

APRIL 1982

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# TRS-80<sup>TM</sup> NEWSLETTER

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SOUTH BAY - USERS GROUP

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SBUG-80, IT'S UP AND  
RUNNING...



## SOFTWARE LIBRARIES

Effective immediately the operation of the software libraries will be suspended temporarily while we assess the legality of having a club software library which includes copyrighted software. The members of the steering committee have come to this decision based on the following considerations:

\* It is impossible for the club to prevent pirating of copyrighted programs that are checked out of the libraries. Copying of this software and documentation is a violation of federal copyright laws.

\* Piracy of software has been receiving increased media coverage. For example, the following quote is from the March 22 issue of InfoWorld (page 36)---"A member of a Northern California TRS-80 users' group says that piracy is common in users' groups. He says that his club's library includes many copyrighted programs that members can take home. 'In theory he only runs it, but in reality he makes a copy,' says the member."

\* Even members that do not participate in the library could be involved in legal prosecution or civil suit based on their association with the club if the library is not completely legal. Several long time members have expressed concern about this and some have even dropped out of the club to avoid being associated with potential illegal activity.

\* The intent of the software libraries is to allow the members to evaluate programs prior to purchase. This intent can be accomplished by other means than the libraries. One suggestion is to compile a list of members that have purchased or are knowledgeable about various software products and are willing to demonstrate and discuss them. A member considering the purchase of a program could contact the members on this list for more information. The newsletter and the bulletin board (when it gets going) can also be forums to review software.

\* We are evaluating the legality of including copyrighted software in the library only if the library contains the original tape or disk and documentation.

\* The elimination of copyrighted software from the club library would probably not stop trading of programs among individual members since the club has no control of members activities outside of the meetings. The person who wants to get a pirated copy will at least be forced to interact with the other club members and perhaps buy a few programs with which to trade.

\* The libraries will be reopened as soon as it has been verified that they contain only public domain and original copies of copyrighted software. Club members are encouraged to submit original programs and public domain software to the libraries. We must also remember that the bulletin board (SBUG-80) will only contain non-copyrighted software.

\* These issues will be discussed at the next club meeting.

-- Mike McHenry  
MCHENRY @ SBUG-80

Editor's note:

Can you believe it?? It's finally here... SBUG-80 is humming strong. It doesn't have direct file transferring capabilities but, it is now being worked on and will soon be available. For now, ASCII files can be downloaded and uploaded through BASIC and there is a mail program that will allow messages to be passed privately among its' users. For those of you who can not make the next club meeting but would like to have access to SBUG-80 give me a call at (408) 732-6775. I will be happy to create you an account. Cost?? It was decided by your steering committee that the first two months access will be free to SBUG members, the system can be used by members ONLY. It is believed, by your committee, that a public system would crowd a 300 baud modem quickly making the utility of such a system unpractical to its' members. Let us call this a trial period, all hardware for SBUG-80 is on loan by supporting members. If the membership likes the idea the committee is considering the purchase of a Model III to do the task. How the financing will be arranged has not yet been determined. Lets' first see what the next two months bring. See you at SBUG-80...

-- Robert Byrd  
EDITOR @ SBUG-80

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#### TO DOUBLE OR NOT TO DOUBLE, THAT IS THE QUESTION

A late report from the double density front! I sent letters to the double density adapter suppliers for the Model I and received the following information:

DAD Sales - sells Percom Doubler for \$135 and offers no discount.  
Aerocomp - sells their own doubler for \$149.95 + \$2 shipping and will sell for \$120 +\$2 each shipping for a single order of 10 or more. AM Electronics - sells a "multiplier" for \$99.95. Possible \$20 discount--see below.

I have ordered and received an Aerocomp unit. It took about 7-10 days for delivery. It is a nicely made, solder masked double sided PC board of apparently good quality workmanship. It is the same size as my Percom data separator and plugs right in like the Percom unit. Carries a 14 day return privilege and a 120 day warranty ... you pay shipping if repair needed.

I have tried it and it works great. Bob Byrd brought over some disks made on the Model III using NEWDOS 80 V.2, they read fine on the Model I. Using the double density capability, I made some disks on the Model I and Bob reports that they read fine on the Model III belonging to his father-in-law.

Now, the story on the AM Electronics unit. They hadn't answered my letter and I had long ago ordered the Aerocomp unit. When I saw their booth at the Computer Fair, I asked them about the multiplier. They were very defensive, asked what I wanted to know about it, and said they would guarantee that it would work as good as the Percom unit, however they wouldn't give a trial period as does Aerocomp. If it doesn't work as well as Percom's they said

they'd fix it. When I asked about a discount, I got a look as if I were crazy and they said it is already cheap. I pointed out that they obviously had some margin, or they wouldn't be selling it. After some shuffling of feet they said they guessed perhaps a \$20 discount for 10 or more units. Nothing in writing still. A week later, I got a letter back from them with price information on a Model III disk controller. Either they can't read as well as Aerocomp and DAD Sales which received the identical letter (Scripsit to the rescue) or they just plain don't have their act together. I have my doubts about this deal if we were to deal with them.

Whether or not we buy an Aerocomp as a group, I think I will keep mine. I'm tired of buying disks.

If you are interested in the Aerocomp unit at \$120 each, I will be glad to coordinate. If I were to collect payment in advance, I would telephone an order and charge it to my VISA card. I am, however, unwilling to assume people are really interested and buy it myself without money up front. It's not that I don't trust people, I just know how people change their minds. Maybe someone knows a better way to handle this, perhaps someone can suggest it.

If you are interested in a group buy and are willing to act reasonably fast so the order can go in, let Bob Byrd (732-6775) or me (867-9533) know and be prepared to come up with the money (tax refunds anyone?) if we get enough people for a group buy we'll put this one together

-- Ian Webb

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#### OBSERVATIONS AT THE FAIR

I went to the Computer Fair Friday morning. Arriving about 9:30, we found the garage full and no parking public or private for blocks. Finally parked near a city park in a shady part of town and walked 10 or 12 blocks. (Yes, the tires and wheels were still on the car when we returned.)

I expected a reasonably light crowd on Friday morning, but the front exit was mobbed. I remembered the basement exit through the parking garage and found no one in line there and got right in after purchasing a \$15 ticket! Wish I had been early to the last meeting for the \$7.50 tickets!

One thing I saw that impressed me was new Epson MX-80 printers WITH Graftrax for \$395. They seemed to be a bait and switch item for the new NEC printer which really looks good at \$495 and perhaps worth the extra \$100. The fellow making the units that allow you to control the MX-80 from the push buttons on it had his ROMS there for demonstration. I think they're \$39.95 for the set. They plug in in place of Epson's ROM. He will be coming out with a Graftrax compatible ROM adapter in the future he said. I put my name on his list for future information. By pushing the buttons when the printer is off line, you count the beeps of the built in horn and the number of beeps you produce determines what function you are

keying in. This way, you can put it into compressed print, for example, without having to turn everything off and getting into BASIC for a LPRINT command. (One of these days, I'll write up my machine language routine which lets you do this easily from BASIC with a LINE command or from DOS using a /CMD file.)

The Japanese (from Japan) Computer Club had an impressive array of computers, some of which are not available in this country, and a collection of magazines which make ours for computers look like comic books. Their computer interests seem to be paralleling their amateur radio interests and it seems as though they could run away with the hardware market very easily as they have done with the ham gear. Wish I could read Japanese, since their magazines seem to have so much in them!

Saw some hardware at low prices. Some disk supplies for about \$25 that were not the typical home made variety, but good commercial supplies. Also Z80A for \$3.95! Wonder what the price will be on them in another year or two. Exatron (Sunnyvale company) had their Stringy Floppies and were offering a free kit of memory expansion board and IC's if you bought the starter package for \$350. Their newboard goes in the KEYBOARD unit NOT THE EXPANSION INTERFACE and will give you 64K ... yes that is right 64K ... with no new power supply. The unit plugs in and replaces your existing memory chips with 64K chips. It will retail ready made for about \$200, but should be available as a kit for less. It may also give you a built in speed up if I understand it correctly.

With the 64K unit, you can software switch in and out the existing ROM. The procedure would be like this. Boot up normally and you would appear to have a regular 48K system. Load the bottom 16K of your memory to high memory RAM using a machine language LDIR routine. Switch out the ROM and in the RAM for the bottom 16K and then move the ROM code back to low memory with another LDIR routine. Now you can modify the ROM code and tailor the system however you wish. Even fix keybounce delays, and patch up Radio Shack peculiarities which you don't like.

Although the phantom ROM isn't yet available, it should be possible to run CP/M with this system also. I guess you could even do it through a system which would put the operating system in memory with a regular TRS-80 disk and then switch in the bottom 16K RAM.

Those who haven't been to an Exatron Stringy Floppy Owner's Association (ESPOA) meeting might find it interesting. Lots of nice people and TRS-80 information. Mostly based on the Stringy Floppy, but lots of good information also. It meets every Saturday morning from 9-12 at Exatron on Commercial St. in Sunnyvale. It is the short part of Commercial between Central Expressway and Kifer just to the West of National Semiconductor. Look for the building with the blue upper part. They also run a free BASIC programming seminar at 1 O'Clock on Saturdays. I recommend it highly.

-- Ian Webb

## SOUTH BAY TRS-80 USER'S GROUP ROSTER AS OF 04/12/82

|                     |                             |                     |       |          |
|---------------------|-----------------------------|---------------------|-------|----------|
| ALLEN, RICHARD      | 172 COLLEGE AVE.            | LOS GATOS, CA       | 95030 | 354-8190 |
| AMES, EDWARD E.     | 6390 WINDSOR LANE           | SAN JOSE, CA        | 95129 | 253-2035 |
| ANDERSON, ROBERT    | 514 LATONA CT.              | SAN JOSE, CA        | 95111 | 281-8980 |
| ANDERSON, ROGER     | 1279 CRESCENT TERRACE       | SUNNYVALE, CA       | 94087 | 732-4307 |
| ANDERSON, TOM       | 91 ANGELA DRIVE             | LOS ALTOS, CA       | 94022 | 941-1543 |
| ANDERSON, WES       | 763 LA PARA AVE.            | PALO ALTO, CA       | 94306 | 493-3330 |
| ANDRES, DAVID       | 1198 AWALT DR.              | MT. VIEW, CA        | 94040 | 961-5225 |
| ANTHONY, DICK       | 132 POTOMAC DR.             | LOS GATOS, CA       | 95030 | 358-3002 |
| ANTICOUNI, STAN     | 7174 SANTA TERESA BLVD., A1 | SAN JOSE, CA        | 95139 | 578-8550 |
| ASHEY, JOE          | 1999 HEATHERDALE AVE.       | SAN JOSE, CA        | 95126 |          |
| BARDEN, GERALD L.   | 8302 CHIANTI CT.            | SAN JOSE, CA        | 95135 | 238-2258 |
| BARNES, KEN         | 106 ARBUUELO WAY            | LOS ALTOS, CA       | 94022 | 948-1613 |
| BARRETT, BARRY      | 3859 ASHRIDGE LANE          | SAN JOSE, CA        | 95121 | 274-1427 |
| BARRETT, DOUGLAS    | 611 EL TORO WAY             | GILROY, CA          | 95020 | 847-4146 |
| BASYE, STEVE        | 450 N. MATHILDA APT S-103   | SUNNYVALE, CA       | 94086 | 735-9117 |
| BEIN SR., GERALD    | 4653 EASTUS DR.             | SAN JOSE, CA        | 95129 | 253-7546 |
| BENNETT, WILLIAM    | 3270 MELENDY DR.            | SAN CARLOS, CA      | 94070 | 595-2537 |
| BERG, LAUREN        | 5145 HARVEST ESTATES        | SAN JOSE, CAL       | 95135 | 274-6869 |
| BIEBER, DENNIS      | 1630 OTTAWA CT., APT. C     | SUNNYVALE, CA       | 94087 | 730-5068 |
| BLAINE, DICK        | 22284 DE ANZA CIRCLE        | CUPERTINO, CA       | 95014 | 257-6410 |
| BOBBITT, KENNETH    | 20 SEA CREST CT.            | HALF MOON BAY, CA   | 94019 | 728-5039 |
| BODNAR, ELMER       | 5162 CORDOY LANE            | SAN JOSE, CA        | 95124 | 266-1304 |
| BRIESE, SUNNY       | P O BOX 632                 | PALO ALTO, CA       | 94301 | 446-5592 |
| BROWN, ROBERT       | 780 MANX AVE.               | CAMPBELL, CA        | 95008 | 379-2774 |
| BROWN, SAM          | 780 MANX AVE.               | CAMPBELL, CA        | 95008 | 379-2774 |
| BROWN, SAM          | 783 BORREGAS                | SUNNYVALE, CA       | 94086 | 734-8898 |
| BRYAN, LARRY        | 285 S. 12TH ST.             | SAN JOSE, CA        | 95112 | 289-1519 |
| BYRD, ROBERT J.     | 450 N. MATHILDA, NO. I-208  | SUNNYVALE, CA       | 94086 | 732-6775 |
| CARPENIER, BILL     | 1079 THE DALLAS             | SUNNYVALE, CA       | 94087 | 739-8916 |
| CARPENTER, RONALD   | NO. 7 LIGHTHOUSE ROAD       | HALFMOON BAY, CA    | 94019 | 726-3487 |
| CARR, JIM           | 16485 OAK GLEN AVE          | MORGAN HILL, CA     | 95037 |          |
| CARRE, DON          | 21100 SUMMIT                | LOS GATOS, CA       | 95030 | 354-2767 |
| CERVANTES, BEN      | 854 34TH AVE.               | SAN FRANCISCO, CA   | 94121 | 964-6635 |
| CHABRAYA, KENNETH   | 2630 PAGANINI AVE.          | SAN JOSE, CA        | 95122 | 238-3104 |
| CHAMBERLAIN, CONRAD | 1469 VALCARTIER DR.         | SUNNYVALE, CA       | 94087 | 736-2208 |
| CHOW, KAM           | 1031 CLYDE AVE., NO. 1504   | SANTA CLARA, CA     | 95050 | 980-5022 |
| COFFMAN, PHILLIP A. | 1016 AKIO WAY               | SAN JOSE, CA        | 95120 | 997-0247 |
| DAY, J. P.          | 1340 SPOONBILL WAY          | SUNNYVALE, CA       | 94087 | 241-6014 |
| DEGRASSE, ROBERT    | 26755 ROBLEDA CT.           | LOS ALTOS HILLS, CA | 94022 | 941-5942 |
| DELLINGER, STEPHEN  | P.O. BOX 521                | REDWOOD CITY, CA    | 94064 | 368-9355 |
| DELONG, RICHARD     | 4878 KINGRIDGE DR.          | SAN JOSE, CA        | 95124 | 356-3780 |
| DEVENDORF, BRYAN    | P.O. BOX 6302               | STANFORD, CA        | 94305 | 494-8500 |
| DINKEY, JAMES       | 3380 CORK OAK WAY           | PALO ALTO, CA       | 94303 | 493-9307 |
| DYKSTRA, JIM        | 102 ELMA WAY                | LOS GATOS, CA       |       | 395-9118 |
| EARLEY, MARTIN      | 1950 EATON AVE              | SAN CARLOS, CA      | 94070 | 592-1950 |
| EDSON, CHARLES      | 13784 VIA ALTO CT.          | SARATOGA, CA        | 95070 |          |
| FEHRENBACH, PAUL    | 1798 COMMODORE DR.          | SAN JOSE, CA        | 95133 | 251-3743 |
| FIBUSH, DAVID K.    | 3877 HANCOCK DR.            | SANTA CLARA, CA     | 95051 | 248-7585 |
| FORBES, ROSS        | P.O. BOX 1                  | LOS ALTOS, CA       | 94022 | 948-5193 |
| FRENZEL, JOHN       | 629 LISA WAY                | CAMPBELL, CA        | 95008 | 244-6427 |
| GARDEI, DANIEL      | 1195 CLAYBORN LN.           | SAN JOSE, CAL       | 95121 | 225-5859 |
| GARMAN JR., LEROY   | 1581 CALIFORNIA AVE         | PALO ALTO, CA       | 94304 | 855-3420 |
| GARMAN, ROY         | 1676 KENNARD WAY            | SUNNYVALE, CA       | 94087 | 736-1084 |
| GEER, JOHN          | 617 VETERANS BLVD., NO. 212 | REDWOOD CITY, CA    | 94063 | 361-8000 |
| GEIBEL, JOHN        | 411 BURGESS                 | MENLO PARK, CAL     | 94025 |          |

|                     |                           |                    |       |          |
|---------------------|---------------------------|--------------------|-------|----------|
| GEORGE, BRIAN       | 3581 MURDOCH DR.          | PALO ALTO, CA      | 94386 | 494-8561 |
| GIBSON, JIM         | 471 CHINOOK LN.           | SAN JOSE, CA       | 95123 | 578-8261 |
| GILL, RICH          | 46937 LUNDY TERR.         | FREMONT, CA        | 94538 | 657-6611 |
| GLESSER, ALLEN      | 2348-C WALSH AVE.         | SANTA CLARA, CA    | 95051 | 727-3830 |
| GOES, HARLEY        | 1358 JOYNER CT.           | SAN JOSE, CA       | 95131 | 926-1254 |
| GOLDBERG, ARTHUR    | 2682 MERIDIAN AVE         | SAN JOSE, CA       | 95124 | 265-6419 |
| GONCALVES, RONALD   | 1722 WICKHAM              | SAN JOSE, CAL      | 95132 | 251-2993 |
| GONSALVES, MARK     | 5199 CARTER AVE           | SAN JOSE, CAL      | 95118 | 266-6539 |
| GORNLEY, PATRICK    | 189 WARWICK ST.           | REDWOOD CITY, CA   | 94062 |          |
| GRAY, CHARLES       | 7576 NEWCASTLE DR.        | CUPERTINO, CA      | 95014 | 253-8606 |
| GRAY, JOANN         | 458 N. MATHILDA, NO. C306 | SUNNYVALE, CA      | 94086 | 733-3857 |
| GREENE, RONALD      | 316 QUINAHILL AVE.        | LOS ALTOS, CA      | 94022 | 941-5149 |
| GUNDERSON, LARRY C. | 1299 SIERRA CT.           | SAN JOSE, CA       | 95132 | 259-5349 |
| HAGER, HANS PAUL    | 1251 ALMENDEN AVE.        | SAN JOSE, CAL.     | 95110 | 297-8265 |
| HALL, ED            | 3545 EL CAMINO REAL       | PALO ALTO, CA      | 94306 | 856-7467 |
| HANSELMAN, ROBERT   | 3403 LODGE DR.            | BELMONT, CAL       | 94002 | 591-1193 |
| HANZ, PAUL          | 555 MIDDLEFIELD APT. P105 | MOUNTAIN VIEW, CAL | 94043 | 969-4290 |
| HARMON, LARRY       | 3155 SYLVAN DR.           | SAN JOSE, CA       | 95148 | 238-8194 |
| HARSHBERGER, BOB    | 4238 HAINES AVE.          | SAN JOSE, CA       | 95136 | 265-7432 |
| HARTLEY, WILEY D.   | 6893 MONTGOMERY CT.       | SAN JOSE, CA       | 95135 | 238-2576 |
| HAYES, RICHARD J.   | 18119 RIDGEWAY DR.        | CUPERTINO, CA      | 95014 | 734-3456 |
| HEATHER, JOHN T.    | 1858 CELILO DR.           | SUNNYVALE, CA      | 94087 | 732-3276 |
| HERNIG, THOMAS      | 1823 BURLWOOD DR.         | SAN JOSE, CAL      | 95120 | 997-8129 |
| HILLBRATH, H.S.     | P.O. BOX 4741             | SANTA CLARA, CA    | 95054 | 578-3696 |
| HIPPLE, MARION      | 3817 PHOENIX CT.          | SAN JOSE, CA       | 95130 | 249-7835 |
| HOBART, TERRY       | 697 HEBRIDES WAY          | SUNNYVALE, CA      | 94087 | 738-4402 |
| HOKER, ALLEN        | 1685 LOBELIA LANE         | SAN JOSE, CA       | 95124 | 265-8297 |
| HOOVER, EDWARD F.   | 585 CYPRESS PT. DR. #171  | MOUNTAINVIEW, CAL  | 94043 | 961-8396 |
| HOOVER, EDWARD      | 1825 HIGHLANDS CR.        | LOS ALTOS, CA      | 94022 | 961-3410 |
| HOPPER, JAMES       | 358 LASSEN PARK CIRCLE    | SAN JOSE, CA       | 95136 | 629-7411 |
| HUGHES, JERRY       | 2116 BEL AIR AVE          | SAN JOSE, CA       | 95128 | 248-5367 |
| HULL, JACQUES       | 1335 COMPER ST.           | PALO ALTO, CA      | 94301 | 321-8337 |
| HUNTLEY, WRIGHT     | 2483 S. PARK LN.          | SANTA CLARA, CA    | 95051 | 248-5905 |
| HUNTSINGER, PETE    | 683 GALEN DR.             | SAN JOSE, CA       | 95123 | 227-7125 |
| HUTCHESON, DAN      | 4838 CAROLINE WAY         | SAN JOSE, CA       | 95124 | 247-7760 |
| IRVING, DONALD      | 5458 MAYME AVE., NO. 15   | SAN JOSE, CA       | 95129 | 255-3270 |
| JARVIS, JOHN R.     | 3181 HUMBOLDT AVE.        | SANTA CLARA, CA    | 95051 | 247-6328 |
| JENSEN, DALE        | 852 ROSS COURT            | PALO ALTO, CA      | 94303 | 494-6553 |
| JIBBY, WILLIAM      | 6185 SILBERMAN DR.        | SAN JOSE, CA       | 95128 | 268-8181 |
| JOHNSON, ANTON      | P. O. BOX 1671            | FREMONT, CA        | 94538 |          |
| JOHNSON, SAM        | 318 CHATHAM WAY           | MT. VIEW, CA       | 94040 | 969-8228 |
| KAMAS, PETER        | 1186 SO. MARY             | SUNNYVALE, CAL     | 94087 | 736-9264 |
| KAWASH, SABRI       | 1816 HAVRE CRT.           | SUNNYVALE, CA      | 94087 | 732-5484 |
| KEPPEL, ROBERT      | 4644 WINDING WAY          | SAN JOSE, CAL      | 95129 | 253-5928 |
| KERRIGAN, VINCENT   | 452 LOS ENCINOS ST        | SAN JOSE, CA       | 95134 | 262-4687 |
| KINCHELOE, BOB      | 26830 ELENA RD.           | LOS ALTOS, CA      | 94022 | 948-8682 |
| KING, FRED          | 15159 MONTALVO RD.        | SARATOGA, CA       | 95070 |          |
| KORS, RICHARD       | 119-A FLYNN AVE.          | MT. VIEW, CA       | 94043 | 964-9845 |
| KREHBIEL, COURTNEY  | 1834 HEATHERSTONE WY      | SUNNYVALE, CAL     | 94087 | 737-2253 |
| KROMENHOCK, JACOB   | 948 HORCAJO CIRCLE        | MILPITAS, CA       | 95035 | 262-4239 |
| LAFFEY, GLORY ANNE  | 353 SURBER DR.            | SAN JOSE, CAL      | 95123 | 227-2657 |
| LAMB, EMMET         | 817 TOLMAN DR.            | STANFORD, CA       | 94305 | 493-1138 |
| LASMAN, JEFF        | P.O. BOX 3157             | SIMI VALLEY, CA    | 93863 | 522-4857 |
| LEE, GIL S.         | 929 JUNGFRAU CT.          | MILPITAS, CA       | 95035 | 263-9294 |
| LESTER, TED         | 139 G ST. #158            | DAVIS, CAL         | 95616 | 758-7961 |
| LYNCH, JOHN & DONNA | 984 ROCKDALE DR.          | SAN JOSE, CA       | 95129 | 252-4491 |
| MARCELLI, MR        | 134 MAPLE ST.             | REDWOOD CITY, CAL  | 94063 | 365-8368 |
| MARRAZZO, JOE       | 2888 STANHOPE DR.         | SAN JOSE, CA       | 95121 | 238-5189 |
| MARSHALL, BOB       | 5868 BOWES LANE           | SAN JOSE, CA       | 95118 | 266-1482 |

|                         |                             |                   |       |          |
|-------------------------|-----------------------------|-------------------|-------|----------|
| MARTIN, JERRY           | 10139 S. BLANEY AVE., NO. F | CUPERTINO, CA     | 95014 | 996-8619 |
| MADCH, PAUL             | 1815 WALNUT DR.             | MT. VIEW, CA      | 94040 | 968-1268 |
| MAYFIELD, R. B.         | 12616 LARCHMONT AVE.        | SARATOGA, CA      | 95070 | 257-3760 |
| McNAUGHT, JEFF          | 2230 HOMESTEAD CT.          | LOS ALTOS, CAL    | 94022 | 749-8332 |
| MEHR, AL                | 3008 OAKBRIDGE DR           | SAN JOSE, CA      | 95121 | 274-8112 |
| MEURER, CHET            | 1671 MILROY PL.             | SAN JOSE, CA      | 95124 | 264-8884 |
| MEYER, ALEX             | 3153 TRISTIAN AVE           | SAN JOSE, CAL     | 95100 | 258-1128 |
| MICHAELS, WAYNE J.      | 1423 KEW GARDENS CT.        | SAN JOSE, CA      | 95120 | 268-8170 |
| MILLER, BILL            | 6675 CLIFFORD DR.           | CUPERTINO, CA     | 95014 | 253-3175 |
| MORREY, ROBERT          | 3404 MERRIMAC DR            | SAN JOSE, CA      | 95117 | 379-5944 |
| MUTSCHLER, LEWIS        | 3348 GARDEN DALE DR.        | SAN JOSE, CAL     | 95118 | 264-2986 |
| McCLAIN, BOB            | 1085 TASMEN DR. #610        | SUNNYVALE, CA     | 94086 |          |
| McHENRY, MICHAEL        | 1030 RANGPUR COURT          | SUNNYVALE, CA     | 94087 | 245-4704 |
| McKEE, GERALD F.        | 926 CAPE BUFFALO DR.        | SAN JOSE, CA      | 95133 | 926-4063 |
| McLAUGHLIN, DAVE        | 12985 TEN OAK WAY           | SARATOGA, CA      | 95070 | 867-5285 |
| McVEIGH, WALTER         | 450 N. MATHILDA, NO. B101   | SUNNYVALE, CA     | 94086 | 736-8228 |
| NELSON, ART             | 645 ALMANOR                 | SUNNYVALE, CA     | 94086 | 732-2710 |
| NEUHAUS, HERMANN        | 12246 WOODSIDE DR.          | SARATOGA, CA      | 95070 | 996-0304 |
| NEWMAN, DAVID E.        | 6658 MT. HOLLY              | SAN JOSE, CAL     | 95120 | 268-6610 |
| NG, SAMUEL              | 6031 BOLLINGER DR.          | CUPERTINO, CA     | 95014 | 257-6506 |
| OBERDING, FRED          | 120 LINCOLN DR.             | CAUSALITO, CA     | 94965 | 332-0625 |
| OGLE, JOHN              | 1472 PASHOTE CT.            | MILPITAS, CA      | 95035 | 263-3798 |
| OLAFSSON, OLAFUR        | 95 GREEN VALLEY DR.         | SANTA CRUZ, CAL   | 95066 | 335-3224 |
| OLSON, CHUCK            | 20832 GREENLEAF             | CUPERTINO, CA     | 95014 | 446-3450 |
| OLSON, MICHAEL          | 4238 MONET CIRCLE           | SAN JOSE, CA      | 95136 | 578-0740 |
| PARKER, CASEY           | 38833 OVERACKER AVE         | FREMONT, CA       | 94536 | 793-2715 |
| PATRICK, RICHARD        | 1334 NANCARROW CT.          | SAN JOSE, CA      | 95120 | 997-7876 |
| PERKINS, DAVID          | 1066 MARIGOLD CT.           | SUNNYVALE, CA     | 94086 | 984-6686 |
| PERKINS, JEFF           | 3088 ADAMS WAY              | SANTA CLARA, CA   | 95051 | 244-0876 |
| PERRY, LARRY            | 284 CARLYN AVE.             | CAMPELL, CA       | 95008 | 378-2003 |
| PERRY, RANDOLPH         | 35879 ADOBE DR.             | FREMONT, CAL      | 94536 | 792-0969 |
| PETERSON, KEN           | 441 PIN OAK DR.             | SUNNYVALE, CA     | 94086 | 733-1464 |
| PHELPS, SANDY           | 585 OAK ST.                 | MTN. VIEW, CA     | 94041 | 964-1642 |
| PICARD, WAYNE           | 520 WALKER DR. #61          | MOUNTAINVIEW, CAL | 94043 | 965-3781 |
| POTIBERG, BILL          | 1621 WESTMOOR RD.           | BURLINGAME, CA    | 94010 | 697-2375 |
| PRINCEAU, RICHARD       | 66 GUAVA BLOSSOM CT.        | SAN JOSE, CA      | 95123 | 227-6254 |
| REDDY, VEN              | 10756 LINDA VISTA DR.       | CUPERTINO, CA     | 95014 | 446-2984 |
| RICHARDS, FRANK         | 1544 LYLE DR.               | SAN JOSE, CA      | 95129 | 252-4543 |
| RICHERSON, BILL & BRIAN | 1047 FOREST KNOLL           | SAN JOSE, CA      | 95129 | 257-8267 |
| ROBERTSON, DAVID        | 12077 COVINA COURT          | SARATOGA, CA      | 95070 | 257-6383 |
| ROCHE, CURT             | 3890 LOUIS RD.              | PALO ALTO, CA     | 94303 | 494-2643 |
| ROE, WAYNE              | 1034 BELLINGHAM DR          | SAN JOSE, CA      | 95121 | 972-2494 |
| RUDDLE, HENRY           | 413 TAYLOR DR.              | MILPITAS, CA      | 95035 | 263-5343 |
| SCHNELL, EDWARD         | 1508 SANTA INEZ DR.         | SAN JOSE, CA      | 95125 | 264-2792 |
| SCHWARTZ, ALLAN         | 919 CAPE GEORGE PL.         | SAN JOSE, CA      | 95133 | 926-5307 |
| SCHWARTZ, DAVID         | 919 CAPE GEORGE PL.         | SAN JOSE, CA      | 95133 | 926-5307 |
| SHAPIRO, AL             | 992 BLUEBONNET DR.          | SUNNYVALE, CA     | 94086 | 738-3687 |
| SHINKEVICH, PETER       | 6419 BERWICKSHIRE WAY       | SAN JOSE, CA      | 95120 | 997-6382 |
| SILLS, MARK             | P.O. BOX 100                | HOLLISTER, CA     | 95023 | 637-4434 |
| SILVA, BILL             | 2643 CUNNINGHAM AVE.        | SAN JOSE, CA      | 95148 | 926-5157 |
| SMITH, LELAND           | 3732 LAGUNA AVE.            | PALO ALTO, CA     | 94306 | 493-9386 |
| SMITH, PATRICK A.       | 124 BELHAVEN DR.            | LOS GATOS, CA     | 95030 | 356-6885 |
| SMITH, VIGO             | 19768 SOLANA DR.            | SARATOGA, CA      | 95070 | 996-7896 |
| SOLEY, CLYNE            | 5541 CRIBARI CIR.           | SAN JOSE, CA      | 95135 | 274-2017 |
| SPRIGGS, LUCIAN         | 1063 CAPE HATTERAS WAY      | SAN JOSE, CA      | 95133 | 926-3523 |
| STEELE, KEN             | 953-70 HENDERSON AVE.       | SUNNYVALE, CA     | 94086 |          |
| STOJANOVICH, JOHN       | 16800 KENNEDY DR.           | LOS GATOS, CA     | 95030 | 356-6452 |
| STONE, BOB              | 19645 NORTHAMPTON           | SARATOGA, CA      | 95070 | 255-6804 |
| STORMBERG, BOB          | 4691 CASTLEWOOD             | SAN JOSE, CA      | 95129 | 255-6770 |

|                     |                        |                  |       |          |
|---------------------|------------------------|------------------|-------|----------|
| TESSMER, MICHAEL    | 135 HEATH ST.          | MILPITAS, CA     | 95035 | 946-5192 |
| THOMPSON, BERNARD   | 20738 WOODWARD CT.     | SARATOGA, CA     | 95070 | 867-7455 |
| THOMPSON, JIM       | 13824 ESPADA CT.       | SARATOGA, CA     | 95070 |          |
| THURBER, GENE       | 648 NAVAJO CT.         | SAN JOSE, CA     | 95123 | 227-4406 |
| TRAINER, RICHARD    | 744 SAN ANTONIO RD.    | PALO ALTO, CA    | 94303 | 494-3565 |
| VANCIURA, ZEB       | 332 LOWELL DRIVE       | SANTA CLARA, CA  | 95051 | 244-7625 |
| WALKER, JOHN        | 5616 SILVERLEAF RD     | SAN JOSE, CA     | 95138 | 225-1088 |
| WATKINS, KENNETH E. | 6349 MALORY DR.        | SAN JOSE, CA     | 95123 | 226-6229 |
| WEBB, IAN           | 20621 CANYON VIEW DR.  | SARATOGA, CA     | 95070 | 867-9533 |
| WEST, E. J.         | 1029 JOHNSON AVE.      | SAN JOSE, CA     | 95129 | 257-8752 |
| WILEY, MARVIN D.    | 20198 KNOLLWOOD DR.    | SARATOGA, CA     | 95070 | 255-1438 |
| WILSER, WALT        | 10136 CAROL LEE DR.    | CUPERTINO, CA    | 95014 | 996-1450 |
| WILSON, CURTIS      | 20251 MERRICK DR.      | SARATOGA, CA     | 95070 | 867-6976 |
| WITTEKIND, BART     | 1820 SARATOGA AVE.     | SAN JOSE, CA     | 95129 | 379-5826 |
| WRIGHT, FRED        | 10112 MELODY PARK DR.  | GARDEN GROVE, CA | 92640 | 638-7889 |
| WYBRANT, SYLVIA     | 1700 COTTAGE GROVE AVE | SAN MATEO, CAL   | 94401 | 342-1169 |
| YUNG, BENJAMIN      | 1923 LUBY DR.          | SAN JOSE, CA     | 95133 | 272-7714 |

### SCRIPSIT ZAP LOCATIONS

Something I picked up at the Fair that should be of interest to some people is from a Marin County TRS-80 Users Group Newsletter for March 1982. This information is attributed to Dick Victor and came from the LDOS board on Micronet. These are the default addresses for Model I Scripsit. You can zap these locations to change the defaults.

An example of the use of this. I put my Epson MX-80 in the 7/72 inch mode with my machine code routine. This gives me about 113 lines per 11" page. You can't specify a page length greater than 90 with Scripsit, so I zapped in 113 in hex for page length and a bottom margin at 106 or so and printed out pages with this closer spacing.

| Rel Addr | Parameter                     | Default Value |
|----------|-------------------------------|---------------|
| 40,C6    | Page Length                   | PL=42H        |
| 40,BB    | Right Margin                  | RM=48H        |
| 40,C4    | Bottom Margin                 | BM=3CH        |
| 40,BC    | Para. Line Spacing            | PF=01H        |
| 40,BA    | Left Margin                   | LM=0CH        |
| 40,C3    | Top Margin                    | TM=06H        |
| 40,C2    | Line Spacing                  | LS=01H        |
| 00,B1    | Paragraph Indent              | I= 05H        |
| 00,A6    | Video Line Width              | W= 3CH        |
| 40,BF    | Flush Right                   | (N) FR=4EH    |
| 40,BD    | Justify                       | (Y) J =59H    |
| 40,C5    | Vertical Centering            | (N) VC=4EH    |
| 40,BE    | Horizontal Centering          | (N) C= 4EH    |
| 00,DD    | Cursor Character              | 8FH           |
| 25,A1    | Bottom screen line character  | 8CH           |
| 40,08    | End of line character         | 8CH           |
| 06,20-42 | Title appearing at first load |               |

-- Ian Webb

### A HARDWARE PROBLEM SOLVED - WITH A LITTLE LUCK!

Recently I had a persistent problem with my Model III. Perhaps someone has had this problem or a similar one and might be interested in my experience. It was a very frustrating experience but the outcome was happy.

#### The Symptoms:

The first symptom of trouble was intermittent failure to accept the DEF FN statement in DISK BASIC. The system would frequently re-boot when this statement came up. Later it became more and more difficult to get into BASIC at all. Error 35 (memory fault during load) appeared frequently. It was also more and more difficult to get into Model III BASIC using the <BREAK> key and RESET. Finally, I could get into BASIC about as often as I might hit the

Jackpot on a nickel slot machine at Harrah's. The MEMTEST program provided on my TRSDOS disk indicated no problems with memory - but I did not believe that.

While all this trouble was going on with BASIC, everything else worked fine. I could run the Editor-Assembler, DEBUG and Assembly Language programs without errors or problems.

#### The Solution:

My first suspicion was that the ROM was the culprit and that it was probably a dirty contact. So I opened up the computer, removed the ROM's (very carefully) and carefully cleaned all the pins. At the same time I cleaned all the cable connector contacts. All this work was for naught - the problem was still there.

After conversations with some SBUG members (notably Ken Watkins), I decided that the problem was in the low part of RAM, where DISK BASIC loads. Fortunately, I received 32K of spare RAM for Christmas, which made it possible to replace RAM IC's one at a time, starting at the bottom. The sixth RAM IC (U12) was the culprit! Everything has been working perfectly since U12 was replaced.

#### The Moral of the Story:

With a little persistence, a few talks with knowledgeable people at SBUG and a lot of good luck you can avoid an expensive service call.

-- Vigo Smith  
VIGO @ SBUG-80

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### SKILLS INVENTORY PROJECT

Many members would be willing to help others with things with which they are familiar. But who can help with what, and how much can they help?? A skills inventory, otherwise known as experience and interest list, if fully implemented, will turn this wasteland into utopia!!

For the April meeting, bring or send in (to me or Bob Byrd, the newsletter editor) a list of TRS-80 things with which you would be willing to help others. You might have from just two to two-hundred things on your list.

Use just a few words to describe each item. After this comes two numbers: the amount of experience / expertise you have with it on a scale of 1 to 9, a comma, then the amount of time you would want to spend helping / working with it. For example, a couple of my items would be:

|           |     |
|-----------|-----|
| 8" drives | 3,9 |
| NEWDOS80  | 6,2 |

This means I only know a little (3) about 8" disk drives, but would

be happy to spend lots of time (9) trying to work on them. I know NEWDOS80 (6), but am not very interested (2) in working with it per se. Obviously, if both ratings were below 3, you wouldn't bother to list that item.

The following is some ideas to remind you of topics:

Basic (type of application, feature, technique specifically)

Assembly and other languages

Hardware (specific type or area)

DOS's (any special area of expertise); Device drivers

RS232 software, modems, source, micronet

Specific applications-business, math, engineering

Specific software packages you could help others with

Helping beginners

Games

Other hobbies in which your computer is used

\*\*\* I think this has GREAT potential. Thanks for cooperating!! \*\*\*

-- Ron Carpenter

RON @ SBUG-80

\*\*\*\*\*  
\*\* ASSEMBLY LANGUAGE CORNER \*\*

Well, here we sit with the second assembly language column. This month, as I mentioned last month, will be spent discussing some of the basics of using the ROM math routines for making assembly language math a lot easier!

First of all, what is the difference between integer, single and double precision arithmetic? Well, basically it is the amount of space it takes to store the numbers. Also, to a lesser extent, it is the amount of time it requires to various functions on these numbers (ie. +, -, \*, /). But, this is usually negated due to the fact that we are doing the math in machine language. You will notice a great difference in time if you do a lot of number crunching (ugh!). This can be easily shown by running some FOR-NEXT loops in BASIC using INTEGER, SINGLE, and DOUBLE precision variable as the counter. Try it, you'll be amazed!

Anyways, what I am going to go over is how to use the ROMs for math functions. I am not going to get into the way the numbers are actually converted and such. (It is fairly long and involved.) But, what I will cover is enough to get you on the road to using the ROMs for converting ASCII to binary (the way the numbers are represented and stored in memory), binary to ASCII, +, -, \*, /, and data type conversions. Unfortunately, due to space, I will only be covering the basic routines this month and actual examples will be in next months' newsletter as well as the ASCII-binary routines.

The first type of math is integer. It is very easy to implement since it uses the HL and DE registers as argument 1 and 2. It is also the fastest of all the different types. But, we are limited to numbers between -32768 and +32767. These numbers take up 2 bytes when being stored or used. Thus, the register pairs HL, DE, and BC can be used for the storage of these numbers. The following table shows the various math calls to ROM.

```
HL + DE = IAREAL : 0BD2H
HL - DE = IAREAL : 0BC7H
HL * DE = IAREAL : 0BF2H
DE / HL = IAREAL : 2490H
```

```
IAREAL =: 4121H - LSB INTEGER RESULT
          4122H - MSB INTEGER RESULT
```

The second type of numbers is single precision. These take up 4 bytes in memory. They are also stored in "Floating Point" format so that they take up less room in memory. Because of this, they are also less accurate. The advantage, though, is being able to have numbers of the range of  $9.9E-38$  to  $9.9E+38$ ! They are less accurate than double precision, but, that is offset by the speed of single precision routines. The following table shows the single precision call locations.

```
BC/DE + SAREAL = SAREAL : 0716H
SAREAL - BC/DE = SAREAL : 0713H
SAREAL * BC/DE = SAREAL : 0847H
BC/DE / SAREAL = SAREAL : 2490H
```

```
SAREAL =: 4121H - LSB OF SINGLE PREC.
          4122H - MIDDLE
          4123H - MSB OF SINGLE PREC.
          4124H - EXPONENT
```

```
BC/DE =: SAME FORMAT AS ABOVE
```

Finally, double precision numbers are the slowest of all. They also take up 8 bytes in memory. The only difference between double precision and single precision numbers is that single precision numbers have 3 bytes allocated for their "mantissa", whereas, the double precision numbers have 7 bytes allocated for their "mantissa." The speed for this type of "number crunching" is by far the slowest, but, one more time.... They are accurate.... (Yes, redundancy!) The following table is for the double precision routines.

```
DAREAL + DAREA2 = DAREAL : 0C77H
DAREAL - DAREA2 = DAREAL : 0C70H
DAREAL * DAREA2 = DAREAL : 0DA1H
DAREAL / DAREA2 = DAREAL : 0DE5H
```

```
DAREAL =: 411DH - LSB OF DOUBLE PREC
          411EH - MIDDLE
          411FH - MIDDLE
          4120H - MIDDLE
          4121H - MIDDLE
          4122H - MIDDLE
          4123H - MSB OF DOUBLE PREC
          4124H - EXPONENT FOR DOUBLE PREC
```

Well, next month I will publish the listings to demonstrate these calls to ROMs as well as calls to do the ASCII to binary conversions. Also, the versa-vica of the latter. If you have any comments or problems, you can leave a message on the BBS to the username BREWER or give me a call. Happy ROaMing around... or is that pROgraMMing ?!?!?!?

```
-- Eric Brewer
BREWER @ SBUG-80
```

## **SBUG BANNER CONTEST**

Your Sbug Steering Committee is sponsoring a super colossal Banner Contest commencing April 20 and running thru May 18, 1982

So what's a banner you say? Well, you've probably all marvelled at those neat lead-in graphics displays like those used in "GALAXY INVASION" or some of the Big Five Software games! Those are banners! And now is your chance to write a snazzy banner and possibly win a prize.

The rules are simple: one entry per contestant, Disk or Level II Basic, and 50 lines of code maximum! Entries will be judged on originality and skill; however, to assure everyone has a chance to win, computer and software professionals will be judged in a separate category.

Sign-ups will commence during the next meeting and all entries must be submitted on May 18, 1982. Entries will be judged and winners will be announced during the June 15th SBUG meeting. Winning programs will be shown at that time and the winners will be awarded a prize!

So start planning your entry now and sign up at the next meeting!

-- Phil Coffman  
CAP @ SBUG-80

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### **Send Newsletter articles to:**

Editor, South Bay TRS-80 User Group  
Robert Byrd  
P.O. Box 60116  
Sunnyvale, Ca 94088

dlne for the May newsletter 5 May 82.

If at all possible send articles via modem or saved on disc/tape. I will see that your disc or tape is returned to you. Thanks . . .

South Bay TRS-80 Users Group  
P.O. Box 60116  
Sunnyvale, Ca 94088

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