

[×÷] Multiplication-Division key

Used when carrying out multiplication and division.

[M/D] Used when carrying out double capacity calculation.

Push to lock the key. Push to unlock the key again.

DOWN position: to designate double capacity mode

UP position: to designate single mode (Memory calculation mode)

When this key is locked (double capacity), the contents of memory are cleared automatically at the same time that a numeral key is depressed if [×÷] key is not set. And when this key is unlocked, a lower part of double capacity is cleared automatically.

[M+] Memory plus key

(Memory calculation mode)

When [×÷] key is set, the depression of this key is completely ignored.

When [×÷] key is not set, depression of this key causes the contents of display panel to be added to the memory register.

(Double capacity mode)

Depression of this key is completely ignored.

[MR] Memory recall key

(Memory calculation mode)

Summons the contents stored in the memory on the display panel.

Memory register retains its contents.

And also, when [×÷] key is not set, the minus sign of memory register is summoned on the display panel. But with [×÷] key is set, the minus sign is not summoned. (Refer to page 32 "Ex. 7-3".)

(Double capacity mode)

After multiplication, summons the lower part of the product.

[CM] Clear memory key

Clears the contents of memory register.

SPECIFICATIONS

■ CALCULATING UNIT EL-8M

Power source:	AC 120V, 60Hz by using the AC adaptor: by using the AC adaptor (EL-81) DC 7.2V; 6 built-in rechargeable batteries (EL-84) DC 12V; car battery by using the car adaptor (EL-85)
Capacity:	
Display digit:	8 digits
Double capacity:	16 digits (In multiplication and division, when $\frac{M}{D}$ key is down position)
Addition & Subtraction:	8 digits ± 8 digits = 8 digits
Multiplication:	(Memory mode) 8 digits x 8 digits = 8 digits (Double mode) 8 digits x 8 digits = 16 digits (Memory mode) 8 digits ÷ 8 digits = 8 digits (Double mode) 16 digits ÷ 8 digits = 8 digits
Decimal point:	Complete floating decimal point
Sign indication:	Minus indication lamp in the case of negative
Calculations:	Four arithmetical calculation, product ± product with individual product, quotient ± quotient with individual quotient, multiplication & division by constant, mixed calculation, etc.
Calculation speed:	0.2 sec. (max.)
ELSI:	4
MOS-IC:	9
Diodes:	24
Display tube:	Mini low power fluorescence display tube
Clock pulse:	46kHz ±30%
Temperature:	0°C – 40°C (32°F – 104°F)
Power consumption:	DC: 1.1W, AC: 1.3W, OFF (rapid charging): 1.9W
Dimensions:	102mm(W) x 70mm(H) x 186mm(D) 4"(W) x 2-3/4"(H) x 7-1/3"(D)
Weight:	770g (1.7lbs.)

■ AC ADAPTOR EL-81

Power consumption:	4.5W
Dimensions:	61mm(W) x 52mm(H) x 101mm(D) 2-1/2"(W) x 2"(H) x 4"(D)
Weight:	430g (0.95 lbs.)

■ BATTERY UNIT EL-84E (EL-84A for Canada)

Type:	6 rechargeable nickel cadmium batteries in unit: 450mAH, 7.2V
Usable time:	3 hours (20°C) (72°F) (Rating)
Charging time:	
Rapid charging:	3 hours (when power switch is set at OFF position with AC adaptor) (20°C) (72°F) (Rating)
Standard charging:	13 – 15 hours (performed while operating on AC position with AC adaptor) (20°C) (72°F) (Rating)
Life cycle:	approximately 500 cycles (One cycle comprises one charge and one discharge.) After charging, if operation time becomes noticeably shortened, replace the battery unit. (Replace the battery unit according to the procedure described in this manual page 10.)

Note: Even when it is charged for longer than specified time, there is no danger of damage because of installed safety device in the battery unit. And the charger (EL-81) controls an electric current.

■ CAR ADAPTOR EL-85 (Optional unit)

This car adaptor is used when operating the ELSI-8M in your car on the car battery (12V).

■ CARRYING CASE (attached)

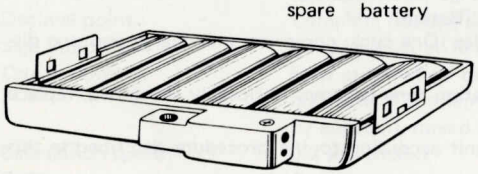
■ SPARE BATTERY

It is possible to charge a spare battery (EL-84) while the ELSI-8M is operating on DC position with the use of a special connector. When the battery being used is discharged, continuous operation of ELSI-8M can be obtained by replacing the discharged battery with the charged spare battery.

When charging the spare battery, connect the battery unit (1) with the special connector (2) before connecting it with AC adaptor (3). Rapid charging (3 hours) of the spare battery is performed.

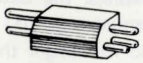
When charging of the spare battery is completed, pull out AC adaptor (3) before disconnecting the special connector from the spare battery unit.

Note: The spare battery and special connector are optional.



(1)

special connector



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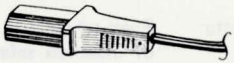


(3)

HOW TO REPLACE THE BATTERY UNIT

The battery unit must be removed as follows:

1. Remove the screw located in the rear of the ELSI-8M (fig. 1).
2. Unhook the bottom cabinet by pulling it back slightly (fig. 2).
3. Remove the battery connector, as shown. (fig. 3)
4. Insert the finger inside from the left-hand side and remove the battery case as shown. (fig. 4 and 5)
5. Set the new battery case in place and reverse the procedure in steps 1, 2, 3 and 4.
   Make certain that the battery unit plug is connected properly – thin pin on top and thick pin on bottom. (fig. 6)

fig. 1

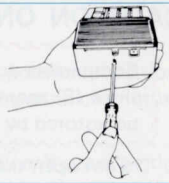


fig. 2

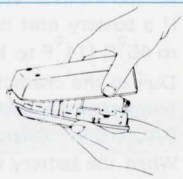


fig. 3

fig. 6

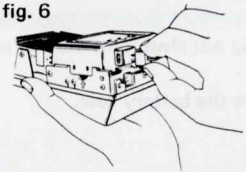


fig. 5

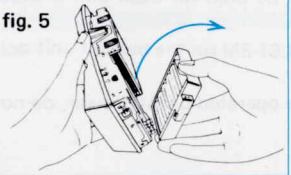
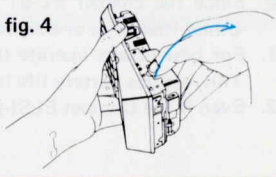


fig. 4



CAUTION ON THE BATTERY UNIT

1. Comparable to any type of battery generally used, if the ELSI-8M is left unused for two (2) to three (3) months the battery unit will slowly discharge. The original state of the battery unit can be restored by several charging and discharging cycles.
2. Do not open the battery unit. The battery should remain intact.
3. Do not Short-circuit the battery connector and over-discharge.
4. If a battery unit is to be stored for long periods, the temperature condition must be within $-10^{\circ}C$ to $45^{\circ}C$ ($14^{\circ}F$ to $115^{\circ}F$) and the storage place must be free from moisture, or direct sunlight.
5. Due to the characteristics of the nickel cadmium battery, $20^{\circ}C$ to $25^{\circ}C$ ($68^{\circ}F$ to $77^{\circ}F$) is the best temperature condition for charging and discharging efficiency.
   CAUTION: Charging under the temperature condition of below $0^{\circ}C$ ($32^{\circ}F$) should be avoided.
6. When the battery voltage decreases below the normal limits, the error lamp indicates. Be sure to stop the calculation as soon as the battery voltage is decreased. If the ELSI-8M is used with the battery source being applied after the error lamp indicates, miscalculations may occur and the battery unit's life expectancy is shortened. Charge the battery unit while operating on AC position with AC adaptor or at OFF position.
7. Even defective or used batteries should not be thrown into a fire or dump into a dustbin.
8. It can be operated in the carrying case by DC power. But, be sure to take it out of the carrying case when operating on AC power or charging the unit.
9. Be sure to charge the battery by using EL-81. Do not use other chargers.
10. Since the charger EL-81 is to be used for ELSI-8M, it should not be used for the batteries of other machines or adaptors.
11. For best results operate the ELSI-8M on the battery unit occasionally not always on AC position. This assures battery life longer.
12. Even if the Compet ELSI-8M is operated on AC power, do not remove the battery case.

DOUBLE CAPACITY MODE

Double capacity in multiplication and division is possible when M/D key is in the down position. Addition and subtraction can not be performed in double capacity. In this mode, memory calculation can not be performed and depression of M+ key is completely ignored.

Ex. In multiplication, summon the lower part of the product by depressing MR key and summon the upper part again by depressing C key.

11111111 x 11111111 = 12345678 7654321.0

upper part lower part

Steps	Operation	Display	Note
1	M/D ↓		
2	11111111	11111111.	
3	x÷	11111111.	
4	11111111	11111111.	
5	+=	12345678	upper part
6	MR	7654321.0	lower part
7	C	12345678	

Ex. When multiplication is performed (in this case the result of double capacity is the multiplicand), the lower 8 digits in the multiplicand are regarded as zero.

88880000 x 22222 x 9

Steps	Operation	Display	Note
1	M/D ↓		
2	88880000	88880000.	
3	×	88880000.	
4	22222	22222.	
5	=	19750913	
6	MR	60000.000	If the intermediate answer is not necessary, these steps can be eliminated.
7	C	19750913	
8	×	19750913	"1975091300000.000 x 9" is carried out.
9	9	9.	
10	=	17775821	Ans.
11	MR	700000.00	
12	C	17775821	

Ex. In division, only the upper 8 digits are obtained as a result. Accordingly, the lower 8 digits are cleared.
When the integral number of the quotient is larger than 8 digits, only the decimal point is memorized in the lower part (memory register).

11111111 x 11111111 ÷ 20

Steps	Operation	Display	Note
1	M/D↓		
2	11111111	11111111.	
3	×+	11111111.	
4	11111111	11111111.	
5	+=	12345678	upper part
6	MR	7654321.0	lower part
7	C	12345678	
8	×+	12345678	
9	20	20.	
10	−=	61728393	
11	MR	00000.000	
12	C	61728393	

Ex. Addition and subtraction can not be performed in double capacity.

98765432 + 4567890

Steps	Operation	Display	Note
1	M/D ↓		
2	98765432	98765432.	
3	+=	98765432.	
4	4567890	4567890.	
5	+=	10333332 [2]	← not displayed
6	MR	00000000	
7	C	10333332	

HINTS

1 As highly sensitive ELSIs and electronic components are used, avoid placing the unit in hot, dusty or humid locations, or on surfaces subject to excessive vibration.

2 Do not jolt or drop the unit.

3 When cleaning the cabinet use the enclosed cloth. Do not use a wet cloth or any organic solutions such as kerosene or benzine.

4 Be sure to set the power switch at OFF position after using and disconnect the power cord surely.

5 When the power cord is connected and set the power switch at DC position, some charging lamps on AC adaptor indicate and others do not indicate.

BEFORE OPERATION

When the power is turned on, press the [C] key twice to clear the machine.

Example: power on	7567.0987- (appears at random.))
depress [C] key (first time)	.0225- (appears at random.)
depress [C] key (second time)	00000000

OPERATION

1. Turn the unit on and be sure to touch [C] key twice before starting calculation.
   Except for double capacity mode, be sure to set [M/C] key in the up position.
2. Be sure to clear the contents of memory by touching [CM] key before performing memory claculation.

1. Addition and Subtraction

Ex. 1 − 1 123.1 + 864.2 + 458

Steps	Operation	Display	Note
1	123.1	123.1	
2	[+=]	123.1	
3	864.2	864.2	
4	[+=]	987.3	
5	458	458.	
6	[+=]	1445.3	Ans.

Ex. 1 – 2 0.12 + 0.3584 + 0.235

Steps	Operation	Display	Note
1	.12	0.12	
2	[+=]	0.12	
3	.3584	0.3584	
4	[+=]	0.4784	
5	.235	0.235	
6	[+=]	0.7134	Ans.

Ex. 1 – 3 358.8 - 1241.6 - 27.5

Steps	Operation	Display	Note
1	358.8	358.8	
2	[+=]	358.8	
3	1241.6	1241.6	
4	[-=]	882.8 -	Minus sign indicator on
5	27.5	27.5 -	
6	[-=]	910.3 -	Ans.

Ex. 1 – 4 12.345678 + 1234.5678

Steps	Operation	Display	Note
1	12.345678	12.345678	
2	[+=]	12.345678	
3	1234.5678	1234.5678	
4	[+=]	1246.9134 [78]	← not displayed Ans.

Note: Underflow system

In this calculation, the decimal point is aligned to that of addend and the lowest two digits of the answer which exceeds 8 digits "78" are discarded.

2. Multiplication

Ex. 2 – 1 1.1 x 2.2

Steps	Operation	Display	Note
1	1.1	1.1	
2	×÷	1.1	
3	2.2	2.2	
4	+/=	2.42	Ans.

Ex. 2 – 2 2.2 x 3.3 x 4.4

Steps	Operation	Display	Note
1	2.2	2.2	
2	×÷	2.2	
3	3.3	3.3	
4	+/=	7.26	
5	×÷	7.26	
6	4.4	4.4	
7	+/=	31.944	Ans.

Ex. 2 – 3 824005.1 x 930047.2

Steps	Operation	Display	Note
1	M/D↓		
2	824005.1	824005.1	
3	x+	824005.1	
4	930047.2	930047.2	
5	+=	76636363	Ans. upper part
6	MR	6040.7200	Ans. lower part
7	C	76636363	

Ex. 2 – 4 (-4) x 5

Steps	Operation	Display	Note
1	-=	-	Minus sign indicator on
2	4	4.-	
3	x+	4.-	
4	5	5.-	
5	+=	20.-	Ans.

3. Division

Ex. 3 – 1 $256 \div 12 \div 0.56 \div 2.3$

Steps	Operation	Display	Note
1	256	256.	
2	×÷	256.	
3	12	12.	
4	−=	21.333333	
5	×÷	21.333333	
6	.56	0.56	
7	−=	38.095237	
8	×÷	38.095237	
9	2.3	2.3	
10	−=	16.563146	Ans.

Ex. 3 – 2 $(-264) \div 12$

Steps	Operation	Display	Note
1	−=	–	Minus sign indicator on
2	264	264.–	
3	×÷	264.–	
4	12	12.–	
5	−=	22.000000–	Ans.

4. Sum (Difference) of Products

Ex. 4 – 1 (8 x 9) + (4 x 5)

Steps	Operation	Display	Note
1	CM		Clear memory
2	8	8.	
3	× +	8.	
4	9	9.	
5	+ =	72.	(product)
6	M+	72.	
7.	4	4.	
8.	× +	4.	
9	5	5.	
10	+ =	20.	(product)
11	M+	20.	
12	MR	92.	Ans.

Ex. 4 – 2 (12.3 x 9.8) - (2.3 x 4.32)

Steps	Operation	Display	Note
1	CM		Clear memory
2	12.3	12.3	
3	×÷	12.3	
4	9.8	9.8	
5	+=	120.54	(product)
6	M+	120.54	
7	2.3	2.3	
8	×÷	2.3	
9	4.32	4.32	
10	+=	9.936	(product)
11	−=	9.936-	Minus sign indicator on
12	M+	9.936-	
13	MR	110.604	Ans.

5. Sum (Difference) of Quotients

Ex. 5 – 1 $(1288 \div 23) + (0.86 \div 4)$

Steps	Operation	Display	Note
1	CM		Clear memory
2	1288	1288.	
3	×÷	1288.	
4	23	23.	
5	−=	56.000000	(quotient)
6	M+	56.000000	
7	.86	0.86	
8	×÷	0.86	
9	4	4.	
10	−=	0.2150000	(quotient)
11	M+	0.2150000	
12	MR	56.215000	Ans.

Ex. 5 – 2 $(11.502 \div 2.7) - (0.96 \div 5)$

Step	Operation	Display	Note
1	CM		Clear memory
2	11.502	11.502	
3	x+	11.502	
4	2.7	2.7	
5	=	4.2600000	(quotient)
6	M+	4.2600000	
7	.96	0.96	
8	x+	0.96	
9	5	5.	
10	=	0.1920000	(quotient)
11	=	0.1920000-	Minus sign indicator on
12	M+	0.1920000-	
13	MR	4.0680000	Ans.

6. Product (Quotient) of Sums (Difference)

Ex. 6 – 1 (35 + 186) x (8 + 47)

Steps	Operation	Display	Note
1	CM		Clear memory
2	35	35.	
3	M+	35.	
4	186	186.	
5	M+	186.	
6	C	0.	
7	8	8.	
8	+=	8.	
9	47	47.	
10	+=	55.	
11	x+	55.	
12	MR	221.	
13	+=	12155.	Ans.

Ex. 6 – 2 (286 - 35) x (86 - 55)

Steps	Operations	Display	Note
1	CM		Clear memory
2	286	286.	
3	+=	286.	
4	35	35.	
5	−=	251.	
6	M+	251.	
7	C	0.	
8	86	86.	
9.	+=	86.	
10.	55	55.	
11	−=	31.	
12	×÷	31.	
13	MR	251.	
14	+=	7781.	Ans.

Ex. 6 – 3 $(218 + 48) \div (32 + 43)$

Steps	Operation	Display	Note
1	CM		Clear memory
2	32	32.	
3	M+	32.	
4	43	43.	
5	M+	43.	
6	C	0.	
7	218	218.	
8	+=	218.	
9	48	48.	
10	+=	266.	
11	×÷	266.	
12	MR	75.	
13	−=	3.5466666	Ans.

7. Constant calculation

Ex. 7 – 1 (1) 123 + 5 - 9
(2) 123 + 46
(3) 123 - 238

Steps	Operation	Display	Note
1	CM		Clear memory
2	123	123.	
3	M+	123.	
4	5	5.	
5	+=	128.	
6	9	9.	
7	−=	119.	Ans. (1)
8	MR	123.	
9	46	46.	
10	+=	169.	Ans. (2)
11	MR	123.	
12	238	238.	
13	−=	115.-	Ans. (3)

Ex. 7 – 2 (1) 4 x 11

(2) 4 x 22

(3) 120 ÷ 4

Steps	Operation	Display	Note
1	CM		Clear memory
2	4	4.	
3	M+	4.	
4	×÷	4.	
5	11	11.	
6	+=	44.	Ans. (1)
7	MR	4.	
8	×÷	4.	
9	22	22.	
10	+=	88.	Ans. (2)
11	120	120.	
12	×÷	120.	
13	MR	4.	
14	-=	30.000000	Ans. (3)

Ex. 7 – 3 (1) (-6) x 13 (2) (-6) x (-26) (3) 25 x (-6)

Steps	Operation	Display	Note
1	CM		Clear memory
2	6	6.	
3	-=	6.-	Minus sign indicator on
4	M+	6.-	
5	×÷	6.-	
6	13	13.-	
7	+=	78.-	Ans. (1)
8	MR	6.-	
9	×÷	6.-	
10	-=	6.	
11	26	26.	
12	+=	156.	Ans. (2)
13	25	25.	
14	×÷	25.	(mistake)
15	MR	6.	Ans. (3)
16	+=	150.	
17	MR	6.-	
18	×÷	6.-	(correct)
19	25	25.-	Ans. (3)
20	+=	150.-	

Note: When ×÷ key is set, depression of MR key does not summon the minus sign of memory. (Step 15)
In the case of (3), operate the constant number (-6) as multiplicand.

8. Mixed calculation

Ex. 8 $\dfrac{(5 + 12) \times 0.2 + 48 - 16}{4}$

Steps	Operation	Display	Note
1	5	5.	
2	[+=]	5.	
3	12	12.	
4	[+=]	17.	
5	[×÷]	17.	
6	.2	0.2	
7	[+=]	3.4	
8	48	48.	
9	[+=]	51.4	
10	16	16.	
11	[−=]	35.4	
12	[×÷]	35.4	
13	4	4.	
14	[−=]	8.8500000	Ans.

9. Correcting mistakes

Ex. 9 123 x 556 (mistake) 456 (correct)

Steps	Operation	Display	Note
1	123	123.	
2	[×÷]	123.	
3	556	556.	(mistake)
4	[C]	123.	
5	[×÷]	123.	(correct)
6	456	456.	
7	[+=]	56088.	

Note: In the above case, when "556" is entered by error (step 3), clears mistaken entry (556) and the function key ([×÷]) by touching [C] key for once. Then touch the same function key again (step 5) and enter correct numeral "456". (step 6)

10. Application

Ex. 10 – 1 Discount calculation

Price of $300 articles with 12% discount.

300 - 300 x 0.12 = 264 dollars

Steps	Operation	Display	Note
1	CM		Clear memory
2	300	300.	
3	M+	300.	
4	×÷	300.	
5	.12	0.12	
6	+=	36.00	discount value
7	−=	36.00−	Minus sign indicator on
8	M+	36.00−	
9	MR	264.00	Ans.

Ex. 10 – 2 Tax calculation

Price of $300 articles with 11% tax included

300 + 300 x 0.11 = 333 dollars

Steps	Operation	Display	Note
1	CM		Clear memory
2	300	300.	
3	M+	300.	
4	×÷	300.	
5	.11	0.11	
6	+=	33.00	tax value
7	M+	33.00	
8	MR	333.00	Ans.

SHARP EL-8M is guaranteed for one year from the date of purchase against any and all defects occurring during normal usage. Please complete the warranty card and place it in the carrying case.
Make certain this card is not misplaced since it must be presented when service is required.

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