

REMOVAL VOIDS WARRANTY

perating Instructions MODEL 450 CRAIG ON ON 5 6 3

WARRANTY

Craig Corporation warrants to the purchaser of this new Craig Calculator that if the machine or any part thereof in the judgment of Craig is proven to be defective in material or workmanship within one year from date of original purchase, such defects will be repaired or replaced (at the Company's option) free of charge for parts and labor.

This warranty does not apply to any product which has been damaged by accident or which has been misused, abused, altered, or repaired by anyone other than Craig. Absence or defacement of the warranty seal on the unit shall be considered as evidence of unauthorized repairs and the warranty is thereby immediately void.

This warranty is in lieu of all other warranties expressed or implied, and no person is authorized to assume for Craig any other liability in connection with the sale of this product.

To obtain repairs, the Calculator should be delivered, prepaid, to Craig Corporation at either address shown below. In-warranty units will be returned postage prepaid.

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INTRODUCTION

Your Craig 4501 Electronic Calculator represents a significant engineering achievement resulting in full-size capability in a pocket-size package. Major advances in miniaturized computer circuits using single-chip LSI (Large Scale Integration), LED (Light Emitting Diode) display technology, and unique snap-action keyboard construction have provided a rugged and reliable unit, and the AC power supply and self-contained nickel-cadmium rechargeable batteries permit convenient use even when AC power is not available.

The Craig 4501 will perform addition, subtraction, multiplication, and division functions, including chain or mixed multiplication and divisions, and utilization of a stored constant. Eight digits are provided for entry and read-out, with full-floating decimal point and positive or negative sign capability. Additional display indicators denote power on, low battery, overflow, error, and negative result (minus sign). A "time-out" feature

to extend battery operating time causes the display to blank out approximately 15 seconds after the last entry, without loss of stored information.

It is suggested that the following instructions for operation be read with the calculator at hand, and that all calculation examples be performed to increase your familiarity with the unit. A short outline of operating procedures is also printed on the back of the calculator for quick reference.

OPERATION

AC Operation:

Connect the Charger unit to any standard 120 Volt electrical outlet and plug the 3-wire connector into the Calculator. (Note that the 3-wire connector is keyed and should not be forced into the socket the wrong way.) After the above connections, the power switch may be turned on and operation started. (While connected to AC, the internal batteries are automatically charged whether the power switch is "ON" or "OFF".)

Battery Operation:

Disconnect the Charger cord and turn the power switch "ON". (An interlock switch in the Calculator socket will prevent battery

operation if the 3-wire plug remains connected.) With normal use, a full battery charge can be expected to supply about 5 hours of working time.

NOTE: When the low battery indicator (L) on the display is lighted, do not continue battery operation. This indicates need for a battery charge. Use of the Calculator can be continued during the charge cycle.

Battery Charging:

Simply follow the same procedure as in AC operation. The Calculator may be used during the charge period if desired. In order to fully charge a battery which has been completely discharged, 14 hours is required. In most cases, an overnight charge should be adequate if the batteries have not been fully discharged.

NOTE: Although no damage will result from prolonged periods with the Charger connected, it is advisable to remove the Charger cord when the Calculator is not in use after a full recharge cycle.

CONTROLS & INDICATORS

"ON" Switch

Turns Calculator "ON" &

"OFF".

'K' Switch

Slide switch with 2 positions: in the up position, the 'K' operation is in effect. Use of 'K' allows a number to be entered and retained as a "constant" for series multi-

plication or division.

D Key

During battery operation, the display will automatically turn off about 15 seconds after the

last operation. Pressing the b key recalls the contents of the display. Pressing any key also reactivates the

display.

Clears the Calculator and the display of all numbers.

Clears display of the previous keyboard entry.

Enters a "multiply" command. Kev

Key Enters a "divide" command.

Adds the entered number, or Key

carries out a previously entered "multiply" or "divide"

command.

Adds a minus sign to an entry. Subtracts the entered number or completes a previously entered "multiply" or

"divide" command.

Enters a decimal point.

Keys Enter digits of a number (limit 8 digits).

Power-ON Indicator

Appears at the center of the Display when all other portions of the Display are off.

Appears as

Overflow Indicator Indicates a calculation result that contains more than eight

digits.

Appears as

Low Battery Indicator

Warns of need for battery charge during battery

operation. Appears as

Minus Sign Indicator

Activated by the key for operations with negative

numbers.

Indicator

Decimal Point Automatically appears to the right of any number entered, unless inserted in another

sequence by use of the Decimal key. With fractional numbers, it will be preceded

by a zero.

Error Indicator Indicates an entry of more

than 8 digits. Appears as

PRELIMINARY INSTRUCTIONS

- 1. To clear (erase)
 - A. Touch the key
 - B. Cleared display will be:

2. To enter (write a number)

Example: enter 123.45

- A. First, clear by touching
- B. Then touch number and decimal keys for 123.45 one at a time. Always start with the left hand digit and progress from left to right.

 Display will then be:

123.45

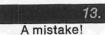
3. To clear an incorrect entry

Example: 48+ 12 is your calculation

- A. You have already entered 48 Display is:
- B. You now touch the += key Display will be:

4

C. Then you enter 13 by mistake The display is:



D. To clear 13, touch the CE key Display will be:



E. Then enter '12' Display will be:



F. Finally, touch the += key for answer Display will be:



Note: Use CE during, or immediately after entry of a number.

CALCULATIONS

1. ADDITION

Example #1: To calculate 16.39 + 9.83 = Do these steps display will be

a.	Touch	C	THE MEAN	0.

Example #2: To calculate 16 + 9 + 8.3 + 4.1 =Do these steps display will be

2. SUBTRACTION

a Touch

e. Touch --

d. Enter 6

Example #1: To calculate 12.81 - 3.6 =Do these steps display will be

a.	Touch	· O.
b.	Enter 12.81	12.81

9.21

6.

Example #2: To calculate
$$23 - 6 + 2.1 - 5 =$$

Do these steps display will be

Answer

2	Touch	C	1887	0
a.	Touch		1000	U.

Example #3: To calculate $62-82+10-$		Example #2: To calculate 3 x 21 x 6.1 = Do these steps display will	be
Do these steps	display will be	a. Touch c	0.
a. Touch	0.	b. Enter 3	3.
b. Enter 62	62.	c. Touch X	3.
c. Touch +=	62.		
d. Enter 82	82.	d. Enter 21	21.
e. Touch	<u> </u>	e. Touch X	63.
f. Enter 10	10.	f. Enter 6.1	6.1
		g. Touch += Answer 38	34.3
g. Touch +=	— 10.	Example #3: To calculate 31 x 6 =	
h. Enter 40	40.	Use of 'K' Switch 31 x 8.2 = 31 x 7.6 =	
i. Touch Answer	50.	Do these steps	be
3. MULTIPLICATION		a. Touch ©	0.
Example #1: To calculate 2 Do these steps	29.32 x 56.5 = display will be	b. Push 'K' on (up)	0.
a. Touch	0.	c. Enter 31	31.
b. Enter 29.32	29.32	d. Touch X	31.
c. Touch X	29.32	e. Enter 6	6.
d. Enter 56.5	56.5	f. Touch += 1st Answer 1	86.
e. Touch += Answer	1656.58	g. Enter 8.2	8.2

j. Touch += 3rd Answer	235.6		g. Touch += Answer	3
k. Push 'K' off (down) 4. DIVISION	31		Example #3: To calculate 1 Use of 'K' switch	96 ÷ 15 =
Example #1: To calculate 3			Do these steps	17 ÷ 15 = display will be
Do these steps a. Touch	display will be 0.		a. Touch	0
b. Enter 376	376.		b. Push 'K' on (up)	0
c. Touch ÷	376.		c. Enter 181	181
d. Enter 53	53.	•	d. Touch ÷	181
e. Touch += Answer	7.0943396		e. Enter 15	15
Example #2: To calculate 8		•	f. Touch += 1st Answer	12.066666
Do these steps	display will be		g. Enter 96	96.
a. Touch 6	0.	7	h. Touch += 2nd Answer	6.
b. Enter 81	81.		i. Enter 117	117.
c. Touch ÷	81.		j. Touch += 3rd Answer	7.8
d. Enter 3	3.		k. Push 'K' off (down)	114.7
	de la milita			

5. MIXED ARITHMET		g. Touch -=	10.
Example #1: To calculate and these steps	23 x (-4) ÷ (-6) = display will be	h. Touch X	10.
a. Touch	0.	i. Enter 8	8.
b. Enter 23	23.	j. Touch ÷	80.
c. Touch X	23.	k. Enter 20	20.
d. Enter 4	4.	I. Touch +=	4.
e. Touch -=	— 92.	m. Enter 8	8.
f. Touch ÷	— 92.	n. Touch - Answer	— 4.
g. Enter 6	6.	6. EXPONENTS	
h. Touch Answer	15.333333	Example #1: To calculat Do these steps	e (3) ⁵ = display will be
Example #2: To calculate $\frac{(9+6-5)}{20}$	$\frac{\times 8}{\times 8} - 8 =$	a. Touch	0.
Do these steps	display will be	b. Push 'K' on (up)	0.
a. Touch	0.	c. Enter 3	3.
b. Enter 9	9.	d. Touch X	3.
c. Touch +=	9.	e. Enter 3	3.
d. Enter 6	6.	f. Touch +=	9.
e. Touch +=	15.	g. Touch +=	27.
f. Enter 5	5.	h. Touch +=	81.

Touch #

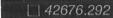
Answer

Push 'K' off (down)

7. OVERFLOW INTERPRETATION

The overflow indicator "
" will appear when the display capacity of the Calculator is exceeded.

For example, multiplication of 12345678×345678 will give the following display



The "\(\sigma\)" symbol indicates "overflow", or an answer of more than the 8 digits shown. To obtain the correct decimal location, simply record the displayed number and move the decimal point 8 places to the right. The real answer will then be:

> 4,267,629,200,000. 8 places 1

This procedure applies to all operations, multiplication, division, addition and subtraction. Use the 'C' key to clear the overflow.

BATTERY NOTES

1. With normal use at room temperature, a full battery charge can be expected to supply about 5 hours of accumulated working time.

2. The Calculator may be used while its battery is

charging.

3. Batteries that have been neither used nor charged for as long as 2 or 3 months will suffer substantial loss of operating time through a tendency to self-discharge. As a general rule, batteries lose about 1% charge per day due to self-discharge, at normal temperatures.

4. For optimum performance and long life:

a. Alternate frequently between Battery and AC power.

b. Operate at or near normal room temperatures.

c. Charge as soon as possible upon appearance of the Low-Battery indicator.

5. Recharge time is 14 hours for a fully discharged battery.

- 6. The Low-Battery indicator is designed to appear as soon as battery voltage drops to the lowest value that will support optimum performance of the Calculator. Should further discharge occur. through continued operations or self-discharge, the Low-Battery indicator may fail to appear. Do not continue to operate on batteries when this condition is noted, or a damaged battery may result.
- 7. As a general rule, if improper operation occurs, first try the Calculator with its charger connected. If operation is then normal, this indicates the batteries are low.
- 8. Do not store the unit in high temperature areas such as the top of radiators or the rear deck of automobiles exposed to the sun. The Calculator will operate satisfactorily over an ambient temperature range of 0 to 50C (32 to 122F) and relative humidity to 95%.