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VOLUME 4 NUMBER 5

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Next meeting July 5th
At the Hurst Public Library
9 am

The reviews, evaluations and opinions contained in
articles in this newsletter are the authors' own
and do not reflect the views of the NET 99er HCUG.

President's Memory Dump

Well things are starting to turn around. The newsletter went out. I put my Volkswagon engine together and the new computer was shown at the Chicago Users group (I have heard that good things come in threes). First, the copier broke down. That is why the newsletter didn't go out. I guess only the faithful have seen the demonstration on the Cram Kracker. So everyone can count on the next meetings, they should be as follows: July 5th, Aug. 2nd, Sept. 6th. We would sure like to see you there. This next meeting bring your TI Computer and modules. We will show you how to clean them. This should stop some of your computer lock ups. Second, no one else cares about my VW, so I will go on to the third. The new computer is coming and here is some info from the Chicago DBS written by Dave Wakely.

It's here and it's...DENEVE from Myarc. It is true! It is here! It works! I saw it! Just as he promised to do. Lou Phillips of Myarc showed up at the Chicago Consumer Electronics Show on Sunday with several working Peripheral Expansion Boxes running his "computer-on-a-card." These were fully functioning printed circuit boards running 80-column and hi-res graphics demos.

I spoke to Mr. Phillips for over an hour at the show, and yet I almost missed him entirely. His small booth was unmarked, and I only spotted it by recognizing him, having seen him at our Chicago TI Faire last November. He was even wearing a badge with someone else's name on it, but denied that he was here incoognito. The booth was not shared, it was entirely Myarc's. With Phillips behind the table was John Kacown, author of Module Emulator, who is now doing extensive work with Myarc.

The new computer is named DENEVE, but will also be known as the "Model 2640 Family

Computer." Phillips stated that Texas Instruments asked him not to use "9900" in the name, but he retained the "9" and added the "00" because that is the amount of RAM which comes with the machine. The following is directly from the one-page information sheet which was handed out:

- * 99-1(A) compatible, runs over 100 existing TI cartridge programs.
- * 99-1(A) compatible, runs over 90% of all Assemble Language programs & utilities.
- * TI WRITER, now a full 80-column.
- * Multiplan, also 80 columns.

FASTER at least 2-3 times

LARGER standard 640K RAM

2 MEGABYTES Addressable RAM

MYARC Memory Card Compatible

With Myarc 512K Card, Supplies 1.1 MEGABYTES RAM

PHONE TYPE CABLE

Replaces Old Hex Bus Cable

HOUSE SUPPORT

On the back of the page was a list of more features, including:

Composite Video Output

RGB Output (Note, I was informed this is Analog RGB, with "thousands" of colors available.)

40 column display

80 Column display

Mouse Output Port

Joystick port

128K VDP RAM memory

Phillips stated that you will no longer need the flex cable or even the TI console. The card plugs into the PC Box, and a cable goes from there to the IBM type keyboard. Your other cards will work as usual. When asked about using cartridge software with a machine which has no such port, Keown stated that a copy of his program, Module Emulator, will be included with machine, and you will be expected to dump whichever cartridges you want. They will then run from disk on the new machine. The only cartridges they have been unable to use are those which call console BASIC routines, such as Personal Record Keeping, Statistics, Tax/Investments Record Keeping, and a few others. They are not sure whether they will attempt to correct this. Everything else, including the present Extended BASIC, will dump and run on the new machine.

You probably won't need XB anyway, since the machine will come with Myarc's BASIC

3.0, as well as 80 column versions of TI-Writer and Multiplan. Myarc plans at this time to include the keyboard, and the suggested retail for all of the above is \$495.00. When asked if they would sell the machine without a keyboard for less, Phillips quickly added that it was likely they would do so.

Availability of the machine is planned for "about mid-July". Phillips stated he has been told to expect completed components from his suppliers "around the end of June". (Sounds like too tight a schedule to me). The initial production run is for "about 1,000 units".

Phillips stated that he considers the hardware, the card itself, "done". Several beta testers already have the card. He is presently working on the native, or boot-up, DOS. Among other things, he is trying to decide whether to use a TI-like directory system, perhaps with a boot-up menu which call TI emulation must be called in by the user from disk. Either way, once in "TI mode" the machine will function as your TI does now, except with all the new "goodies" added.

At this point I asked Mr. Phillips directly if, in essence, there will ever be another mode to use, namely, an IBM compatible system. He very quickly stated that this is one of their goals and that he expects "in about six months to be at the same stage we are now with this card". It was pointed out to him that this will roughly coincide with the 4th Chicago TI Faire, to which he was immediately invited. He has tentatively accepted our offer to be present at that show.

There are still plans to produce a stand-alone, new computer, but this seemed, at least to me, somewhat vague. Phillips also hinted that Myarc will probably be producing the equivalent of a Peripheral Expansion box of their own, which would also seem to me to remove the need for a self-contained machine.

Back to IBM compatibility, Phillips did state that with a double-density disk controller (such as Myarc's) there is no reason why the new machine could not read IBM (MS-DOS) formatted disks. The problem is that the TI 9995 processor knows not what to do with 8080 instructions, so IBM programs are out until the compatibility card comes along. But I asked if, for example, word processing files and possibly even saved Multiplan files could be used by either system, and, after thinking about it for a second, Phillips stated he couldn't see too many problems with this. This should give us some immediate "productivity compatibility" at least.

In wrapping up, Phillips noted that the quad density chip upgrade which has been talked about at other shows is now ready, and to contact dealers for info. He also stated that the fine hi-res demos which were running at the CES were written by Chris Faherty of Incebot, and that copies of the demos would be included with Myarc's release of BASIC 2.1 free of charge.

I would like to conclude by noting that there have been those, even on this bulletin board, who have publicly doubted the intentions of Myarc with regards to this machine. After waiting over 2.5 years for a replacement/upgrade machine, perhaps such skepticism is understandable among TI owners. I will say that Lou Phillips comes across as a sincere, straight forward guy. For those who also quite understandable doubt appearances, I will tell you both that the machine DOES exist, and whatever else he is doing, Lou Phillips just spent one HECK of a lot of money for a table at this CES to show it.

I apologize for any editorializing I may have done in this article, and for anything I may have omitted. I believe I have outlined everything of importance I spoke about with Phillips, but if you have questions I haven't anticipated, by all means contact Myarc, or, as a last resort, SMAIL me.

Incidentally, I inquired about the origin of the name. Keown jumped in and stated that it was his idea. It seems that a few days before the CES, while they were working together, Keown told Phillips that he felt there should be a name for the new machine instead of just a number, "the 9640". As they were heading down the staircase from Phillips' office there was a framed print on the wall. The name at the bottom was "Geneve", and when Keown suggested this, Phillips agreed to it. Considering the near religious fervor of TI users, this vaguely biblical sounding name seems appropriate.

Ken Dominiec

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MINUTES
June 7, 1984

Net 99er HOUG was called to order by the President, Ken Dominiec.

The President made an announcement that we have a system to be raffled at the Sept. 4th. meeting. \$5.00 per chance

Our July meeting will be July 5, 1984.

There was an inquiry from TI about our status, as they had interested parties to contact us about membership.

A round of appreciation was given for Leroy Thompson and all the assistance he has given the Club and its members. Leroy will be leaving us as an active member because of new needs.

A new source of Disk in lots of 100 for .39c plus postage of .02c and Lee DeForrest took orders. Orders will be taken at each meeting if there is enough interest.

TI bumper stickers are available from Ken Dominiec.

At the conclusion of the next meeting we will hold a service and clean-up session for the console. If you have a console that gives you intermittent problems bring it with you to the next meeting along with the transformer.

A word of caution from Leroy Thompson about the PE Box, IF YOU HAVE THE COVER OFF BE CAREFUL OF DAMAGING COMPONENTS. IF YOU ARE INSTALLING A FAN OR DISK DRIVES BE SURE YOU REMOVE ALL LOOSE DEBRIS.

Treasury report was given by Jim Stewart.

Roy Willis discussed the new Smart Programmer Magazine. Roy also talked about the "New" Home Computer Magazine and how much a rip off it is. He suggested a letter to the originating Post Office in care of the Postmaster may help to remove this magazine from the market. Roy also stated there is a new version of c99 language available from Clint Pulley.

A discussion was held on the best way to advertise the Club and possibly renew interest in our computer.

The demonstrations for this months meeting were by Gary Higgs who demonstrated a digital graphics program he downloaded from Compu-Serve. A demonstration of Millers Graphics GRAM KRACKER was given by Charles Bathman. Charles also stated that if there was enough interest he would become a dealer for the GRAM KRACKER.

Respectfully Submitted,

Jo Lambert

for Lexie Glenn

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THE MUSIC CORNER
by Jeff Gatlin

One of the things I always thought was missing from the 4a's music capability was the lower range. The 4a gives us an almost infinite upper range, as far as we can hear, but its lower range stops at the frequency of 110. After listening to dozens of music programs, I noticed that some of them seemed to defy reason and belt out bass notes below what I call low "A" (the lowest note played by the 4a without magic). Curiosity and a greedy desire to hold this magic secret led me to examine these programs. I found that to create these magic tones, one must make use of a mysterious fourth voice which our beloved Extended Basic Manual describes as "noise". The "noise" is created by using a negative value between 1 and 8 in place of a note's frequency.

10 CALL SOUND(1000,-4,0)

This statement creates a mildly interesting noise if you have never heard it before. After hearing it once, no secrets are revealed. So what is the secret? Once again our Extended Basic Manual sheds light upon us. It says, "-4 Periodic Noise that varies with the frequency of the third tone specified." Ah ha! The secret is revealed! To create the magic bass notes, one must make use of ALL THREE voices PLUS a -4 noise.

10 CALL SOUND(1000,330,0,392,0,523,0,-4,0)

Wala! But wait, something is amiss. The bass note created does not match the three note chord. Experimentation revealed that if you use the note C (523) in the third voice, the bass note played is C# (sharp). Why? It doesn't really matter, at least to me. Below is a chart I made up of the frequencies to use in the third voice, to create the desired bass note.

PLENTY LOW:

REALLY LOW:

1661 -- A (same as A110)	831 -- A (one octave below 110)
1568 -- G#,Ab	784 -- G#,Ab
1480 -- G	740 -- G
1397 -- F#,Gb	698 -- F#,Gb
1319 -- F	659 -- F
1245 -- E	622 -- E
1175 -- D#,Eb	587 -- D#,Eb
1109 -- D	554 -- D
1047 -- C#,Db	523 -- C#,Db
988 -- C	494 -- C
932 -- B	466 -- B
880 -- A#,Bb	440 -- A#,Bb
831 -- A (one octave below A110)	415 -- A (two octaves below A110)

The bad news is that this doesn't give you FULL control of four voices, although if your tricky enough, you can make use of four note chords. The reason is that the third tone and the noise work together as one tone. In almost every example I have come across, the third tone has a volume of 30, which makes it inaudible. However, this does not affect the volume of the bass note. It's volume is controlled by the value after -4.

With this basic information, you should be able to experiment using bass notes in your own. I hope this has been helpful. If anyone has any questions about bass notes or any other aspect of music on the 4a, please feel free to ask, call, or write. The least I can do is offer comfort that your not the only one who can't figure it out.

Below is a program in which I use the mysterious four voice ability of the 4a. The thing to remember is that there will always be an interval of three octaves and a major seventh between the bass and third voice. Enjoy!

```
10 ! "SHADED VELVET"
15 ! AN ORIGINAL COMPOSITION
20 ! BY JEFF GATLIN
25 ! COPYRIGHT JUNE 1986
30 CALL CLEAR :: CALL SCREEN(0) :: FOR T=1 TO 14 :: CALL COLOR(T,15,0) :: NEXT T
32 PRINT "This program demonstrates the ability to play four voices instead of three."
35 DISPLAY AT(5,5):"SHADED VELVET" :: DISPLAY AT(8,5):"An Original Composition"
40 DISPLAY AT(10,5):"By Jeff Gatlin" :: DISPLAY AT(12,5):"copyright june 1986"
50 DIM A(60),B(60),C(60) :: P=1 :: V=0
60 FOR R=1 TO 60 :: READ A(R) :: NEXT R
70 FOR R=1 TO 60 :: READ B(R) :: NEXT R
80 FOR R=1 TO 60 :: READ C(R) :: NEXT R
100 FOR R=1 TO 3 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V-2 :: NEXT R
110 FOR R=4 TO 6 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V+2 :: NEXT R
119 V=0
120 FOR R=9 TO 11 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V-2 :: NEXT R
130 FOR R=12 TO 16 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V+2 :: NEXT R
139 V=0
140 FOR R=17 TO 19 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V-2 :: NEXT R
150 FOR R=20 TO 24 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V+2 :: NEXT R
159 V=0
160 FOR R=25 TO 27 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V-2 :: NEXT R
170 FOR R=28 TO 32 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V+2 :: NEXT R
179 V=0
180 FOR R=33 TO 35 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V-2 :: NEXT R
190 FOR R=36 TO 40 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V+2 :: NEXT R
199 V=0
200 FOR R=41 TO 43 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V-2 :: NEXT R
210 FOR R=44 TO 48 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V+2 :: NEXT R
219 V=0
220 FOR R=49 TO 51 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V-2 :: NEXT R
230 FOR R=52 TO 56 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V+2 :: NEXT R
239 V=0
240 FOR R=57 TO 59 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V-2 :: NEXT R
245 R=60 :: FOR RP=1 TO 2 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: NEXT RP
247 FOR RP=1 TO 8 :: CALL SOUND(-999,A(R),V,B(R),V,C(R),V,-4,V-2) :: P=P^1000000 ::
    P=P^1000000 :: V=V+2 :: NEXT RP
250 CALL KEY(0,K,S) :: IF S=0 THEN 250
998 END
999 ! FIRST VOICE
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JUG Newsletter of the Johnson Space Center of Texas

Vol 85.9	Club News Super Space TI Forth Call Peeks Super Bug II	Vol 85.10	Hard Disk for 99/4a What's on My Disk? Potpourri New from Downunder Customizing Super Bug II Advanced Basics
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Vol 85.11 Jug Notes
What is a Ram Disk?
Disk Drives
Interrupt Notes (Part 2)
Solid State Disk Drives
TK Writer Revisions
Software Review: Character Sets Graphics Design
Tips From The TigerCub #27

Vol 86.1	New Library Software and TICOFF News Same Song, Second Verse Super Space Status Review: Disk Master I Jug Library Jug "Kudos" TI 99/4a Capability Inventory Tips From The TigerCub #29	Vol 85.12	1985 for the TI 99/4a Foreign Freeware Library Woes Oh Say Can You c Tips From The TigerCub #28
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PRINTOUT Newsletter of The San Gabriel Valley 99/4a Users Group.
1000 Dora St., W. Covina Ca. 91792

Vol 1 #6 (Sept 83)	From Tom's Desk The Library Software Reviews Helpful Hints The Editor	Vol 1 (Dec 83)	Editors Two Bits From Tom's Desk News The Library Helpful Hints
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Vol 1 #9 (Dec/Jan 83/84)	Bulletin Board Editors Two Bits The Library Tips From The TigerCub #17	Vol 2 #2 (Mar 84)	The Library Helpful Hints V.P. Bytes
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Vol 2 #3
(Apr/May
84)
Editors Two Bits
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TI 99/4a Memory Architecture Map
For The Programmer
V.P. Bytes
Helpful Hints

Vol 2 #4
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Cassette Screen Dump
Picking Up The Slack
Getting To Know Your Computer Better
Programming Tips

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(July) The Library
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Vol 2 #6 The Library
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(Sept) Maintaining Your
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Vol 2 #8 The Library
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Dec 84) Helpful Hints
File Transfer Program:
TI to IBM
Information to Make
Cable for TI to IBM
Tips From The TigerCub #12,#14

Roy Willis

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MEMBERSHIP UPDATE

June 7, 1986

I would like to welcome new member

KEVIN MANTOOTH M2/87
1105 GREENBRIAR
ARLINGTON TX 76013
860-3741

The following members renewed their membership.

Jo & John Lambert M5/87

We had two members reinstated.

Les Long M2/87
1156 E. Hiway 121 #23
Lewisville, Tx 75067
(214)221-2318

Marc F Robinson 1/87
6104 Cholla Dr
Fort Worth Tx 76112
451-3535
422-8000

Unfortunately, we had some members who did not renew their membership.

James Cowan
Bob Derryberry
Steve Graham
J.B. Hamilton
Tomothy Kelly
Roy Maxwell
Fred Richter
George W Shupee, Jr
Ken Ward

A NOTE TO ALL MEMBERS. Look on your mailing label on your newsletter for the date that your membership is renewable, such as M1/86 is January 1986, M5/86 is May 1986, etc.. The club does not send out reminders on dues because the postage is prohibitive. If you know any of the members who did not renew, please give them a call and see if you can learn the reason. Let your officers know so they can look into the reasons. Your

help on this will be greatly appreciated.

John Lambert
Membership Committee

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IMPORTANT EXTRAS

Ever get tired of waiting for your newsletter in the mail? Well, there is cure for this illness. As many of you know, the newsletter is available on Startext. What! You say you don't subscribe to Startext. Well not to worry. The wonders of modern medicine never cease, for as there is more than one cure for sickness, there is now more than one cure for postal anticipation. In other words, your newsletter is now available in the following BBS's download sections:

Zylog (817) 795-2322 -- This board supports TEII graphics and music! Try it!

The Orphanage (214) 276-7832 -- Run on a PCjr but has a very large 99/4a section

FLUG TIBBS (214) 321-4238 -- TIBBS v.5 must be experienced! Run by Forest Lane UG.

The newsletter can be downloaded using Xmodem and printed with the TIwriter formatter, just like the way we print the newsletter that you receive in the mail. We've spread it around to give everyone a chance to get it without having to call long distance and, of course, to publicize the club. Give these boards a call!

*****EDITOR'S NOTE:**

The deadline for contributions for the July newsletter is Wednesday July 16.

Comments or questions about anything? Contact your officers:

PRESIDENT---: Ken Dominiec, 656-1473

V.PRESIDENT-: Lee DeForest, 237-9746

SECRETARY---: Lexie Glenn, 232-2852

TREASURER---: Jim Stewart, 214-370-0922

Got some interesting info to share? Articles, letters, paragraphs, & words of wisdom are yours to contribute. Contact Jeff Gatlin, editor, 214-264-2925. Startext MC60053