

1992

From: Beery Miller
To: All
Subject: Genie Msg to TI-ECHO

Msg #52, 02/25/92 05:21pm

Category 14, Topic 1
Message 27 Mon Feb 24, 1992
J.WHITE28 [Jeff] at 20:57 EST

Today I downloaded two programs which will be very useful to me while I restore my hard disk to reduce wear-and-tear. These are Program File Compressor by Koen Holtman, and ARCHIE by Jim Reiss. I proceeded to use PFC on Disk Utilities by John Birdwell, Archiver III by Barry Boone, and ARCHIE. All went fine until I ran the compressed ARCHIE file, which I had named ARCHIE-PFC. The ARCHIE title screen was glitched at the bottom, with garbage characters following: * Press any key to proc

I checked the original ARCHIE file, and sure enough it runs fine. This missing characters were "eed *". That is five missing characters, so I had a pretty good idea what had went wrong. So I loaded Disk Utilities and started looking at ARCHIE with the sector editor. What I found was "eed */" in the last six bytes of the file. Thus, PFC was somehow not finding those bytes. Looking at the six-byte loader header in the first sector of ARCHIE I found the value >0C08 (3080) in the second word, which is the actual length of the program, and the PROPER value to store there. At the seventeenth byte (Byte 0 is the first byte, so I am talking about byte >10 or 16.) in the ARCHIE file descriptor record I found the value >0E, which is the number of bytes used in the last sector of the file.

Then I started looking at Archiver III, version 3.03 which I had patched with the correction implemented in version 3.03g. At the seventeenth byte in its FDR was the value >B2, and in the second word of the six-byte loader header was the value >1FB2. Going to the last sector of the file, the ABSOLUTELY correct values should be >62 and >1F5C, since only >62 (98 bytes) are used in that last sector. But that does not really matter.

I checked the Disk Utilities files, and sure enough the values at the second word in the six-byte loader headers were six higher than they needed to be to properly load. I.e., for DSKU1 and DSKU2, the value was >2000, and each of the values in their respective FDR's at the seventeenth byte was >00 (signifying all 256, or >100, bytes were used in the last sector of the files). The values should have been >1FFA and >00, but this time it was fortunate they weren't. For the DSKU3 file, the value in the FDR was >F2, and the value in the six-byte loader header was >1BF2. If you are following closely, you will realize that the value in the six-byte loader header need only be >1BEC.

However, for PFC to work properly, the second byte in the second word of the six-byte loader header in the first sector of each program image file must be equal to the seventeenth (byte >10 or 16) byte in the FDR of that file. If that byte is >00, the first byte in the second word of the six-byte loader header must be incremented by 1. E.g., if the DSKU1 file had as its six-byte

loader header 0000 1FFA A000, before using PFC on it, you would look at the FDR for DSKU1, find that byte >10 has the value >00, and change the value >1FFA in the loader header to >2000.

Anyway, what started this was the glitch PFC had compressing ARCHIE. The value in its six-byte header that needed changing was >0C08. So I changed the value to >0C0E, and ran PFC on ARCHIE. This time when I ran the compressed version of ARCHIE, the title screen looked right.

Program File Compressor (PFC) has the bug in my opinion. But now you know how to work around it. Had the last few bytes of ARCHIE been program code rather than title screen data, unpredictable results might have occurred while running ARCHIE.

"Now the rest of the story." Program image files such as PFC1 and PFC2 can be packed with Archiver III as described in the ARCHIE docs, and then you can run them with ARCHIE. I created an uncompressed archive of PFC1 and PFC2, called it PFC, and now I have save disk space and a filename in the directory. I used PFC to change DSKU1 to DSKU2 into DSKUT to DSKUV, then packed the latter three files into DSKU, and now I can run DSKU with ARCHIE.

Of course, single files such as ARCHIE and Archiver III need not be packed, but compressing them with PFC works fine. ARCHIE compressed to 89% of its original size, Archiver to 79%, and Disk Utilities to 77%.

Now you may be wondering if you should compress your program files with PFC and follow that by archiving them with docs with Archiver III. I recommend that you check both ways. To support my position, consider the case of ARCHIE. The file I downloaded was 19 sectors archived with ARCHIE and ARCHIE/DOC. I used PFC to make an executable compressed file named ARCHIE- PFC, and when archived with the ARCHIE/DOC file I had a 22-sector file. Then I created a non-executable file with PFC called ARCHIE-P, and archived it with ARCHIE/DOC and got a 20-sector file. Obviously, for file transfers it pays to have the smallest possible file size. But that was only one case. I then used Archiver III to archive itself, and it created a 27 sector file than is not runnable until it is unarc'd -- a catch-22. However, the version of Archiver III compressed with PFC that I named ARC-PFC was 26 sectors. That is a reasonable way to distribute Archiver III.

I do recommend that ARCHIE executables not be archived with doc's, as an archive of the separate program image files, support files (like CHARA1), and doc files will normally be smaller. Nevertheless, it is possible to get a

small archive of ARCHIE executables by using Archiver III twice. Case-in- point: a compressed archive of DSKU/REF, DSKU1, DSKU2, and DSKU3 was 94 sectors. I compressed DSKU1 through DSKU3 into DSKUT through DSKUV, then packed them into an ARCHIE runnable file called DSKU. I compressed DSKU/REF with Archiver III, then packed it with DSKU, getting a file of 93 sectors. That is a savings of only 1 sector, but a big savings in time. Unpacking the DSKU file is a much quicker process than decompressing and unpacking the DSKU1 through

DSKU3 files. With ARCHIE, DSKU is runnable. BTW, the packed DSKU file of PFC-compressed files is only 74 sectors, while a compressed archive of DSKU1 through DSKU3 is 76 sectors. The DSKU/REF file compressed to 19 sectors with Archiver III (wonder what Clint Pulley's Text compressor would do).

Jeff White, on his never ending search for more space

--- * Origin: -9640 News BBS- MidSouth 99'er BBS **1-901-368-0112** (1:123/50)

-WP

The National Committee for TI Standards (NCTIS)

Committee proposal, generated at Fest West 1992, Phoenix Arizona.

To form hardware, software and configuration standards to extend the life of the 99/4a and bring order to the community.

In these hard times, the TI community need a direction to go. In the past other committee's have been formed, such as ANSI to generate standards for hardware and software developers to follow. The standards set forth by NCTIS will aid the users and developers in providing a better software/hardware solution for you. Once standards are set, it is recommended that all current and new software is labeled as standard #1... compliant. These standards should have acronyms for easy recognition.

The following guidelines were discussed at a "Vendors Forum" on February 15, 1992 in Phoenix Arizona. These are recommended standards for the community to ponder upon until May 1992 at the Lima fair, at which time the standards will be decided and publicized.

LEVEL #1: TI 99/4a Console, 32k memory expansion, cassette, and EA/5 loader (EA, Supercart, TI Writer, Multiplan, etc.)

LEVEL #2: Level #1 system PLUS: RS232, and DSSD Disk drive and controller

LEVEL #3: Level #2 system PLUS: at least 128k of CPU RAM, bankable at the >6000 space.

LEVEL #4: Level #3 system PLUS: 9938/58 VDP with 192k VDP RAM

PLEASE remember that these are recommendations generated by this first meeting, and are by no means locked in stone. We are presenting these ideas to you, the user, the developer, the market. Please take our recommendations and think carefully about them, and forward your ideas to your local user group, and then on to the Lima fair.

We appreciate your support.

**THE BOSTON COMPUTER SOCIETY
TI99/4A USER GROUP
PRESENTS**



**THE SEVENTH ANNUAL
NORTHEAST TIFAIR**

**SATURDAY APRIL 4, 1992
10:00 AM TO 4:00 PM**

**SEE USER GROUPS FROM ALL OVER MASSACHUSETTS
AND OTHER PARTS OF THE COUNTRY
DEMOS OF NEW HARDWARE AND SOFTWARE
EXHIBITS AND DEALER DISPLAYS
AND MANY GUEST SPEAKERS**

**FAIR IN THE CAFETERIA
WALTHAM CENTRAL MIDDLE
SCHOOL**



**55 SCHOOL STREET
WALTHAM, MA. 02154**

DIRECTIONS:

**FROM RT 128 (US 95) TAKE EXIT 26(RT 20) TO WALTHAM
CENTER, TAKE LEFT ON TO LEXINGTON STREET(CITY HALL ON
RIGHT) CROSS SCHOOL STREET, TURN RIGHT AT THE NEXT
STREET FOLLOW TO INTERSECTION THEN TURN A SHARP RIGHT
TO THE SCHOOL. CAFETERIA IN BACK OF SCHOOL.**

FOR TABLE INFORMATION CONTACT:

**RON WILLIAMS
14 EAST STREET
AVON, MA 02322-1913**

SPONSORED BY:

**THE BOSTON COMPUTER SOCIETY
ONE KENDALL SQUARE
CAMBRIDGE, MA. 02139**



CaDD Electronics
81 Presscott Road
Raymond, NH 03077
(603) 895-0119

We at Cadd Electronics are proud to offer some very fine programs for the TI 99/4A and Geneve computers. A description of our current offerings follows.

RICHGKXB

This is an enhancement to the original TI Extended Basic. This program requires the use of a GRAM emulating device. A few of these devices are the Gramulator (see below), GRAM Kracker, Geneve and the GRAM Karte. This new XB interpreter adds many new and modified commands to XB and remains 100% compatible with TIXB. It also adds many combined commands to help speed up XB considerably. The combined commands deal mostly with sprites. Example;

OLD TIXB

```
Call COINC(#1,#2,A) :: IF A THEN CALL  
DELSRITE(#3)
```

RICHGKXB

```
CALL CDE(#1,#2,A)(#3)
```

Both of the preceding lines will delete sprite #3 if sprites #1 and #2 collide. The lack of reinterpretation in the RICHGKXB will result in its line executing much faster than the TIXB line.

CALL LINKs are not needed to execute the new commands because they are part of the interpreter and are not assembly add-ons. The load times associated with assembly LINKs is also not required since all commands are built into the GRAM files.

Many powerful tools are at your disposal, including some windowing features and direct CRU control (IO), when using RXB. Also included are convenient disk commands such as RENAME, PROTECT, and PDISK. These disk commands are not CALL LINKs, they are true XB commands.

P.S. The GK stands for GRAM Kracker. All the changes Millers Graphics made to GRAM Kracker XB are included in RXB (with Mr. Millers permission).

RXB is 100% TIXB compatible on the TI99/4a. RXB should be 100% compatible with the Geneve 9640. CaDD will make every practical attempt to keep every function usable to the 9640.

Price \$24.95 + \$2.00 shipping. This includes a 90+ page manual.

GRAMULATOR KIT

Our very successful GRAM emulating product now in kit form. This kit will allow a person to build a Gramulator. This is a GRAM simulating device. GROMs are the solid state memory used in all TI cartridges. These memory chips contain a computer language called GPL. GPL code is the key to the 99/4A internals. With this device you will be able to back up all your TI cartridges. Having access to a GRAM device will allow you to take advantage of new programs like RICHGKXB. You can also modify your cartridges to use a printer port not normally supported by the program. Many people have made major enhancements to cartridges using GRAM devices. RICHGKXB was developed using the Gramulator.

The Gramulator is also expandable. You may add support for MBX cartridges and/or a real hardware alternate GRAM bank. This alternate bank will allow you, under most conditions, to load two cartridges simultaneously. Once two are loaded all utilities of both programs are available to BASIC (i.e. Speech from TELL and CALL LOAD from the EA). The directions and parts for adding these options can be obtained from CaDD Electronics.

The kit will at minimum include;

- 4-layer P.C. board
- Assembly instructions
- 60+ page type set operator manual
- Cartridge connector
- Battery holder
- EPROM
- 4 disks with utilities and source code
- Schematics

Base kit price \$65.00. (as above)

Full kit price \$150.00 (all parts)

****Please Note:****

Neither kit includes a case.

UTILITY DISK #1

These three disks contain three programs and their assembly source code. The programs are;

CHARA1LOAD

A program to allow you to add your preferred character set to GRAM 0 of the Gramulator. This character set will then be permanent for all programs to default to including BASIC and Extended BASIC.

MEMTESTER

A program to test all of the Gramulators memory and functionality. This will also test all optional features such as the MBX and Alternate GRAM modifications.

Universal GRAM file Converter

This program does not require a GRAM device. The program converts three very popular GRAM file formats used by different GRAM emulators into one of the other formats. This will allow you to share changes and enhancements to cartridges with people having a different GRAM device.

The three formats supported are;

1. GRAM Kracker, P-Gram,
Gramulator, Geneve
2. GRAM Karte
3. TI GRAM emulator

Price: includes three disks with all three programs and source code: \$12.00

****Please Note:****

If the destination format does not support the hardware required, the conversion will not be possible. (i.e. Gramulator MBX to GRAM Karte).

TI 99 OWNERS

BELIEVE IT OR NOT!

DUAL ½ Ht 360k DISK DRIVE KIT

**Includes 2 ½ Height 360k Drives, Logic
& Power Splitter cables, Screws, Drill
Template & Instructions To Install In
Your P.E. Box!**

COMPLETE!

\$75



the taylor company
hardware · software

1233 N. Mesa Drive, #2118 · Mesa, AZ 85201 · (602) 464-0354

Dear Computer Enthusiast,

On 15 February 1992, in Phoenix, Arizona a new era in computing will begin. On that day ttc will introduce the "aTT", "xTT", and "mTT" which represent an advanced, expanded and multimedia respectively version of the Texas Instruments 99/4A home computer which was discontinued in October 1983. The 99/4A was chosen because many of its powerful capabilities lay dormant until this event. More importantly, the 99/4A is a concept computer, ttc is developing this concept herewith to be known as "Concept 99." Like any new business I must have customers to survive but the dwindling base of 99/4A users may prevent **Concept 99** from developing fully. *I need your support.*

The majority of Concept 99 software is under the trademark "t_ware" and is easily recognizable. I have developed core modules (usable but in no way user friendly) for the following t_ware:

t_draw (a drawing program) t_chess (a chess program)
t_font (a bit map font program) t_sked (a scheduler program)
t_base (a dbase manager) t_write (a word processor)
t_learn (language tutor programs: *Mid-East, European, Slavic, Asian*)

I can use these programs but to make them marketable, they must be completed, tested and most importantly have manuals written. To accomplish the above tasks I must know where to concentrate my resources. Please let me know for which program you would be willing to make a deposit in order to support continued development. Use the address above to correspond.

Also, if you are aware of any group willing to pay for custom software (especially, educational), I'm available to discuss terms.

Thank You

Chris Taylor
owner, ttc

TEXAS INSTRUMENTS



January 28, 1992

Mr. Bill Gaskill
2310 Cypress Court
Grand Junction, CO 81506

Dear Mr. Gaskill:

Thank you for your recent inquiry regarding information on the discontinued TI-99/4A home computer.

I am enclosing all of the TI-99/4A information and literature that I could find for you.

If I can be of further assistance to you, please write to my attention at the letterhead address or call me at 806/741-3303. Our consumer services representatives can be reached at 800/TI-CARES (800/842-2737).

Cordially,



Tom Shields
Manager Consumer Relations

/jrl
Enclosures
51067066

TEXAS INSTRUMENTS



Dear Customer:

Thank you for taking the time to write concerning the availability of home computer products.

Texas Instruments announced our withdrawal from the home computer market in October, 1983. As a result, we no longer sell home computer products.

Quantities of Texas Instruments peripherals and accessories are limited, but we are enclosing a list of third-party suppliers to assist you. While this list is not comprehensive, we do feel that it may be helpful. Please keep in mind that Texas Instruments cannot assume responsibility for the quality or compatibility of any of these products.

If we can be of further assistance, please write again or call a consumer services representative at 800/TI-CARES (800/842-2737).

Yours truly,

Consumer Services

/bjw
Enclosure

FF-02-HC-298/90

TEXAS INSTRUMENTS



TI-99/4A Home Computer Third Party Suppliers

Manufacturers of the following items have represented that their products are compatible with the TI-99/4A. However, Texas Instruments assumes no responsibility for the quality or compatibility of any of these products.

Alboes Computer/Supplies
6298 Hamilton Rd.
Columbus, GA 31909
404/327-4900
(Does not ship internationally)

Joy Electronics
P.O. Box 542526
Dallas, TX 75354-2526
214/243-5371
800/527-7438
(Does ship internationally)

L.L. Conner Enterprise
1521 Ferry Street
Lafayette, IN 47904
317/742-8146
Fax: 317/423-4879
(Does ship internationally)

Tex-Comp
P.O. Box 33084
Granada Hills, CA 91344
818/366-6631
(Does ship internationally)

T.M. Direct Product Marketing
379 Beach Road
Burlingame, CA 94014
800/336-9966
(Does not ship internationally)

Revised 6/6/91



Electronic Systems Development Corp.

- *A revolutionary design* using surface mount parts.
- Controls up to 2 IDE hard drive and 2 floppy drives.
- Formats drives ranging from 90K 5 1/4 " drives to 2.88 MB 3 1/2 ".
- User friendly set-up and support software.
- Uses advanced Western Digital Floppy drive controller chips.
- 100% IT and 9640 compatible.
- Integrated with high speed DMA controller to *boost* performance.
- Features separate CRU address selection for IDE hard disk and floppy controller.

Several configurations available:

IDE drive interface and IDE drive.

FDC interface w/ 3.5" 1.44 MB FDD.

Combination IDE/FDC interface W/IDE drive.

Combination IDE/FDC interface W/IDE drive and 3.5" 1.44 MD FDD.

Configuration without drives also available.

ESD Corp. 7698 Briar Lane, Pasadena, MD 21122

TI FEST WEST '92

February 15 and 16, 1992

Hosted by

The VAST Computer User Group

To be held at

Days Inn Phoenix/Camelback

502 W. Camelback Road

Phoenix, AZ 85013

- * Reservations MUST be in by *January 10, 1992.*
- * Advance deposit of \$20 MUST accompany your reservation request.
- * Booth location assigned by TI FEST WEST '92 Committee.
- * Special requests handled on a first come/first served basis.
- * Transportation from airport: DAYS INN airport Courtesy Phones.
- * For more information, call (602) 938-5446 or (602) 869-8145.
- * Mail this form to the address listed below.

BOOTH RESERVATION FORM

VAST Computer User Group
TI FEST WEST '92 Committee
4316 W. Altadena
Glendale, AZ 85304

DATES OF FEST WEST 1992:
February 15 and 16, 1992

APPROXIMATE ARRIVAL TIME;

YOUR FULL NAME:

COMPANY NAME:

STREET ADDRESS:

CITY:

STATE:

ZIP CODE:

Transportation to and from Sky Harbor International Airport is available by using the Courtesy Phones for the DAYS INN Phoenix/Camelback.

NUMBER OF TABLES NEEDED:

Telephone jacks needed:

Electric outlets needed:

NAMES OF ADDITIONAL ATTENDEES: (Reservations include 2 FREE admissions.)

IF YOU HAVE SPECIAL NEEDS NOT LISTED ABOVE, PLEASE SPECIFY HERE OR ON REVERSE SIDE OF THIS FORM:

TI FEST WEST 1992

HOSTED BY:

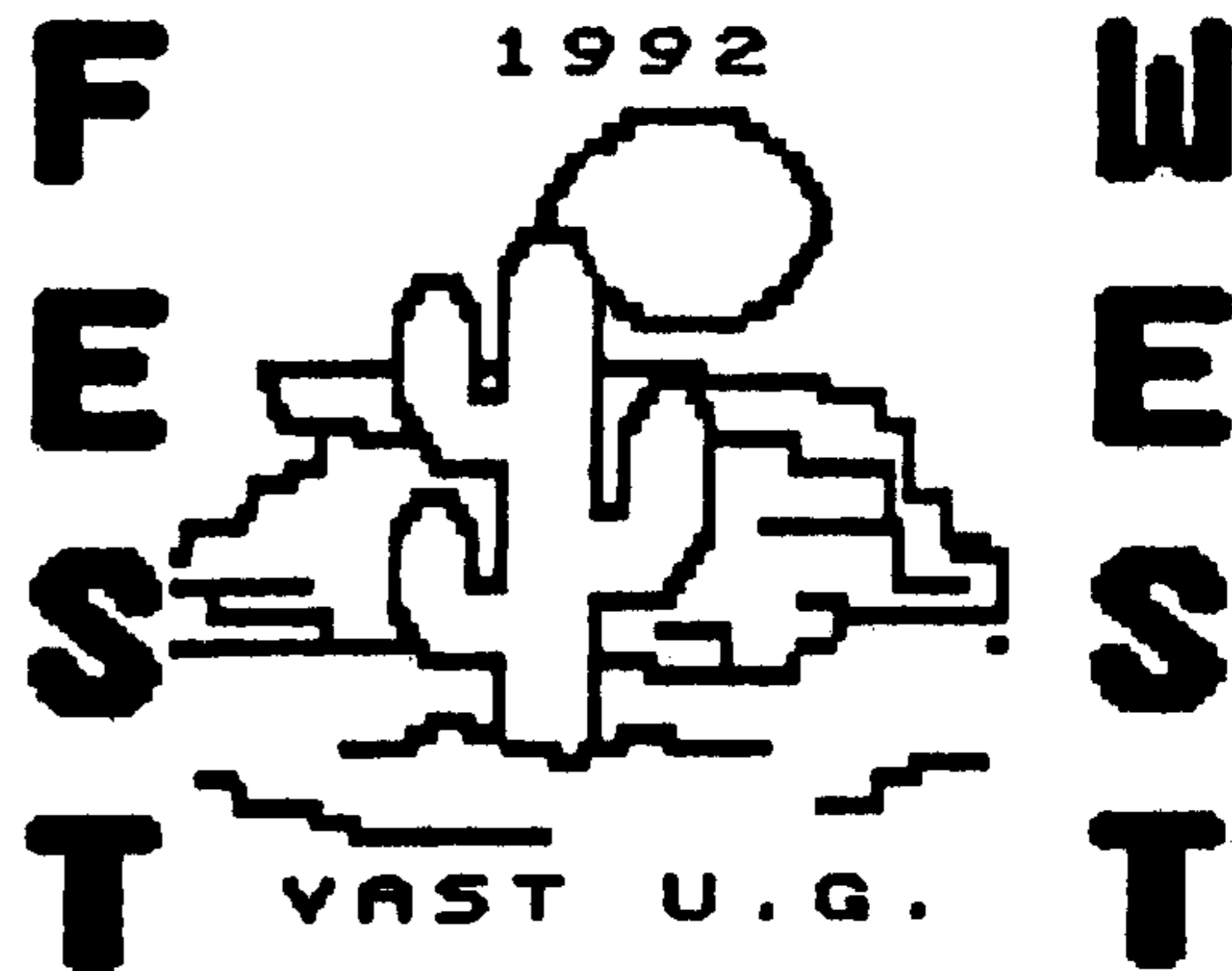
VAST - Valley of the Sun TI Computer User Group
c/o FEST WEST '92 COMMITTEE
4316 W. Altadena, Glendale, AZ 85304

DATE/TIME:

Saturday, February 15, 1992 - 9 a.m. to 5 p.m.
Sunday, February 16, 1992 - 9 a.m. to 3 p.m.

LOCATION:

Days Inn - Phoenix/Camelback
502 W. Camelback Road
Phoenix, AZ 85013
(602) 264-9290 or 1-800-688-2021



FEST WEST '92, THE BEST YOU CAN GET!! FEST WEST has been one of the major faires for the TI-99/4A and the Myarc GENEVE 9640. We think this year's FEST will follow the successes in quality and size of the previous ones hosted by the Los Angeles User Group, Southern Nevada User Group, Southern California Computer Group, Southwest Ninety-Niners User Group, and last year, the User Group of Orange County in association with the Pomona Valley User Group. The FEST will be held in Phoenix, the capitol of Arizona. Many museums and the revitalized Downtown Phoenix are only a short bus ride away. The Phoenix Zoo, 123 acres of mammals, reptiles and birds, and the Desert Botanical Gardens at Papago Park are a little farther away, but worth the visit.

The large ballroom at Days Inn (the Arizona and Sedona Rooms) will be used for exhibit space. The Speaker's Presentations will be held in The Cactus Room. User Groups and vendors are invited to display and sell their wares. Many electrical outlets will be provided. Each table is only \$20.00 and each table reservation includes 2 admission tickets that are good for both days.

The Guest Room rate of \$54.00 is very good at this time of year in Phoenix. The \$54.00 is for 1 to 4 people so bring the family and the swimming suits for a long weekend vacation. Don't forget the warm weather clothing for the evening.

These rates are for FEST WEST and available only at the phone numbers indicated above. The FEST WEST '92 Committee has guaranteed a number of rooms in a block. This will be near the Hospitality Suite. To enjoy all the TI'ers, make reservations early and indicate it is for FEST WEST.

As the FEST nears, the time to get your reservations in is NOW. Booths will be assigned on a first reserved, first assigned basis. Making reservations early will not only give you one of the best locations in the room, but will also give the Committee additional advertising information. There is nothing like **FREE** advertising and people DQ want to know who will be here.

FEST WEST has always been successful at providing a good place for TI/MYARC Vendors to come. Attendance has always been good and sales high. With the FEST in Phoenix, we expect no less. Some tables have already been reserved, but many are still available.

Something new for FEST WEST '92 will be a "Vendor's Forum," an open meeting for Software/Hardware developers to put their ideas on the table for discussion. This meeting will be on Saturday evening and conducted by Don O'Neil. We expect *Good Things* for the TI and Geneve Computers.

There will be door prizes and a raffle. Raffle tickets cost \$1.00 or 11 for \$10.00. The grand prize will be a Star NX1020 Color Printer. Now someone will be able to make those greeting cards with seven colors! Other prizes will be available and the FEST WEST '92 Committee is still looking for additional prizes. It would be greatly appreciated if you have something that can be donated for this purpose.

COME, TI/Myarc Vendors, and take advantage of this Western Region gathering to present and sell your wares to the TI community "that just keeps going."

Construction Guide

Horizon 4000 Ramdisk

COPYRIGHT 1992

Bud Mills Services

166 Dartmouth Dr.

Toledo OH 43614

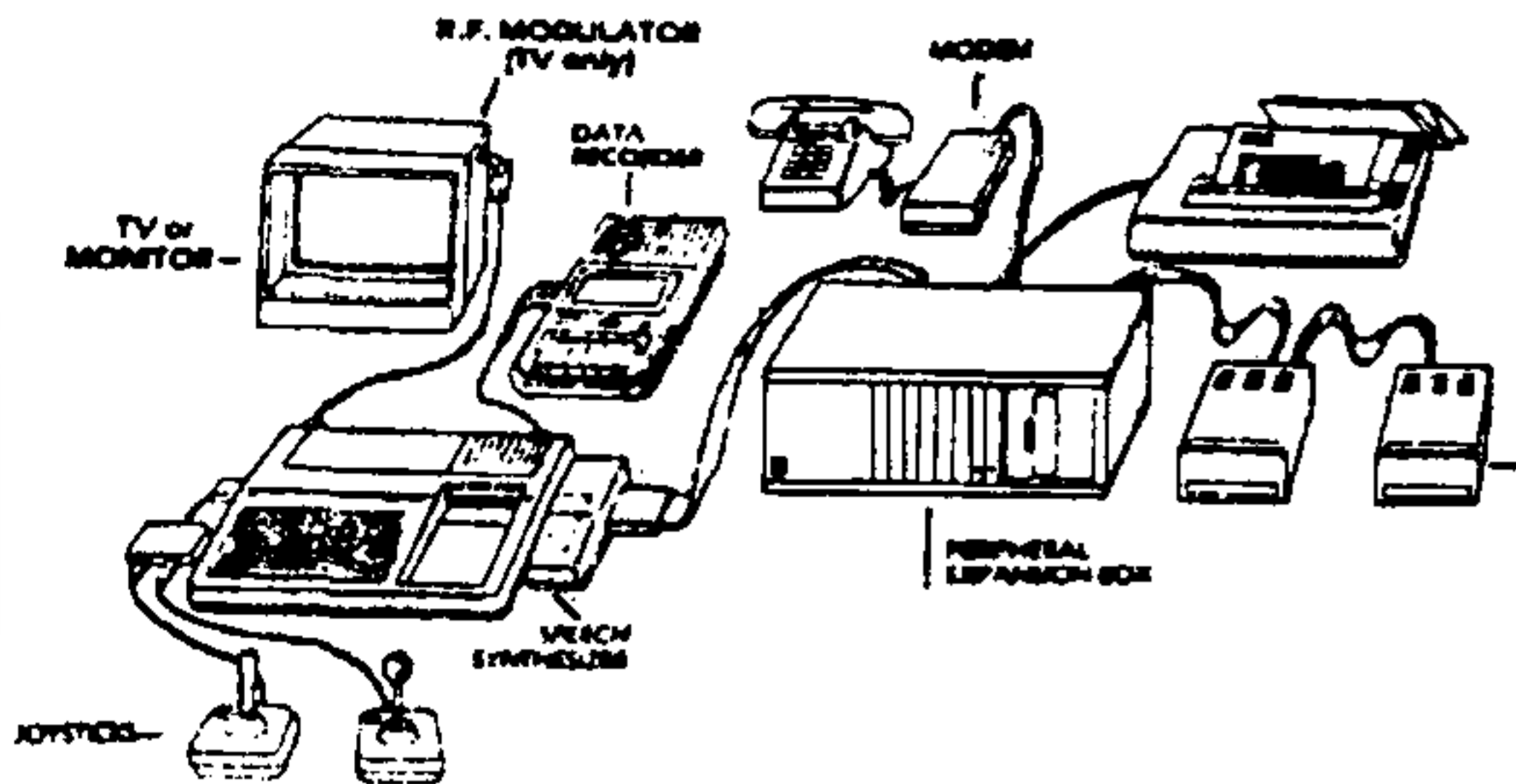
USA

**RAVE 99 CO. PRODUCT
PRELIMINARY DATA**

**Professional Expansion Chassis
MODEL PE/2**

**It's time to get organized!!
You need to PE/2 it!!!**

Does your computer area look like this?
If Yes, look right to see how it could be .



The development of the original TI-99/4A computer system was an evolutionary process with "NEED" causing new accessories to be developed and designed into the existing TI-99/4A computer as best possible.

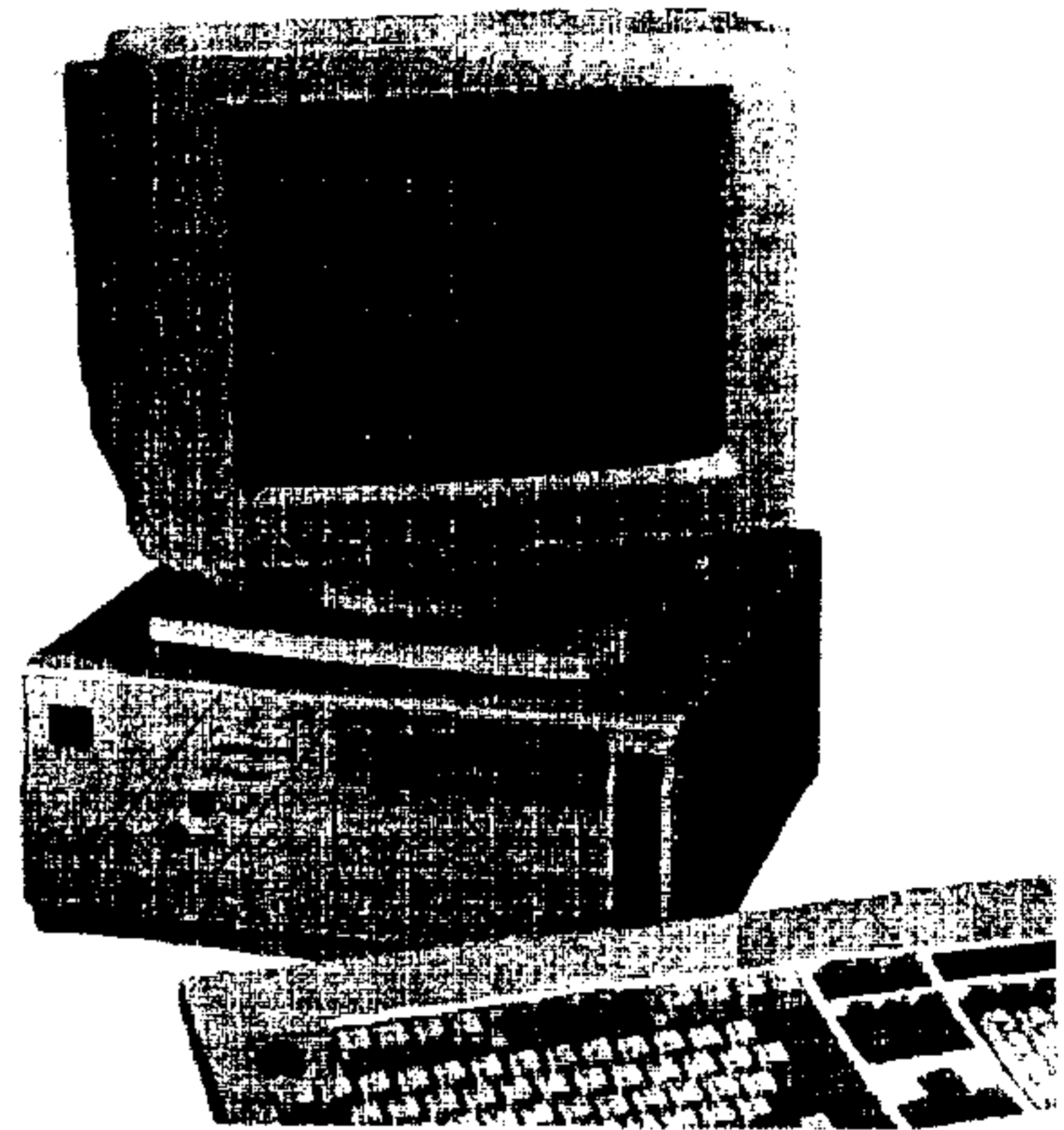
The results gave us expansion modules connected to the side of the TI-99/4A as well as the "FIRE HOSE" and the P.E. Box. This type of system, due to its many connections, has inherent reliability problems as well as consuming large amounts of space on desks and tables.

It is for these reasons we developed our own Model PE/2 EXPANSION CHASSIS for the TI-99/4A.

HAVE YOUR CAKE & EAT IT TO!!

The Model PE/2 -C chassis allows you to have both TI computers in the same box, at the same time, using the same IBM style keyboard and composite video monitor. Our PE/2-C design allows both computers to "SHARE" common PE cards such as disk controllers, RS232 cards, and our speech adaptor card. Our system is so smart that you may even run both computers at the same time, using caution as to which computer has control of the common cards. Cards that would conflict with the GENEVE are automatically disabled when it is selected. A switch on the front of the chassis selects which computer gets the Bus, Monitor & Keyboard.

Now, get organized with RAVE 99's NEW PROFESSIONAL EXPANSION CHASSIS for the TI-99/4A and GENEVE computers.



Our new EXPANSION CHASSIS has modern computer styling utilizing a space-saving design. The new chassis design allows the use of existing TI-99/4A or GENEVE computers, P.E. Box cards, and disk drives into a single enclosure. A 200 Watt Power Supply provides more than enough power for the computer, P.E. Box cards, and FIVE Disk Drives. Access to the cartridge port is available from the right side of the chassis. The front panel has a Power Switch, Key Lock, Reset Switch, Turbo switch, "Power" LED, "Hard Disk" LED, and "Turbo" LED. The Expansion Chassis has 8 expansion slots for TI type P.E. Box Cards. Two new features added include a 36 pin EXPANSION BUS which allows for future growth with 8 additional lines for both Data & Addresses. The new bus comes with connectors installed in bus slots 1,7,& 8. This allows use of standard TI cards with clamshells in slots 2, 3, 4, 5, & 6. Additional 5 connectors in slots 2->6 adds \$10.00 to the Price. The 2nd feature is a DUAL PROCESSOR BUS which allows the use of the TI-99/4A and the Geneve in the same chassis.

This Product is required for those who wish to have both functionality and and neat appearance around their computer work area. The cost of this system is \$309 for use with GENEVE and \$379 for the TI-99/4A. \$399 for both GENEVE & TI-99/4A,PE/2-C.