

sight-impaired," says Tom Mock, a staff engineer with the Electronic Industries Association (EIA) in Washington, D.C.

"Input is verified by voice simulation," explains Mock. For any calculator user, however, the voice verification of what is entered can improve accuracy.

There are three general classifications of hand-held calculators: four- to six-function, preprogrammed, and programmable. Your first step in choosing a calculator is to determine which of the three best suits your needs.

☐ Four- to six-function units.

They perform addition, subtraction, multiplication, division, and one or two other functions, such as percentages and square roots. They include keys for adding or subtracting to memory, memory recall, and memory clear.

For basic math, this is probably all the calculating power you will need. You'll find this type of unit useful in figuring taxes, balancing a checkbook, and keeping track of budgets.



☐ Preprogrammed units.

These units have been programmed to perform specific functions according to their primary application. Mock explains: "*Statistical* units are useful to students involved in a lot of number crunching. *Business* units are preprogrammed for real estate loan calculations or banking. And *engineering* units are designed for com-

**"Technological
advances mean
a lot more
power in the palm
of your hand."**

puting angles, degrees, and other math-oriented functions."

In business applications, preprogrammed units are especially useful for figuring present and future value, monthly payments on annuities, bond yield, and loan amortization. The alternative is to use a complicated book of interest tables, in which case a calculator is still needed for multiplying table values. Units designed to calculate interest usually include a feature for counting the number of days between two

dates (also useful for figuring such things as the number of days until midterm exams, homecoming weekend, etc.).

☐ Programmable units.

While they offer many of the same features as the other types of units, they also offer a computerlike programming capacity that allows

you to tailor the calculator to your own applications.

For instance, let's say that you have a particular calculation that you'll need to repeat many times—such as separating loan payments into interest and principal or figuring sales tax on individual items. First you must break down the calculation into its steps, then enter the computational routine into the cal-

culator's memory (usually by depressing the "Learn" key). Once this is done, you can execute the sequence with one keystroke whenever you need to.

Some specialized calculators can be used to produce graphic displays. With automatic scaling routines, optimum screen usage is fully automated in these systems. Some versions of this type of calculator are programmable, so that you can create your own graphics. With plug-in devices, a hand-held calculator can give you graphic capability not available on many computer systems.

Shopping skills

The type of calculator you buy should be determined by your computational needs. With all the new models on the market, how do you determine the one that's right for you? Begin by shopping around. Find out what features are available and decide which ones you should have. Don't be sold on "extras" you'll never use. On the other hand, keep in mind that you don't want to "outgrow" your calculator right away.

Some questions to ask before you buy:

- Is the calculator for personal or academic use? If academic, how advanced is your coursework?
- Will you need statistical or high-math functions?
- How much can you afford to spend?
- Is programming a feature you'll need?
- Where will you use the calculator? (For outdoor use, says Mock, you'll want a liquid crystal display; in dim light conditions, you'll need LED display.)

The latest generation of calculators offers a wide range of choices. Whether your needs stop with math basics or have progressed to trig functions, computer conversions, loan amortizations, and more, there's a calculator that's just the right tool for you.