

THE FREE TCS LETTER IS A CLUB PROJECT OF
THE TIDEWATER TRS-80 USERS GROUP*****
PUBLISHED ON HOT DRY WEEKENDS ----- JULY 1980

Welcome to yet another TCS letter where happiness is getting a peek at a new poke. For those of you who keep track, our last letter was in May and the one before that was in March. The next one is planned for September.

NEWS

SHUGART ASSOCIATES is out as the famous supplier of disk drives for Radio Shack. An article in COMPUTER SYSTEMS NEWS recently reported that TANDY and DATAPOINT (a maker of 8-inch drives in Waco, Texas) have clinched plans to form a joint venture to produce mini-floppy drives solely for Tandy's personal computer line. The new venture will be headquartered in Odessa, Texas and known as TEXAS PERIPHERALS, INC. In our May issue we had reported a speculation that Tandy's new disk supplier would be TANDON MAGNETICS of Chatsworth, California and as recently as the last week of June, a third party spoke to Tandon and says they confirmed that rumor. So, your guess is as good as ours at the present time...

ZILOG has announced the Z80B, a version that runs at 6 MHz compared to the 4 MHz of the Z80A and the 2.5 MHz of the basic Z80. It is completely pin and software compatible with the earlier versions so we may see some new speedup kits for the TRS-80 before long which will allow use of the Z80B...

The coming proliferation of voice synthesizers which we hinted at in the last issue has already started. A new device built with CMOS technology called the SC-01 is being introduced by VOTRAX. It will have an unlimited vocabulary and use very little memory by processing 6-bit phonemes in a steady stream of 70 to 100 bits per second.... Meanwhile, PERCOM DATA COMPANY is presently marketing a \$70 circuit board called "SPEAK-2-ME-2" which directly interfaces the TRS-80 with TI's SPEAK & SPELL. It comes with software and allows you to generate speech from the keyboard or from BASIC programs....

VIDEOTEK, announced May 27 by RADIO SHACK and expected to be on the market by October, is a \$400 "information system" for non-owners of computers. Believed to have originally been a specialized computer known by a different name (possibly the TRS-90 which Radio Shack now says doesn't exist), a new name was selected to disassociate it with "computers" because of their overall slow acceptance by the general public. Now it is feared that merely a change in the name may not be enough and that a lower price will be needed because of the recession. By concentrating on the educational market, it is hoped that production can be geared up enough to cut costs (and the selling price) in half before introducing it to everyone through Radio Shack stores. VIDEOTEK looks like a TRS-80 keyboard but apparently contains a modem and RF modulator internally for hooking up to the telephone and a standard color TV set. Arrangements are being made with COMPUSERVE so that eventually, owners will be able to subscribe to the MICRO-NET system for access to news, stock market, electronic mail, etc. The significance of all this to TRS-80 owners is that there will be a substantial growth in the popularity of MICRO-NET so many new services will be created for it and local phone numbers in more cities will be sponsored by Radio Shack for VIDEOTEK owners. We will be able to use the system with a \$30 software package from Radio Shack for the TRS-80....

ANNOUNCEMENTS

We hate to say it but we have lost track of some readers. If anyone knows the current address of the following persons, please let us know at TCS: 1) P. SUDYK (formerly of Binghamton, New York), 2) S/SGT. William MASSE (formerly of Pease Air Force Base, New Hampshire), 3) JACK THORPE (formerly of Oxen Hill, Maryland but moved according to the Post Office).... The 80-USERS OF HOUSTON (formerly known as the TRS-80 Microcomputer Group of Southwest Houston) no longer meets at the Bellaire Chamber of Commerce which is receiving mail addressed to the group and they don't like it. Please address all future correspondence to Ben Taylor, 3723 Purdue, Houston, Texas 77005.... If you want to send a message to TCS on THE SOURCE then use TCD425. Also, there is a local CBBS in Tidewater courtesy of HOME COMPUTER CENTER. The phone number is (804)/340-5246... MICRO-80 (2665 North Bushy Rd, Oak Harbor, WA 98277) is looking for software to market and pay 25% royalty on... Write for additional programming information. Discounts offered to clubs on computer grade cassettes.

HINTS

To alleviate sensitivity to power line fluctuations or other erratic operation on systems with an expansion interface, try this hint: remove all ribbon connectors and lightly go over the contacts of the PC board with a soft rubber eraser. Then clean with a solvent such as freon (tape head cleaner) and wipe dry before it has a chance to evaporate and leave a residue. Then (here is the key) apply a thin coat of electrically neutral silicon grease (GC Electronics No. 22-01 or equivalent, available at most electronics stores) before pushing the ribbon cable connector back on. Air won't be able to get to the contact surfaces to cause high resistance connections due to oxidation... If the official Radio Shack modification to your CTR-80 recorder (a capacitor across the head) didn't completely solve your problems of writing glitches over data tapes, a fast recovery diode such as General Electric's GE-300 (177) installed across the motor winding should do the trick. It shorts out the inductive kick and will prolong the life of your cassette relay as well... There is a new (second edition) of the LEVEL II BASIC REFERENCE manual out now (cat. 26-2102) for \$5.95 which has corrected a lot of the errors in the old manual. This one even has an index... When installing mods that use a panel mounted switch, make it unpluggable for easier servicing. Hobby shops that sell radio controlled model airplanes have 3, 4 and 5-wire "servo extension cables" made of very flexible, twisted #26 wire and tiny (1/10" thick) Dean's plugs. The connector on each end will mate with each other so cut the cable in the middle, wire one half to your board and the other half to your switch.... ELECTRIC PENCIL users take note. The SX print command (used to suppress line feeds) should be used FIRST or it will negate some previous commands, most notably the setting of page spacing in some versions.... LNW RESEARCH expansion board owners who aren't using floppy disks can still use the Real Time Clock feature: If U23 (74LS08) is installed for the serial interface, ground it's pin 9. If U23 is not installed, ground pin 5 of U29 (74LS32).... You machine language guys who like to peek and poke in hex and look down your nose at those of us who prefer decimal, take note: when your way doesn't work, try it our way. For example, PRINT PEEK (19951) gives the right answer while PRINT PEEK (&H4DEF) only gives a syntax error even though they are the same address. The reason, of course, is that the "DEF" in the hex address is a reserved word.... In "ON n GOTO" or "ON n GOSUB" statements, the variable "n" can only be within the range of 0 to 255 or an error will occur and stop the program. Prior to executing that statement you can preclude the variable from being out of range:

```
100 INPUT X : IF X 0 OR X 255 THEN 100
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THESE HINTS AND MANY OTHER ITEMS IN THIS NEWSLETTER COME FROM OUR READERS. WE SELDOM HAVE ROOM FOR CREDITS BUT YOUR PARTICIPATION IS SINCERELY APPRECIATED BY ALL. OTHER NEWSLETTERS ARE ENCOURAGED TO COPY ANY PART.

HELP

How can CP/M sold by Applied Dana Corp. be made to drive a printer through the TRS232 interface? G. VON HILSHEIMER, 124 N. CLARA AVE, DELAND, FL 32720.... Has anyone found a way of printing the DIR to the screen in Disk Basic 2.3? M. LIGHTERMAN, 9230 SW 59 ST, MIAMI, FL 33173.... Has anyone been able to modify the MODEM I for both originate and answer mode? Even a schematic of an unmodified unit would help. B. CARSO, 3798 Hancock Dr, Santa Clara, CA 95051.... Can anyone provide the modifications required to use the 20-pin character generator out of the new Heathkit computer in the TRS-80 for true decoders? C. BUTLER, 1806 ADA, LANSING, MI 48910.... The new Radio Shack character generator with the proprietary part number from Motorola (with lower case decoders and a non-offset "a") comes standard in all new TRS-80's now whether the lower case mod is installed or not. We tried to order one but Radio Shack refuses to sell it to us early owners except as a complete lower case mod kit for \$100. Rumors persist that it is the same as one costing \$6.50 from a mail order house in California. But no one can come up with the specifics. If anyone out there can, contact TCS.

TRUE STORY DEPT.

My wife wanted my computer off the table so she could set it for dinner and I was hurrying as fast as I could. While using CLOAD? to verify the program I had just saved, she finally lost all patience and yelled "Get that DUMB computer off of here" as she banged her fist hard on the table. Whatever that did to the tape passing the head resulted in a missed bit and the message "BAD" on the display. That surprise shut her up for awhile without me having to say a word. (Name withheld by request).

TCS FREE BULLETIN BOARD

Free ad space is donated by TCS. A small percentage of any profits that result will be appreciated to help continue this service but there is no obligation.

FOR SALE: RO 35 TELETYPE - ASCII encoded heavy duty with changeable print box, stand and quiet cover. Fully checked out. \$300 plus crating & shipping. *Easily hooked up to TRS-80 and other micros. Call BRYAN MCPHEE (609) 893-5120

PERSONAL ESTATE PLANNING for TRS-80 16K L2. New version and reduced to \$9.95 for cassette and documentation. Printer version available at same cost. Every TRS-80 owner should have a copy. See article in Creative Computing, Feb 80. LARRY BUSS, 101 SOUTH U ST, APT 1, LOMPOC, CA 93436

WANTED FOR A SMALL CHURCH: Used Selectric typewriter or line printer in working condition to use with TRS-80. Should be priced low (or donations appreciated). VICTORY TEMPLE ASSEMBLY OF GOD, 1003 COURT ST, SAULT STE. MARIE, MI 49783

USED SOFTWARE BOUGHT & SOLD on consignment. Recycle those no-longer-needed programs you paid good money for. All programs must be complete on original cassette or disk with all documentation. Sellers may send programs (specify how much you want), others send SASE for more info and current list of available programs. NOTE: Not responsible for programs lost or damaged in transit (send insured if valuable). JACK DECKER, 1804 WEST 18TH ST, LOT #155, SAULT STE. MARIE, MI 49783

PROGRAM WANTED: To appraise single family dwelling. Please contact H. C. (JUICY) STEVENS, DEER CREEK INSURANCE AGENCY, BOX 126, 105 E. AVE, HOLLANDALE, MS 38748

PROGRAM WANTED: To appraise single family houses using Saving and Loan form - FHLMC Form 70. A procedure is needed to merge comparable sales (25 fields) from a data base into the appraisal format. Please contact MICHAEL CALWELL, 111 PENNY LANE, CARY, NC 27511

HELP WANTED: Need information on interfacing a Digital Group model PT96 to a TRS-80. Can anyone help? V. JUPE, RFD BOX 60, #4 CHURCH LANE, CARLOTTA, CA 95528

BACKUP is a no-nonsense, auto-starting, self-documenting copy utility to make backup copies of any normal machine language program including Adventure, Microchess 1.5 and Sargon II on a 16K Level II system. Simple to use, available as a SYSTEM load tape for \$7.50 or in source form as a listing or EDTASM compatible tape for \$20 from: W. R. ANDRUS, 7034 THOMAS DR, N. HIGHLANDS, CA 95660

INFORMATION WANTED: I am legally blind, with gradually failing vision, and I'm exploring the possibilities of a braille output system for the TRS-80. Does anyone know where I might get information on braille printers? I know they exist. Please contact DICK RAMM, 64 DIVISION AVE, LEVITTOWN, NY 11756

NEW EXATRON DISTRIBUTOR in the Tidewater area for personal service. HRW ENTERPRISES, INC., 240 BROOK LANE, GRAFTON, VA 23692 (804)/898-4587

SNDFC, ten machine language sound effect subroutines, \$3.95; SIMON, with sound, \$5.95; LEVEL II.IV, 14 utilities including left/right scroll, save/restore screen contents, \$9.95; AUTO GRAPHICS, keyboard driver for developing program, \$6.95; HEX DEC, a converter that can be called without killing BASIC program in memory, \$6.95. J. LINDSEY, 8106 QUAILWOOD CT, WEST CHESTER, OH 45069

SPELLER 100 - a BASIC program to review the 100 most threatening spelling words. May be easily modified to use any list of your choosing. For Level II 4K or 16K cassette tape, \$10. LEROY PRICE, ROUTE ONE, TAMA, IA 52339

SURPLUS VIDEO MONITORS - 9" (SPL-331) \$40, 12" (SPL-332) \$50. JOHN MESHNA, PO BOX 62, 19 ALLERTON ST, E. LYNN, MA 01904

CUSTOM BUSINESS PROGRAMMING in BASIC, FORTRAN or PASCAL. Disk and cassette software made to customers specifications. Call (717) 888-6833 after 4 pm EST or write for more information. GREG M. NICHOLS, 909 W. LOCKHART ST, SAYRE, PA 18840

REQUEST FOR INFORMATION - Are there any groups or newsletters out there which deal PRIMARILY with the Level I TRS-80? If so, let us know at TCS so we can announce it in the next newsletter for interested readers.

PLEASE STOP sending advertisements about computers to the Bellaire Chamber of Commerce at 6900 South Rice, Houston, Texas. They don't like it. The TRS-80 Microcomputer Users of Southwest Houston no longer meets there. In fact we have even changed our name. Please forward all future correspondence to 80-USERS OF HOUSTON, c/o BEN TAYLOR 3723 PURDUE, HOUSTON, TX 77005

CLUB SEEKS USED SOFTWARE - We will buy your used software in original form (on either cassette or disk) and with documentation. Send list and your asking price, then we'll send you a check for items we buy. WICHITA VALLEY TRS-80 USERS GROUP, PO BOX 4391, WICHITA FALLS, TX 76308

WANTED - SOFTWARE FOR HELPING HANDICAPPED PEOPLE. We are searching for teaching aids for handicapped kids like our son who is retarded due to Cerebral Palsey. Does anyone know of a way to allow the computer to respond to unintelligent sounds and convert them into intelligent speech via Computalker CT-1? All info must be free to all handicapped people. Thank you. BRUCE KOPCSO, 3970 GLORIA LANE, CARLSBAD, CA 92008

CUSTOM PROGRAMMING - professional, very reasonable rates, mailing lists a specialty. HARRY HOPKINS, PO BOX 873, LANGLEY AFB, VA 23665, 804-826-6645

BUSINESS SOFTWARE - Osborne accounting software on disk. GENERAL LEDGER, ACCOUNTS PAYABLE, ACCOUNTS RECEIVABLE (\$39.95 each on single diskette) and PAYROLL (\$44.95) with Osborne operating manuals. Requires 32K and two disks, start-up and system modification instructions included, configurable to be coordinated with GL using three disks. MAILING LISTER for \$39.95. Many games for \$5 for a packed diskette. INVENTORY program for \$39.95 (free with order of \$100). Write for details. DANIEL BOOTH, 11331 NE KNOTT, PORTLAND, OR 97220

ATTENTION SOFTWARE SUPPLIERS - Dr. Portia Isaacson is preparing a number of magazine articles about the availability of programs for personal computers. For these articles we will be purchasing some programs for evaluation. Please supply information about your programs and how to buy them. BETTY THOMPSON, ELECTRONIC DATA SYSTEMS, 14580 MIDWAY RD, DALLAS, TX 75234

SERIAL PRINTER INTERFACE - don't dedicate your RS-232 card and the memory it requires to drive a serial printer. Leave it free for modems or other uses. Instead, use the parallel port on either Radio Shack's or LNW's expansion unit by building a parallel to serial converter. Supports handshaking. Uses power from the expansion unit. Circuit board and instructions, \$24.95 from EHI CO., 7808 SHERYL DR, NORFOLK, VA 23505

MAIL YOUR FLYERS WITH OUR TCS NEWSLETTER - The September issue will be mailed FIRST CLASS in SEALED ENVELOPES to over 2,000 bonafide TRS-80 owners like yourselves. If direct mail advertising works for your type of product, you can avoid the trouble of printing flyers, folding them, stuffing envelopes, stamping them, addressing them, and maintaining a current mailing list. You also avoid the cost of envelopes and printing and it still costs significantly less than a bulk mail stamp for each flyer.

*** You can have a FULL PAGE flyer printed from your camera ready artwork on the back side of one of our newsletter pages for only \$130 total cost. That's only about SIX CENTS each including printing, less than the cost of a bulk mail stamp by itself.

*** If you would prefer a separate flyer printed on BOTH sides, 187 square inches of area devoted to your product, the total cost will be \$160. That's still less than the cost of a bulk mail stamp.

*** If your business isn't that big yet, why not try an 8-1/2" by 3-2/3" MINI-FLYER for only \$50 printed on one side or \$60 printed on both sides. Even an individual can afford that price for 2,000 flyers mailed directly to potential customers because it comes to a TOTAL cost of only THREE CENTS each.

The September issue will be mailed the third week September and the deadline for artwork is September 9 you can make your flyer as current as possible. But reserve your space by sending a reasonable deposit as soon as possible.

Deposits for reserving space in the popular NOVEMBER mailing (for those Christmas orders) now being accepted. Quantity will be 5,000 and rates proportionally higher.

NEW SOFTWARE

Well, we got a look at Microsoft's new **BASIC COMPILER** which sells for \$195 and comes on two diskettes and includes a couple of hundred pages of looseleaf documentation. Most of the documentation is a reference for their BASIC-80 (5.0) interpreter so you can tinker with a Level II program to resolve idiosyncrasies which the compiler may be sensitive to.

The biggest advantage of compiled programs is speed. A simple program which counts to a thousand was demonstrated for us and it ran exactly four times faster after being compiled. Other types will run even faster. The biggest disadvantage is that any program you write and compile can't be sold without paying Microsoft a royalty. An inconvenience for most of us is the fact that the original program must be transferred from NEWDOS to TRSDOS first before it can be compiled. Afterwards it can be transferred back to NEWDOS again.

The BASIC COMPILER isn't for everyone but where operating speed is important, it is an advanced tool for certain specialized applications.

We also got a look at **NEWDOS/80** from Apparat which sells for \$150. It comes on a diskette with about 180 pages of looseleaf documentation. This DOS is more than an enhancement to NEWDOS+ and many of the modules appear to have been completely rewritten. There are dozens of new buzzwords and commands to master. It features five new kinds of disk files, an enhanced machine language version of Superzap, has the ability to operate with drives of different track capacity simultaneously, and more. One surprise is a spooler utility so the printer can be operating while the computer is being used for something else at the same time.

The power of NEWDOS/80 may be overwhelming to a novice so unless you are really doing some sophisticated programming, you will probably find the ease of NEWDOS+ more usable.

Other new software announcements that have come our way include: **ORCHESTRA-80** which is a five-part machine language program and a small, assembled PC board that plugs into the screen printer connection of the expansion interface. It will enable you to compose and play music with up to four simultaneous voices over a six-octave range. It's \$79.95 + \$2 shipping and tax for California residents from SOFTWARE AFFAIR, 473 Sapena Court Suite 1, Santa Clara, CA 95051. If you want to hear what it sounds like dial (408)/727-8194 ***** **THE DOW JONES CONNECTION** is a \$79.95 software package which will allow you to get the latest quotes on 25 stocks of your choosing and display certain other information. It and other telecommunications software requires the use of **THE MICRO CONNECTION**, a \$249 direct connect telephone modem for the TRS-80 with an integrated RS-232 output to drive a serial printer. For additional information write THE MICROPERIPHERAL PEOPLE, Box 529, Mercer Island, WA 98040 or call Michael Darland, President, at (206)/454-3303 ***** Clubs and educational establishments get 15% discount on orders over \$100 from ABACUS SOFTWARE, PO Box 77, E. Greenbush, NY 12061. Write for their catalog of \$20-100 programs including games, text editors, inventory, etc., or call (518)/477-8222 ***** **FILETRAN** "bridges the gap" between the TRS-80 and CP/M at \$99 for business applications and **PAYSOFT** is a feature-packed professional payroll system from BUSINESS MICROPRODUCTS, 1838 Catalina Court, Livermore, CA 94550 (415)/449-4412 ***** **RELOC** is a Z-80 utility program which allows you to relocate other utilities which compete for the protected top of memory area in the TRS-80 so you can use more than one at the same time. It's \$29.95 on tape or disk. **QUILL DRIVER** is an alternate text processor with many advanced features including the ability to transpose PENCIL, BASIC and EDTASM text files. It's \$39.95 on disk. Both are available from THE ALTERNATE SOURCE, 1806 Ada St, Lansing, MI 48910 ***** A unique new program which will display correct volume settings in real time for cassette tapes doubles as a tape certifier by writing a special data pattern and then checking for dropouts. It's known as **THE VERIFIER** and sells for \$14.95 + tax for CA residents. Specify Level I or Level II. WOLF & ASSOCIATES, PO Box 8073, La Crescenta, CA 91214 *****

NEW HARDWARE

ZOOM3.6 is a device that connects between a Level II TRS-80 and a CTR-41 or CTR-80 recorder that comes with software to permit tapes to be read and written in a special format at 3600 bits per second. 16K loads in 36 seconds instead of the standard rate of 4-1/2 minutes. No modifications are necessary and it is compatible with the XRX mods. Volume settings are not critical nor are certified cassettes required and patches are given for use

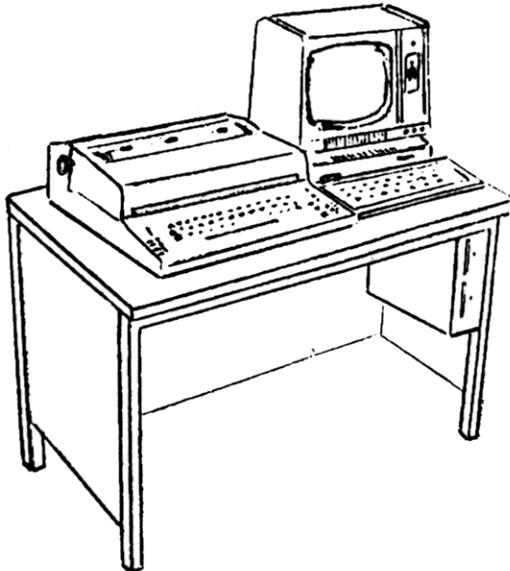
3

with PENCIL. For more information on the \$119 unit and options send an SASE to ZOOM, PO Box 3766, Nashua, NH 03061 or phone (603)/889-0901 ***** If sound effects is what you are looking for, **BLIPPO** is a small PC board including on-board speaker that will plug into the expansion port and provide 15 different tones over four octaves for only \$29.95 + \$2 shipping and tax for NY residents. ALPHA PRODUCT CO, 85-71 79th St, Woodhaven, NY 11421 (212)/296-5916 ***** An interface card, **XTD-TRS**, permits use of the TRS-80 for low cost development of STD-bus products. Priced at \$260, it includes 2K of ROM with Z80 debug routines and a cable for direct connection to the TRS-80. Available from XITEX, 9861 Chartwell Dr, Dallas, TX 75243 (214)/349-2490 ***** All kinds of **SURPLUS** electronics parts, displays, keyboards, tape and card readers are described in a 20-page catalog from WORLDWIDE ELECTRONICS, 130 Northeastern Blvd, Nashua, NH 03062 (toll free 800-258-1036). When we first bought the surplus IBM Selectric this newsletter has always been printed on, that's all they sold. ***** The **U3000** is a palm-sized module with 1024 bytes of extra RAM that uses the addresses between 3000 and 33FF not presently assigned. It plugs into your expansion interface or CPU unit and allows you to store short utility routines without having to protect memory. The price is \$99 plus shipping and for a limited time they will throw in two software packages worth \$26 that use the extra RAM as a monitor, printout control, key de-bounce, etc. COMPUTER PERIPHERALS, 1857 W. Maple Rd, Walled Lake, MI 48088 (313)/624-7303 ***** Rigid, self-sealing **mailing envelopes** with anti-static foam liners for floppy diskettes are 45 cents each in lots of 10 for 5-1/4" size, 95 cents each in lots of 10 for 8" size. **Head cleaning diskettes** with solution are \$24.50 for set of two. These and a variety of holders and binders are among several items for disk and tape users described in a brochure from DISKS, ETC., PO Box 327, Center Valley, PA 18037 ***** Handsome and compact **luggage cases** specifically designed for the TRS-80 allow immediate operation when the cover is removed. One model accepts the computer, expansion interface and two disk drives (\$109) while two others accept the monitor (\$84) and a Line Printer II (\$89). Clubs can get 20% discounts on 10 or more or individual club members can get 10% discount on a single purchase. COMPUTER CASE COMPANY, 5650 Indian Mound Court, Columbus, OH 43213 (614)/868-9464 ***** A new 24-page catalog of **line filters and isolators** with suggestions for solving particular problems is catalog #971 from ELECTRONIC SPECIALISTS, INC., 171 South Natick, MA 01760 (617)/655-1532 ***** **FLEX-FILE** is a system of organizing diskettes in vinyl 3-ring binder pages which have pockets for associated printouts. Pages come in six different configurations. Sets go for about \$10. Get a brochure from BUSINESS INFORMATION SYSTEMS, INC., PO Box 969, Brentwood, TN 37027 ***** The H-14 printer can be interfaced to the TRS-80 without the need for a software driver if the **PTS-3** (or **PTS-4** for use without expansion interface) is used. It's \$89.95 + 3.50 shipping and tax for IN residents from MULTI MEDIA SYSTEMS, PO Box 41084, Indianapolis, IN 46241 (317)/839-6520 ***** An **interface to the GPIB-488** bus is now available for the TRS-80 with software for disk or tape. The price is \$225 from SCIENTIFIC ENGINEERING LABORATORIES, 11 Neil Dr, Old Bethpage, NY 11804 (516)/694-3205

FEEDBACK FROM READERS

Did you know that the MPI 52 (dual head) is a 40-track drive instead of 35 tracks as it says in the ads? This editor replaced his Pertec drive with the MPI 52 several months ago and didn't know there were 10 more tracks available (25.6K) on each diskette by using a 40-track version of DOS until a reader informed me recently. If I had spent an extra \$30 for the Service manual I would have known because it says so right in the specifications. While incorporating the patch to NEWDOS for 40 tracks I also speeded up the step rate (with the patches given in the March 8-80 COMPUTING) to the FASTEST of the four possible rates. I don't have an external data separator but I found I don't need one. I don't know whether to give credit to the MPI 52, my LNW expansion board, or NEWDOS, but I haven't experienced so much as a hiccup, much less an error, while reading ANY of the tracks.

We like to be able to relay recommendations of good products from our readers, even if appears to be "set-up" because one happens to be one of our advertisers. In this case, it's **KEYPLUS** for **SJW, Inc.** A reader reports that it arrived within 3 days, the documentation is "short and sweet", and he is very happy with it. It was reviewed in the April PERSONAL COMPUTING and a good review in OCTUG even claims it is "under-priced".... Another recommendation was received about **LEVEL IV PRODUCTS** and another for the computer desk from **AUDIO-VISUAL SYSTEMS**, 2485 Autumnale Ave, San Jose, CA 95132.



**SELECTRIC-BASED
MICROCOMPUTER TERMINALS**

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**COMPUTER CLUB MEMBER
DISCOUNTS AVAILABLE !!**

IBM Selectric typewriters have long been valued for their superior printing and extensive IBM engineering insures the highest possible reliability. ALPHA TECHNOLOGY now offers Selectric-based Printer/Terminals for use with your microcomputer.

This high quality terminal, manufactured by Terminal Communications, originally sold for about \$4000. Model 745 Selectrics (15" carriage), with heavy-duty clutches and bearings, were used for mechanical reliability. The unit is built into an attractive wood grain top desk with the electronics, power supply and cooling fan enclosed in the rear.

Our units are completely refurbished before distribution. All components are disassembled, cleaned and all worn or damaged parts are replaced. The machines are adjusted and lubricated to factory specifications and then thoroughly tested.

Alpha Technology has now developed a new interface which contains its own 8085 microprocessor and allows use of all the features designed into these machines. Our interface may be used with Parallel (Centronics Equivalent), Serial (RS232 Bi-directional), and 20 or 60 ma loop I/O ports. Baud rates are dip selectable to 1200 and may use either 1 or 2 stop bits with even, odd or mark parity as required. The interface translates ASCII to Correspondence code allowing use of any standard Selectric typing elements. The terminal may also be used off-line as an office typewriter. The user may also select buffered or non-buffered send/receive modes of operation (buffered receive allows up to 4K* to be retained and printed while the computer is being used for other operations). Printing may also be interrupted for use in "Local" mode and the unit will maintain a "message waiting" status for further computer operations. These units may also be featured for automatic carriage return and automatic forms feed.

*BASIC MODEL (500 Character Buffer).....\$1095

4K MODEL (4000 Character Buffer).....\$1295
(All Orders Shipped F.O.B. Raleigh, N.C.)

BOOK REPORTS

Read any good books lately? We have. MICROCOMPUTER INTERFACING (by Artwick, Prentice-Hall, 340 pages, hardcover, \$18.95) is a 1980 book which is a good reference for the average TRS-80 owner who is curious about how his computer works with external devices. It covers the basics of various types of memory, printers, video displays, light-emitting diode displays, floppy disks, joysticks, modems, etc. It explains buzzwords such as A/D, ASCII, FIFO and provides typical decoding circuits, logic techniques, modulation schemes and the features of standard busses including pin designations and timing of RS-232, IEE-488, S-100, etc.

There is a new LEVEL II BASIC REFERENCE manual out now (cat. 26-2102) for \$5.95 from Radio Shack. This second edition has corrected a lot of the errors in the old manual, has better examples and believe it or not, it even has an index.

From Hayden Book Company (50 Essex St, Rochelle Park, NJ 07662) come two offerings by mail order with a 15-day free examination. BASIC COMPUTER PROGRAMS FOR THE HOME (by Sternberg, #5154-9, \$8.95) contains 75 home application programs. BASIC COMPUTER PROGRAMS IN SCIENCE & ENGINEERING (by Gilder, #0761-2, paper, \$8.95) has 114 ready-to-run programs for the hobbyist and engineer for statistical operations, curve-fitting, etc. Both books have listings and sample runs and Hayden pays postage on pre-paid orders.

PROGRAMMING THE Z80 (by Zaks, 624 pages, softbound, \$14.95 + shipping) can be used by a person who has never programmed before, according to the preface. It carries a 30-day money back guarantee. SYBEX, 2344 Sixth St, Berkeley, CA 94710 (415)/848-8233 (toll free 800-227-2346 except CA)

No less than six books on PASCAL in the \$10 to \$20 range are available from FMG Corporation, PO Box 16020, Ft. Worth, TX 76133 (817)/294-2510. Request catalog 80 which contains business software as well.

Finally, just to prove that there is something for everyone, these two offerings from opposite ends of the price spectrum: A comprehensive book recommended by Datamation, ENCYCLOPEDIA OF COMPUTER SCIENCE (by Ralston, 1551 pages, \$60). It and other books in the field are available from VAN NOSTRAND REINHOLD, 7625 Empire Dr, Prentice, KY 41042... And the SUPERMAN comic book we reported on in an earlier issue of TCS is now available and free from your local Radio Shack store. Teachers are invited to request a reasonable number of the comic books plus one copy each of MY TRS-80 LIKES ME and the TRS-80 MICROCOMPUTER SOURCEBOOK FOR EDUCATORS, all free, from Radio Shack Advertising Dept, 1300 One Tandy Center, Ft. Worth, TX 76102. Give the grades you teach and the school's address.

CLUBS & NEWSLETTERS

How does your club compare others across the country? What interesting things are other clubs doing? One way to keep up is to swap newsletters with them. If you haven't already sent us a TCS "club" registration form for your club, request one. Then, if you want to swap newsletters with other clubs we will send you the addresses of all those who wish to swap. Meanwhile, here is a selection of club happenings:

The TRS-80 USERS GROUP of OTTAWA (TUGO) has a nice newsletter known as LPRINT which they will swap with newsletters from other clubs. Future issues will contain some useful utility routines which members can burn into a 2K ROM board designed by their club president. It operates in the 3000 hex region. Their address is c/o Brian Harron, 67-3691 Albion Rd, Ottawa, Ontario, Canada, K1T 1P2 ***** Somebody in the RHODE ISLAND COMPUTER HOBBISTS club built a four-foot tall robot named IRA, according to their newsletter RICH. It runs on wheels powered by two storage batteries, is strong enough to push a person across the room, it blinks lights, it whistles, and will soon be able to recognize objects. It's brain is, of course, a TRS-80 ***** The AMATEUR RADIO RESEARCH and DEVELOPMENT CORPORATION is a club of about 250 "radio and computer amateurs" whose newsletter is extremely informative, especially now that hams are allowed to use ASCII for data transmission. They are attempting to define standard protocols to be used and have some super tutorials. A subscription to their fine newsletter is \$12 annually. AMRAD, c/o Gerald Adkins, 1206 Livingston St N, Arlington, VA 22205 ***** The CINTUG newsletter from CINCINNATI TRS-80 USERS GROUP is becoming one of our favorites for it's well written tutorials and useful peeks and pokes. We don't have a form from them so we don't know if they will swap with other clubs or not but they really should. ***** From the MCTUG newsletter in MARIN COUNTY (CA), the following changes made with SUPERZAP on track 3, sector 9 starting

4

at byte D0 on a VTOS 3.0 non-master will render it copyable with the NEWDOS copy command: 21 AF 62 C3 1E 62 ***** The CENTRAL ALABAMA MICROCOMPUTER SOCIETY (CAMS) has announced that their newsletter READY can be contacted on THE SOURCE by ID number TCG797

MAGAZINE HIGHLIGHTS

This section attempts to call attention to some of the more interesting articles in different magazines so you can better judge which magazines you should be subscribing to for your particular interests. Also, you can buy or borrow a particular issue when you know it has something you want to read. We can't afford them all so unless we are sent complimentary issues we rely on feedback from readers who are subscribers. That goes for newsletters, too.

We read in the May issue of BYTE that Dr. John Mauchly, co-inventor of the famous ENIAC digital computer in 1944, owned a TRS-80 and was working on a word processor when he died in January at the age of 72. The May and June issues contain extensive articles on parallel and serial I/O interfacing for the TRS-80 and they are excellent... The Jul/Aug 80-US has 16 articles including an excellent primer on printers, a look at light pens, how to select business software and the results (including a lot of charts) of a survey of TRS-80 owners. That produce such gems as the fact that the average TRS-80 owner is over 40 years old... Noteworthy articles in the June 80-MICROCOMPUTING were the index of EDTASM and an I/O driver for the LA-34 DecWriter. The article on a teletype software driver seems to have some errors around 7F6E in the listing so you may wish to contact the author if you plan to use it. July's issue deals with disk files, graphics, sound, and morse code, all with program listings. Very good.... KILOBAUD's June issue is a special "Microcomputers in Education" edition with several articles devoted to the subject. Also, a review of four popular word processors. July's issue contains modifications necessary to make a text formatter in the May 79 issue work with the TRS-80.... Many good hints in THE ALTERNATE SOURCE #3 and, especially, #4, which is their best one yet. Each issue had lengthy and really superb articles on VARPTR written by different authors. Other articles included a method to store up to five video frames for later recall, how to make a "system" tape begin execution automatically, great tutorials by Dennis Kitz, use of the GSF sort routine, a review of the "Speak-2-Me-2", and more. This publication is really beginning to mature.... In the June CREATIVE COMPUTING there are five articles related to the TRS-80 including simulation of motion with graphics, another review of SCRIPSIT, and a listing for computer aided sight reading which teaches names of notes on seven musical staves.... The summer issue of ON-COMPUTING has three TRS-80 related articles. One is an excellent primer on disks, another is a good review of THE SOURCE.... The June PROG/80 has an article on APL programming, how to use PENCIL to edit BASIC programs (by saving it in ASCII first), techniques for random files, and how to zap PENCIL to work with the new Radio Shack lower case modification.... THE S-EIGHTY which started out being free in January and soon became \$3 per year for non-subscribers of SOFTSIDE as we reported in our last issue, has now become \$5 per year for non-subscribers of SOFTSIDE or PROG/80. The June issue contained three brief articles, one of which went on about a program which was not listed.

LAST MINUTE STUFF

The list of toll free numbers of people who sell things for the TRS-80 has been mailed to all user groups we know of. If your group didn't get one, let us know. Some corrections for that list: AEI should be 800-854-6003, and the CENTRONICS number only gets you the field engineering office so delete it. Please send corrections and new numbers to us.

If you have a special use for your TRS-80 and would like to communicate with someone who shares your interest, let us add your name to our PEN-PAL list (tell us what your interest is) and we'll send you a copy. There's over 100 names on the list.

We wish again to thank all of you who have written and complimented us on our "letters" and for the many tips and hints you've provided for us to use. Please, keep it up. And special thanks for those of you who have donated more than your share to help continue this project. It is not our policy to ask for donations (even though we exist on them) because we think there should be at least one free source of information available to TRS-80 owners. Apparently you feel the same way which is why you help spontaneously.

UNTIL SEPTEMBER.....

SJW, INC.

P.O. BOX 438
HUNTINGDON VALLEY, PA 19006
(215) 947-2057

KEYPLUS INTEGRATED UTILITY PACKAGE

Keyplus is a powerful collection of utilities for the TRS-80. With the exception of keyboard debounce, which is automatic, Keyplus utilities can be enabled whenever the TRS-80 accesses the keyboard. A partial list of utilities includes:

AUTO REPEAT - Allows you to repeat a key simply by holding the key down. Works with all keys but ENTER, CLEAR, and BREAK. This is a must when editing BASIC programs.

LOWERCASE VIDEO - If your TRS-80 has a hardware modification installed for lowercase video, Keyplus will add the software needed to make it work. Several companies, including Radio Shack, offer the lowercase hardware modification at reasonable prices.

BASIC SHORTHAND - Keyplus generates BASIC key words (GOSUB, INPUT, STEP, etc.) in a single key stroke. You have the option of having Keyplus print trailing blanks when practical, adding to the appearance of the listing.

RESTORE LOST BASIC PROGRAM - Ever NEW a program only to realize you did not record it? Two key strokes and you've got it back!

LOWERCASE WITHOUT SHIFT - Keyplus lets you generate lowercase from the keyboard without depressing the SHIFT key.

DIRECT KEYBOARD ENTRY OF GRAPHICS - Type graphic strings directly from the keyboard. This is the easy way to create BASIC programs with super fast graphics. Keyplus provides three different modes of direct graphic entry to give you maximum flexibility.

USER DEFINABLE STRINGS - User definable strings up to 32 characters long can be generated in a single key stroke. With this feature redundant input does not have to be retyped.

KEYBOARD DEBOUNCE - (LV. II, 16K version only) Keyplus cures debounce problems completely. What's really nice is the 16K version of Keyplus loads in just 20 seconds! Note: debounce protection was left off the disk version because DOS already provides this function.

AUTO INPUT - (Disk version only) Allows you to define a string, save the string onto disk, and then recall the string fooling the computer into thinking the string is being typed from keyboard. The string may automatically be inputted at power up or by pressing just two keys. This is extremely powerful. For example, you can now enter BASIC, set memory size, reserve file buffers, turn off interrupts, run a program, respond to questions asked by the program, etc., automatically from power up or from the DOS READY prompt.

SAVE KEYPLUS - (Disk version only) This routine allows you to transfer Keyplus from diskette to diskette. You can also use this routine to allow Keyplus to be initialized with any combination of routines enabled or disabled.

TRS-80 is a registered trade mark of Radio Shack, a division of Tandy Corp.



SJW, INC., P.O. Box 438, Huntingdon Valley, Pa. 19006
Credit card users may phone (215) 947-2057 to order



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