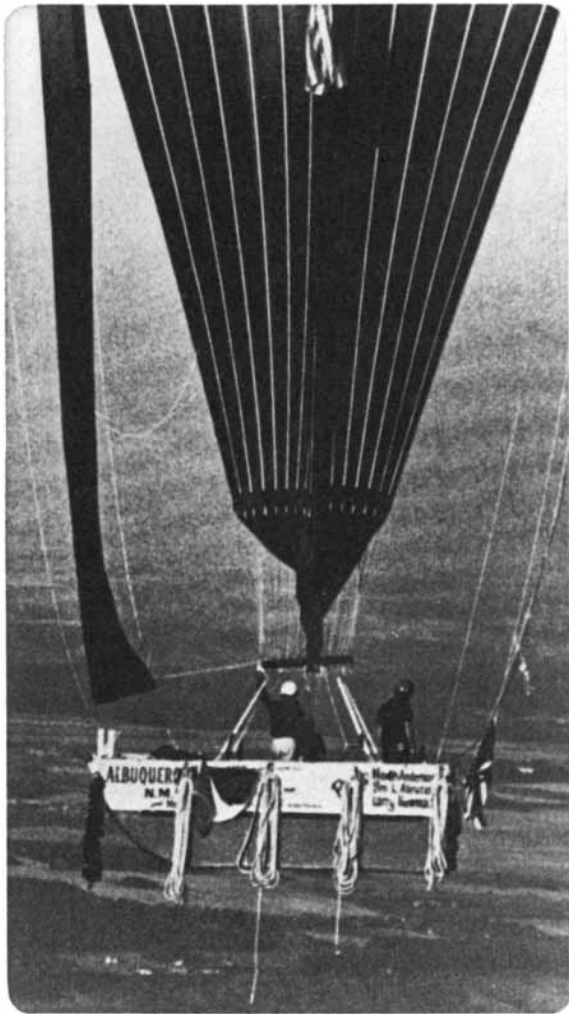


HP measurement and computer advances

When you set out on a journey without equal, you rely on a calculator without "equal."



United Press International Photo

HP programmable calculators have performed navigational computations on some extraordinary journeys before: the Apollo-Soyuz link-up in space and the America Cup yacht race, for example. But to our knowledge, this is the first time one has navigated the Atlantic in a balloon.

When three balloonists from Albuquerque, New Mexico, made aeronautical history by flying nonstop from the United States to France, they calculated their position every morning and evening with an HP-67 hand-held programmable calculator.

American balloonists aboard Double Eagle II approach their landing site at Evreux, France, after completing the first successful transatlantic crossing by balloon.

Balloonist Maxie Anderson took along an HP-67 together with a Navigation Pac of prerecorded programs designed for ocean-going vessels but also appropriate for a slow-moving balloon. While the HP-67 was originally intended as a backup for a most elaborate navigation system involving weather satellites, Goddard Space Flight Center, ham radio, and transatlantic commercial aircraft, response from the system took six or seven hours so that its precision was rather too retroactive for immediate use.

Shortly after crossing the coast of Newfoundland, as it happened, the aeronauts received word of an approaching storm. They needed to know their position, and they needed it fast. Unfortunately, Goddard's computers were tied up tracking a newly launched Venus probe, and couldn't help.

HP-67 to the rescue: balloonist Anderson measured the altitudes of Venus and Polaris, then spent a few minutes with his calculator and Navigation Pac, and was able to report his position to the ground crew by ham radio in time to turn the weather pattern to his advantage.

Thereafter, Anderson used his HP-67 each morning and evening to compute his position, which was confirmed six to seven hours later by data from Goddard. His fixes were within 20 to 30 miles of the satellite-derived positions—more than sufficiently accurate, considering that the horizon was 160 miles away. With a modern bubble sextant rather than his World War II surplus model, Anderson estimates his accuracy would have increased to within 10 miles.

HP programmables have successfully weathered a range of adverse environmental conditions—outer space, Mt. Everest, the Sahara, deep jungle—where reliability, accuracy, and quality were crucial. And while you may not be planning to navigate an 11-story-high bag of gas across the Atlantic, you can be certain that HP programmables will make your important calculations reliably and without "equal."

extend your possibilities.

The HP 250: A new, easy to use, small business computer with true data base management that adapts to your existing organization.

The HP 250 is the lowest-priced business computer available today with full data base management. HP 250 also offers forms and report-writing utilities; 128K bytes of system memory and 32K bytes of user memory, expandable to 64K; and built-in self test.

While it contains many big-system features, and includes powerful tools for developing applications, the HP 250 is exceptionally easy to program and operate. It is well suited for the end user, the OEM who tailors computer solutions for the small-business market, and larger companies that need easy-to-use systems for dedicated applications.

The careful attention to human engineering makes the HP 250 very approachable, especially for first-time computer users. The keyboard resembles that of an office electric typewriter with an adding machine's numeric pad as well. The video display screen, which swivels, tilts, and slides for viewer comfort, has eight "soft keys," with definitions labeled on the display screen. These keys can be programmed to guide the user through each task with step-by-step prompting. They're also very useful to a programmer writing applications software.

As a further convenience, the HP 250 can be placed in most office environments without special site preparation. Installation is a simple matter of plugging the computer into a standard electrical outlet.

The HP 250 provides complete data base management capability (IMAGE/250) which makes defining, creating, accessing, maintaining, and using complex data files a simple task. The information stored in the data base is available on command with QUERY/250, a simple, direct inquiry method that makes it possible to get stored information without writing an additional program. The FORMS/250 utility makes it easy for the user to put existing business forms on the HP 250. The user can then display the form on the video screen when



needed for fill-in-the-blanks use. REPORT WRITER/250 provides formatting controls for computer-generated reports in complete or summary form.

Price of the standard system is \$24,500*. The system includes two 1.2-megabyte flexible disc drives, a dot matrix printer, the data base manager, and all the application development tools described earlier. Storage for the system can be expanded through additional flexible discs or by adding fixed discs.

Even with all these technical advances, you don't have to be afraid of the HP 250. Turning the key initiates a self test that lets you know the system is operating properly and ready to do your task. And when it comes to maintenance, the CPU and memory boards are on a single, roll-out chassis to make it easy for HP-trained service personnel to keep the system in top form.

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