new products

without digital programming experience, step by step operating instructions are included. A hybrid monitor controls the analog control functions, A/D and D/A data transfers, and random or sequential addressing. In addition to hybrid software, standard DDP-516 software is provided, including FORTRAN IV, an assembler, I/O, utility, test and verification routines, and a math library.

The standard DDP-516 training course will be provided to DDP-516/TR-48 customers together with a special hybrid course. HONEYWELL COMPUTER CONTROL DIV., Framingham, Mass. For information:
CIRCLE 163 ON READER CARD

10 volt analog/hybrid
The AD/FIVE was constructed with an eye toward hybridization, so that a minimum of circuitry and interfacing is necessary to mate it with a digital machine. The FIVE's bandwidth is 500 KHz, as might be expected for 10v reference hardware. It sports a universal analog and logic plugboard for giving program parameters, specifying logical operators, and providing counters and shift registers on the same panel. The basic system will feature a 12-bit control/data word. Deliveries are slated for June or July. The price range runs from $20K to $100K, depending upon the number of components. APPLIED DYNAMICS, Ann Arbor, Mich. For information:
CIRCLE 164 ON READER CARD

keyboard terminal
This Model 33 keyboard is called a secretarial terminal since the keyboard is built with the general layout and "feel" of an electric typewriter. It does have features, however, that no typewriter ever considered. It transmits in 8-bit ASCII code using a one-character buffer, at up to 75 char/sec through a 402C Bell System Data Set. (This happens to be the top transmission speed for the 402C.) The ASCII code is good for upper and lower case alpha, numerics and some control functions, but in addition to these data sending capabilities, the Model 33 is equipped with a key to convert the keyboard into a keypunch numeric format. While the terminal is being used to send the keypunch numerics, a tiny light in the "NUM" key glows, indicating the transmission mode. Lights on the top of the unit can be used in conjunction with the 402C's three error detection signals to signify whatever the user chooses. Eleven additional

function keys are available. Unit price for the product is $700; oem discounts are also offered. DATANETICS CORP., Redondo Beach, Calif. For information:

crt terminal

The VT03 crt terminal is for use in an interactive time-sharing environment with the PDP-10 computer. It accepts data at the rate of 1200 baud and displays up to 12 rows of 80 characters each. A full-duplex console features a local memory for display refreshing, eliminating the use of cpu time to perform this function. The terminal uses an alphanumeric keyboard, provides editing capability from either keyboard or computer, produces audible end-of-line and incoming message tones, and has plug-in boards for easy maintenance. An interface option, priced at $400, generates hard copy remotely via standard Teletypes. Price of the VT03 is $7900. First deliveries are scheduled for this summer. DIGITAL EQUIPMENT CORP., Maynard, Mass. For information:

student response system

The Student Response System 1000 is designed to enable an instructor to monitor the performance of students working in large classrooms or in independent study booths. Each student has a response panel for inputting answers to multiple-choice questions. All answers are then analyzed by computer, which displays percentage responses and produces printout for later use by the instructor in determining individual student performance. The system requires that the user have access to a computer or a time-sharing service.

The student response panel is a solid state unit with six push-buttons, five of which are for answering multiple-choice questions, and the sixth for "erasing" a choice. Five lights confirm that an answer has been entered into the system. Two thumb wheels are used for recording student i.d. number, question number, lesson number, etc.

Each student response panel has a printed circuit board installed in a single central electronic scanner interfaced with a Model 33 or 35 tty or Teletype DRPE paper tape punch, providing a capability of working either off-line or on-line with any computer that accepts ASCII code by means of a paper tape reader, or in an on-line time-sharing mode. Additional student response panels may be added later by installing additional printed circuit boards in the scanner.

Two present-day SRS 1000 systems are currently being installed at the Univ. of California (San Diego) Medical School and the State Univ. of New York at Albany. Price of the SRS 1000 starts at $20,000, but varies widely depending on the number of student response panels and type of installation required. Delivery requires five months ARO. GENERAL ELECTRIC CO., Schenectady, N.Y. For information:

source data collection

The Message ComposeR system is designed for capturing, transmitting, and recording source data. It consists of a keyboard (with sliding keys), a junction box which contains the logic for encoding the keyboard inputs, a master unit which scans the junction boxes and converts the data to tones for transmission over phone lines, a tone receiving and decoding unit, and, finally, a solenoid pack used to drive the keys of a typewriter, keypunch, or similar keyboard unit. With the basic configuration just described, a user has the capability of taking reservation, stock brokerage, or inventory information at remote sites and having it recorded on hard copy or punched cards. An overlay on the keyboard above the keys is designed to tailor the general system to any application, so that the data originator will have a better feel for what he is doing.

To increase the potential market for the system, several accessories are offered, including an acoustic coupler, an audio tape recorder, a card reader, and a badge reader. Since the levers on the keyboard can be used to encode 20 variable characters (the digits from 0 through 9), and up to 28 internal characters can be added to messages in the junction box, a total of 48 characters per message can be sent with the basic system. If desired, custom junction boxes may be incorporated to add up to 100 characters to the message stream, and serial dual-keyboard configurations are offered. The device is aimed at applications with a high proportion of numeric data to be transmitted, but an alphanumeric sys-