

# INSTRUCTIONS

H767

Congratulations! You have just acquired the smallest scientific calculator in the world! This machine is the result of modern LSI technology and advanced production technique. Never has there been such a small machine with such a large capability of performance!

To enable you to get the maximum results from this machine, please read through this manual carefully. It will save you many hours of experimentation.

First, install the 9V, (006P) battery by sliding the battery cover open. Install the battery, observing correct polarities of the battery, and close the battery cover. Switch the power-on switch to "ON". One zero, 0, should appear at the left hand corner of the display. If not, check the battery again for correct connection and polarity.

## WARNING!

Always remove low batteries from machine! Low batteries leak and will damage the machine. Any damage caused by battery leak are "NOT" under the warranty of the manufacturer.

## EXPLANATION OF KEYS

0 to 9

Numeric entry keys.

.

Decimal key.

+ - x ÷

Arithmetic function keys.

C/CE Clear Key:

Press once, clear only previous entry, press twice, clear all the figures.

+/-

Sign change key. Press once for sign change.

RM

Recall memory key.

F

Function key. Press the key will activate the secondary functions printed above the normal function keys.

CA

Clear all key. Press this key to clear all the figures including memory.

D

Display Recall key. After 30 seconds approximately, display goes out to save battery. Press this key to recall display.

The following functions are activated only after first pressing the F key.

π

Pi, 3.1415926.

1/x

Reciprocal.

COS

Cosine.

SIN

Sine.

TAN

Tangent.

COS<sup>-1</sup>

Arc cosine.

SIN<sup>-1</sup>

Arc sine.

TAN<sup>-1</sup>

Arc tangent.

D→R

Degrees to Radians.

R→D

Radians to Degrees.

M-

Subtract display from memory.

M+

Add display to memory.

MS

Memory store. If a number had been stored before, the addition of a new number will replace the first number. First number will be lost.

Depressing 0 F MS will cancel the memory.

Log

Common logarithm, to the base 10.

Ln

Natural logarithm to the base e.

Y<sup>X</sup>

Y raised to the x power.

e<sup>x</sup>

e raised to the x power.

√x

Square root.

X↔Y

X, Y exchange.

CLF

Clear "FUNCTION". If F key is depressed by mistake, it can be cancelled by pressing CLF.

ENT

Enter key.

This machine uses RPN (Reverse Polish Notation) logic. This will seem strange to you at the beginning, but soon, you will realize the advantages and power of this logic. It saves time in entry and requires no parenthesis for chain operations.

## EXAMPLES

### ADDITION

$$2 + 3 + 8 = 13$$

Key Entry	Display
2	2
ENT	2
3	3
+	5
8	8
+	13 Answer

### SUBTRACTION

$$45 - 6 - 8 = 31$$

Key Entry	Display
45	45
ENT	45
6	6
-	39
8	8
-	31 Answer

### MULTIPLICATION

$$2 \times 4 \times 9 = 72$$

Key Entry	Display
2	2
ENT	2
4	4
x	8
9	9
x	72 Answer

### DIVISION

$$\frac{98}{4 \times 2} = 12.25$$

Key Entry	Display
98	98
ENT	98
4	4
÷	24.5
2	2
÷	12.25 Answer

### CHAIN OPERATION

$$\frac{\left(\frac{10}{2} - 2\right) + (12 \times 2 + 3) \times \left(\frac{16}{4} \times 2\right)}{24} = 10$$

Key Entry	Display
10 ENT	10
2 ÷	5
2 -	3
12 ENT	12
2 x	24
3 +	27
+	30 3 is added to 27!
16 ENT	16
4 ÷	4
2 x	8
x	240 30 is multiplied by 8
24 ÷	10 240 divided by 24

**NEGATIVE NUMBERS**

$-\frac{1}{3} = .33333333$

Key Entry	Display
3	3
$\boxed{+/-}$	-3
$\boxed{F} \boxed{1/x}$	-.33333333

**SQUARE ROOT**

$(6 + \sqrt{8}) \times 3 = 26.485281$

Key Entry	Display
6 $\boxed{ENT}$	6
8 $\boxed{F} \boxed{\sqrt{x}}$	2.8284271
$\boxed{+}$	8.8284271
3 $\boxed{x}$	26.485281

**SQUARE**

$(3 + 1.5^2)^2 = 27.5625$

Key Entry	Display
3 $\boxed{ENT}$	3
1.5 $\boxed{ENT} \boxed{x}$	2.25 1.5 squared
$\boxed{+}$	5.25
$\boxed{ENT} \boxed{x}$	27.5625 5.25 squared

**NATURAL LOGARITHM**

$\ln 44^3 = 3 \times \ln 44 = 11.35257$

Key Entry	Display
3 $\boxed{ENT}$	3
44 $\boxed{F} \boxed{\ln}$	3.78419
$\boxed{x}$	11.35257

**COMMON LOGARITHM**

$\log \left(\frac{846}{2}\right) = 2.6263$

Key Entry	Display
846 $\boxed{ENT}$	846
2 $\boxed{\div}$	423
$\boxed{F} \boxed{\log}$	2.62634

**NATURAL LOGARITHM, TO THE BASE e**

$e^{-0.2} = 0.818731$

Key Entry	Display
.2 $\boxed{+/-}$	-.2
$\boxed{F} \boxed{e^x}$	.818731

**ANTI COMMON LOGARITHM**

$10^{2.55} = 354.8131$

Key Entry	Display
10 $\boxed{ENT}$	10
2.55 $\boxed{F} \boxed{Y^x}$	354.8131

**RAISING ANY NUMBER TO ANY POWER**

$3^{3.3} = 38.79839$

Key Entry	Display
3 $\boxed{ENT}$	3
3.3 $\boxed{F} \boxed{Y^x}$	38.79839

**DEGREES TO RADIAN AND REVERSE**

$45^\circ = 0.78539815$  radians

Key Entry	Display
45 $\boxed{F} \boxed{D \rightarrow R}$	0.78539815
$\boxed{F} \boxed{R \rightarrow D}$	44.999999 = 45°

**TRIGONOMETRIC FUNCTIONS**

Key Entry	Display
30 $\boxed{F} \boxed{\sin}$	0.5
$\boxed{F} \boxed{\sin^{-1}}$	30
$\boxed{F} \boxed{\cos}$	.8660255
$\boxed{F} \boxed{\cos^{-1}}$	29.99999
$\boxed{F} \boxed{\tan}$	.57735
$\boxed{F} \boxed{\tan^{-1}}$	29.99999

**RECIPROCAL**

$\frac{1}{9} = .11111111$

Key Entry	Display
9 $\boxed{ENT}$	9
$\boxed{F} \boxed{1/x}$	0.11111111

**PI**

$2\pi R = 2\pi \cdot 6 = 37.699111$

Key Entry	Display
2 $\boxed{ENT}$	2
$\boxed{F} \boxed{\pi} \boxed{x}$	62831852
6 $\boxed{x}$	37.699111

**MEMORY AND MEMORY STORE AND OTHER FUNCTIONS**

$\frac{10}{(2+3) - 7}$

Entry	Display	Comments
$\boxed{CA}$	0	
2	2	
$\boxed{F} \boxed{M+}$	2	2 in memory
3	3	
$\boxed{F} \boxed{M+}$	3	5 in memory
7	7	
$\boxed{F} \boxed{M-}$	7	-2 (subtract from memory)
10	10	
$\boxed{ENT}$	10	
$\boxed{RM}$	-2	-2 recall memory
$\boxed{\div}$	-5	--2 division

**COMPLEX CALCULATIONS**

$\sqrt{B \left\{ \left[ \left( \frac{400}{661.5} \right)^2 (0.2) + 1 \right]^{0.4} - 1 \right\} \left( \frac{29.96}{15} \right) + 1 \right\}^{0.286} - 1}$

Entry	Display	Comments
400 $\boxed{ENT}$	400	
661.5 $\boxed{\div}$	.60468631	
$\boxed{ENT} \boxed{x}$	.36564553	Squared
.2 $\boxed{x}$	.0731291	
1 $\boxed{+}$	1.0731291	
1.4 $\boxed{ENT}$	1.4	
.4 $\boxed{\div}$	3.5	
$\boxed{F} \boxed{Y^x}$	1.280211	
1 $\boxed{-}$	.280211	
29.96 $\boxed{ENT}$	29.96	
15 $\boxed{\div}$	1.9973333	
$\boxed{x}$	.55967476	
1 $\boxed{+}$	1.5596747	
.286 $\boxed{F} \boxed{Y^x}$	1.135553	
1 $\boxed{-}$	.135553	
5 $\boxed{x}$	.677765	
$\boxed{F} \boxed{\sqrt{x}}$	.82326484	

*Handwritten notes:*  
 multiply:  
 change subtrahend  
 provided as in add:  
 subtract:  
 + = +  
 - = -  
 + = +  
 - = -