

**OPERATING
INSTRUCTION
MANUAL**

**Model 301
210
401**



ELECTRONIC CALCULATOR

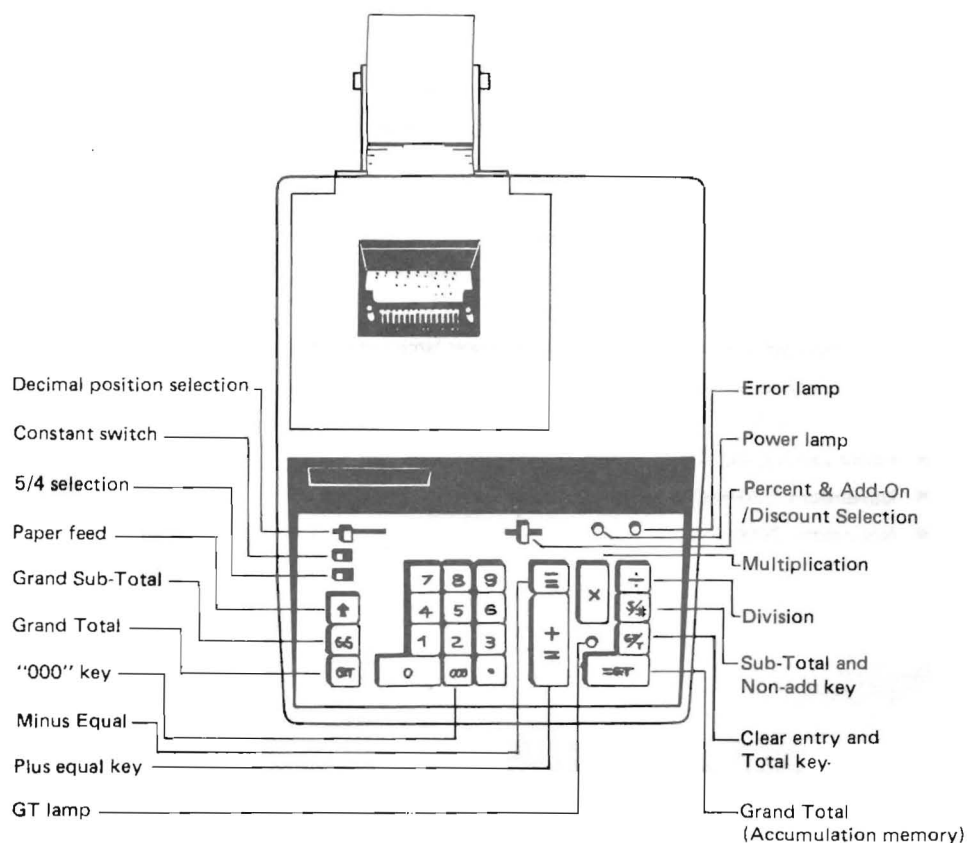


*Represents the finest
in
Electronic Products for Business*

FEATURES

- Basic four functions, Direct-In ground total accumulation, Selectable mode of percent, Multiplication and add-on/discount, Constant calculation, 5/4 round Non-Add and optional "000" key.
- 12 digit operation, 12 digits print plus decimal point, Comma and two symbols.
- Repeats add and subtracts.
- Discount/Add-on sequences.
- Selectable stored constant multiplicand and divisor.
- Subtotal and Non-add print key.
- Floating in fixed out decimal system.
- 5/4 round-off, truncate for Multiplication and division.
- Add mode switch permits automatic entry of decimal point at any Selected position.
- Eight key input buffering.
- One line print buffering on output.
- Printer motor Automatic start and stop.
- Printer speed, 3 lines per second.
- Negative minus number printed in red.
- Indication lamps Error, Ground total and power lamp indication.
- Logic element, Single MOS LSI.
- Temperature, 32° — 104° F.
- Power sources, AC 100V — 240V available out.
- Dimensions. 230mm(W) x 310mm(L) x 88mm(H).
- Net weight. 3000 g

KEYBOARD NOMENCLATURE



CONTROL KEYS:

(Please refer to attached keyboard-layout)

+ =

Plus-Equal Key

For addition, this key stores an addition operation and performs a possible preceding operation.

For multiplication and division, this key performs completion of calculations.

When % — N — A/D switch is set to % or A/D position, this key performs percent calculation or add-on calculation mode of multiplication.

- =

Minus-Equal Key

For subtraction, this key stores a subtraction operation and performs a possible preceding operation.

For multiplication and division, this key performs completion of calculation but acts as a data entry changing the figure to minus.

x

Multiply Key

This key stores a multiply command and performs any previous operation if new data has been entered.

When the % — N — A/D switch is set to % or A/D position, this key performs the calculation of percent or add-on/discount operation.

÷

Divide Key

This key acts the same as the multiply key but stores a division operation.

S/#

Non-Add/Sub-Total Key

Depression of this key following the data entry prints the entered figure with non-add symbol without affecting any calculation.

Depression of this key following the += or -= key on addition or subtraction mode prints contents of accumulator.

CE/*

Total/CE Key

Depression of this key following the data entry functions as clear-entry key.

Depression of this key following the += or -= key on addition or subtraction mode prints total of addition or subtraction and clear the registers.

At any case, depression of this key prints the content of accumulator and clears all register except grand-total register.

= GT

This key completes any calculations and prints the result, and at same time makes the calculation result be added in to grand-total register.

GS

Grand-Subtotal Key

This key acts as sub-total key of grand-total register.

Recalls and prints content of grand-total register, and holds content of grand-total register.

GT

Grand-Total Key

This key acts as total and clear key of grand-total register.

Prints content of grand-total register and clears the register.

↑

Paper Feed Key

Depression of this key advances the paper tape.

SELECTOR SWITCHES

%-N-A/D Multiplication Mode Selector

Set % for percent calculation. Operation sequence would be same as for regular multiplication.

Set A/D for add-on or discount calculation.

Operation sequence would be same as for regular multiplication but ending by += key for add-on and by -= key for discount.

K Constant Switch

Set this switch to "K" to perform constant figure calculations of multiplication and division, the constant figure is multiplicand or divisor.

A-0-2-3-4-6 Decimal Position Selector Switch

Add-mode or desired decimal point positions can be selected.

NOTE:

The standard keyboard layout as attached drawing is available.

OPERATION SPEC.

Example		Operation		Print	
(A) Addition & Subtraction					
Switch: (A-0-1-2-4-6) (5/4 - N) (%-N-A/D) (K-N)					
Select: ▲ ▲ ▲ ▲					
	1,234	1234	+=	1,234	+
-	567	567	-=	567	- (Red)
+	89	89	+=	89	+
+	1,012	1012	+=	1,012	+
+	3,456	3456	+=	3,456	+
-	789	789	-=	789	- (Red)
T.	4,435		CE/T	4,435	*
(B) Subtraction, Credit Balance					
	56,789	56789	+=	56,789	+
-	45,632	45632	-=	45,632	- (Red)
-	38,426	38426	-=	38,426	- (Red)
T.	-27,269		CE/T	27,269	- *
(C) Addition Overflow					
	333,333,333,333	333333333333	+=	333,333,333,333	+
+444,444,444,444	444444444444		+=	444,444,444,444	+
+555,555,555,555	555555555555		+=	555,555,555,555	+
T.	1,333,333,333,332		CE/T	777,777,777,777	E
Overflow					
(D) Repeat add/subtraction, Incl. Recall & Running Total					
	485	485	+=	485	+
+	485		+= Repeat	485	+
+	485		+= "	485	+
+	485		+= "	485	+
+	485		+= "	485	+
-	45	45	-=	45	- (Red)
-	45		-= Repeat	45	- (Red)
-	45		-= "	45	- (Red)
S.T.	2,290	--Running total--	# / ST	2,290	◇
-	3,853	3853	-=	3,853	- (Red)
-	3,853		-= Repeat	3,853	- (Red)
S.T.	- 5,416	--Running total--	# / ST	5,416	- ◇ (Red)
--Recall Previous Print--					
-	5,416		+=	5,416	- (Red)
-	5,416		+= Repeat	5,416	- (Red)
+	5,416		- =, (+/-Change)	5,416	+
T.	- 10,832		CE/T	10,832	- *
--Recall Previous Print--					
-	10,832		+=	10,832	- (Red)
+	580	580	+=	580	+
+	580		+= Repeat	580	+
+	1,230	1230	+=	1,230	+
-	1,230		- = (+/-Change)	1,230	-
T.	- 9,672		CE/T	9,672	- *

	Example	Operation	Print
(E)	Multiplication & Division		
	Switch: \uparrow (A-0-1-2-4-6) (5/4 - N) (%-N-A/D) (K-N)		
	Select: \uparrow		
	12,345	12345	x
	x 435	435	+ =
	= 53,700.75		53,700.75 * 5/4
	(A-0-1-2-4-6) (5/4 - N) (%-N-A/D) (K-N)		
	348.42176	348.42176	x
	x 4,356.0123	4356.0123	+ =
	= 1,517,729.4721476 —Underflow, 5/4—		1,517,729.47215 * 5/4
	(A-0-1-2-4-6) (5/4 - N) (%-N-A/D) (K-N)		
	123,456,789	123456789	÷
	÷ 8,562	8562	=
	= 14,419.1531184 ... —Decimal 4—		14,419.1531 * 5/4
	(A-0-1-2-4-6) (5/4 - N) (%-N-A/D) (K-N)		
	12345	12345	x
	x 4567	4567	x
	x 8901	8901	x
	x 35	35	=
	= 17,564,223,359,025 —Overflow—		17.5642233590 E
			10 ¹² position.
	x 352 (Round calculation)	CE/T	—Clear error condition—
	x	x	17.5642233590 x
	= 6,183	=	352 =
			6,6183 * 5/4
			10 ¹² position.
(F)	Add Mode, Add/Subtract		
	(A-0-1-2-4-6) (5/4 - N) (%-N-A/D) (K-N)		
	315.21	31521	+
	+ .06	6	+
	+ 1.53	153	+
	+ 432.87	43287	+
	- 58.46	5846	-
	T. 691.21		CE/T 691.21 * (Red)
(G)	Add-Mode, Multiplication/Division		
	(A-0-1-2-4-6) (5/4 - N) (%-N-A/D) (K-N)		
	340.53	34053	x
	x 123	123	+ =
	= 41,885.19		41,885.19 * 5/4
	340.53	34053	x
	x 1.2356	1.2356	=
	= 420.758868		420.76 * 5/4
	4856.35	485635	÷
	÷ 14.345	14.345	=
	= 338.539560 ...		338.54 * 5/4

Example	Operation	Print
(H) Constant Mode		
(A-0-1-2-4-6) (5/4 - N) (%-N-A/D) (K-N)		
285 x 1,234 = 351,690	285 x	285 x
285 x 456 = 129,960	1234 =	1,234 = K
285 x 45 = 12,825	456 =	351,690 * 456 = K
	45 =	129,960 * 45 = K
		12,825 *
(A-0-1-2-4-6) (5/4 - N) (%-N-A/D) (K-N)		
3,456 ÷ 285 = 12.12631 . .	3456 ÷	3,456 ÷
45,623 ÷ 285 = 160.080701 . .	285 =	285 = K
3,460 ÷ 285 = 12.140350 . .	45623 =	12.1263 * 5/4 45,623 = K
	3460 =	160.0807 * 5/4 3,460 = K
		12.1404 * 5/4
(I) Percentage, Add-on Discount		
(A-0-1-2-4-6) (5/4 - N) (%-N-A/D) (K-N)		
5% of 500 = 25	500 x	500 x
	5 + =	5 %
		25 *
25 is 5% of 500	25 ÷	25 ÷
	5 + =	5 %
		500 *
(A-0-1-2-4-6) (5/4 - N) (%-N-A/D) (K-N)		
5% Mark Up of 500	500 x	500 x
	5 + =	5 %
		25 *
		525 *
5% Mark Up Down of 500	500 x	500 x
	5 - =	5 % (Red)
		25 *
		475 *

Example	Operation		Print
(A-0-1-2-4-6) (5/4 - N) (%-N-A/D) (K-N)			
10% Mark-up of 300	300	x	300 x
20% Mark-up of 300	10	+ =	10 % K
30% Mark-up of 300			30 *
			330 *
	20	+ =	20 % K
			60 *
			360 *
	30	+ =	30 % K
			90 *
			390 *
10% Mark-Down of 300	300	x	300 x
20% Mark-Down of 300	10	- =	10 % (Red)
30% Mark-Down of 300			30 - * (Red)
			270 *
	20	- =	20 % (Red)
			60 - * (Red)
			240 *
	30	- =	30 % (Red)
			90 - * (Red)
			210 *

(J) Memory Calculation

(A-0-1-2-4-6) (5/4 - N) (%-N-A/D) (K-N)

123 + 45 + 56 = 224	123	+ =	123.00 +	
1234 - 356 + 45 = 923	45	+ =	45.00 +	
456 x 12 = 5,472	56	+ =	56.00 +	
8,563 ÷ 43 = 199.1395 ...		GT =	224.00 Σ	
Running G.T. = 6,818,1395 ...				
1.23 + 4.567 = 5.797	1234	+ =	1,234.00 +	
2.45 x 1.25 = 3.0625	356	- =	356.00 -	(Red)
Running G.T. = 6826.99950	45	+ =	45.00 +	
			923.00 Σ	
123,456 x 456 = 56,295,936	456	x	456 x	
3,685 x 563 = 2,074,655	12	GT =	12 =	
Grand Total = 58,377,417,9995			5,472.00 Σ	
	8563	÷	8,563 ÷	
	43	GT =	43 =	
			199.14 Σ	
		GS	6,818.14 ◇ Σ	
(A-0-1-2-4-6)				
	1.23	+ =	1.2300	
	4.567	+ =	4.5670	
		= GT	5.7970 Σ	
	2.45	x	2.45 x	
	1.25	GT =	1.25 =	
			3.0625 Σ	
		GS	6826.9995 ◇ Σ	

CORPORATE OFFICES

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