

# TI\*MES

ISSUE 71 Summer 2001



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Any item which is submitted may be edited  
to fit the magazine, however we do try to insure  
the author's message is transposed.

The EDITOR cannot be held responsible or  
financial loss from any article produced.

In line with the new policy, the TI\*MES will now  
be mostly of a text nature, which gives you a  
more compressed format.

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**From the Chairman's Chair.....**

**Or, from the bloke who tries to run the group.**

Hello and welcome to the Chairman's chair. At last I can now do other things and still put content into our magazine. How did I do that you may ask?

You may remember that in the last issue I put out a big cry for help as I was swamped with work at my normal job and my computer business, still am, making my computer time is very scarce. So in TI\*MES to what I thought was lack of general response, I asked you the membership what you wanted to do via the back page questionnaire or email.

I had a really large response from, "don't let go of the valuable group" to, "well if it has to close it has close." However the latter was well in the minority.

In addition I received replies from members to take over the TI\*MES editorship which was resolved at the AGM.

At the AGM the Committee was voted in again nearly the same as before except PAUL SAUNDERS who now takes over the editorship of the TI\*MES (bless him!).

This issue being his first, so please support him in the submission of any article you may wish to put into the magazine so others can see what you have to offer, be it an advert or what ever.

The AGM then discussed the TREF, which is coming up in Germany. I will endeavour to attend the meeting. This will then confirm that we the English Group will hold a TREF in the year

2002. The venue will again be at the BEECHES in Nottingham pending on booking etc.

If you yourself wish to attend the German Tref I have all the joining instructions and places to stay. There should also be mention of this in this issue of TI\*MES. There are also full details on our WEB site :

<http://tiug.mansfield-notts.co.uk> .

We then discussed the state of the group, and it was found that some members were receiving TI\*MES and not paying for the yearly contribution.

**So please send in your money and the group will last longer.**  
On the subject of funds the Group Bank account stands at about £2000 so we are still maintaining a steady footing on the financial side.

Libraries were discussed and it was decided that Francesco Lama would take on all library duties as of that date. We then discussed a few minor matters and the meeting then closed.

Some of our members then left the trusty TI and headed for Ros Bennetts narrow boat and went on a trip up the canal. Then others including yours truly stayed behind to "play". The AGM closed fully at 5.10pm.

I formally say thank you to all those members that attended the AGM including Berrie Harmson from Holland.

Well thanks for reading this and hope you enjoy the magazine.

Trev Stevens

## THE NEW EDITOR WRITES

First of all I would like to say a big hello to everybody in the group. I will now be editing the TIMES and I hope that I can keep it to Trevors high standards.

I have been a TI owner for about 18 years. I can still remember receiveing my TI for Christmas along with a Parsec cartridge and Cassette cable. I did not have any joysticks and played Parsec using the keyboard until my fingers were numb. I then added a Speech Sythesiser which added a new dimension to Parsec. At the time the TI was one of the few computers that had a added speech capability. Soon after I added TI Invaders and the Intrigue cassette software to my games collection as well as the TI Joysticks. At this time several monthly and weekly computer magazines carried listings for the TI. I use to spend hours typing these in to add to my games collection. As time went on I added several more cartridges to my collection including Extended Basic. My enthusiasm for the TI dwindled as I also had an Atari 800XL which had a bigger software library and a cheaper disk drive.

I joined the TI group when it had a stand at an Alternate Micro Show (AMS) show in Stafford. I went to the show as a lot of Atari exhibitors were there. At this time I thought that the TI was dead. The AMS show at this time did not allow the exhibiting of PC equipment. There was a big non PC market because of the Amiga and the ST. Vendors were selling all the 8-bit stock very cheaply as the new 16 bit micros were taking over. The TIUG had a stand which was manned by Mike Goddard. He offered to sell me a complete Expansion box with all the cards for under £200. This re-ignited my interest in the TI as I now had disk drives. I joined the group at this show but never exhibited an article until now. At this show I also bought a p-code card which is very rare.

I use to attend the TI meetings when they were in Hertfordshire and I attended one in Sandbach. I gave up going to the meets as most of them were up north and too far. My TI then got consigned to the Attic as the PC Era dawned. As I have visited each TI group meeting I have seen the number of people attending dwindle down to the core few.

When I saw Trevors plea for an editor I decided to give it a go and reasurrect my interest in the TI. I will try and fill the newsletter with lost of interesting articles, but I would like to see people send some in also. I also write and edit a monthly newsletter which I send out to my clients. This newsletter contains information about tax and legal things. If I do not receive articles I will cut and paste some form this newsletter. You have been warned!

Some ideas I have for future articles which I would like some help and information on are as follows.

I use to play the Intrigue software titles a lot but never completed them. Does anyone have solutions to Mania, Adventuremania or Santa and the Goblins. Also does anyone know what the Intrigue team are doing now?

The Atari 8 Bit has a USB interface. Is anyone working on such a thing for the TI?

TI Assembler coding now seems to be a lost art. Can anyone write simple tutorials for the TI Assembler cartridge?

Is it possible for the TI to drive the new Ink Jet printers?

In the next issue I hope to bring you an article on the linux project for the TI.

## IN THIS ISSUE

This issue mainly concentrates on the connection of more modern 3 1/2 drives to the TI. This is something that I will be looking into for my own system. It seems that hardly anyone uses 5 1/4 inch disks these days. As even owners of small businesses who refuse to upgrade their PCs have at least upgraded to 720kb 3 1/2 inch drives. The other problem is obtaining the disks. I know of no suppliers in the UK. If anyone knows different then please let me know. I still have a couple of clients who use 5 1/4 inch disks and have to import them from the US. Another factor is the cost of these disks. At the moment they cost the same as 3 1/2 inch disks but very soon they will cost more as the market becomes smaller and smaller.

Owners of other 80s computers have also all upgraded to 3 1/2 inch or ZIP disks. The Commodore 64 and Atari 8 bit now both have 3 1/2 disk adaptors.

There is a small article on the TI CPM card. I intend to do more research to find out a bit more about the card for future issues.

The main problem with this issue has been time. For those of you who have Ltd Companies will know that at the end of the tax year the tax office requires loads of forms to be filled in. I currently have to do 74 lots of these forms and they are not easy.



## TI Controlling 3 ½ Drives

From: "Barry M Peterson" <barry.peterson@juno.com>  
To: <ti99-4a@yahoogroups.com>  
Sent: Monday, February 26, 2001 11:11 PM

The TI controller has no problem with 3.5" floppy drives, but it can only do double sided single density which results in 180KB or 720 sectors maximum.

The double density controllers can go to 360KB or 1440 sectors, (or 720KB/2880 sectors with a Geneve).

The Myarc MFM controller can go to 1.44MB or a whole bunch of sectors.

Date: Wed, 7 Mar 2001 02:06:57 +0100  
From: "Paolo Bagnaresi" <paolo\_bagnaresi@libero.it>  
Subject: Re: 3.5" in place of 5.25" drive?

Sure, but there is something else that has to be pointed out as well:

- 1) Use Double Density disks, that work in Single Density as well, and forget about the High Density types (they don't work in Single or Double Density).
- 2) Since almost all the 3.5" drives have 80 tracks, and your software doesn't handle 80 tracks (otherwise you would use Double Density), you will end up with a non-standard 3.5" floppy, where only the first 40 tracks (0-39) of each side are used. This would leave the second 40 tracks of each side unused (40-79).

That is not really a problem, as long as you exchange floppies only with people that have the same disk format.

In my opinion, though, a true 3.5" 40 track floppy should work

with the Double-Stepping enabled on the 3.5" drive.

In other words, that disk should be formatted on every other track only (0,2,4,6,8,...). I understand this would pose a problem for those who cannot handle 80 track drives.

Tony Adds

I have dealt with this problem by adding a spdt switch to the front of my TI case. The switch is wired to my Myarc floppy controller's #3 dip switch.

I leave the dip switch on the card turned off. This allows me to switch my DSK3. drive, which is 3.5" - 80 track, to either format. That way I can read those 'odd' 3.5" - 40 track disks that I exchange with non - 80 track TI's.

The switch allows formatting and writing in 40 tracks, too, as long as you remember to 'Quit' between switch changes. Gotta' be careful once you add that switch!

Tony  
knerr@erols.com

Date: Tue, 27 Feb 2001 15:50:59 -0500  
From: Jeff White <jhwhite@delphi.com>  
Subject: Re: Geneve

Clarification: The Myarc HFDC, which is an MFM hard and floppy disk controller, can handle 1.44MB disks, but only in a limited fashion on the 99/4A (the DSR does not fully support 1.44MB).

A Geneve and HFDC atCRU>1100 handles 1.44MB disks best.

The Myarc DDCC, which is an MFM floppy disk controller, supports up to 720KB with the 80-track EPROM DSR.

Jeff White  
jhwhite@delphi.com

Date: Wed, 07 Mar 2001 18:04:41 -0500  
From: Tony Knerr <knerr@erols.com>  
Subject: Re: 3.5" in place of 5.25" drive?

an Olson wrote:

> ... Why wouldn't the controller just attempt to read or write the ?  
> first 35 or 40 tracks if that's what the disk  
> is formatted to? Otherwise, your switch method seems like the  
best to me.

The double stepping was designed to make the 80 track drives able  
to read 'standard' 40 track disks.

There exist both 40 and 80 track drives in both 3.5" & 5.25" for-  
mats.

A 40 track disk formatted properly has the tracks spread evenly  
across the width of the disk surface, not clumped together on half  
of it. If a standard formatted 40 track disk is read by an 80 track  
drive by single stepping, the same data will be returned for each  
two successive tracks - not very desirable. That's why the drive has  
to double step for 40 track 'standard' disks.

This problem in our community was created by ourselves.

By connecting an 80 track drive to a 40 track controller, an individ-  
ual is technically doing the wrong thing.

Sure the drive works for him, but the disk is not correctly readable  
by someone whose system is set up according to the proper specs  
for 80 track drives.

So there are two solutions as I see it:

1. Get everyone who has connected an 80 track drive to a 40 track controller to disconnect them because they're not following the standard.

( Not very likely, they probably like using 3.5" disks and they work fine for the individual. )

2. Install the switch on your 80 track controller for situations where you need to read the non-standard 40 track disk.

Should I take a poll? I'll bet #2 wins.

Tony  
knerr@erols.com

### Printing Problem

From: Eric Kinzie <ekinzie@bpsinet.com>  
To: <ti99-4a@yahoogroups.com>  
Sent: Thursday, March 01, 2001 4:06 AM  
Subject: [ti-99/4a] printing problem

> when I try to print anything from any program to "PIO", the application either hangs or  
> just sits there until I press BREAK.

There is a known bug with the parallel output on the standard TI RS232 card.

I don't think this problem existed with CorComp or Myarc cards.

The cure involves the replacement of one component on the TI-card.

Date: Thu, 1 Mar 2001 21:16:01 -0000

From: "Peter Killick" <peter.killick@btinternet.com>

Subject: Re: printing problem

My experience is that the TI RS-232 card does not output to most printers through the PIO. It will hang and stay hung for ever, which seems to be your problem.

This is because the software on the card's DSR ROM is NOT the true Centronics standard and cannot respond to the standard Centronics 'Busy' signal.

The DSR routine used was only intended to cope with the 99/4A printer - a badge engineered Epson - and other early printers which used 'Acknowledge' to confirm each byte sent to them. (Ken, you are right I should maybe not have called this a bug.)

The 'Acknowledge' signal, which was only intended for old, slow receiving systems, was replaced by 'Busy' for all more recent, true Centronics peripherals.

The Busy signal is normally low ('Not Busy') unless there is a problem, like the printer buffer is full, or it has gone offline.

It does not change with each byte sent like Acknowledge did (a process called 'handshaking'), and therefore the DSR routine stalls while it waits for the first byte to be acknowledged.

A further problem is that Acknowledge came out of the printer on pin 10, while Busy is on pin 11.

Whether changing the wiring on your Centronics cable will therefore cure the problem I cannot say, but it would seem logical the TI RS-232 card needs to receive Busy on pin 10.

I once saw a working system with a bit of circuit board wired into the connection, which presumably did just this.

There are two other cures:

A modified DSR ROM. These were certainly available as an EPROM here in the UK about fifteen years ago - maybe also in the States? Probably none around any more after so long.

An Assembly language routine to drive the PIO with a true Centronics signal.

I have a copy of this which I could fax to you (it's very short, but I wouldn't like to type it in an e-mail because of all the unwanted wraps that could mess it up).

I wouldn't know how to implement the routine, but there's no shortage of people in the group who can help you with that.

Hope this helps - let me know if you would like the A/L routine.

Peter

WordWriter Copyright

Date: Tue, 06 Mar 2001 10:39:31 -0500

From: Charles Good <cgood@nicsweb.com>

Subject: Wordwriter copyright

A recent post to this egroup discussed the virtues of DataBioTics' "Beyond Wordwriter" word processor cartridge. This is indeed a neat product with the formatter built in and able to save to cassette as well as to disk.

Beyond Wordwriter is the most recent incarnation of DataBioTics' Wordwriter cartridge. Both the original Wordwriter cartridge label and the accompanying manual state "c 1987". The manual was

written by R.J.W. Seddon and the software by Todd Kaplan.

A search of the CHOM copyright database, available from [www.copyright.gov](http://www.copyright.gov), reveals the following:

Software titled "'Wordwriter' text editor v2" has a registered copyright under the name of Brian George Schmidt. Date of creation-1984.

Date of registration 9Apr85.

This "Wordwriter" with the registered copyright is apparently not the DataBioTics product.

Schmidt's copyright of the name Wordwriter to describe his text editing program predates the release of the 99/4A word processor of the same name.

None of the DataBioTics titles have been registered with the copyright office. I wonder, has the marketing of the 99/4a "Wordwriter" and its subsequent versions such as WordwriterXtra and Beyond Wordwriter been in violation of the Brian Schmidt copyright?

Charles Good  
[cgood@nicweb.com](mailto:cgood@nicweb.com)

Solid State Hard Drives

Date: Tue, 6 Mar 2001 16:55:37 -0600

From: "Nieters, Dave" <[dave.nieters@fingerhut.com](mailto:dave.nieters@fingerhut.com)>

Subject: FW: Solid State hard drives

It seems to me it would be fairly easy to build a solid state hard drive for the TI on a single card.

You just need some ROM for the DSR, some control logic (or

maybe just a PLA chip) and some slots to plug in CompactFlash cards. You wouldn't have to worry about battery backup since the compactflash retains its memory all the time.

The user could decide how large of a hard drive he or she wanted by purchasing a compactflash. You could go as high as 248MB using the current HRD/SCSI hard drive format and it would be compatible with SCSI disk managers.

Has anyone ever thought about building something like this?

Date: Tue, 6 Mar 2001 19:58:56 -0500

From: "Yancey B. Jones" <ybjones@one.net>

Subject: RE: FW: Solid State hard drives

It's not that there are no buyers at all, just buyers that are not willing to pay the asking price. For me I have to ask myself whether I am willing to shell out \$150+ for a piece of equipment with no warranty and when the only people capable of repairing it are already backlogged.

This is not meant as a bash to anybody selling TI equipment.

I just see way to many people complaining that the TI users aren't willing to pay for stuff. I find that to be a bit off the mark. The cost of TI peripherals are beyond that of brand new computer equipment.

I guess that it boils down to those of us who would be willing to purchase items simply can't because the price is too prohibitive.

For those of us without an unlimited TI budget, we have to pick and choose what we will buy.

I am saving my money for a ASCSI card when they are finally available. I would love to but a DSDD disk controller card but I can't afford the prices that I have seen asked for one and still get



something like an SCSI card.

Not only that but my wife already has a problem with all the Computer stuff that I do have

She really dislikes it when I spend too much money on my old computers. I have several Commodore 128's, a Commodore 64, a couple Amiga 500's, an Apple IIc, and several TI-99/4A's and expansion boxes.

One day I'll have to upload a picture of my computer museum. I'm pretty pleased with it.

Date: Wed, 07 Mar 2001 09:46:59 -0700 (MST)

From: dlormand@aztec.asu.edu

Subject: Re: FW: Solid State hard drives

>I'm afraid that many of the users would even balk at a kit. When I was  
>looking into making another run of the SAMS card I did some price  
>checking. To reproduce the printed circuit boards, already having all of  
>the design work done, was \$80 for 20 boards and \$40 for 40 boards. That's  
>without the RAM, memory mappers, etc. Perhaps something like a solid state  
>SCSI board would have more interest and you could increase the quantities,  
>but throw in the price of memory, etc. and you're probably looking at \$100+  
>unassembled. That's not to discourage someone from taking the lead on  
>such a project, just realize that somebody has to front the costs and hope  
>that everyone who said they would buy a card actually comes

through.

I would go for a kit. When we did the SAMS card, we set a price to recover our investment over the run of 100 cards, and the labour we expended to build the cards was "free".

We didn't offer a kit, because (a) there would have been no price differential to induce anyone to get the kit over the assembled card, due to our pricing strategy (as a User Group, not a business), and (b) since we offered a warranty, we didn't want to fix the problems of people who weren't really competent to assemble a card. We had enough work fixing cards that just got broke (or plugged into the P-Box backwards! Fun, Fun!).

You would have to consider if you even wanted to offer a warranty, even for built-up cards.

At this point in the game, hardware builders should be interested in supplying hobbyists, not in making money, and hardware buyers should be interested in getting a new toy, not a guaranteed product.

If it breaks, and someone offers to fix it if you compensate their time (at hobby rates), then great!

But except for the few remaining vendors, we should not expect a normal business model to work in the TI world.

I still like the idea of an "Open Source" hardware model. Do a design, and publish the engineering, maybe with a GPL. Other interested people build it at their own risk.

Maybe a kind soul will do a run of boards for sale to other, less capable hobbyists, who pay to cover the costs, which reflect the quantity built.

THIS, I think, is the way to do things in the TI world.

Now, I believe that a solid-state drive card (with larger capacities

and hopefully more reliable than a RAM disk) is of more general use than the AMS card. We (and Asgard) did up the AMS to provide expansion memory to programmers who were limited by the stock 32K address space.

As it turned out, it was too late; there were not enough programmers inclined to brave the AMS learning curve to produce a sufficient number of titles to justify the AMS. So for the most part, the AMS is a hardware curiosity supported by a very small number of interesting and/or somewhat useful programs. A RAMDisk, and a Solid-State drive card, could be used by anyone with all existing software!

#### TI Modules

One of my favourite aspects of the TI is the amount of quality cartridges available. Unfortunately in the old days these were very expensive but recently can be picked up very cheap.

Does anyone have a definitive list of cartridges produced by TI and a list produced by third party manufacturers?

Also does anyone have a list of modules which used the Speech Synthesiser?

The codes on the cartridges are suppose to be the manufacture date and the place of manufacture. Can anyone confirm this?

On other older machines the cartridge port is also used to handle things like IDE cards and fast modems. Could this be done on the TI?

On the Atari 8, Bit bigger games could be placed in modules because the contained extra memory or bigger roms. For the

cartridges with bigger roms bank switching was used to switch between the area of memory.

Has this ever been done with the TI?

Scott Adams/TI had an adventure cartridge. Tape games could be loaded which used this cartridge.

Does any one have a list of the tapes available for the cartridge and what sort of language/parser system the cartridge used?

Lots of questions about modules. Hopefully I will get some answers for the autumn issue.

#### THE TI CPM Card

I have seen lots of postings on the NET about the TI CPM Card.

This card seems to only have been sold in the US and currently sells for around its original selling price of around \$600. The Card came with 64KB on board but could be expanded to 128KB.

The card allowed the TI to take advantage of the vast amount of CPM software which was available at the time. The card also came with 2 CPM Utility disks.

The card was aimed at serious business users who had a TI at home and a CPM machine in the office.

Has any of the group members got a CPM card?

## Assembly Code

Date: Sat, 28 Apr 2001 00:30:35 -0500

From: Jon Guidry <jon@guidry.org>

Subject: Wow!

After checking out the Micropendium archives on ftp.  
whtech.com.

I found the July 1992 User notes on page 31 has a program written by me!

It's amazing that I find this thing like 9 years later....  
hehe... I wrote it like in 1991 when I was dabbling with  
Assembly language.

I don't even remember how I found the addresses to write  
to do this! Anyways.. here's the program.

It turns the audio from the cassette on and off and the  
motor (remote) line on and off. The Micropendium article  
did have a typo in it... which I think I corrected in here. (I  
haven't programmed for the TI since 1991!)

```
DEF MTRON,MTROFF
DEF AUDON,AUDOFF
STATUS EQU >837C
GPLWS EQU >83E0
MTRON CLR R12
SBO 22
JMP QUIT
MTROFF CLR R12
SBZ 22
JMP QUIT
AUDON CLR R12
SBZ 24
JMP QUIT
```

## Assembly Code

Date: Sat, 28 Apr 2001 00:30:35 -0500

From: Jon Guidry <jon@guidry.org>

Subject: Wow!

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did have a typo in it... which I think I corrected in here. (I  
haven't programmed for the TI since 1991!)

```
      DEF  MTRON,MTROFF
      DEF  AUDON,AUDOFF
STATUS EQU  >837C
GPLWS  EQU  >83E0
MTRON  CLR  R12
      SBO  22
      JMP  QUIT
MTROFF CLR  R12
      SBZ  22
      JMP  QUIT
AUDON  CLR  R12
      SBZ  24
      JMP  QUIT
```

```
QUIT CLR R0
      MOVB R0,@STATUS
      LWPI GPLWS
      B @>0070
      END
```

If anyone feels like decyphering this and reminding me what I did... feel free to. :-)

Thanks!  
Jon

### New Internet Laws

Although not totally relevant to the TI. Would anyone like an article on the new EU and UK legislation on the new Internet laws.

If you would e-mail me and I'll include it in the next issue if I get enough responses.

I have included this as I can't think of anything else to write in this small space, but if you would like the article included e-mail me.

## **AND FINALLY.....**

Thanks for reading my first attempt at being editor. Please do e-mail me any comments, bad or good.

Please also e-mail answers to the questions which I posed in my editorial.

Also please e-mail me lots of articles, opinions or anything which you would like to see in the TI\*MES.

I have never used Publisher 2000 before so I hope this issue looks OK.

By the next issue I hope to have bought A TI from Richard with an 80 column card. I hope to have the time to start playing on the TI again and hopefully learn some of the things I always wanted to learn. Such as TI Assembler.

I also hope to download a TI emulator for the PC although this never seems the same as using the real thing.

See you next issue.