In Which We Learn About
The Purchase By Uncle Sam
Of An Amazing Hybrid Com-
puting System Which Will In
Some Small Measure Help
Transport Our Intrepid Astron-
auts To Outer Space. And In
Which We Also Read About
The Aptly-Named Multiverto.
Further, We See Indications
That Raytheon Computers Will
Next Be Exhibited At Wescon
In The City By The Golden
Gate. To Wit: Booths 2217-
2221.
How do you turn an ordinary analog computer into a state-of-the-art hybrid system? NASA is doing it with Raytheon Computer's new 520 System and high-speed Multivertter.

NASA will have new state-of-the-art simulation capabilities this fall when Raytheon Computer connects a 520 digital computing system and an advanced analog/digital linkage system to an existing analog computer. At Marshall Space Flight Center's Slidell, Louisiana facility, the hybrid system will be used for space vehicle control system and structure and fluid thrust coupling simulation, trajectory optimization and lateral-load and wind-profile studies.

The new 520 System offers substantial speed advantages in scientific and data systems computing. For example, multiply for 12-bit data executes in 3.5 μsecs. Floating point operations include 24-bit mantissa addition in 21-36 μsecs and 24-bit mantissa multiply in 25-28 μsecs. The 520 is the only computer in its class that can be optionally equipped with a 200 nanosecond access non-destructive readout memory for function generation, table lookup and subroutine storage.

520 software includes a new compiler-assembler with capability oriented toward hybrid computation. Called FLEXTRAN, it includes such instructions as: SET POT, READ POT SETTING, READ ANALOG ELEMENT, ANALOG COMPUTER MODE SELECT, READ ANALOG CHANNEL AND SCALE, CONVERT TO ENGINEERING UNITS.

Heart of Raytheon Computer's linkage system is the new Multivertter, which combines up to 96 channels of 0.01% multiplexing, a 0.01% 100 nanosecond sample and hold unit and an 0.01% 12-bit or 15-bit analog/digital converter in a single 5¼” drawer.

More information on the 520 System, the Multivertter and Raytheon Computer's ability to provide you with state-of-the-art hybrid computing is in Data File H-113J. Write today, Raytheon Computer.

2700 So. Fairview Street, Santa Ana, California 92704.
What's a Multivert er®?
An integrated circuit multiplexer, sample & hold amplifier and analog-to-digital converter in a single unit.
You can pick one up at Raytheon Computer. And nowhere else.

A significant advance in the state-of-the-art, Raytheon Computer's Multivert er is a complete analog front-end for data acquisition and processing systems in a single 5 1/4" drawer. There are no sub-systems to combine, no cables to connect. And all the benefits of integrated circuitry are there. You can count on twice the data handling capacity at a substantial cost savings over conventional equipment.

A fully-expanded Multivert er with 96 multiplex channels, a high-speed sample and hold amplifier and a 12-bit converter can provide 50 KC data throughput. Any one of six standard Raytheon converters (10 to 17 bits, 14 to 76 KC, 0.01% accuracy) can be included. Timing, sequencing and control logic are included; no additional engineering or wiring time is required.

The Multivert er's input impedance for selected or unselected channels is 1000 megohms; overall accuracy is 0.02%; standard input voltage ranges from ±1 to ±128 volts; and aperture time is under 50 nanoseconds. The Multivert er operates in sequential or random address modes; other mode control switches permit calibration and dynamic testing.

If you are linking analog and digital computers for hybrid computing or implementing high-speed data-acquisition systems, Raytheon Computer's Multivert er will simplify your engineering, improve your performance and stretch your budget. Write for details. They are all in Data File E-112B. Raytheon Computer, 2700 South Fairview Street, Santa Ana, California.
Late, Late News!
Raytheon Computer
Will Introduce
Integrated Circuit
Digital Modules
At Wiscon.
and maybe it's the one you're going to miss. If that's the case, we have plenty of fresh, up-to-date information on the 520 System and other Raytheon Computer products. Ready to go. Just check the appropriate boxes for the product data you'd like to receive. We'll send it by return mail.

I would like more information about:

☐ 520 System
☐ Trico/520 Hybrid Computing System
☐ 260 Computer
☐ Germanium 200KC, 1MC and 5MC Digital Circuit Modules
☐ Silicon 1MC Digital Circuit Modules
☐ Module Breadboard Kit

☐ A — D Converters
☐ Multiverters
☐ Sample and Hold Units
☐ BIAX Memory Products
☐ I would like to see a representative,
☐ I would like to stay on your mailing list.
☐ Please take me off your mailing list.

☐ Late, Late Data on IC Modules.

Name:

Title:

Company: ___________________ Dept. ___________________

Address: ___________________ State: ___________ Zip: ___________

City: ___________________ State: ___________ Zip: ___________

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Please place the following individual on your mailing list so that he may receive future Raytheon Computer mailings.
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AC Power Sources; Static Inverters; Gyro Supplies; Digital Modules (MIL and NASA Spec); Custom Circuit Packaging

C & K Components Inc. - Newton, Mass
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Data Printers; Printing Keyboards; Tape Perforators

Datacon Div. - Santa Fe Springs, Calif.
Solid State Relays; Analog Gates; Data System Interfaces

W. H. Ferwalt Co. - Lewiston, Idaho
Low Frequency Crystal Oscillators

Ithaca - Ithaca, New York
Ac Amplifiers; Charge Amplifiers; Analog Memory

Michigan Magnetics Inc. - Vermontville, Michigan
Magnetic Tape Recording Heads

Nanosecond Systems Inc. - Fairfield, Conn.
Fast Pulse Instrumentation; Nanosecond Logic; PM Tube Heads

RFS Engineering Co. - Philadelphia, Pennsylvania
Memory Test Equipment and Systems; Pulse Generators

Transistor Electronics Corp. - Minneapolis, Minn.
Computer Cards; A/D & D/A Converters; Multiplexers

Union Carbide Electronics Div. - Mountain View, Calif.
FETS; Transistors; Matched Pairs; Amplifiers

Winelco - Half Moon Bay, Calif.
Reed Relay Modules