The Paper Peripheral

October 1985

Putting you Online with the Central Texas 99/4A Users Group

From the President's Keyboard

Hello again. There are several things that I'd like to discuss with you, but first let me tell you about the last meeting and the next.

At the last meeting, Penny Nichol demoNstrated the Paint 'N Print program from Navarone. Most people were impressed by it.

We also discussed what to do with the free products that Navarone was giving us for demoNstration. The final decision was to put the item into the library to be checked out. In order to ensure that the item would be returned, we are requiring a check to be left with the librarian which would be returned when the item was. We also decided that after the item was no longer being checked out of the library, the group would give the item to the person who reviewed it. All in all, a very good solution. Check with the librarian for more details.

At the next meeting, we'll have a demonstration of the Byte Bench. This is a piece of computer furniture made here in Austin. It looks well thought out, having space for the computer, manuals, printer, and printer paper.

We'll also have John Lesesne presenting another one of the nifty add ons that he has aquired for his /4A. John's system in a testimonial to the fact that the /4A isn't just a "Home Computer". This month he will show us a speech recognition system that he has added. Now, we're not talking MBX here. The speech recognition system is actually being run from the /4A. FORTH is the software driving it.

Lastly, at the next meeting we'll need to form a nominating committee for next year's officers. I am suggesting starting this early this year in order to give the committee more time to work.

I would also like to take this time to announce that I don't intend to be President of this group next year. Please note that this doesn't mean that I intend to cease being active in the group. I just think two years is enough, and it is time to let someone else get a chance to direct the group's activity. I'll have more to say in the December newsletter.

Mike Schultz

A Few Bytes and Nibbles

Mike had already finished his mailbox article for the month when another catalog came in--this one a little better than most of them we got this month. The new Triton /4A catalog is out, and there are some interesting things in it. They've got the CorComp expansion system stuff, Extended BASIC ($49.95), a new TE--4A Talk ($19.95), CorComp's Clock/Calendar ($79.95), a new kind of joystick--a Joypad you jump on to move the cursor ($39.95), lots of TI, Funware, and Atarisoft games, plus lots of other games, including some Tunnels of Doom types, several new adventure games, Axiom and Smith-Corona printers, TI-WRITER and the spelling checker, Multiplan, the speech synthesizer, LOGO II, several TI and non-TI educational programs, including a number to call about programs in the Plato series, a /4A User's Encyclopedia to aid in programming, several other books, combo packs (books with programs on cassette, cables of various kinds, the console (beige), a color monitor, Paint'N'Print, a color printer ($349.95), Super Sketch, a trackball joystick, the MBX system, and 9 programs that run under MBX. Well, you get the picture. It's a pretty good selection of things that are not always available elsewhere.

While Mike is announcing that he's not going to be President next year, I'd like to throw the newsletter editor's job open for volunteers. I know there are some of you out there who have been thinking about how you'd do the newsletter if you had the chance--well, here it is! Lest you think we're both bailing out because we think the ship is sinking, let me assure you that that's not the case. Really, it's more that my job is taking more and more of my time, since they won't let us hire enough people to do it, plus a

two-year-old takes more time than a few months old. And it's time that other people stepped in. A couple of people will run out of ideas of what to do with a group after a couple of years, so it's best for the group that someone with fresh ideas get involved. So, it's time for some of you out there to think about using a few hours a month for a good cause--and getting a few, probably unexpected, benefits into the bargain.

Diane Schultz

From the Business End of the Mailbox

The mailbox has been rather active this month. First, **Navarone Industies, Inc; 19968 El Ray Lane; Sonora, California 95370** has sent us a letter informing us of some fine tuning that they are applying to their HYWAY program. Orginally they planned to treat users groups as dealers for their products. Since we a non-profit organization, I ignored this the first time around. However, several groups let Navarone know about the problems that being a dealer caused, and they've now modified the program to allow users groups to buy products from them at special users group prices. They sent us a price list for the products. I won't list them all, but some of the products are: Cartridge Expander (Widgit) for $24.00, Sprite Editor for $14.00, Music Editor for $14.00, Disk Fixer for $24.95, Paint'N'Print for $28.00 and Extended Graphics for $21.00. I've got several order forms, so give me a call if you're interested.

We get some pretty strange stuff in the mailbox. This month's award for the strangest comes from **Sofcast; The National Digital Network; 2565 - 152nd Ave. N.E.; Redmond, Washington 98052.** These guys claim that they have a gizmo called the Shuttle Communicator, manufactured by **The Microperipheral Corporation** that will allow you to download programs from your RADIO to your computer. They also claim that the tranmission rate is 4800 buad. They state that there is a program that is playing on radio stations around the country called Softcast. The program will have free software, and interviews with computer industry leaders, receive discount coupons to be printed out, and get detailed information on national software contests. The list price is $69.95 and they are offering a 20% discount if we order before October 12. Now according to their list, there isn't even a station in our area broadcasting this program. Add this to the fact that there are very little specifics in the letter they sent and I say keep your money in your pocket. They don't even give a list of the computers that this thing works with. I am sure that it is nothing but a simple modem, and that means they'll need software to drive it and I bet you that they don't have a program for the /4A.

Now here is something interesting. **MPB; 5522 East Harry Street; Wichita, Kansas 67218** has a clock/calender kit for $41.50. The kit only contains a printed circuit board, assembly manual, and demostration manual. You have to supply about $40.00 of additional parts to complete it, or they'll send you the parts for another $41.50. The card fits into the p-box and has the clock/calender as well as an 8 channel analog to digital input converter.

I have received a copy of the latest catalog from **Unisource Electronics, Inc; 7006 University; P.O. Box 64240; Lubbock, Texas 79464.** If you're interested in looking at it, I'm bringing to the meeting.

The Jackal; 13318 Broadmeade; Austin, Texas 78729 is developing a modem card for the p-box. I don't know much about it other than it appears that it won't be using the RS232 port to drive it and thus will need special Terminal Emulator software. But there are plenty of TEs floating around that can be modified. The Jackal is looking for suggestions and comments. Please send them to the above address.

BCD Electro; P.O. Box 830119; Richardson, Texas 75083 has sent us their latest flyer. Among other things it contains a TI Y DB25 serial RS232 cable (male-female/female) for $4.50.

Do you ever have the feeling like you have too much money? Do you have $1200.00 that you want to part with? Then send it to me, care of.... Seriously folks, **John J. Meshna, Jr., Inc. P.O. Box 62; East Lynn, Massachusetts 01904** has taken over production of the Myarc Winchester disk system. Yes, you too can have a 5-megabyte hard disk with a SSDD floppy in the same case for just $1200.00. They supply a controller for the hard disk, but you still have to buy the floppy controller separately. They also have a mini-floppy disk controller card for $165.00. I think that this offer is for real because I've read about it in the *MICROpendium*.

Vik Corporation; 260 Eliot Street; Ashland, Massachusetts 01721; 1-800-VIK-DISK has sent us their September Special catalog (yes I know it's October). They offer several things, but of most interest is 10 SSDD diskettes with a translucent storage case for $8.20. The same deal for DSDD costs $11.40. If you need more diskettes then you can order 50 SSDD for $41.50 and 50 DSDD for $56.00.

A little closer to home, **Almost New Computers; 13018 Pat Booker Rd; Universal City, Texas 78148; 512-659-2625** is offering bulk diskettes. 100% guaranteed certified error free, with sleeves, tabs and reinforced hubs: $.79 for SSDD and $.84 DSDD.

Comark, Inc; 135 N. Brandon Drive; P.O. Box 2608; Glendale Heights, Illinois 60138-2608; 800-323-6135 is offering the users group what they call HOT prices on diskettes and printer ribbons. Unfortunately, they didn't send the prices for the diskettes.

Just one more diskette offer and we'll move on: Syncom; 1000 Syncom Drive; Mitchell, South Dakota 57301; 800-843-9862 makes a diskette that they claim meets or exceeds your needs. They claim the price is reasonable, but fail to state it. The name of the diskette is the Platinum series Universal 5 1/4 diskettes. This means that their diskettes will perform as SSSD to DSQD 48 TPI. Sounds nice (and expensive). The interesting thing about the advertisement is that they provide a list of computers and then state that the Platinum diskette is the recommended diskette for each one of them. One of the computers listed is the TI 99/7!! I wonder if they really tested with that one?

Next we have a flyer from Electronic Parts Outlet; 2515 N. Scottsdale Road; Scottsdale, Arizona 85257; 800-245-8555. They claim to be my Arizona IBM Clone Connection. As you can expect, there isn't much in this that interests a /4A owner except that they are offering surplus disk drives. They claim that the drives are cosmetically fine but that the heads may need alignment. The price $24.95 for MPI-52A8 and $44.95 for Tandon 100-2A. WOW! Start your checkbooks! Quantities are limited.

Last and certainly least, Datatek;, Inc.; 909 S.R. 584; P.O. Box 517; Oldsmar, Florida 33557; 813-855-9313 is offering a word processor for $95, plus the source for it for an additional $145.00. Users group members can purchase the DATATEXT word processor for $75.00, the source for $125.00, and the manual in diskette form for $25.00. The only problem is that the word processor is written in Pascal-M and the diskettes are for the IBM PC.

Mike Schultz

The Library

Well, as I promised at the last meeting I finally got around to getting the list (partial) of the library programs. The programs that follow are only the ones that have been reviewed. There are still several more disks and a lot of cassettes in the library that need to be reviewed, so if anyone is interested in reviewing, please let me know and I will be happy to show you what needs to be done.

Program Name	Description	Requirements
DISKMAN	Simple Disk Manager	XB, DD, 32K, Printer
SDUMP	Screen Dump	XB, DD, 32K, Printer
LOAD	Christmas Song Player	XB, DD, 32K
MURDERX	Whodunit (like Clue)	XB, DD
SAY&SPELLX	Speak-N-Spell	XB, DD, 32K, Speech
INVESTMENT	Various Economic	XB, DD
READFAST	Speed Reading Aid	XB, DD, 32K
INVASION	Destroy Spaceships	BAS OR XB, DD
LABELS	Label Printer	XB, DD, 32K, Printer
CHUCK-LUCK	Dice Game	XB, DD
SANTA	Christmas Music/Graphics	BAS, DD
UP/SCOPE	Submarine Game	XB, DD
AMORTIZATI	Amortization Program	XB, DD
MAILWRITER	Auto Logon for TEII	XB, DD
SPREADSHEE	Electronic Spreadsheet	XB, DD
TEX-SCRIBE	Simple Word Processor	XB, DD
AWARDS	Trivia about Oscars	XB, DD
CHASE	Strategy Game	XB, DD
3-D_MAZE	Maze Game	XB, DD, 32K
VISIONS	Visions of Color	BAS, DD
SWORDS	Adventure-type Game	XB, DD, 32K
STOCK RECORDS	Stock Utility Program	XB, DD
PIANO	Musical Demonstration	XB, DD
NOT_ONE	Craps-like Game	XB, DD, 32K, Speech
GRAPHMSY	Bargraph Utility	BAS or XB, DD

Well, I'll try to get some more programs listed in the newsletter next month. By the way, I was kinda surprised that no one contacted me last month about the Paint'N'Print. Oh well, I will have it with me at the meeting if anyone is interested. Until then, happy computing!

Mark Milam

BBS Update

There are now offically three /4A based BBSs running in Austin. The Bill Board run by Bill Forsythe, the Austin Private Library run by Craig Dunn, and the Lightpole's Hideout run by Mark Milam. The phone numbers are given below.

We finally got Mark's board up around the middle of last month. There are still a few problems with it, but we're working on them.

Board Name	phone number
Bill Board	512-836-6383
Austin Private Library	512-250-5967
Lightpole's Hideout	512-339-1822

Mike Schultz

Freeware

Freeware has become the hot topic recently. What is it? Why do people like/dislike it? How can you get some?

Freeware is not free; you just get to try it out for free. Freeware is a concept that allows anyone to copy a program from anyone who has a copy. Once copied you get a chance to try it out to see if it is of use to you. If you like it and find it of use you may then get permission to use it from the programmer; you are in effect granted a license from the author. You get permission by sending the author money (usually $5.00 or $10.00) to the address listed in the program. (The amount of money to send will probably be listed in the program, too.) The author may or may not reply, but don't worry, you are licensed.

Big software publishers don't like this concept because it eliminates the middleman (them). Programmers for the big houses have said it promotes piracy. Users like it because it is a simple system, it lets you try out the program (you don't buy sight unseen), and it greatly reduces the cost of software. Most of these programs are really good quality--the bad ones don't get passed around. That personal recommendation is what makes the author his money!

You get freeware in many places. Compuserve has several freeware programs in the TI SIG data library. There are several programs in our library; they will be listed at the end of this article. *MICROpendium* lists freeware in every issue. Your friends may have freeware around; ask them!

A final word of warning. Freeware works only if we all are honest about it. It operates on the honor system. If we fail to pay where payment is due there will be no more freeware and those who do not pay will be pirates.

Some programs in our library to look for are:

TOD/ATC	A new Tunnels of Doom game
TOD/FILE	A new Tunnels of Doom game
TOD/TOMB	A new Tunnels of doom game
MASTERCAT	A disk catalog program (better than Supercat)
BOWLING	E/B GAME
BREAKOUT	E/B GAME
MINE	E/B GAME
SPIDERBOP	

Mark Milam
4203 Yucatan
Austin, Texas 78727
(512) 836-3301

The Quiet Fan Man

Due to the response from other users groups I am going to *tell all* regarding the fans that I have been installing. There are three steps in this process. The first step is to disassemble the PEB, and the second is the electrical work. The final step, reassembly, will be the opposite of the disassembly instructions. If you have any problems you can contact me direct, or through the club.

Step 1

First, remove all the cards except for the disk controller. Locate the four screws which hold the drive in place and remove them, unplugging the two cables therein. Now remove the drive and controller.

Second, turn the PEB upside-down, locate and remove all the screws along the outside edge of the PEB on the bottom, on each end, and along the rear (except for the two screws which hold the spacer for the drive). Don't forget the screw behind the #1 card slot on the bottom. There should be a total of seven screws removed from the bottom of the PEB.

Third, turn the PEB right side up, remove the two screws on each end of the PEB, remove the three screws on the rear behind the disk compartment, then the three screws behind the power supply. Now, being very careful, slide the outer cover forward, away from the power supply and set it aside, out of the way. Note--on some PEBs the on/off switch will fall off. Don't worry!

Fourth, loosen the two screws holding the power supply board and move the power supply out of the way. Next, unplug the two connectors for the fan and remove the four nuts holding the fan in place. Now we go to Step 2.

Step 2

First, cut the two wires halfway between the connectors and the fan. Take the new fan (with wires already on it) and splice the two wires together. It will probably be easiest to use small wire nuts to splice the wires.

Second, you will have to drill out two of the mounting screws for the old fan. Drill out any two of them as long as they are diagonally across from each other. Drill with a quarter inch drill bit.

Third, install a grommet in each hole, then mount the fan using washers on each side of the grommet. Plug in the fan and put the power supply back in place. Turn on the PEB to check for proper operation of the fan. If it works you can start to put your PEB back together. If it doesn't work, check all your connections and try again. If it still doesn't work, you might want to check to see if you have gotten a broken fan.

Fan Information

The type of fan I have been using is an Etri five-watt, 3 1/4-inch fan. It is a 115 volt fan. I found some at an electronics surplus house. You can also mail-order similar ones. Check the Computer Shopper Magazine ads. Make sure that you do not get one that is more than seven watts--five watts is best. If you get one that is more than seven watts then it will make just as much noise as the one currently in your PEB.

If you have any questions or problems, don't hesitate to write me or call me at the above address or phone number. The entire installatin should take about an hour to do. Let me know how it comes out!

Mark Milam

Special Interest Group Meeting

The assembly language SIG is now meeting on the Wednesday following the regular group meeting and starts around 7:00 pm. The meeting is held at the Health Care International building, just off Great Hills Drive--contact Don Lynch or Mike Schultz for directions.

Newsletter Exchange

Our users group exchanges newsletters with several other recognized 99/4A Users Groups. The exchange is made with the understanding that, with proper credit to both the newsletter and author (if listed), your users group can reprint articles from our newsletter and, with proper credit, we can reprint articles from exchanged newsletters. (Please feel free to correct any typos, misspelling, bad grammar, etc.; we will do the same.)

Please send your exchange newsletters to:

Central Texas 99/4A Users Group
P.O. Box 200246
Austin, Texas 78720-0246

Commercial Ads

Commercial advertisements are welcomed by our newsletter. This newsletter can provide a select, specialized audience for advertisers. Advertisements also help our group by offsetting the printing and mailing costs of the monthly newsletter. Any advertisment must arrive by the first of the month to be included in that month's newsletter.

The cost of placing a full-page ad is $20. The cost of a half-page ad is $10. The ad should be camera (actually photocopy) ready. Some flexibility is allowed in the size of half- and full-page ads--but let's not overdo it!

Classified ads are free to individuals both members and non-members. Send your ads to Central Texas 99/4A Users Group; Box 200246; Austin, Texas 78720-0246

Classified Ads

For sale: TI system--black console, p-box, RS232 card, 32K memory card, disk controller card and drive, TI-WRITER, assembly language, LOGO I, Extended BASIC, games. Want to sell as package, take best offer. Call Brad Kuhn at 451-4220 after 4:00.

For sale: TI system. Call George Palmer at 834-1573.

HAS YOUR P-BOX BEEN TOO NOISY? Well, it isn't too loud you say? WHAT'S THAT? I CAN'T HEAR YOU OVER THE P-BOX! Has this ever happened to YOU? If it has (or even if it hasn't but you're tired of the LOUD fan in your P-Box) I can help. I will replace your fan with a new QUIET fan for only 15.00 (plus tax) AND even return your old fan back to you! You may ask, "Why so cheap?", and I will tell you. I am not out to rip-off your pocketbooks. I am just trying to help out my fellow 4A'ers, so if you are interested call:

Mark Milam
836-3301 after 6:00 pm

Meetings Calendar

Meetings of the Central Texas 99/4A Users Group are held monthly at the Pizza Inn, 3000 Duval (near the UT) on the second Thursday of each month. Meetings begin at 7:30.

The following list of meeting dates were compiled from my trusty Dr. Who 1985 calendar. Should any of the dates prove to be faulty, please blame it on the Doctor's poor sense of time (Time Lords confuse easily, you know.) Should there be any mistakes, I'm sure my readers will let me know.

> October 10
> November 14
> December 12

Meetings of the assembly language special interest group at held on the following Wednesday. This month the meeting will be held in the Health Care International Building, just off Great Hills Trail. Contact Mike Schultz or Don Lynch for more details.

Current Officers

President	Mike Schultz	835-2377
	4200 Harcourt Drive; Austin, Texas 78727	
Vice President	Susan Donaldson	327-4165
Treasurer	Paul Dunn	258-4308
Secretary	Patrick O'Donnell	345-6255
Librarian	Mark Milam	836-3301
Newsletter Editor	Diane Schultz	835-2377

Correspondence for the Users Group can be sent to the address given for the President, or to the Central Texas 99/4A Users Group; Box 200246; Austin, Texas 78720.

TIPS FROM THE TIGERCUB

#26

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TIGERCUB SOFTWARE
156 Collingwood Ave.
Columbus, OH 43213

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Groups for promotional
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The entire contents of Tips
from the Tigercub Nos. 1
through 14, with more added,
are available as a full disk
of 50 programs, routines and
files for just $15.00
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with 64 routines and files,
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    Or both for $27
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    New Catalog #6, for $1
which is deductable from
your first order. Describes
140 original programs for
only $3 each (plus $1.50 per
order for casette or disk,
package and postage).
    If you have my previous
catalog, the following are
now available in Extended
Basic versions - Fast
Addition Practice, Submarine
Hunt, Rithmatik, Wawaland
(also now available in Basic
with Speech), Long Division
Cryptograms, Miss Spell,
Scrambulation, Bargraffer,
Squinch, Dry Gulch, Name
That Tune, Scrum, Midnight
Trail, Nimbo, Kindertimes,
Optical Illusion, Bazoo,
Synonymy, Speeder Reader,
Changeroo, Glunk, Fraction
Math, Three Buckets Puzzle,
Roman Numbers, Match A

Patch, Kinderminus, I E
Spelling, Casting Out Nines,
Haunted Graveyard, Spalling
Teecher, Homonymy, Antonymy,
Old -Timer Puzzle, Ten
Thousand Sights, Mechanical
Aptitude Test, Junior
Speeder Reader, and Bars and
Balls.
    Due to reduced prices
for disks and mailers, the
PPM charge is now $1.50 for
either disk or casette - BUT
PLEASE BE SURE TO SPECIFY
WHICH!
    And my best seller -
NUTS & BOLTS, a full disk of
100 (yes, I said 100)
utility subprograms in MERGE
format, ready for you to
merge into your own
programs. 13 type fonts, 14
text display routines, 9
wipes, 8 pauses, 3
programming aids, 9 data
saving and reading routines,
5 graphics routines, 4 time
and date, 6 music, 12 sorts
and shuffles, 2 printer
aids, 4 key and joystick, 4
math, 2 protection and 7
miscellaneous, plus a
tutorial on subprograms.
With documentation, example
of using each subprogram.
All for only $19.95
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    Now for the old
business -
    I was mortified to find
an error in the Unprintable
Unkeyable Program in Tips
#22. The last line should
end with ELSE 180, not ELSE
130. In the Grocery
Shopping program in Tips
#21, your wife will never
get to the zucchini unless
you delete line 140 and
change line 200 to -
200 IF EOF(1)<>1 THEN 130
    Sorry about that. And
the update to the Menu
Loader in Tips #22 will not
list all listable files,
just D/V80 files. I now
have a version to really
list all listable files, I
think, plus show protection,

dump the catalog to the
printer, rescan, etc., but
am not sure all the bugs are
out so will publish it next
month.
    Folks have been asking
why their orders for
TI-WRITER COMPANION,
mentioned in Tips #22, were
being returned unopened, so
I called Bill Browning. He
said he found he was going
broke selling it for $2.50,
but he is now prepared to
supply it for $6.50. Still
a bargain, in my opinion.

    Barry Ensley warns that
when FCTN V is used for a
blank in a filename, as
mentioned in Tips #25, it is
not recognized by the Disk
Manager.

    In Tips #21, I said
that the special characters
available on the Gemini
printer could not be
accessed from TI-Writer. I
have since learned that Star
Micronics hid a valuable
feature of their printer in
a paragraph of gobbledegook
computerese in the manual.
See "Other Function Codes",
ESC ">", ESC "=" and ESC
"#". In plain English, you
can access these codes by
CTRL U, FCTN R, CTRL U,
SHIFT >, then type the
character with an ASCII 128
less than the character you
want. In other words, if
you want CHR$(160), hit the
space bar (ASCII 32), etc.
To get back to the normal
character mode, use CTRL U,
FCTN R, CTRL U, SHIFT #.
Many thanks to David Aragon
(San Antonio Area 99ers
newsletter, Aug. 1985), who
described how to do the same
by transliteration.

    In Tips #25, I said
that a program which had
been converted to I/V 254
format by adding REM lines
could be converted back to
program format by deleting

the REM lines and reSAVing.
Well, it usually can - but
not always!
    I have been receiving
inquiries as to whether my
programs published in the
Tips are public domain
programs which can be placed
in user group libraries and
on BBS's. Well, the
copyright notice on this
newsletter is really only
intended to keep anyone from
reprinting it for personal
profit. I have always
thought that programs
published for the purpose of
being keyed in should be OK
to copy, and I don't intend
to claim that "you must own
the magazine"! However, a
peculiar situation has
developed. The short
programs which I wrote to
give away to promote my
other programs, have become
the bread and butter of my
business! If it was not for
the sales of the Tips disk
and the Nuts & Bolts disk, I
would long ago have gone out
of business. So, I would
appreciate it if you would
exercise some restraint in
putting my Tips programs in
your libraries or in
downloadable form on your
BBS.
    And I do consider my
two Tips disks, as complete
collections of programs, to
be copyrighted material
which should not be placed
in libraries for copying.

    In the Automatic Mouse
Maze in Tips #23, you can
improve the maze by adding
these lines -
475 IF (C>20)*(X<10)THEN 500
515 X=X+1
555 X=X+1
595 X=X+1
1325 X=0

    And the last word - I
think - on the challenge to
quickly scramble the numbers
1 to 255. Ian Swales sent
me, from Belgium, two

routines which beat everyone else - and then sent me two more which beat his first ones! His PEEK version -
```
100 DIM A(255),C(255):: FOR
K=255 TO 1 STEP -1 :: RANDOM
IZE :: CALL PEEK(-31808,B)::
J=INT(B*K/256+1):: C(K)=MAX
(J,A(J)):: A(J)=MAX(K,A(K)):
: NEXT K
```
And see if you can unravel the logic of this truly elegant bit of code!
```
100 DIM A(255):: RANDOMIZE :
: FOR K=255 TO 1 STEP -1 ::
J=INT(RND*K+1):: T=MAX(J,A(J
)):: A(J)=MAX(K,A(K)):: A(K)
=T :: NEXT K
```

So, on to new business -

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       Phila. PA 19128
130 CALL CLEAR :: PRINT "LIN
PUT PUZZLE/BUG":"BY BARRY TR
AVER"
140 PRINT "Can you figure ou
t why your computer will not
obey?"
150 PRINT "Why won't it stop
```

when you tell it to?": : :
```
160 LINPUT "Want me to stop?
(YES/NO)":W$
170 IF W$="YES" THEN STOP EL
SE 160
180 END
```

It seems that many of you still haven't heard of Super 99 Monthly, published monthly (and on time!) by Bytemaster   Computer Services,   171   Mustang Street, Sulphur, LA 70663, for $12 per year. The May issue contained a Word Processor Dump, to dump a graphics/text screen into a D/V80 file which can be printed out of the TI-Writer Formatter - that program alone is worth the annual subscription price!

I've said it before, there is more than one way to skin that poor cat. This is my routine to alternate between the #1 and #2 joysticks.
```
Z=Z+1+(Z=2)*2 :: CALL (JOYST
(Z,X,Y)
```
Compact, isn't it? Now, the Reading-Berks 99ers publish a newsletter called "A Byte of Info", which is hardly more than a byte long, but the August byte was a mouthful! Check this -
```
100 Z=2
110 Z=1/Z*2 :: CALL JOYST(Z,
X,Y)
```
And this! Elegant!
```
Z=Z=0 :: CALL JOYST(Z+2,X,Y)
```

Here is another of those programs that write a program. This one will read a screen of graphics and/or text and convert it into a RUNable program of DISPLAY AT statements which will recreate the screen.
First, we need a file of the hex codes of all the normal characters, to check against to see if any have been redefined. Rather than key in all 95 of the 16-digit codes, let's write

a program to write a program of them -
```
110 OPEN #1:"DSK1.HEXCODES",
VARIABLE 163 :: LN=30000 ::
FOR D=32 TO 124 STEP 8 :: FO
R CH=D TO D+7 :: CALL CHARPA
T(CH,CH$)
120 D$=D$&CHR$(179)&CHR$(200
)&CHR$(16)&CH$ :: NEXT CH
130 PRINT #1:CHR$(INT(LN/256
))&CHR$(LN-256*INT(LN/256))&
CHR$(147)&SEG$(D$,2,LEN(D$))
&CHR$(0):: LN=LN+1 :: D$=""
:: NEXT D
140 PRINT #1:CHR$(255)&CHR$(
255):: CLOSE #1 :: END
```
RUN that to create a MERGE format program of DATA statements. Now, key in the GRAFWRITER program -
```
31000 SUB GRAFWRITER      .
31001 OPEN #1:"DSK1.PG",OUTP
UT,DISPLAY ,VARIABLE 163
31002 RESTORE 30000 :: L=300
00 :: GOSUB 31018
31003 FOR CH=32 TO 127 :: CA
LL CHARPAT(CH,CH$):: READ A$
:: IF CH$=A$ THEN 31004 ELS
E GOSUB 31019 :: GOSUB 31018
31004 NEXT CH
31005 FOR CH=128 TO 143 :: C
ALL CHARPAT(CH,CH$):: IF CH$
=RPT$("0",16)THEN 31006 ELSE
GOSUB 31019 :: GOSUB 31018
31006 NEXT CH
31007 PRINT #1:L$&CHR$(157)&
CHR$(200)&CHR$(5)&"CLEAR"&CH
R$(0):: GOSUB 31018
31008 FOR R=1 TO 24
31009 M$=L$&CHR$(162)&CHR$(2
40)&CHR$(183)&CHR$(200)&CHR$
(LEN(STR$(R)))&STR$(R)&CHR$(
179)
31010 FOR C=3 TO 30 :: CALL
GCHAR(R,C,G):: CALL HCHAR(R,
C,42):: IF F=0 AND G=32 THEN
31013
31011 F=1 :: IF FF=1 THEN 31
012 ELSE CC=C-2 :: FF=1
31012 A$=A$&CHR$(G)
31013 NEXT C :: IF CC=0 THEN
CC=1 :: A$=" "
31014 PRINT #1:M$&CHR$(200)&
CHR$(LEN(STR$(CC)))&STR$(CC)
&CHR$(182)&CHR$(181)&CHR$(19
9)&CHR$(LEN(A$))&A$&CHR$(0)
31015 L=L+10 :: F,FF,CC=0 ::
M$,A$="" :: GOSUB 31018 ::
NEXT R
31016 PRINT #1:L$&CHR$(134)&
```

```
CHR$(201)&L$&CHR$(0):: GOSUB
31018
31017 PRINT #1:CHR$(255)&CHR
$(255):: CLOSE #1 :: SUBEXIT
31018 L1=INT(L/256):: L2=L-2
56*L1 :: L$=CHR$(L1)&CHR$(L2
):: L=L+10 :: RETURN
31019 PRINT #1:L$&CHR$(157)&
CHR$(200)&CHR$(4)&"CHAR"&CHR
$(183)&CHR$(200)&CHR$(LEN(ST
R$(CH)))&STR$(CH)&CHR$(179)&
CHR$(199)&CHR$(16)&CH$&CHR$(
182)&CHR$(0):: RETURN
31020 SUBEND
```
Next, Enter MERGE DSK1. HEXCODES to merge in those DATA statements. Then save the   program   by   SAVE DSK1.GRAFWRITER,MERGE

Now, load any program which has a screen you would like to copy. Run the program to the point where the screen display is ready, then break it with FCTN 4. Put in a temporary line going to itself, such as 1001 GOTO 1001, and run the program again to be sure you found the right place. Then replace that temporary line with CALL GRAFWRITER :: STOP
Put   in   the   disk containing   the Grafwriter program   and   enter MERGE DSK1.GRAFWRITER. Then RUN the program. When it stops, type NEW, then MERGE DSK1.PG and then RUN!
Now for a Tigercub chall- enge that I can't answer! Can one of you assembly programmers tell me how to PEEK out of Extended Basic for screen color and charac- ter set colors, so I can reproduce them   in   that program?

And, thanks to Jerry Glaze in the Southern Nevada UG newsletter, by way of the Tidewater   newsletter - you don't need SIZE with DISPLAY AT - just a semicolon!
```
100 DISPLAY AT(12,1):RPT$("*
",28):: DISPLAY AT(12,1):"SE
E?";
```

MEMORY FULL! - Jim Peterson