Wang Laboratories

WANG

SERIES 300 CALCULATING SYSTEMS ... Versatile, reliable, low cost ... the calculators for all reasons.

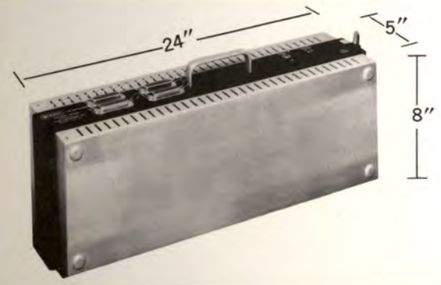
Made in America for the world of numbers

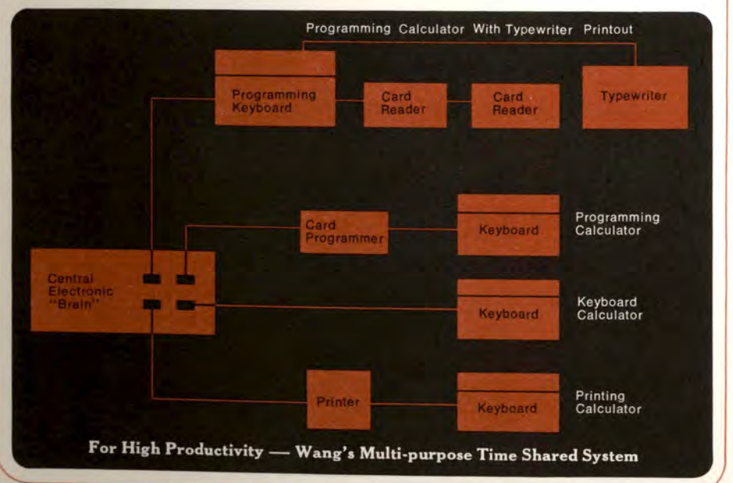
The Advantages of a TIME-SHARED Calculating System

Wang offers a TIME-SHARED calculating system that enables up to four users to operate simultaneously from one central electronic package, with no interference.

This system provides multiple benefits:

- smaller, more compact desk-top designs for more work space.
- greater reliability; and Wang's modular design ensures efficient servicing.
- flexibility in calculator configuration; 200's can work easily beside 370/380 units.
- expansion capabilities. Wang's "building-block" concept enables easy and rapid replacement of simpler units with more sophisticated keyboards as your requirements expand.





For High Productivity — Wang's Multi-purpose Time Shared System

The Trend Toward Electronic Calculators

In the 1970's more Wang Electronic Calculating Systems will be employed in operations throughout the United States, Canada and abroad than ever before, replacing the outmoded electro-mechanical calculators. One of the major reasons for this shift to electronic calculators is economy. Wang 300 Calculating Systems pay for themselves within six months to a year of purchase, with savings of as much as 30 times their initial cost over a ten year period.

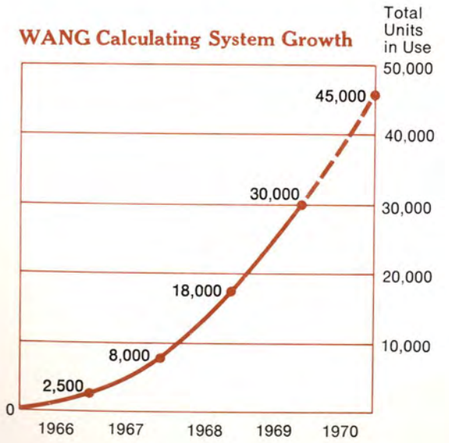
This substantial saving, plus the fact that Wang's 300 Series is simple to use, quietly efficient, and truly reliable, are some of the reasons why Wang Calculating Systems are continuously expanding into new application areas.

Each working day, professional people are using the Wang 300 Series equipment in 47 countries around the globe, realizing estimated savings as high as $230,000,000 annually. They are accomplishing tasks of great importance.

- An eighth grade math-science teacher improves student motivation and achievement.
- A large department store checks all their sales receipts.
- An oil company production engineer figures next year's crude oil production quota.
- An executive gets quick calculations for a critical decision.
- The surveyor lays out a subdivision, checks the boundary points and defines properties.
- A medical statistician determines the "sugar burn" of diabetic patients.
- A nuclear scientist solves Einstein's equations.

All these and a thousand other applications require the ease, power and accuracy of Wang's Series 300 Calculating Systems.

WANG Calculating System Growth



How to Select the Optimum System

Here is a summary of the important features of the Wang 300 Series that will help you select the optimum system for your needs.

All equipment can be supplied for 110-Volt, 60-cycle or 220-Volt, 50-cycle operation.

200/300 Series Calculating Systems

The 200 for high speed addition, subtraction, multiplication, division and reciprocals; the 210 for instantaneous $\sqrt{x}$ and x^2; the 240 and 250 adding four extra storage registers to the 200 and 210 respectively; the 320 for logarithmic and exponential operations; the 360 with four extra storage registers; the 362 with up to 26 storage registers; and six more keyboards providing trig functions by single keystrokes. CP-1 and CP-2 Card Programmers plug into any of the 200/300 Series for automatic calculations, and the 301 Printer for permanent printout on ordinary paper at 2 lines per second.

370/380 Series Programmable Calculating Systems

Compact, desk-top keyboards can give you immediate answers to many complex calculations at less cost than full-scale computers. They have the same simplicity of operation as the basic 300 Series calculators, but data storage capacity is significantly increased, with random access from the keyboard or under program control. The 370 utilizes prescored tab cards for program control, with programs as long as 640 steps. The system will branch, loop, perform subroutines, make decisions and manipulate arrays. Model 380 programs are "learned" directly from the keyboard on plug-in magnetic tape cartridges of 40- to 640-step capacity. The 379-5/7 Output Writer and other peripheral devices increase system versatility. Each system features the most comprehensive program library available.

FEATURES	GENERAL BUSINESS			STATISTICAL			SCIENTIFIC-TECHNICAL						
	200*	300	240*	210*	310	250*	320	360	320KT	360KT 362KT	362	370	380
Two Sets of Add, Subtract and Recall Operations	•	•	•	•	•	•	•	•	•	•	•	•	•
Multiply, Divide and One-Step Reciprocal	•	•	•	•	•	•	•	•	•	•	•	•	•
Automatic Accumulation: Product, Entry, Multiplier	•	•	•	•	•	•	•	•	•	•	•	•	•
Simple to Program With Optional Card Reader	•	•	•	•	•	•	•	•	•	•	•	•	
Ten Digit ⅝" Nixie Tube Display & Floating Decimal	•	•	•	•	•	•	•	•	•	•	•	•	•
Optional Printer	•	•	•	•	•	•	•	•	•	•	•	•	•
Programmable With Tape Cartridges													•
Automatic Round-Off to Nearest Cent	•		•	•		•							
Instant Square and Square Root				•	•	•	•	•	•	•	•	•	•
Instant $\text{Log}_e X$ and e^x							•	•	•	•	•	•	•
Four Additional Storage and Recall Registers			•			•		•		•		•	•
Twelve Additional Storage Registers or 24-Half Registers										362KT	•	•	•
Sin-Cosine-Arc Sin-Arc Tan Functions									•	•			
Price per Calculator on a 4 Unit System**	$ 860	$ 980	$1,100	$ 970	$1,088	$1,210	$1,283	$1,498	$1,733	360KT $1,948	N.A.	N.A.	N.A.
Price on a Single Calculator**	N.A.	$1,600	N.A.	N.A.	$1,705	N.A.	$1,845	$2,095	$2,295	360KT $2,545	$2,395	$3,995	$3,095

The table shown at left is a handy reference guide to help you relate specific features of the Wang systems to the calculation or computation work you do. Circle those dotted features you regard as the most critical in your work; you will quickly find the particular Wang calculator to meet your requirements.

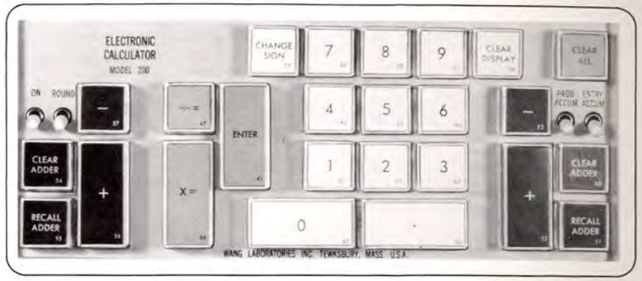
NA Not Available
* Available as a Four-Calculator System Only
** Consult Your Wang Systems Representative for Prices of Peripherals and Add-On Modules

The following pages contain your
Model Selection Guide
for further details.

Model 200 Business Keyboard

For applications requiring high speed addition, subtraction, multiplication, division and reciprocals.

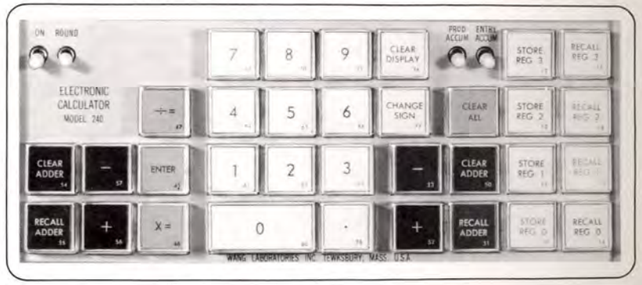
Simplest of the Wang calculators, this basic business-oriented keyboard is essentially a space-age replacement for the rotary-type calculator. Standard features include two independent registers for separate accumulation of two totals (such as inventory quantity in one register and inventory value in the other, from a single series of entries). Duplex accumulating switches provide for automatic accumulation of entries and/or multipliers in the right adder and for extensions or products in the left adder. Plus, a round-off to the nearest cent statement.



Model 240 Business Keyboard

For statistical and business applications requiring additional storage capability

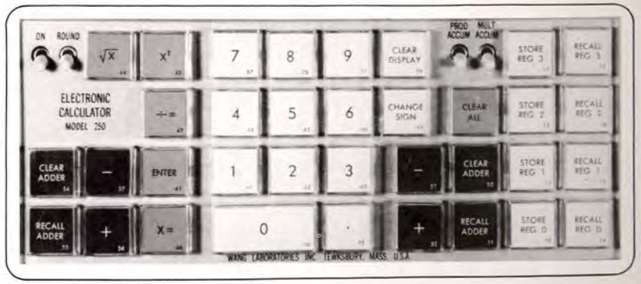
This simple to use Wang Calculator provides the features of the 200 keyboard, with the addition of four random-access core storage registers for greater flexibility. This additional storage will hold constants, intermediate answers or multiple results.



Model 250 Business Keyboard

For statistical and business applications requiring instantaneous $\sqrt{x}$ and x^2.

Our Model 250 provides all the features of our 240 plus square and square root keys. The duplex accumulation switches, in addition to their normal functions, provide Σx, Σx^2, Σy, Σy^2, $\Sigma(x+y)$, $\Sigma x.y$, $\Sigma\sqrt{x}$, $\Sigma\,\frac{1}{x}$. The accumulated totals are recallable to the display at any time. For the statistician, this calculator provides a simple, accurate means of obtaining fast solutions for mean, variance and standard deviation or multiple regression problems.



Because your Series 200/300 Calculating Systems are so versatile and economical

- ☐ I would like to have a salesman drop by to discuss my order
- ☐ I would like further information on:
  - ☐ 200 Series
  - ☐ 300 Series
  - ☐ 370 Series

Name_____ Title_____

Organization_____

Division_____

Address_____

City_____ State_____ Zip_____

Comments:_____

Use This Card For
Wang Headquarters in U.S.A.

Because your Series 200/300 Calculating Systems are so versatile and economical

- ☑ I would like to have a salesman drop by to discuss my order
- ☐ I would like further information on:
  - ☐ 200 Series
  - ☐ 300 Series
  - ☐ 370 Series

Name_____ Title_____

Organization_____

Division_____

Address_____

City_____ State_____ Zip_____

Comments:_____

Use This Card For Your
Nearest Wang Office

FIRST CLASS
PERMIT NO. 16
Tewksbury, Mass.

BUSINESS REPLY MAIL
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

— POSTAGE WILL BE PAID BY —

WANG LABORATORIES, Inc.
836 NORTH STREET
TEWKSBURY, MASSACHUSETTS 01876

PLACE
STAMP
HERE

(Local Sales Office Address)

Checkpoint Calculations

Calculations on the Wang 200/300 Series are simple and efficient. Here, for your personal review, are checkpoint calculations with sample times based on a slow operator's work. Our user-customers have rated Wang systems 2 to 30 times faster than methods they previously had employed.

Specific Application	Steps	Time & Model
1. Simple Arithmetic		
a. $12.34 + 103 - 27.18 = 88.16$	3	6 sec. Any model.
b. $245.85 \div 15 = 16.39$	1	4 sec. Any model.
c. $\frac{7 \times 9 \times 18}{8} = 141.75$	4	5 sec. Any model.
2. Per Cent Change: Last year $21,644.39 This year $32,659.32 Increase +51%	5	8 sec. with Product Accum. Any model.
3. Root Mean Square: $\sqrt{\frac{13^2 + 21^2 + 35^2 + 67^2}{4}} = 39.76$	8	13 sec. with Product Accum. Models 210, 250, 310, 320, 360, 362.
4. Monthly Mortgage Payment of $36,000, 30-Year Loan at 9% Interest: $\frac{p \cdot i}{1-(1+i)^{-n}} = \frac{36{,}000 \times .0075}{1-(1.0075)^{-360}} = \$289.66$	11 3	20 sec. manual. 5 sec. with CP-1. Models 320, 360, 362.
5. Parallel Resistance: $R = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} + \cdots}$	1 each R	1 sec. each R with Product Accum. Any model.
6. Simpson's Rule (Experimental Data): $\int_0^n f(x) = \frac{dx}{3}(y_0 + \frac{y_1}{4} + \frac{2}{y_2} + \cdots + y_n)$	2 each y	2 sec. each value with Product Accum. Any model.
7. Linear Regression: Fit x, y data to $y = ax + b$	5 each point	6 sec. each x, y pair. 2 sec. with CP-1. Any model.
8. Exponential Decay: $A = A_0 e^{-x}$	4	3 sec. each value. Models 320, 360, 362.
9. Pipeline Pressure Loss: $P_2 = \sqrt{P_1^2 - L(^Q/_K)^{1.8539}}$	11 4	12 sec. manual. 5 sec. with CP-1. Models 320, 360, 362.

Your work is done as quickly as you can key in the numbers.

Where To Send For More Information

Wang has factory direct sales and service offices at 80 locations in the United States and Canada. Check your telephone directory for listings or use the business reply card to our main address in Tewksbury, Massachusetts.

You can buy, rent or lease a Wang calculating system. Government agencies in the United States may order a Wang on G.S.A. Contract GS-OOS-76559.

WANG LABORATORIES, INC.

U.S.A.
Wang Laboratories, Inc.
836 North Street
Tewksbury, Massachusetts 01876
(617) 851-7311

CANADA
Don Mills
Wang Laboratories (Canada) Ltd.
180 Ducan Mill Road
Don Mills, Ontario
(416) 449-7890

EUROPE
Belgium
Wang Europe, S.A.
68 Rue de Moulin
Brussels 3
(02) 19.08.02

TAIWAN
Wang Laboratories (Taiwan), Ltd.
9, Sec. 5 Nanking East Road
Taipei, Taiwan
779619

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