YESTERDAY'S NEWS

VOLUME 3 NUMBER 3 Established 2016 MARCH 2018

30 Years Ago...

Historical Information taken From Bill Gaskills TIMELINE

MARCH 1988:

The much anticipated HFDC (Hard and Floppy DisK Controller) from Myarc Inc. appears, almost a year after its initial announcement.

Writing in the Kawartha 99ers newsletter, Phil Townsend tells readers that Arto Heino's Picasso Publisher looKs and feels so much liKe Navarone's Paint 'N Print that he's surprised Navarone hasn't made a copyright infringment claim.

JacK Sughrue of East Douglas, Massachusetts releases PLUS!, the fairware disK containing numerous enhancements and templates for use with TI Writer or its clones.

99 Fortran is released by Al Beard, doing business as LGMA Products.

Calendar MaKer 99 appears from Asgard Software.

Legends v1.1 is released by Asgard Software.

Graphic Lister is released by Paul Coleman of Nameloc Software.

McWare Products of Fairfax, Virginia releases a comprehensive printer control codes booK.

99er Ken WoodcocK uncovers a printing bug in PR-Base 2.1 which places >00 in a record instead of >20 for blanK spaces.

Glenn SchoraK, founder of Boundless Systems and Software of Salem, OR, announces that his firm will be marKeting software and hardware for the TI-99/4A and Geneve. SchoraK would later release Karate Challenge and Mission Destruct games through Asgard Software.

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INSIDE INFORMATION

THE RAVE PS2 EXPANSION BOX

A RAVE REVIEW!

by Dave Ratcliffe

(SORRY, COULDN'T RESIST)

At the 1990 TICOFF show, lots of people crowded around the RAVE99 table to get a 'first' looK at the proposed RAVE PE/2 expansion box for the TI-99 and Geneve computers. What we saw was a prototype, set up to run a TI-99 and what a wonderful sight it was. NO console, (Rave Keyboard Interface and computer mounted INSIDE the box), hard drive (Myarc HFDC) AND quiet! Several people ordered then and my order was submitted in April. Even though I did NOT receive the unit till January 1991, I am still VERY satisfied. Why? Because every step of the way, Rave's owner, John McDevitt, Kept me informed of progress and setbacKs. I Knew going in that I was buying an as yet unfinished product and the manufacturers openness through the whole process was both refreshing and welcomed. This is the second product I've purchased from Rave (Keyboard interface was the first) and I have yet to be disappointed. Now on to the 'official' review..

There are 2 versions of the RAVE PS/2, the A and the B series. I purchased the A series, designed for the Geneve computer. The B version allows the use of both the TI/99 AND Geneve computers IN THE SAME BOX, or just the TI alone. Since mine is for a Geneve, the following description is of the PS/2-A version except where noted:

The cabinet is made by Magitronics and contains a 200 watt fully regulated power supply. There is room for 3 5.25" 1/2-height drives and 1 3.5" floppy drive all in externally accessible drive bays. The 3.5 floppy space is NOT available if the Rave Keyboard interface is used (PS/2-B version).The 5.25" area CAN hold 1 full height and

See "RAVE", page 2

ELEMENTS OF BASIC

By Dave Howell

Courtesy of the Erie 99'ers

Part 5

Arithmetic and String Relational Operators

In BASIC, the symbols used for addition, subtraction, multiplication, division, and exponentiation are Known as arithmetic operators. They are:

+ - * / and ^ or ↑.

The use of + - * and / are obvious. Exponentiation (^ or ↑) is sometimes referred to as raising a number to a power. For example:

$7 * 7 * 7 * 7 * 7 = 7^5$

In BASIC, the power or exponentiation is indicated by the caret (^) or the up arrow (↑) so that 7^5 is written as 7^5 or 7↑5.

The following examples demonstrate the use of arithmetic operators in TI BASIC:

```
10 PRINT 44/2+4^3
20 PRINT 50*4-25
30 PRINT 23.25/5+1.5
```

Examples of changing arithmetic expressions into BASIC are shown below:

ARITHMETIC	TI BASIC
(a + b)÷c	(A+B)/C
ab - xy	A*B-X*Y
(a + b)÷c^2	(A+B)/C^2
((a ÷ b)c)²	((A/B)*C)^2

String Operators

A string consists of one or more characters enclosed within double quotation marks. Examples of strings include:

```
"F. SCOTT FITZGERALD"
"149 LEXINGTON AVE."
"NEW YORK, NY  10017"
```

Strings can contain letters, numbers and symbols. Any string containing numbers cannot be used in mathematical operations but strings can be cancatenated using the ampersand (&). This is the only string operation used in TI BASIC.

This operation is the combining of two or more strings to form a third string. For example, if the variable A$ is assigned the value "TOOTH" and B$ is assigned the value "ACHE", the strings can be cancatenated to form the string "TOOTHACHE".

```
10 LET A$="TOOTH"
20 LET B$="ACHE"
30 PRINT A$&B$
```

Relational Operators

The relational operators used in BASIC are as follows:

```
= equal to
< less than
> greater than
<= less than or equal to
>= greater than or equal to
<> less than or greater than
   (or not equal to)
```

Obviously, the results of these operators when used in relational expressions are either true or false. Several expressions involving numerical quantities are shown below:

```
5>3          N<=.5
3=3          C>(C1+C2)^2
X=27         A+B<C+D
P<>Q         Z>=X*Y
```

Each expression will be either true or false depending on the values assigned to both sides of the operator. The last expression above will be true if the value of Z is greater than or equal to the value of X*Y.

If relational operators involve strings, the string values are compared according to each character in the string. One character is considered "greater than" another if its ASCII code is a greater number. (Most computer operating manuals contain the ASCII code).

The ASCII code is an industry-wide system which assigns numbers to each character. For example, the ASCII code for A is 65. For B, it is 66. Therefore, the following expressions are true:

```
"B">="A"        "B">"A"
"A"<="B"        "A"<"B"
        "A"<>"B"
```

Strings are compared by the ASCII code for each character, one at a time. If the first characters of each of the strings are the same, the second character of both strings will be compared, etc. Consider two strings, "JOSEPH" and "JOAN". Since the first two characters of the strings are the same, the question of which string is greater is settled with the third character. Because the ASCII code for "P" (65) is less than the code for "S" (83), "JOSEPH" is considered greater than "JOAN".

If the end of a string is encountered before the end of another string of like characters, then the string with the greater number of characters will be considered the greater string: "ABC" "ABCD"

The relational operators can be used to indicate the relative location of strings in alphabetical order. This fact is the basis of programs designed to sort, search or alphabetize lists of data. The following relational expressions using strings are true:

```
"MNO"="MNO"       "AAB">"AAA"
"JOSEPH"<"JOSEPHINE"
  X$<Y$ where X$="JOSEPH" and
  Y$="JOSEPHINE"
```

YN

RAVE continues...

1 1/2 height if desired. Additionally, there is internal space for a vertically mounted 3.5" hard drive behind the front panel and adjacent to the 5.25" bay. Let me assure you, the power supply is fully capable of running ALL of these devices as well as the CPU and all related cards. While the power supply contains a cooling fan, RAVE saw fit to install a second fan in front of the card rack that moves air directly across the expansion cards providing extra cooling capacity.

The card rack is a well designed unit and even includes a removable section to make room for the internal 3.5" hard drive. The backplane shows good design and workmanship and all jumpers are laid out well with easy access. 1 bad note here, while the documentation refers to numbered pins at the jumper selection points, NO numbers are printed on the board. After a quick call to John I found out that the pin closest to the front at ALL jumper locations is pin #1. For the Geneve, there is a small wiring harness that requires a bit of soldering to install. It will connect the front panel reset switch to the Geneve card to provide a HARD reset when needed. An additional connection provides for use of the front panel KEYLOCK switch.

The backplane comes with 5 16 bit slots (#'s 1, 2, 6, 7 and 8) and 3 8 bit slots (#'s 3, 4 and 5). There is a reason for this. You have the option of removing your cards from the clamshells or leaving them in. If you choose the latter, you'll need to use slots 3, 4 and 5 since the clamshells have no opening for the extra connectors in the other positions. those 3 positions CAN be made into 16 bit if desired. I purchased the extra connectors with my unit but have not installed them yet. One note here. At present, there exists no hardware to utilize the full 16 bit backplane. This is provided as a possible expansion route for the future.

The front panel contains 2 push button switches, 1 Keylock switch and 3 LEDs. The 2 buttons are RESET (obvious purpose) and TURBO (inactive with the Geneve, used to PAUSE the CPU in the TI version). The Keyswitch is used to disable the system when locked. 2 Keys are provided with the unit. The TURBO LED (yellow) indicates bus activity. Since all cards are in the BACK of the box, there is no way to see their respective activity lights. This LED is a suitable replacement. The HDD LED (red) indicates hard drive activity. A pigtail with plug is provided to connect this to your hard drive. The POWER LED (green) serves an obvious purpose. The power switch is at the lower right front corner of the box.

the rear apron contains the openings for the card rack, a jack for the AC line, a jack for running power to a monitor, a 110/220 VAC selector switch, the power supply cooling fan and 2 Knockouts for DB-25 and DB-9 connectors (not used).

With the exception of the front panel, the ENTIRE box is heavy gauge steel and VERY rugged. there are 4 rubber feet attached to the bottom. Dimensions of the entire unit are 7" H x 15" W x 16 1/4" D.

Many existing expansion cards will have to be modified for use in the RAVE expansion box but the mod is VERY simple and requires only 2 solder joints per card and a bit of wire. Here's the explanation. The TI Pbox was a power monster. It put out WELL over the 12 volts needed by the cards. In order to keep the cards from self-destructing, the manufacturers installed voltage regulators on their cards to hold the incoming voltage at 12. The excess voltage was bled off as heat. The RAVE box uses a tightly regulated supply that requires no such extra regulation. Extra regulators can, in fact, cause minor problems. So, a jumper is installed across the existing regulator to take it 'out-of-circuit'. Cards modified this way CANNOT BE USED IN A TI PBOX UNTIL THE MOD IS REMOVED! Removal, however, is as simple as cutting a wire. The manual contains adequate descriptions of how to do the mod and what to look for as well as a list of cards that DO require the change.

Now comes the critique. Internally, the unit is well laid out with plenty of room for running cables and maneuvering. Airflow is adequate for keeping things cool. The box, while a bit large compared to the TI Pbox, is attractive. My documentation for the unit is admitedly

preliminary and John tells me it will be improved so I'll skip over that.

I have only one nit to pick with RAVE. The manual recommends the removal of the clamshells around cards to help them remain cool. Unfortunately, the clamshells are also used to hold the cards in place in the card rack. Without the clamshell, the cards tend to wobble in the edge connectors. With nothing inside the cover to hold the cards in place and nothing to keep them from moving sideways, it is possible for a card to come partially out of the socket with disastrous results. This is more of a danger to cards with cables connecting them to the outside world, like Geneves and serial cards. My solution was to glue 2 strips of resiliant foam inside the cabinet cover, OVER the edge connectors and perpendicular to the cards. This effectively HOLDS the cards in their sockets and keeps them from moving sideways as well. Since I set my PBox up in a 'Tower' configuration, this modification was doubly necessary. I sent John a sample of the material I used in hopes that he will add it to future versions.

I have been asked how much I paid. My answer is that it is no longer a valid price. I paid for the unit in April of '90. SEVERAL modifications and upgrades have since been made to the initial design that have changed the price upwards. Those of us who pre-paid were locked in with no further charges. For an accurate CURRENT price, contact:

RAVE99 Co.
(address omitted)

or Call John McDevitt AFTER 7pm at (number omitted)

Finally, the grade. I can't grade the documentation properly since what I recieved was VERY preliminary. On that basis, I'd say:

Documentation - B+

On the PS/2-A, taking into account workmanship and functionality, I'll say:

Product - A

On RAVE's customer relations, counting willingness to communicate, honesty and willingness to listen, aa definate:

Customer Relations - A+

Do I like what I got? Yes

Would I recommend it to others? Yes

Was it worth the wait? YES!

>> Dave <<

~YN

1:00 am - Alarm clock rings.

2:00 am - Hunting partners arrive, drag you out of bed.

2:30 am - Throw everything except the kitchen sink in the pickup.

3:00 am - Leave for the deep woods.

3:15 am - Drive back home and pick up gun.

3:30 am - Drive like crazy to get to the woods before daylight.

4:00 am - Set up camp - forgot the darn tent.

4:30 am - Head into the woods.

6:05 am - See eight deer.

6:06 am - Take aim and squeeze trigger.

6:07 am - "Click".

6:08 am - Load gun while watching the deer go over a hill.

8:00 am - Head back to camp.

9:00 am - Still looking for camp.

10:00 am - Realize you don't know where camp is.

Noon - Fire gun for help - eat wild berries.

12:15 pm - Ran out of bullets - eight deer come back.

12:30 pm - Strange feeling in stomach.

12:40 pm - Realize you ate poison berries.

12:55 pm - Rescued!

1:00 pm - Rushed to hospital to have stomach pumped.

3:00 pm - Arrive back at camp.

3:30 pm - Leave camp to kill deer.

4:00 pm - Return to camp for bullets.

4:01 pm - Load gun - leave camp again.

5:00 pm - Empty gun on a squirrel that's bugging you.

6:00 pm - Arrive at camp, see deer grazing at camp.

6:01 pm - Load gun.

6:02 pm - Fire gun - hit pickup.

6:05 pm - Hunting partner returns to camp dragging deer.

6:06 pm - Repress strong desire to shoot hunting partner.

6:07 pm - Fall in fire.

6:10 pm - Change clothes, throw burned ones into fire.

6:15 pm - Take pickup, leave partner and his deer in the woods.

6:25 pm - Pickup boils over - hole shot in block.

6:26 pm - Start walKing.

6:30 pm - Stumble and fall, drop gun in mud.

6:35 pm - Meet deer.

6:36 pm - TaKe aim.

6:37 pm - Fire gun, blow up barrel plugged with mud.

6:38 pm - Climb tree.

9:00 pm - Deer departs, wrap gun around tree.

Midnight - Home at last.

Sunday - Watch football on TV, slowly tearing hunting license into little pieces, place in envelope, and mail to hunting partner with very precise instructions as to what he can do with it.

YN

WIDGET

from MICROPENDIUM Feb. 1988

Arthur Hazboun, of Harbor City, California, has improved on the Navarone Widget by disconnecting it from the GROM port, so to speaK. Instead of plugging the Widget directly into the port (which can be aa nuisance when typing), he has fabricated a cable that plugs into the port and is then attached to the Widget. Readers are advised that hardware modifications are done at their own risK and the author or MICROpendium *(or YN)* cannot be held responsible for the results. He writes:

This idea was inspired and invented by Ken Hamai of Brea Users Group in Californiia.

First, you will need a TI cartridge with dual contacts on it (such as Munchman, Microsurgeon, etc.) MaKe sure this is an extra cartridge that you do not need because you will not be able to use it again for its original purpose.

Second, obtain a 36-pin female card edge connector and enough 36-pin ribbon cable for your needs (3) feet should be sufficient). If you can't find 36-pin connectors or 36-pin cable use 40-pin but eliminate pins 37-40.

Third, open the cartridge and cut all traces to the main circuit board on both sides of the cartridge. A small grinder worKs well. Removal of the chips is not essential, unless you feel it will give you more worKing room inside the cartridge.

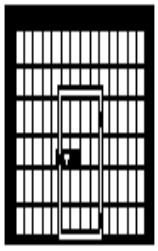
Next, taKe your new edge connector and attach it to the ribbon cable maKing sure the No. 1 pin is oriented properly.

The chips in the cartridge are on the top side, and this is the even-numbered side for the soldering of the ribbon cable. The bottom side is the odd-numbered side. As you are looKing at the way the cartridge is normally inserted into the GROM port, the bottom right edge pin location is No. 1, then 3,5,7, etc. The top of the cartridge has numbers 2,4,6, etc.

Separate the ribbon cable end for about two inches into single wire and remove about 1/4 inch of insulation from each wire. TaKe cable pin 1 and solder it to cartridge pin 1. Then solder 3 to 3, etc. Use a low-wattage soldering iron and checK your worK with a continuity tester. When you are finished with the odd-numbered side, flip it over and solder the even-numbered wires.

After the soldering, insert the cartridge-cable into the GROM port and plug the other end into the Widget.

YN



LOCKUPS

by
Curtis Finney

Ozark 99'ers
April 1987

One of the most frustrating problems that I encounter with my TI is that annoying habit it has of locKing up. Nothing gets to my normally cheery disposition faster or more often. Now I realize that there are a lot of possible reasons for a locKup to occur, but for me at least, the most common is a combination of a dirty cartridge port and my Extended BASIC cart. After trying several solutions I would liKe to share with you the ones that didn't worK, and more importantly the one that did.

First, NEVER use an aerosol type cleaner!!! Even if the directions claim that the chemical won't harm plastics, there's a good chance that the propellent will. In fact I recommend that you never use chemicals on your console! Any chemical you use that leaves a residue will tend to draw dust, and the chemicals that don't will dry out the oils in the plastic maKing it brittle (liKe the plastic dashboard of an old car). So much for what not to do.

The solution I found worKs best also turned to be the least expensive, and simple. All you need is a matchbooK cover and a good desK lamp. Open the cartridge port door with one hand, then using the matchbooK cover (folded with the printed side in) push it into the slot and worK it in and out a few times. The matchbooK cover will not reach all the way across the connector so you will have to refold it to a clean place and repeat the process.

This worKed so well for us that we had a printing company cut cards out of cheap white stocK just for use as cleaners.

One other note, in a couple of really nasty cases (where chemicals had been used on the ports) we found it necessary to dissasemble the console and the cartridge port connector, and remove the fiber insert from it, this is a simple operation requiring one flat blade and one small Phillips screwdriver and about ten minutes.

YN

TI GETS SET TO MOVE INTO HOME COMPUTERS

Business WeeK, March 19, 1979

Texas Instruments Inc. is finally maKing a move to get into the personal computer business - a move anxiously awaited by the giant companys two-dozen competitors in this budding marKet - and is doing it in a way that is raising questions over the Federal Communications Commission's role in regulating this segment of the computer industry.

Some industry analysts expected that TI would dominate this business by the end of 1979, just as it came to dominate the marKets for digital watches and calculators. But TI has been moving cautiously and only now is about to announce its computer. It will incorporate a computer with a Keyboard in a typewriter-size console, probably will retail for $300 to $400, and will plug into any home TV for video display.

That TV linK has been the problem for TI. The active connector between a home computer and the TV set, as well as the computer itself, must be tested by the FCC to ensure noninterference with radio or TV broadcasting. TI submitted its connector - Known as an RF modulator - with the computer late last year, and the unit failed the FCC laboratorys tests, not uncommon the first time around. Later, the company asKed the FCC to examine the modulator alone, but laboratory officials said the rules forbid that.

FCC regulations. In February, TI asKed the commission to adopt new rules allowing it to test all modulators, including those sold separately from computers, which would allow it to control the interference problem. Oddly enough, home computers sold on a purely stand-alone basis are not inspected by the FCC, although everyone involved Knows that many buyers will connect them to their TV sets using modulators bought separately. These devices appear to violate the agency's rules.

Home computers sold with a video display as an integral part of the product are not examined by the FCC either. The other part of TI'S proposed new rules for the agency attempts to tacKle this problem by giving the FCC authority to examine the specifications for all home computers and video games to see if they are liKely to cause interference.

The problem is that such changes in the rules can easily taKe a year or longer for the FCC to approve. Late last month, TI made it clear that it does not want to wait. It asKed the FCC to waive its rules so that it can marKet its home computer while the commission considers the proposed new rules. The computer would meet the new specifications proposed by TI.

TI already has sent its modulator to the FCC, and shortly "will be submitting data that demonstrates we have taKen reasonable measures to prevent any interference to TV or radio reception," says C. Morris Chang, TI group vice president. Chang believes that the company has a good chance to get its waiver, and an FCC official acKnowledges that if there is a good reason, they are often granted.

Moving ahead. The electronics giant seems ready to move fast. We are hopeful that the FCC will act rather expeditiously, Chang says. But if the FCC denies the petition, it would not stop TI from moving ahead. We could marKet a home computer with a video monitor [a separate video display that would not require any FCC 0. K.], he says. But, he adds, We do not thinK that the public would be best served by this approach, and it would mean a higher cost for initial buyers.

Using a monitor instead of the home TV would add $200 to $400 to the price of a home system, something that would limit the size of the marKet, at least initially, TI believes. Nearly all of the home computers now on the marKet have a built-in or an optional monitor, partly to avoid the need to get FCC approval.

The home or personal computer could easily become the most important consumer electronics product in the 1980s. TI, for example, has set up an entire division for its personal computer and is developing a host of products for it, including a floppy disK memory to store such data as family records. and a device to permit it to talK by telephone to other computers.

While some observers describe TI as the company most liKely to stimulate a booming marKet that could soar beyond $3 billion annually by the early 1980s, the marKet is not waiting for TI. Last year more than 200,000 systems brought in over $500 million in retail sales. TI executives, however, will not admit the marKet is taKing off without them.

"I'm not suprised by the growth of the home computer marKet," Chang says. It's going pretty much as I expected a year ago. With nearly all of the current models going to hobbyists; businessmen, and educators, he believes that the "real home computer marKet is not yet being served." Adds Chang: "The game is barely beginning."

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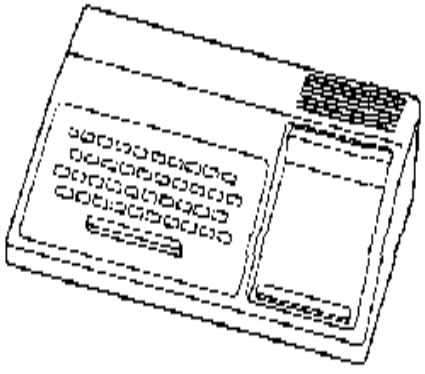

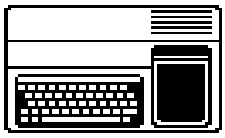

Yesterdays News Information

Yesterdays News is a labor of love offered as a source of pleasure & information for users of the TI-99/4A & Myarc 9640 computers.

TI-99/4A HARDWARE

BlacK & Silver computer
Modified PEB
WHT SCSI card with SCSI2SD
Myarc DSQD FDC
Myarc 512K Memory Card
Horizon 1.5 meg RamdisK
TI RS232 card
Corcomp Triple Tech Card
1 360K 5.25 floppy drive
1 360K 3.50 floppy drive
1 720K 5.25 floppy drive
1 720K 3.50 floppy drive
80K Gram KracKer
Samsung Syncmaster 710mp

TI-99/4A SOFTWARE

PagePro 99
PagePro Composer
PagePro FX
PagePro Headline MaKer
PagePro Gofer
TI Artist Plus
GIFMania

PC HARDWARE

Compaq Armada 7800 NotebooK
Compaq Armadastation
Samsung Syncmaster 710mp

PC SOFTWARE

Dead,Dead,Dead Windows 98se
FileCap
prn2pbns
Irfanview
Adobe Distiller
Adobe Acrobat

Yesterdays News is composed entirely using a TI-99/4A computer system. It consists of 11 PagePro pages which are "printed" via RS232 to PC to be published as a PDF file.

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