Everyone Should Learn Programming, TI Calculates

Photo 1: TI's DataMan offers arithmetic practice problems and math strategy games for the youngster. It includes a "beat the clock" timer feature and a "whiz-bang" display for correct answers.

Circle 555 on inquiry card.

Photo 2: The TI 58, shown mounted on the PC-100A printing cradle with alphabetic printing capability.

Circle 556 on inquiry card.

Photo 3: The ultra compact DataClip calculator will run for 1000 hours on one set of batteries.

Circle 557 on inquiry card.

In a move calculated to encourage interest in programming and computational problem solving, Texas Instruments introduced a number of new general purpose and specialty calculators recently. In a press announcement, TI noted that nearly 400,000 people purchased programmable calculators in 1976, and estimated that over 3 million people a year would be buying programmables by 1979. Included among TI's new products are calculators with "Solid State Software" program libraries, new tutorial books on programming, and a new teaching device for the kiddies.

At the top of the new line are the TI Programmables 57, 58 and 59. The Programmable 57 ($79.95), which evidently supersedes the SR-56, includes a 150 keystroke program memory, insert and delete keys for editing programs, and ten labels for "relocatable" program branching. The 57 comes with a new learning guide, *Making Tracks Into Programming*, which replaces the usual owner's manual.

The Programmable 58 ($124.95) and 59 ($299.95) feature larger program and data memories, and plug-in Solid State Software read only memory modules containing up to 5000 program steps each. The ROM libraries range from applied statistics and surveying to real estate, investment, aviation and marine navigation programs.

Internal memory on the 58 and 59 can be allocated either to program steps or to data registers. The unit of allocation is ten data registers or 80 program steps. The TI 58 has up to 480 program
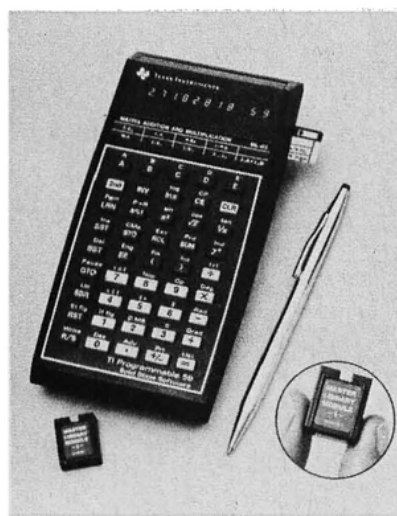

Photo 4: The TI 59 features Solid State Software plug-in program library modules of up to 5000 program steps, as well as a magnetic card reader and internal memory for 960 program steps.
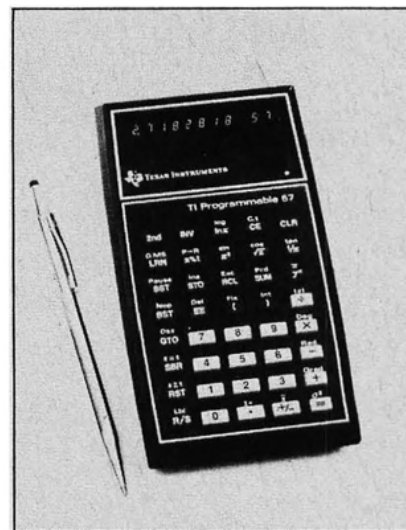
Circle 558 on inquiry card.

Photo 5: The new TI 57 programmable calculator can store up to 150 keystrokes.

Circle 559 on inquiry card.

steps or up to 60 data registers, while the TI 59 has up to 960 program steps or 100 data registers. (When all 100 memory registers are in use on the TI 59, 160 program steps are still available.) The TI 59 also has a magnetic card facility. Using two cards, up to 960 program steps can be recorded and reloaded in this way.

Additional features of the TI 58 and 59 are up to ten registers for looping, incrementing and decrementing, up to ten flags which can be set, reset or tested, and up to six levels of subroutine calls. Program steps may be addressed in absolute, indirect and label modes, while data registers may be addressed directly or indirectly.

A related new product is the PC-100A printing cradle, which can be used with any TI programmable calculator except the Programmable 57. This printer has 64 alphabetic, numeric and special characters which can be printed at the rate of 60 characters per second. Up to 20 characters can be printed per line on 2.5 inch (6.4 cm) wide thermal paper. The PC-100A can also be used to print, list or trace program steps as an aid to debugging. It is priced at $199.95.

Another element in TI's consumer education program is a new book, *Calculating Better Decisions*. Priced at $4.95, the book is offered in a package with the SR-51-11 calculator for $69.95. The book concentrates on use of the SR-51-11's advanced statistical functions in psychology and the social sciences and in business finance.

One strategy in TI's plan to place several calculators in every home is to design specialty calculators for specific types of consumers or consumer uses. A good example of this strategy is the new MBA calculator, aimed at the

hundreds of thousands of masters in business administration students and degree holders. The MBA ($79.95), like the TI Business Analyst, has special keys to accomplish common business functions such as net present value, internal rate of return, trend line analysis, mean, variance and standard deviation, accumulated interest and remaining loan balance, and annuity calculations. But it also has a simplified programming feature, allowing storage of up to 32 program steps but no tests and branches, as well as 12 data memories.

Another new product, the TI 1680 "Replay Calculator," is designed specifically for applications such as checkbook reconciliation or "balancing the books" in an accounting system. The TI 1680 ($29.95) allows the user to recall up to 20 previously entered numbers and arithmetic operations, and to change the previous entries to see what effect the change has on the calculated result.

If the typical TI calculator is too heavy or bulky for your pocket, TI still has something for you. The new Data-Clip ($34.95) is about the size of a 6 inch (15.2 cm) ruler, and no thicker than a pencil. It has five functions and an 8 digit liquid crystal (LCD) display, and will operate up to 1000 hours on a set of batteries.

And finally, for the kiddies, there's DataMan! TI evidently believes that youngsters should get started with calculators at an early age (so that they'll be ready for programming by age 12?). DataMan ($24.95), patterned after the highly successful "Little Professor" introduced a year ago, offers children practice with arithmetic problems and fun with math strategy games. Learning activities possible with the unit include the Answer Checker, Problem Storage, Math Tables and Missing Numbers, and games include Wipe Out and Force Out. A special "beat the clock" timing feature adds to the fun and challenge of the exercises and games. Correct answers are rewarded with "whiz-bang," a highly
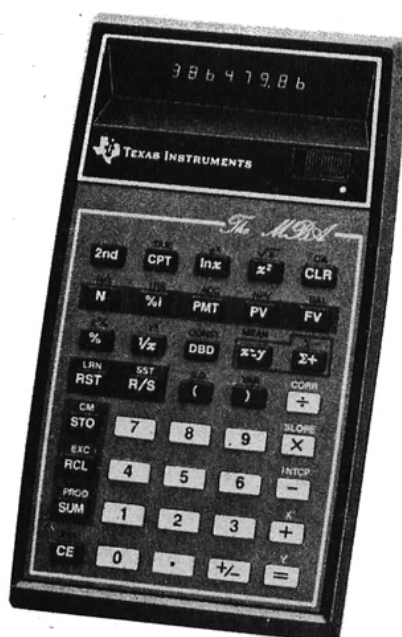

Photo 6: The new MBA calculator is aimed at business administration students.

Circle 560 on inquiry card.

Photo 7: This new book is available alone or packaged with the SR-51-11 calculator.

Circle 562 on inquiry card.

Photo 8: The TI 1680 replay calculator, which remembers the last 20 numbers and operations entered, is useful for checkbook balancing.

Circle 561 on inquiry card.

visual action packed display "on the order of modern stadium scoreboards." DataMan can be adjusted to present problems appropriate to the youngster's achievement level. It comes with a math activity book and helpful hints for parents.

Clearly, TI's calculators are moving in the direction of increasing diversity and sophistication. In fact, the TI 59 with the PC-100A printing cradle probably qualifies as a personal computer, with limited alphabetic data handling, hard copy, and mass storage. But when will TI introduce a product similar to the Commodore PET or the Radio Shack TRS-80, and what impact will it have on the marketplace? This is anyone's guess. In the meantime, you can find out about today's calculators by contacting Texas Instruments Inc, Inquiry Answering Service, POB 53 (attn: the product of your choice), Lubbock TX 79408.■