Popular Electronics®
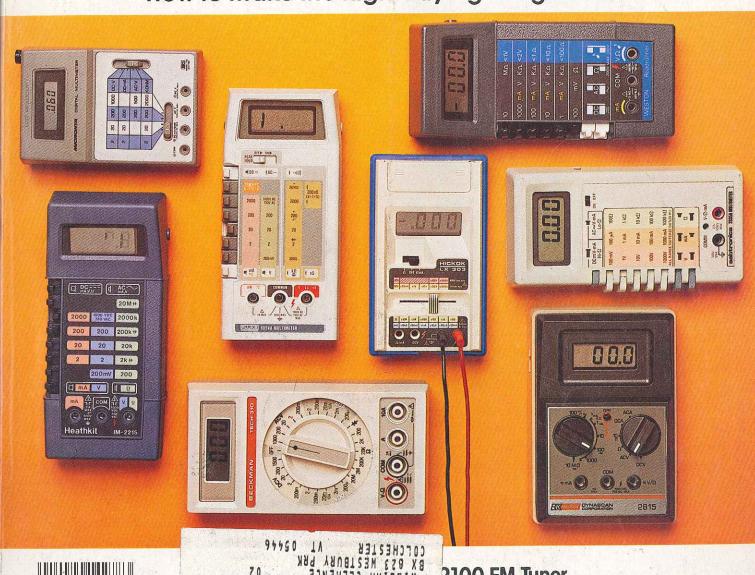
Audio Noise Source For Testing Hi-Fi
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The New Digital Multimeters
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Issue

Computer Bits

By Leslie Solomon
Technical Director

THE COMPUTER WORLD "OVER THERE"

LAST NOVEMBER, I had the pleasure of attending the Personal Computer World Show that took place in London, England. This three-day computer hobbyist fair had the same "look" as any of the similar computer shows that take place in this country, except that it was slightly smaller, and there were a lot of strange languages being spoken. Visitors came from all over the British Isles, Scandinavia, and the rest of Europe, including some from behind the iron curtain countries, such as Yugoslavia and Poland.

There were about 50 booths on the main floor; and, since the majority of the exhibitors were European representatives of American manufacturers, most of the systems on display were quite familiar to a visitor from the States. In many cases, each booth carried several American devices that were up and running. However, there were a number of excellent hardware systems that were designed and manufactured in Europe, particularly England.

It was interesting to note that there is quite a market for standards conversion and NTSC monitors. This is a result, of course, of the different video bases used by American and British computer manufacturers. Ours is NTSC, while they use PAL.

There was no difference in the enthusiasm of the European computer hobbyist compared to his American counterpart—it was in abundant evidence everywhere. The enthusiasm is all the more striking when one considers the prices that the Briton must pay for a piece of American equipment. Owing to a number of factors (including shipping, inflation, taxes, etc.), an American computer costs about twice as much in England as it does here. Thus, a $1000 item in New York costs 1000 pounds in London—the pound being approximately equivalent to two dollars currently.

The cost of computer hardware may be one reason that the British are devoting a great deal of time to creating their own software. And they are beginning to catch up with us when it comes to hardware. Last year, when I was there, they appeared to be about a year or two behind us—judging by the oohing and aahing I heard at some of the latest peripherals that I brought over to show them. This year, they seemed to have caught up since I saw many peripherals at this show that were just starting to appear on the American market.

Unfortunately, high costs were also reflected in the admission charges to the Show. Admission to the exhibition alone was $3—not so bad. However, during the three-day show, there was a seminar during which 12 speakers "did their thing" (yours truly being one of them). Price for entry to the seminar (and show) was $90 plus $13 tax (!) for the first two days (Thursday and Friday) which also included lunches, while on Saturday, it cost $28 plus $8 tax, including a sandwich lunch.

PACS Game Festival. The Philadelphia Area Computer Society, in conjunction with LaSalle College Physics Department, is holding a computer games festival on March 15, 1980 between 10 AM and 6 PM in the LaSalle College Ballroom, 20th and Olney, Philadelphia, PA 19141. For further information, contact Dr. Stephen A. Longo, Physics Dept., LaSalle College, Philadelphia, PA 19141 (Tel: 215-951-1255).

Small Computer Symposium. To be held at the University of Tennessee, Knoxville, TN, during the fourth weekend in February, this symposium will present a forum for the display and discussion of small computers in the area of hobby, education and business. For further information, contact Mike Sappington, 8 Ayres Hall, University of Tennessee, Knoxville, TN 37916.

PET Cursor Problems. A problem that seems to occur in the use of machine language programs or one of the early PET-2001's loss of cursor for unknown reasons. The New Cursor® can be installed without soldering or modifications to the PET and no special tools are required. It provides instant pushbutton cursor retrieval without machine power-down or software manipulation. $4.95. Specify type of PET or CBM computer. International Technical Systems, Inc., P.O. Box 264, Woodbridge, VA 22194 (Tel: 804-262-9709).

Super Graphics. The VMS (video modular systems) is a series of video processing modules having 4-bit resolution for the red, green and blue channels and operates with a general-purpose microcomputer. The series includes an A/D converter, D/A converter, and RGB Encoder. Through software, the devices function as a mapped colorizing unit. The configured modules will internally generate, mix and display all 16 levels of red, green and blue images, as well as their combinations. This produces 4096 colors. It has the ability to update the colorizer signal each ⅟₆₀th of a second. Upcoming modules include an 8 × 3 matrix switcher, frame buffer, vertical and horizontal pattern genera-

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tor, color vector display and waveform adapter, firmware I/O interface, RGB decoder, multiplexer key matrix and a video processing unit. For further information on this professional system, contact Ron Wilton, G.E.S.I., 1440 San Pablo Ave., Berkeley CA 94702 (Tel: 415-527-7700).

Apple and S-100 Modems. The MICRO-MODEM II is a data communication system for the Apple II, and the MICROMODEM 100 is for S-100 systems. Both feature MICRO-COUPLER data access arrangement, an FCC-registered device that provides direct access into the telephone system with none of the losses or distortions associated with acoustic couplers. It can automatically answer the phone or originate a call. Both are Bell 103 compatible. The MICROMODEM II is supplied with firmware in ROM and plugs into any Apple I/O slot. The MICROMODEM 100 is fully compatible with 16-bit and 4-MHz processors. D.C. Hayes Associates Inc., 10 Perimeter Park Dr., Atlanta, GA 30341 (Tel: 404-455-7663).

Digitizer. The Hi-Pad Digitizer allows graphics input with both serial and parallel interfaces as standard features. In addition to resolution by inch, metric measurement is included. It also has a translucent tablet area for rear projection. It can be used with any North Star-based system or Vector Graphics High Resolution Video Display. $795. Micro-age Wholesale, 1425 West 12th Place, Tempe, AZ 85281 (Tel: 602-894-9247).

Apple Interface. The A10 Serial and Parallel Apple Interface features a software programmable serial interface using the RS-232 standard at 9 selected baud rates. On-board firmware provides a driver routine so the user does not need to write software. The parallel portion features software programmable I/O ports that can handle two printers simultaneously. A parallel driver routine is available in firmware as an option. Solid State Music, 2116 Walsh Ave., Santa Clara, CA 95050 (Tel: 408-246-2707).

Transient Protection. The Blitz-Bug is a fast-acting transient and surge protector that keeps guard over your electric power lines. It has a response time of less than 50 nanoseconds, and can sustain up to 20 joules of current for a short period. All impulses are restrained to 186 volts. $19.95. Omni Communication Co., Inc., 200 West Country Line Rd., RD 3 Box 200, Jackson, NJ 08527.

Typewriter I/O. The I/O Pak (actually just an output port) is an electromechanical interface that fits over the keyboard of any electric typewriter and connects it to a computer. The unit consists of a bank of solenoids that operate each key. It produces no more key pressure than a conventional typist. No mechanical modifications of the typewriter are required, and the Pak can be instantly removed. $439. TRS-80 Interface $89.50, Apple Interface $79.95, GPI (S-100) $69.50. Rochester Data Inc., 3100 Monroe Ave., Rochester, NY 14618 (Tel: 716-385-4336).

Equipment Covers. You can now protect your valuable computing equipment from dust, spills and scratches with attractive

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leather-grained, cloth-backed vinyl. The covers come in gold, chestnut, black or olive and feature double stitching and corded seams. Contact the company for styles and prices. International Technical Systems, Inc., P.O. Box 264, Woodbridge, VA 22194 (Tel: 804-262-9709).

New Disk Systems. The Maxi-Disk runs CP/M (with the Shuffleboard option), TRS-DOS, uses a Shugart 800 drive having a capacity of 250K bytes, and has a transfer rate of 250K bytes per second on 77 tracks. The disk system plugs into the TRS-80 expansion interface and is style coordinated with the existing system. Price is $995, including power supply, cabinet and interface board. Additional drives are $845 (with cabinet and power supply). TRS-80 cables are $60. The Shuffleboard option plugs into the Z-80 socket and releases the lower 16K of memory for use as RAM. It allows the use of standard CP/M. An on-board bootstrap phantom ROM allows instant boot-up of CP/M from the Maxi-Disk. The Shuffleboard with CP/M on an 8" diskette and documentation is $249. Parasitic Engineering, 1202 10th St., Berkeley, CA 94710.

DISCUS/2D is a single/double density disk compatible with the IBM System-34 format and is compatible with IEEE standard S-100 bus. The disk drive is a full-size Shugart 800R and features power-on jump circuitry, 1K of RAM, 1K of ROM with built-in monitor and a hardware UART to make I/O interfacing easy. Software includes BASIC-V virtual disk BASIC, DOS and Disk/ATE assembler/editor. Patches for CP/M are included. Microsoft disk BASIC and FORTRAN are available. $1149. Up to three additional drives can be added at $795 each. Thinker Toys, 1201 10th St., Berkeley, CA 94710 (Tel: 415-524-2101).

2650 For the S-100. The Slavemaster 2650 uses the Signetics 2650 processor and includes cassette interface, serial I/O (RS-232/20-mA), 8 vectored interrupts, 4K of 2708 ROM, a digital input, and two digital outputs. Software includes the Signetics PIP-BUG, and Real Time Control ($25 each). Assembled and tested boards are $269, and $198 in kit form. Two of these boards can be used to form a multiprocessor system. One is the slave and the other is the master. They reside in an S-100 bus mainframe with multiprocessing control via a ribbon cable. Each has full access to S-100 resources. One card may be used as a stand-alone 2560 S-100 bus computer. Victoria Micro Digital, 401 Dundee St., Victoria, TX 77901 (Tel: 512-575-3836).

New Keyboard. The Micro Proximity Keyboard is fully solid-state and virtually indestructible, impervious to environmental pollution, and consists of microproximity touch sensors protected by a polycarbonate shield. There is no way that it can wear out or short because it has no exposed components and in fact no moving parts. It resembles a conventional keyboard only in format (full ASCII set), and the keyboard is thin (0.325 inches thick), with a totally flat surface, and weighs 19 ounces. $75. TASA Inc., 2346 Walsh Ave., Santa Clara, CA 95050 (Tel: 408-247-2301). ◇