The era of personal programming is here.

And TI's new low prices prove it.

SR-56
Key programmable
$109.95*

SR-52
Card programmable
$299.95*

*U.S. suggested retail price; may vary elsewhere.

Long calculations. Analytical math. Time-consuming and error-prone to do by hand. Costly on a computer.

An SR-52 is a better way.

If you're a professional—or studying to be one—then chances are you're deeply involved with: Optimization. Mathematical modeling. Iteration. Data reduction. Projections. What-if matrices. Risk analysis. Forecasts. Worst case analysis. Probability.

If you have the time, you work them out. Or, you get in line for computer time, then wait. So, more often than you'd like to admit, you rely on your intuition. Make an educated guess. Or do some ball-park figuring.

But you can change all this. You don't need to guess. You can *know*. Because personal programmables help you cope with more data, explore with more insight, far more successfully than ever before. You make better decisions, chosen from more options—better decisions founded on a broader data base. More decisions. Faster. On the spot.

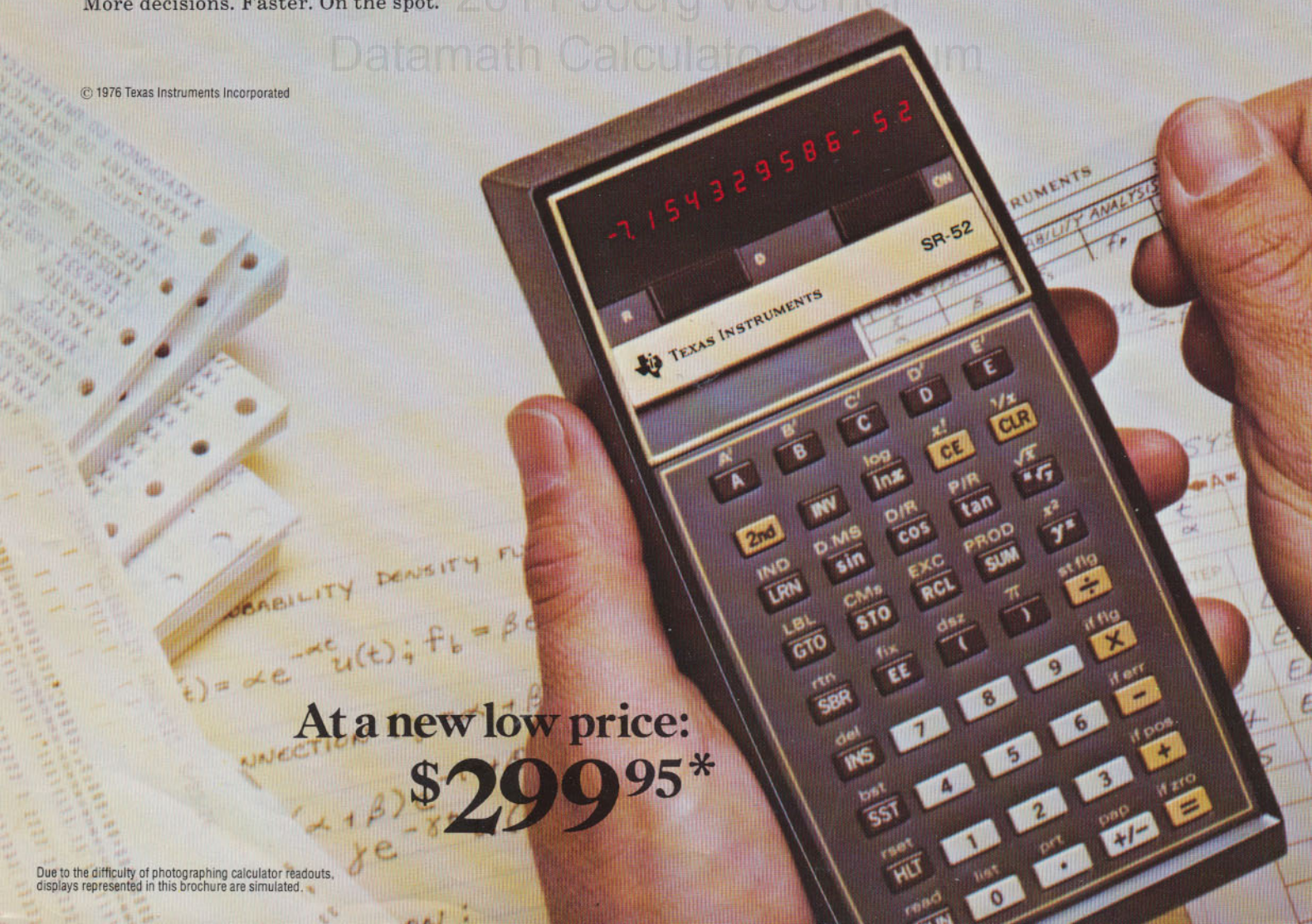
A card programmable that offers outstanding capability at an extremely attractive price. Without compromising quality.

TI's advanced technology and manufacturing know-how are the keys to the SR-52's exceptional value.

You can process data or perform complex calculations automatically. Load the card and put its contents into program memory. Key variables directly into the program — or into the 20 data memory registers (up to 60 in certain cases). Run a program as often as needed. Change values of variables as often as you desire.

Program memory and data registers in abundance. Data recording, too. The SR-52's 224-step program memory uses merged prefixes, so each step can hold two keystrokes. With this capability the SR-52 can handle programs you may have thought required a computer. Although the basic 20 data registers are usually more than adequate, you can use up to 40 additional registers. (28 in program memory, the 10 pending operations registers, and 2 more.) And you can record up to 28 data registers onto blank magnetic cards. Read them back in later.

Computer-like branching. The SR-52 offers seven types of unconditional branching. And 10 conditional branches each with three ways to address: absolute, label, or indirect. That's 37 different branch-



At a new low price:

$299.95*

Due to the difficulty of photographing calculator readouts, displays represented in this brochure are simulated.

ing instructions. Five flags can be set, cleared, or tested from the keyboard or within a program. You also get 10 user-defined keys.

Direct or indirect access to *all* data memories. Store numbers directly in *any* memory register. Or, store a number in a data memory specified by *any* other register (indirect addressing). Add, subtract, multiply, divide directly within all registers. Exchange display with memory.

Edit and debug. Move through a program a step at a time. Forward or backward. Insert. Delete. Or write over steps. List and trace your programs on the PC-100 printer.

Basic Library of 22 programs included. Put them to work right away: math, statistics, finance, electrical engineering, and others. You also get a 96-page Basic Library manual. Each prerecorded program card is supported with sample problems, user instructions and program listings.

Develop, write and record your own programs.

Programming is just logical thinking. You can do it. Using the programming manual with the handy coding form and user instruction tablet, you'll be writing programs in just a few hours. More than likely you won't be able to write optimum programs straight-off. Programs which run the fastest and use the fewest steps. However, you can begin writing programs that work. Press LRN to store each keystroke. Press it again and the SR-52 has learned your program. It's ready to RUN. Record your program on a blank magnetic card, and make it part of your personal library to use again and again. As your programming knowledge develops, you'll discover how this skill magnifies your professional capability. Better decisions will be as near as your SR-52.

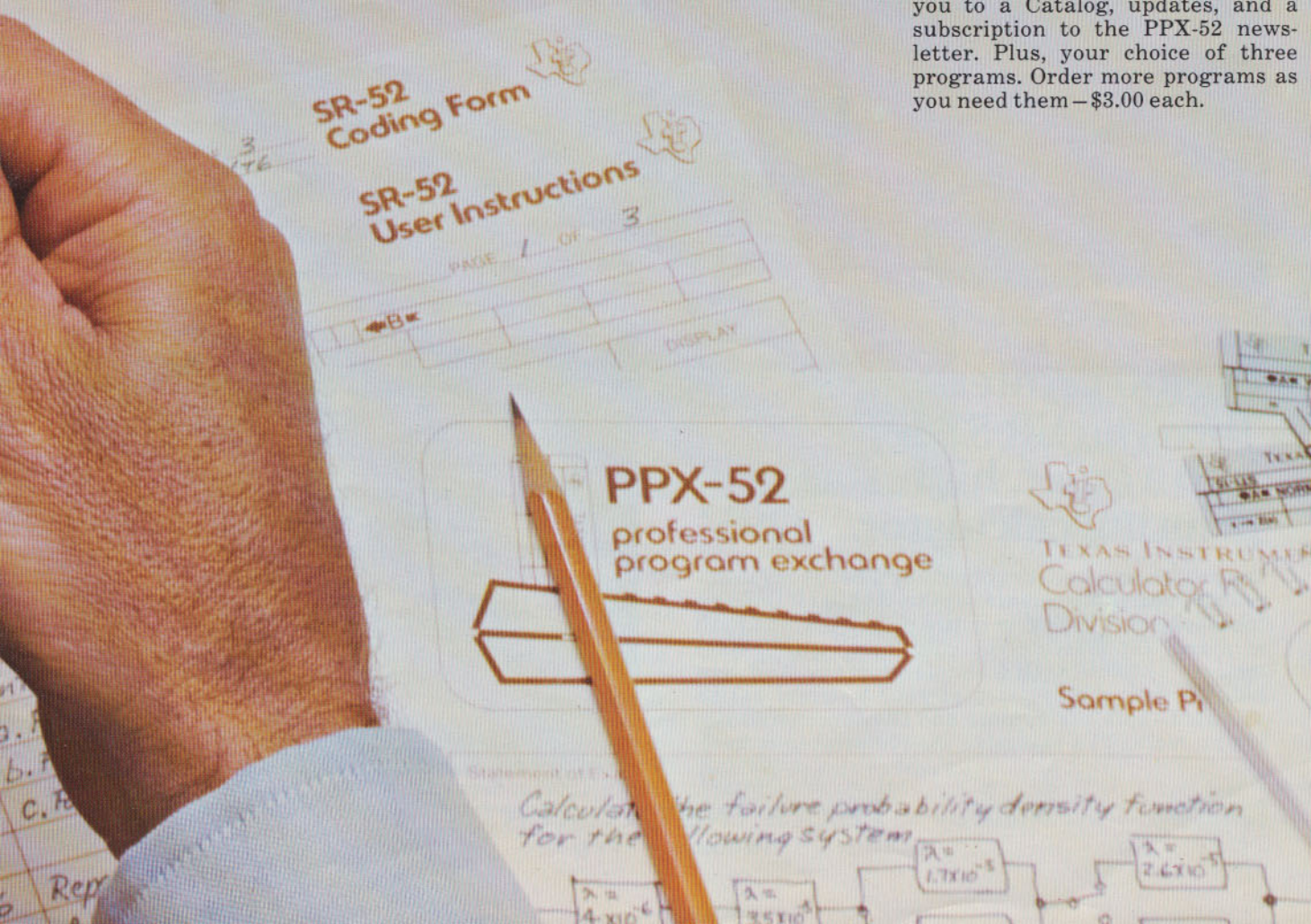
Share programs with your colleagues through PPX-52.

There may be times when you need a complex specialty program. But you'd like the convenience of having a ready-made program that's not a bother to obtain. This is where TI's Professional Program Exchange (PPX) can be of enormous help. Here's how it works:

As a member you'll be able to turn to the section of your PPX-52 Catalog that serves your discipline. With hundreds of user-submitted programs available, there's a good chance the one you need is there. Order it, and put it to work on receipt.

What you get is a program developed, tested and submitted by one of your professional peers. Likewise, when you develop programs you may submit them for possible inclusion in the Exchange for others to use.

PPX-52 is for SR-52 owners who want to increase their professional contribution and efficiency. The annual membership fee of $15 entitles you to a Catalog, updates, and a subscription to the PPX-52 newsletter. Plus, your choice of three programs. Order more programs as you need them—$3.00 each.



Or, run prerecorded programs from TI's Libraries.

Optional libraries for the SR-52 go further and do more. Because of the 10 user-defined keys, 20 data memories and 224 program steps. So more steps and functions can be put on a card.

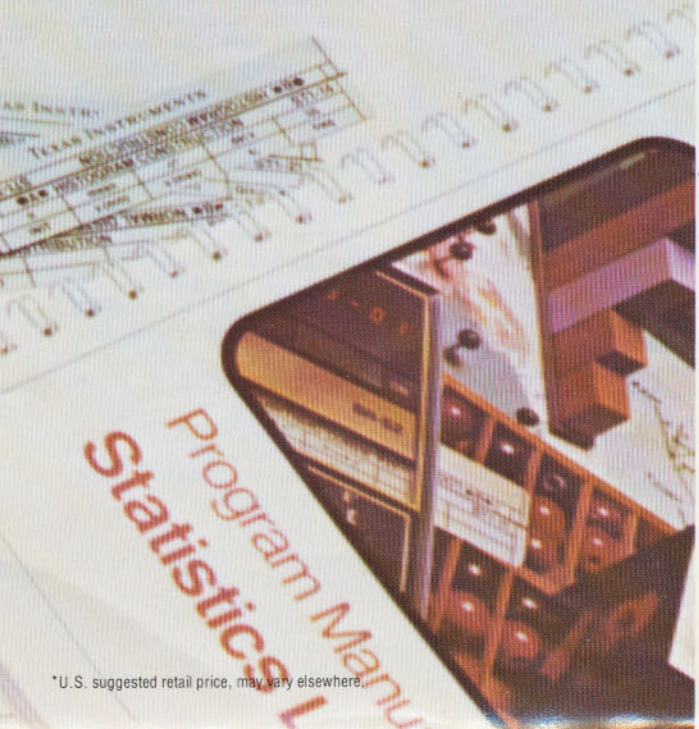
Math. Hyperbolic functions. Quadratic and cubic equations. Simultaneous equations. Interpolation. Numerical integration. Differential equations. Matrix operations. Base conversions. Triangle solutions. Complex functions. 34 program cards. $29.95*

Electrical Engineering. Active filters. Resonant circuits. T-π networks and transformations. Transmission lines. Phase-locked loops. Transistor amplifiers. Fourier series. Coils. Power transformers. Controlled rectifier and power supply circuits. 25 programs. $29.95*

Statistics. Means, moments, standard deviations. Random numbers. Permutations and combinations. t-statistics. Analysis of variance. Regression analysis (linear, power curve, exponential, logarithmic, quadratic). Multiple regression. Histograms. 12 distributions (normal, chi-squared, Poisson, Weibull, hypergeometric, etc.) 29 programs. $29.95*

Finance. Ordinary annuities. Compound interest. Accrued interest. Sinking fund. Annuity due. Bond yield and value. Days between dates. Annuities with balloon payments. Interest rate conversions. Add-on rate installment loans. Loan amortization. Interest rebate. Depreciation (SL, DB, and SOYD) and crossover. Variable cash flows. Internal rate of return. Capital budgeting. 32 programs. $29.95*

Now available. Three new applications for the SR-52: Aviation. Surveying. Navigation. Check the new system that interests you, and we'll send you detailed information.

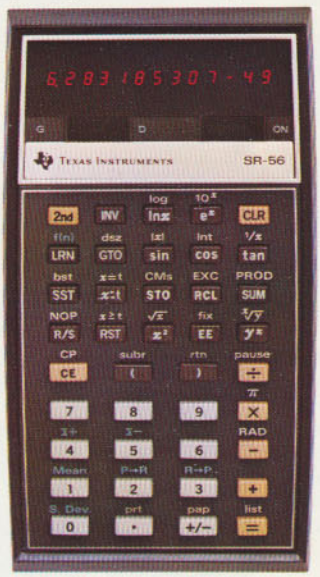


*U.S. suggested retail price, may vary elsewhere.

SR-56

new low price: $109.95*

74-preprogrammed operations. Incredible calculating power, 10 memories and computer-like programmability in 100 steps.



A powerful slide rule calculator that also does double-duty as an economical, powerful key-programmable with: 100 programming steps. Eight-register stack (handles up to seven pending operations). Nine levels of parentheses. And 10 data memories.

Branches like a computer. Capable of direct addressing, which includes: Go to. Reset. Subroutine (4 levels). Plus six conditional branches.

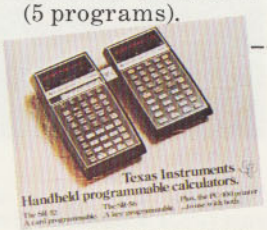
Unique independent test register. Compare the value in the display with a value in the t-register—without interfering with calculations in progress. Or, use it as an extra memory.

10 memories for your tough problems. Store and recall data. Add, subtract, multiply, or divide within a memory register without affecting the calculation in progress.

Unique pause key works two ways. Using this key in a program displays any step you designate for a ½-second. Hold the key down and you'll see the result of every step in the program for ½-second.

Easy editing. Single-step and back-step keys let you sequence through program memory to examine what you've done. If you pressed a key incorrectly, you can go back and write over it.

An applications library, too. A 192-page collection of programs. All pre-written. Select a program. Follow the listing (putting in your own data, of course). And you'll immediately begin using your SR-56's computing power to solve your own problems. • Math (10 programs) • Statistics (12 programs) • Finance (11 programs) • Electrical Engineering (11 programs) • Navigation (7 programs) • Miscellaneous and games (5 programs).



Get our new 16-page brochure that delves deeply into the features of the SR-52, SR-56 and PC-100. Also get a **free** prerecorded program and instructions so you can try an SR-52 at your TI retailer.

Texas Instruments Incorporated
P.O. Box 5012 M/S98
Dallas, Texas 75222

Check one. Send me free:
- ☐ EE program card
- ☐ Statistics program card
- ☐ Finance program card

Send me more information:
- ☐ Navigation System
- ☐ Aviation System
- ☐ Surveying System
- ☐ PPX-52

Name _____

Title _____

Company _____

Address _____

City _____ State _____ Zip _____

T I M D I R D D N E E D N S A

When professionals need decisions, programmables deliver. Anywhere. Anytime.

"The SR-52 saves me time in designing attenuators—pi pads, T-pads, H-pads, etc. I key in the impedance and amount of loss and, in seconds, the SR-52 tells me what resistors to use. Without a calculator, it might take hours to optimize these values. The SR-52 is very easy to program—it works very naturally. It's cheaper, of course, than using a time shared system. It's also quicker and more convenient—not having to go to a terminal and access the big computer. And many things—formula translations, for example—are just easier to do on the SR-52."
M. H. Kindermann
Engineering Staff Supervisor
AT&T Long Lines
Kansas City

"I'm using the SR-52 to handle long calculations in determining optimum locations in a warehousing system. I need lots of data storage – plus I can copy the magnetic cards and send them to our clients for use on their SR-52. We're also working on an energy model – a huge computer program with thousands of calculations. Here, I'm using the SR-52 for pre-processing and post-processing data to get it in a more usable form – to get my data out faster. The SR-52 is very powerful – and convenient. It's always available. I can take it anywhere."
Marleen Mandt
Operations Researcher
Stanford Research Institute
Menlo Park

"We had a program we ran twice a week on time shared computer. It involved entering stock prices, option exercise prices—60 option prices. We had chronic difficulty getting a clean, accurate run because wrong quotations crept in. We'd lose time locating each error. I got the idea we could do it faster with an SR-52 and a PC-100 printer—screening each entry. I wrote the program myself. It worked beautifully. It's a big dollar savings. My secretary usually runs the program now."
Biddle W.
Worthington, Jr.
Securities Account Executive
Wertheim & Co., Inc.
New York City

"Inserting a lens in the eye, usually at the time of a cataract extraction, has become an important surgical technique. The lens must be precise. This is where my SR-52 has proven invaluable. First the length of the eye is measured by ultrasound. Then I incorporate this and other data into formulas which I've developed and programmed on the SR-52. Of course, I share my programs with my colleagues. And, my approach is an integral part of my lectures."
Richard D.
Binkhorst, M.D.
Ophthalmic Surgeon
New York City

"Calculating a gas pipeline network for 200 homes under construction takes hours of tedious work. I developed a program for my SR-52. It makes all the necessary iterations—and gives me pressures and flow rates. Now I do in less than two hours the same work that used to take 10."
Carlos de León
Consulting Engineer
Diseño Ingenieria y Tecnica en Gas, S.A.
Mexico City

"I wrote a program which I use in designing overhead bridge cranes. It calculates the moment and the maximum deflection on the beams that carry the trolley. I plug in the section's modulus and moment of inertia. Then the bending stresses and deflection are calculated for me. I wrote another program that I use in designing column footings. A programmable gives me the capability to analyze several setups very rapidly and come up with a good solution."
Joel Waldbieser
Civil Engineer
Waldbieser Engineering
Terra Haute

TI's unique Algebraic Operating System makes the calculator part of the solution. Not part of the problem.

With the introduction of the SR-50 slide rule calculator a few years ago, Texas Instruments had a choice: algebraic entry or Reverse Polish Notation (RPN). TI chose algebraic entry because it's the most natural and easiest to use. Now, with the new programmable calculators, TI takes another major step forward in power and ease of use—the unique Algebraic Operating System.

AOS is more than just algebraic entry. It's a full algebraic hierarchy coupled with multiple levels of parentheses. This means more pending operations, as well as easy left-to-right entry of expressions—both numbers *and* functions.

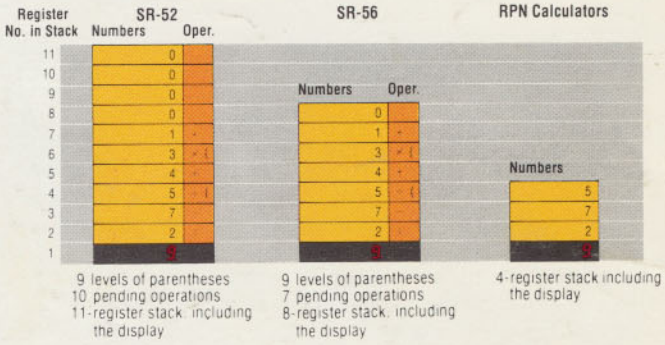
Pending operations let you compute complex equations directly. For example, a seemingly simple calculation like this:

$$1+3\times\left[4+\frac{5}{\left(7-\frac{2}{9}\right)}\right]=?$$

contains six pending operations as it's written. A TI calculator with full AOS easily handles it just as it's stated, left-to-right. You don't have to rearrange the equation, or remember what's in the stack as with RPN.

Here's how AOS stacks up.

AOS remembers both numbers and operations, so you key-in your equation left-to-right. RPN only remembers numbers, you have to remember operations and the order.



A calculator with full AOS remembers both the numbers **and functions** in its register stack. And performs them according to algebraic hierarchy. As more operations become pending, the stack fills up (see diagram). Finally, when the equals key is pressed, the operations in the register stack are performed to give you the correct answer (15.21311475). Automatically.

Compare the SR-52 & SR-56 with other programmables in their class.

Operating characteristics	SR-56	SR-52
Logic System	AOS	AOS
Maximum number of pending operations	7	10
Parentheses levels	9	9
Memories	10	22
Store & recall	●	●
Clear memory	●	●
Sum/Subt to Memory	●	●
Mult/Div to Memory	●	●
Exchange display with memory	●	●
Additional special memories	1	38
Indirect memory addressing	–	●
Exchange x with t	●	–
Fixed decimal option	●	●
Calculating digits	12	12
Angular mode Deg/Rad	●	●
Grad angular mode	●	–
Digits displayed (mantissa + exponent)	10 + 2	10 + 2

Calculating characteristics	SR-56	SR-52
Log, Inx	●	●
10^x, e^x	●	●
X^2, $\sqrt{X}$	●	●
1/X, π	●	●
Y^x	●	●
$\sqrt[x]{y}$	●	●
X!	●*	●
Int X (integer part)	●	●*
Fractional part	●	●*
Trig functions & inverses	●	●
Hyperbolic functions & inverses	●*	●*
Deg/min/sec to decimal deg & inverse	●*	●
Deg to Rad conversion & inverse	●*	●
Polar to rectangular conversion & inverse	●	●
Mean, variance & standard deviation	●	●*

*Programmable functions

Programming capability	SR-56	SR-52
Program steps	100	224
Merged prefixes	●	●
Program read/write on mag. cards	–	●
Data read/write on mag. cards	–	●*
User defined keys	–	10
Possible labels	–	72
Absolute addressing	●	●
Subroutine levels	4	2
Program flags	–	5
Decrement & skip on zero (loop)	●	●
Conditional branching instructions	6	30
Unconditional branching	3	7
Indirect branching	–	●
Editing: Step, Backstep	●	●
Insert, delete	–	●
NOP	●	–
Single step execution	●	●
Pause	●	–

PC-100 printer. Turns an SR-52 or SR-56 into a quiet, high-speed printing calculator. $295*

Imagine the convenience of getting a hard copy printout of: Data. Intermediate results. Answers. Imagine the efficiency of listing an entire program at the push of a key. Or, printing the calculator's entire data memory contents with a simple program. And now imagine seeing every step of your program as it's executed—both the number and the function. Imagine no more. TI's exclusive PC-100 printer is here.

*U.S. suggested retail price, may vary elsewhere.

Be sure and send coupon to get your 16 page brochure and free preprogrammed magnetic card.

TEXAS INSTRUMENTS
INCORPORATED

Printed in U.S.A.
65543