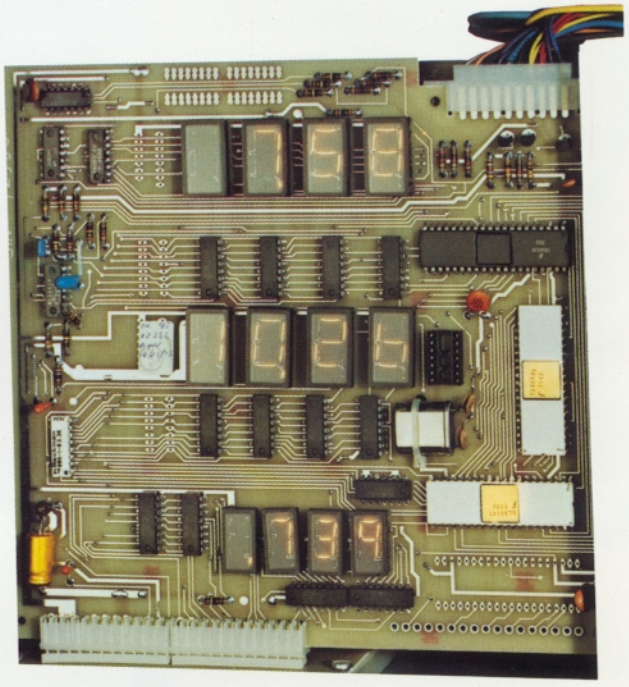
Announcing with pride...

Bennett Computerized Marketing System

Solid-state reliability . . . microcomputer flexibility . . . now teamed to give you an unprecedented range of management controls and cost-cutting functions!

Here is remote control of up to twelve hoses — continuous, instantaneous, and virtually effortless. Here is automatic book-keeping to slash station management time while increasing accuracy. Here is a triumph in technology for the petroleum marketing industry.

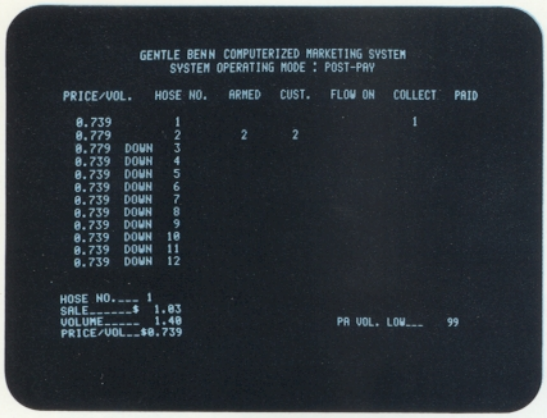
The Bennett Computerized Marketing System is designed to meet your immediate marketing/management needs, plus those you'll face in the future. You have remote control of up to twelve hoses with a single control console, keyboard and cathode ray tube (CRT) display unit. It's the ultimate system for self-serve operations. And it's so *easy* to operate, we call it "Gentle Benn."



Memories are made of this.

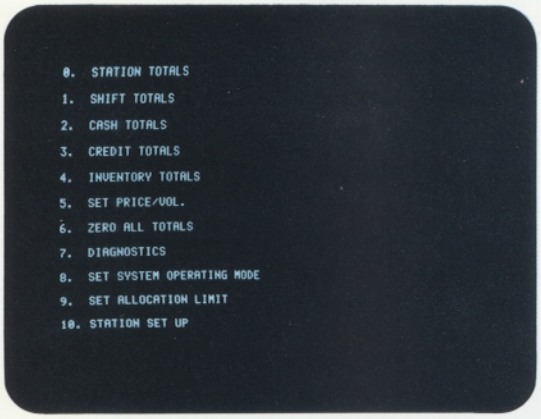
Heart of the new Bennett System is this microcomputer. Integrated into its sophisticated circuitry is a *microprocessor* — a state-of-the-art device smaller than your thumbnail, that performs like computers many, many times larger.

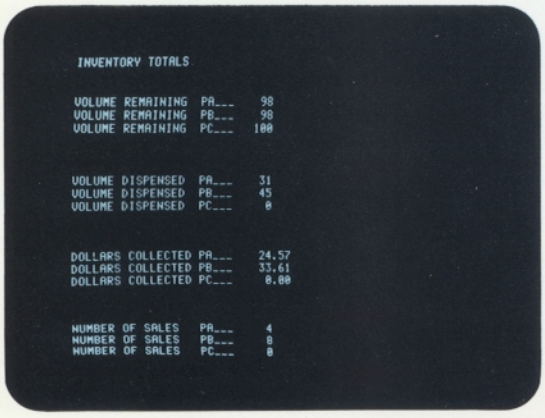
Each dispenser, and the control console, features such a microcomputer. Because of this, the Bennett System is exceptionally easy to install. Only four wires are required, and all devices hook into a common communications link, utilizing it much like a telephone party line. The microcomputer in the console seeks out information from the microcomputer in the first dispenser, relays it to the CRT display tube, then moves along the line to the next dispenser, where the operation is repeated. All in microseconds, of course.



Readouts–instantly and continuously.

When your station is in operation, you know instantly — and continuously — which hoses are in use, number of gallons pumped, and amount of individual sales. You identify sales as "cash" or "credit" with the press of a button. You have complete visual control of the status of each hose, including product price per gallon, which can be set directly from the console.





Bookkeeping–at the touch of a button.

For the manager or supervisor, the Bennett System provides privileged information via instant readings on the CRT display. Data instantly available includes:

- **Station totals** in dollars, gallons, and the number of sales transactions.
- **Shift totals,** based on a three-shift operation, in dollars and gallons per shift.
- **Cash totals** — dollars, gallons, number of transactions.
- **Credit totals** — dollars, gallons, number of transactions.
- **Inventory totals** — which provide information as to gallons remaining to be sold at station.
- **Price per gallons assignment.** You can remotely control the price assigned to each dispenser by product and/or individual dispenser if a split island operation is desired.
- **Zero all totals.** If an accounting procedure from your general office is established to start at zero on the first of every month, or if a new dealer is assigned a station, all figures can be reset at zero.
- **Automated diagnostics.** Because of its microcomputer operation, the Bennett System affords you an opportunity to diagnose the status of your station equipment. You can determine if you have a malfunction in any portion of the system's circuitry, and then receive instructions on parts replacement.
- **Set station operating mode** — as post-pay; pre-pay, dollars; pre-pay, gallons; full manual operation; split islands, if desired.
- **Set allocation limit** — control maximum gallonage per customer at each dispenser.

You can also teach this system new tricks.

Because the Bennett System is not a hard-wire system, it is much easier to interface with peripheral devices, such as receipt printers, cash register, credit card reader and validator, etc. Thus, you're assured of flexibility in meeting future requirements while enjoying immediate advantages in marketing/ management techniques.

The Bennett Computerized Marketing System is easily installed — only four wires are required. Solid-state circuitry and Bennett design experience assure simplicity of operation for any station personnel. The added investment, compared to conventional equipment, will pay dividends for years to come. Let's talk about the advantages in light of both your current and future requirements. Call (616) 733-1302.

A note on dispensers.

The Series 5000 dispenser presents a striking advancement in dispensing equipment design. All hydraulics required for actual product transfer are contained in the base section. So the head is uniquely attractive, giving the appearance of being independent of the lower cabinet. Indeed, future design considerations will permit removal of the head from the base section for installation on side stanchion or elsewhere, as desired.

Construction, of course, features the rigid attention to rugged reliability that has made the name Bennett an industry standard.

BENNETT PUMP COMPANY
Broadway and Wood Streets, P.O. Box 597
Muskegon, Michigan 49443 — 616/733-1302

THE BENNETT COMPUTERIZED MARKETING SYSTEM

• *Solid-State Reliability*
• *Microcomputer Flexibility*

The Bennett Computerized Marketing System consists of five elements: A CRT video display unit; control console with keyboard; termination panel with power supply; four-wire "party line" to the dispensers; and the dispensers themselves.

Heart of the system is a microcomputer. Integrated into this sophisticated circuit board is a microprocessor — a state of the art device, no larger than your thumb. *When controlled by the adjacent programmable memory it performs like computers many times its size.*

Each dispenser, and the control console, features such a microcomputer. Because of this design, The Bennett Computerized Marketing System is exceptionally easy to install. Only four wires are required, and all devices hook into this common cable, utilizing it much like a telephone party line. The microcomputer in the console "talks" with the microcomputer in each dispenser and relays input into the CRT display. All in microseconds.

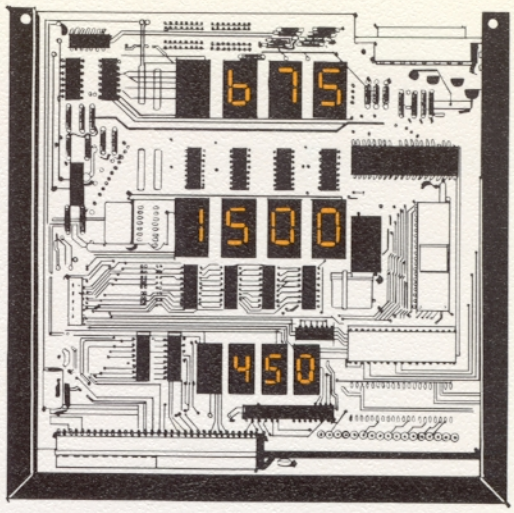
The CRT video display allows monitoring any number of dispensers up to one dozen. It provides continuous display of ten or more functions, including price per gallon, gallons pumped, and cost of the current transaction.

The control console consists of "arm" and "display" buttons for each dispenser; four "function" keys; an "emergency off" button; and a series of keys for input information.

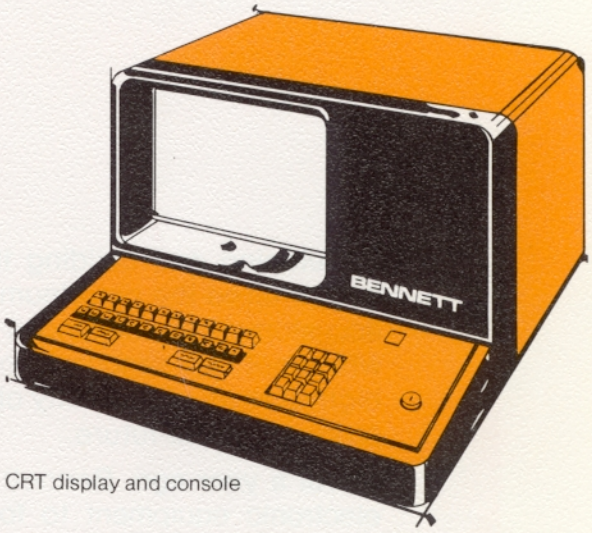
Lockable input keys allow access to privileged station information, such as shift reports; day totals; inventory figures; a current breakdown of cash and credit sales, as well as number of transactions recorded. This management information system also allows remote price setting on each individual pump.

The control console can be interfaced with such peripheral devices as receipt printers, cash drawer or change dispenser, credit card reader and validator, etc.

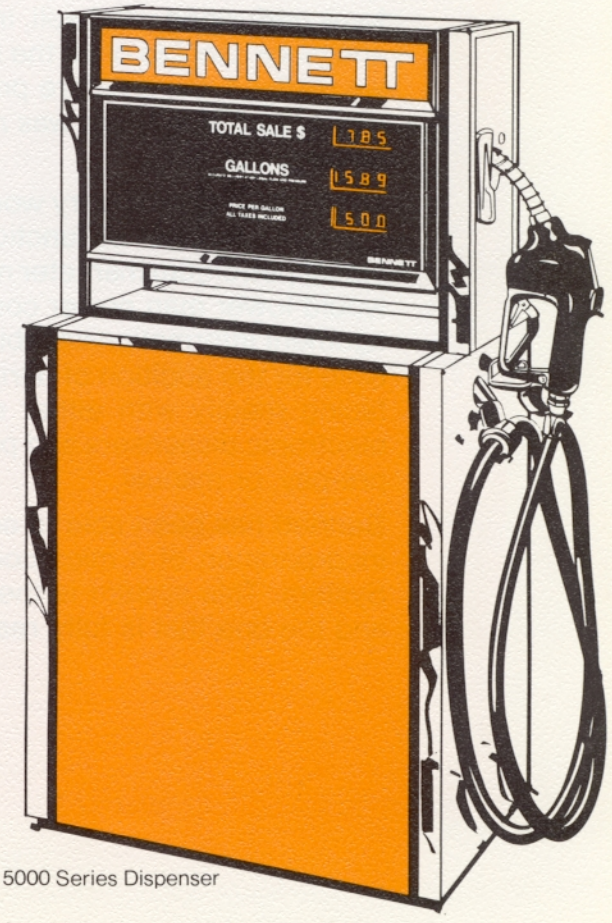
Because the mechanical computer has been replaced by a solid-state electronic display unit, the head of the Bennett 5000 Series Dispenser is very distinctive in design. The head houses a microcomputer and solid-state electronics. A pulser and all hydraulics required for actual product transfer are contained in the lower portion of the dispenser constructed with the rigid attention to ruggedness and reliability that has made Bennett Dispensers an industry standard.



Microcomputer with microprocessor chip



CRT display and console



5000 Series Dispenser

BENNETT PUMP COMPANY
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Muskegon, Michigan 49443 — 616/733-1302

THE BENNETT COMPUTERIZED MARKETING SYSTEM

- ***Solid-State Reliability***
- ***Microcomputer Flexibility***

Developing and building the most sophisticated gasoline dispensing system ever offered the petroleum industry was no easy task. But Bennett people are accustomed to challenges of this type and, in fact, are introducing a system which not only responds to the current requirements of the market but has the highest level of flexibility obtainable for adaption to the marketing of petroleum products in the future.

About a year ago, Bennett delivered what we tend to call our first generation electronic equipment to four different field prototype installations. These systems performed very well, indeed, doing all the things they were designed to do and were capable of all the functions performed by competitive equipment. But we realized, even before production was begun on this very reliable solid-state equipment, that there was need for even more flexible equipment than we had developed.

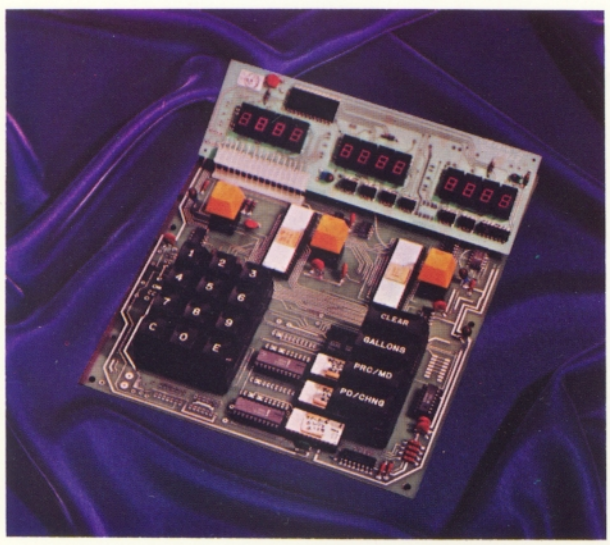
The system the industry would need in the future would have to perform a considerable number of functions with a greater amount of flexibility to suit individual petroleum marketer needs and goals. It would have to offer features which would lower man power costs; increase station design flexibility, provide management information capabilities and, of extreme importance, provide a low cost base for the addition of peripheral automation devices. Also be capable of interfacing readily with either existing mechanical dispensers or fully solid-state electronic dispensers and perform equally well in self-serve modes — post-pay, pre-pay, or manual.

Bennett has been able to achieve previously unheard of flexibility through the incorporation of a microcomputer into The Bennett Computerized Marketing System. This system is the most advanced gasoline dispenser system today, and the one that is fully ready for tomorrow.

Bennett's Newest Pre-Pay/Post-Pay Entry

MODEL 50

The second in our Baby Benn Family



The System designed with Pre-Pay and Post-Pay flexibility for station operators using mechanical pumps or dispensers.

The Model 50 Baby Benn is a three hose Pre-Pay/Post-Pay or Manual "Gallon and Dollar" microcomputer based solid-state, self-serve control console that provides a dedicated display for each of three individual dispenser hoses.

The Model 50 computer is microprocessor based. It's the same basic control logic element used in Gentle Benn equipment, a part of Bennett's entire line of electronic equipment.

It's a small and compact control console—only 2½ lbs. Easy to operate—it enables the station operator to have a Post-Pay/Manual station during certain hours then easily switch to a Pre-Pay operation, whichever suits his needs.

The complete Model 50 Baby Benn System contains:

One Model 50 Control Console for three hose outlets, and one Interconnection Box measuring 15" x 15" x 4".

For complete information contact:

BENNETT PUMP COMPANY
P.O. Box 597 Broadway and Wood Streets
Muskegon, Michigan 49443 – 616/733-1302

PRODUCT DESIGN

A smart gas pump for self-service

The market for gasoline pumps seemed about to evaporate two years ago when the Arab oil boycott, followed by quadrupled oil prices, caused the closing of thousands of existing gas stations and the cancellation of plans for the opening of new ones. But pump sales rebounded last year by 17%, and the rapid growth of the gas pump business is likely to continue as station operators scramble to convert their outlets to self-service. "We are in a new era of retail gas marketing," says Robert K. Disser, vice-president for U. S. sales at Tokheim Corp., of Fort Wayne, Ind., the leading gas pump producer.

Customers pump their own gas at self-service stations, so fewer attendants are needed. But like most labor-saving approaches, self-service is most cost-effective when the procedures are automated. The old-fashioned electromechanical pumps, however, are inflexible in the functions that they can perform and do not lend themselves to automation. As a result, some pump manufacturers recently began offering pumps based on solid-state electronics. And one company, Bennett Pump Co., in Muskegon, Mich., a division of Molson Cos., has leapfrogged even this technology by devising a gas-dispensing system that uses microprocessors, the so-called computer-on-a-chip. Charles L. Vaninwagen, a marketing engineer for Shell Oil Co., which is testing the system, says: "It's the most advanced design anyone has come up with to date."

Peter M. Turner, Bennett's president, explains: "If you are going electronic, you may as well go all the way and use the microcomputer." That trend is mirrored in many industries as microcomputers are designed into machines to increase the power, flexibility, speed, or performance of products that now do their jobs mechanically or by means of conventional electronic technology.

A big market. Because Turner relied on microcomputer builder Process Computer Systems Inc., in Flint, Mich., for the microcomputer design and development work, Bennett itself had to spend only $500,000 to develop the advanced gasoline pump. The stakes seem well worth the small investment. Of the 1 million electromechanical pumps in use today in the U.S., industry sources estimate that about half are candidates for eventual replacement by electronic units as they wear out and station aisles are converted to self-service.

So far, Bennett, which claims 20% of the U. S. gas pump market, has installed some 76 preproduction prototype systems at 11 sites, all on a trial basis. Texaco, Inc., for instance, opened an experimental gas station earlier this year in College Park, Ga., just outside Atlanta, and put the innards of the Bennett system into its own futuristic housing. The installation separates the meters from the pumping equipment, thus providing drivers with a less obstructed view of the transaction display. Turner expects the big action to come soon. "Next month we begin production," he says.

Even without microcomputers, ordinary solid-state electronics systems represent a big state-of-the-art advance over electromechanical pumps.

The Bennett system keeps track of sales and inventory and is reprogrammable

The recent doubling of gasoline prices also works against the old designs. The cumbersome number gears in the conventional design now have to spin twice as fast to indicate the value of a gasoline purchase, and this causes the wheels to wear faster. But electronic displays have no moving parts, so they last much longer and are also faster, more precise, and more sensitive to the starting and stopping of the gas flow. Even more important, electronic gas-dispensing systems, unlike mechanical ones, can readily be tied to a master display terminal in a station kiosk so that a single worker can monitor all sales from one location.

Tokheim stole a lead on its rivals by introducing a solid-state gas pump in November, 1974, and since then the company has sold 8,000 units in the U. S. Other big suppliers, such as the Dresser-Wayne Div. of Dresser Industries Inc., have followed with electronic offerings of their own. "Within two years the market for mechanical pumps will be too small to warrant our interest," predicts Tokheim President Joseph J. Guidrey.

More versatile. The Bennett microcomputer system provides the same benefits as Tokheim's solid-state gas pump, but it can also perform more complex jobs. Because it can store data on memory chips, the microcomputer-based pump can be used to keep track of inventory automatically, maintain daily records on sales, and do other data processing jobs.

A Best service station in Grand Rapids, Mich., operated by Total-Leonard Inc., recently converted to a Bennett system, and now station manager Neal A. Lindale sits at a television-like con-

Ron Sherman

Microcomputers run the gasoline pumps at this Texaco station in College Park, Ga.

sole in the station office, keeping tabs on his operation by pushing an assortment of buttons to read out the results of a current transaction or total sale on his pumps for the day. He can also change prices, measure inventory levels, determine the ratio of credit card to cash sales, and even help diagnose the cause of electronic troubles. "To determine inventory levels previously," Lindale recounts, "we would plunge a stick into the underground tank and read the oil mark."

The Bennett gas pump system has another big advantage. A conventional electronic system is "hard wired," so it cannot readily be altered to perform new functions. The Bennett microcomputer-based system, on the other hand, can easily be reprogrammed to handle new—and unforseen—requirements, such as a change to metric measurement or a government ruling that drivers of big cars be charged a price penalty on gas. When other stations in the Total-Leonard chain are converted to the Bennett system, management plans to hook up the station terminals to a central computer at a headquarters depot in Alma, Mich., where gasoline trucks can be dispatched automatically as needed. "With our system," Turner boasts, "we can go to the oil companies and say, 'You tell us what you want, and we'll program the capabilities in.' "

To what extent gasoline retailers will buy that remains to be seen. It is still too early for the field trials to be conclusive, and many gas marketers, particularly the big oil companies, remain skeptical. For one thing, the system is expensive. A six-hose Bennett system, without display terminals, costs about $1,200 more than a solid-state one and twice as much as mechanical pumps. As a result, most station operators are using their electronic systems simply to dispense gas and tally costs. A microprocessor is not warranted for such simple jobs, and one gasoline marketer says that the Bennett system is "overdesigned." But Gary D. Johnson, vice-president of Process Computer Systems, points out that service stations are getting bigger as a result of the trend toward self-service. Industry figures confirm that trend. A typical self-service outlet is equipped with nine pumps compared with the five commonly installed in the past. "For these stations, microcomputer-based systems will be essential," he says.

Support for Johnson's view comes—at least indirectly—from another important source. Guidrey of Tokheim, whose sales of solid-state gas pumps already account for more than 50% of the company's pump business, says: "We, too, will have a microprocessor-based system on the market within 18 months." ■