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For The Hobbyist

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R-E Lab Tests Optronica ST-3535 Tuner & Hitachi SR-903 Receiver

Movie Sound Synchronization
Infinite UC1800 Microcomputer

Infinite, Inc., takes two different approaches to the microcomputer learning/development system. First, they produce a training kit with a package that leads the student unerringly and unambiguously through the learning process. For example, their model UC1800 microcomputer is completely assembled and self-contained. The student can avoid construction pitfalls and the futile troubleshooting that oftentimes follow. To determine whether a problem is in the microcomputer or elsewhere, he can simply replace the faulty component with a known good one. The UC1800 is a completely assembled microcomputer system that requires no understanding of the RCA CORMAC model CP1803 microprocessor. Four printed-circuit boards are mounted in a carry case. These boards contain only those components that are not widely available. A good control panel built to hold the microcomputer in the proper position to access the package with a ROM utility program. There is an advantage in not requiring the student to assemble the whole system. Infinite also includes a set of tests that allows the student to test the system using the basic components. The board also contains a set of test points for the microcomputer. The student is encouraged to use oscilloscopes and other test equipment to monitor the microcomputer as it is being built.
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**EQUIPMENT REPORT**

The memory-location address are entered, the new contents are keyed in and the display refreshed. If the display is cleared by a single memory location is accessed by the DC and CC commands, the system can write a ROM-accurate, monitor and be ready for a new command.

To examine a series of memory locations without entering memory addresses sequentially use the RT (next memory) command. The computer displays the address and the contents of the cells up through each time RT is pressed. Similarly, the RT forward command sequentially loads the memory by printing the RT switch after each data entry. These last two commands are self-testing; the only way to exit the loop is to then a new command can be executed to exit and restart KEVRON.

The remaining command is RT for execution. The RT command is keyed in, RT pressed, the program-running address entered and RT pressed again. Because KEVRON starts at 0 and a program cannot be written there, if is the only way to activate the program.

To display the program, set breakpoints by inserting a break at 0; this causes a "db" message when KEVRON is reset. You can then examine memory to see what has taken place so far. A more sophisticated approach would be to examine the processor registers when the breakpoint is reached, ensuring the program and continuing to the next breakpoint.

[Keypad is not available on ROM.

The last section is just the assembled CPU board, which also supplies 500 mA of current for other system components. The 7450 is a 16-bit CMOS PAL package that contains $17.90, plus $0.10 for shipping and handling.

For additional details write to Infinite Incorporated, 151 Center St., Cape Cod, FL 30511.

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**Ondina Model 90A Picture Tube Tester**

**CIRCLE TV ON FREE INFORMATION CARD**

ALL THINGS COME TO HIM WHO WASTES TIME TO WASTE IT IS THE ONLY THING I NEEDED. A new device, made by Ondina Electronic Manufacturing Company. This is their model 904 No-Collar picture tube tester. This device is designed to restore color to old picture tubes with one or more worn spots.

I had a trade-in Wang TV, with a picture tube to bad it to be sent to. The blue gun real almost normal emission; the continued on page 73

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**Build this Video Oscillograph**

Permits direct connection of composite video signals from video games and microcomputers to the antenna terminals of your TV set.

**GLEN DASH**

**How it works**

The schematic diagram of the Video-oscope is shown in Fig. 1. Transistor Q1 is used in a Hartley oscillator circuit in which tunable coil L1 and capacitor C4 set the carrier frequency. Feedback to the emitter is provided by capacitor C3. Resistor R3 biases the transistor, as do resistors R1 and R2. The base of the transistor is grounded by C2 for high-frequency signals, makes this a grounded base configuration. A filter that prevents RF from getting into the power supply is provided and is comprised of capacitors C1, C3 and resistor R4.

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**NOTE**

The Federal Communications Commission requires that any device to be marketed using a commercial or monitoring to the Video-oscope or other RF device does not automatically entitle the manufacturer to FCC approval.

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**FIG. 1—OUTPUT SIGNAL LEVEL of Video-oscope is controlled by the modulation input.**
Originally, the large temperature range of the CECO 5350, 5300, 5350 microproces- sor made it a likely candidate. Additional memory, however, could become quite expen- sive and because the architecture is non- traditional, it required a ground-up systems design.

The very fast 6802 microprocessor has many advantages and only one disadvan- tage—temperature operating range. This can be solved by designing the entire electronics compartment in a large, thermally- controlled case that will keep the appliance at a reasonably low temperature. Even if you don’t plan on using a microprocessor in your compression system, I strongly recommend the CECO 540 Video Bond as an excellent way of packaging the circuitry. It will be available for $85.50.

An elaborate attention to detail is paid to the housing of both CB radio and television. The case is designed to be serviceable, and all new components are ordered and tested to ensure reliability.

The Castle 1300 stereophonic television set is a plug-in device that is inserted between the picture tube and socket, like a wall socket. However, it is not a wall socket, at least in the usual sense of the word. Between its plug and socket is a little box with three colored-coded side controls, one for each color.

Starting with all the controls at the 0 position, I plugged the Nu-Color in and turned on the set. As expected, the color was a bright blue. I adjusted the controls of the Nu-Color and came up with a good-looking color-bar pattern. Twidllling the grey scale and the Nu-Color control gives an excellent color picture. Reds saturated normally, with the color control at the 0 all the way and all other things looked very good. The picture line up to its claim and its name certainly did “restore the colors” in this old set.

As one can see, this Nu-Color set is as good as any other set on the market. If you are interested in color for your home, you can be assured of receiving reliable, quality service.

Each tuner is ultrasonically cleaned. Our tech- nicians analyze the defects, document the repair performed and return the tuner to you in a professional manner. Workman- ship and parts are backed by a one year limited warranty.