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TI-LINES

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Volume 2, Issue 1

June 1st., 1985

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Contributions should be submitted either on diskette in TI-Writer compatible files, or in a form which is as legible as possible. Art work should fit within an A4 area and should not contain colour. Very high contrast line drawings are preferred, and these may be produced by arrangement with the publisher.

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E D I T O R I A L

VOLUME TWO

Well, I have finally managed to stagger into the production of volume 2 of the dreaded TI-LINES, and with me have come some 50-odd former subscribers to volume 1. I managed to stave off the urge to begin writing this editorial before the toner was cool on the pages of issue 14, and as I write now (June 13th.; well, only just - it's 2 am) it is going to be a desperate struggle to get this first issue out before the second is due. Incidentally, such is the speed at which my nimble fingers clod-hop around the keyboard, you may find odd words like AAGIN (which appeared last issue) which of course you will correctly interpret as the word AGAIN (as in: OH NO, NOT TYPING ERRORS AAGIN!).

Fortunately for me, I have the trusty and far more nimble fingers of Mrs Jenny Keane to fall back on (er, that sounds bad but you know what I mean) and she kindly rattled off a couple of articles before she went on holiday (I know that word - it has something to do with not doing anything on a pile of sand, doesn't it ?), so the task will be eased considerably.

I am also in the process of supplying Mrs Keane with a complete TI set-up so that she can TI-Write articles for me (and thus hopefully avoid the use of 'h' to signify ') when presenting hexadecimal numbers) and also assist in a few minor mammoth tasks - like retyping the TI Forth manual.

I am still trying desperately to obtain a decent ASCII printwheel for my SMITH - CORONA TP-I through the local agent - so far without success - before getting down to some serious examination of the possibility of condensing TI-LINES even further. I did investigate the use of double reduction photocopying, but the results were illegible.

News is still filtering in about all sorts of TI-99/4A-related events, and I have recently taken delivery of disks from ERNST NOVAK of the PHILADELPHIA AREA TI-99/4A USERS GROUP which will keep me occupied for quite a while I can see.

I have lots of articles planned - even some which I began as a series for HOME COMPUTING WEEKLY and which got lost by them for two years - and a number of OTIUers have promised interesting projects and associated articles for the coming year. We kick off this volume with one from MALCOLM HEDLEY on making the most of the PEB's power supply to drive umpteen disk drives. I know that the recent bias towards the more well-endowed OTIUer (er, that is, an OTIUer who has a large set-up; er, never mind) may have dismayed the OTIUers with more modest equipment (I give up) but fear not: there are lots of articles in the pipeline which will apply to a broad spectrum of owners.

~~~~~  
MEMBERSHIP CARDS  
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Also with this issue you should receive a chunk of plastic with a thousand uses (like cutting Christmas cake) but which is cunningly disguised as an OTIU membership card. Once you get it, sign it with a ball-point pen. It won't act as a passport to the world - unless you hijack a plane with it - but someone somewhere might let you get away with something sometime. There's nothing like being non-committal.

If you have any problems with the cards, contact me - unless you signed the wrong name in which case hard luck, 'cos I'm not able to give you another one!

You can see by the number of leading zeroes that we have plenty of room for expansion - unintentional really: the stamping machine doesn't have suppression of leading zeroes built in!

~~~~~  
THE TIHCUC PHOENIX

I am informed that a successor to TIHCUC has appeared, based in EDINBURGH. The group, which is due to fold in December this year, has been rescued by PHILLIP THOMPSON, whose name is highly familiar to me, but I can't remember why. It'll come to me, probably before this issue hits the streets. His circular to the supporting companies declares that former TIHCUCers will be contacted sometime after the end of MAY. I wish him luck: TIHCUC's former proprietors, the Public Relations firm of RAE HODGES, did for TI owners what Legionnaire's Disease does for Legionnaires. Resuscitating the mortally-wounded is not an easy task and I have had some contact with disillusioned owners over the past few months which strongly suggests that consoles are changing hands faster than TI BASIC can open a cassette file.

I hope to establish links with Phillip once he has things off the ground, but I sincerely doubt if I will be able to write for him. I have great difficulty keeping my commitment to write for CLIVE SCALLY's TI*MES, my time is so filled.

~~~~~  
CHANGING TI-WRITER COLOURS  
-----

After the article from the SASKATOON TI USERS COMPUTER CLUB on page 14 of last issue by TERRY ATKINSON which concerned the changing of EDITOR/ASSEMBLER default colours, I was inspired to delve into my TI-Writer EDITA1 file using the NAVARONE DISK FIXER in a vain attempt to alter the default colours there.

I did locate a short piece of code which had the following hex values:

>87F4 8713 87F3 8717 87F1

which relates to the use of CONTROL and 3 to change screen colour. However, although I managed to alter the sequence so that BLACK on CYAN (>8717) was the first in the sequence, I wasn't able to alter the default colour of WHITE on DARK BLUE which is, I believe, set up by the TI-WRITER module itself, and must therefore require a similar patch such as that presented in Terry's article.

Although I understand TMS9900 Assembly Language, I am not proficient in its use, so I have not attempted to create a patch myself. I know that at least one DTIUser has found a way to do something about it, so I am going to see if I can subvert them and extract the bare essentials from them - in the nicest possible way, naturally. Hang on a tick while I put a few more nails in this bullwhip...

PHEW!

-----

The other weekend OTIUser GORDON PITT came across with a back-up system so that Mrs Keane, my 'editorial assistant' could write up material using TI-Writer, and although we began with one complete working system and one system which was untested after its journey, we ended with neither system working. We checked everything, setting the systems up again and again, swapping drives, cables, controller cards, interface cards, and external standalone drives, till we were blue in the face. Eventually Gordon had to head back home and I settled down to a night of testing and checking.

At about 3 a.m. the following morning I had isolated one of the problems.

I have no idea how it happened, but overnight (the previous night, that is) one of my disks had developed a problem with sector 2 which had become unreadable. Another disk also appeared to have some problems, and both disks gave different error messages when I tried to read them. The one with sector 2 problems gave a DISK NOT INITIALISED error, while the other gave a DRIVE NOT CONNECTED error.

Needless to say, I was becoming balder by the moment!

Having realised that the two disks which I had been using to test the systems were unreliable, I tried other disks with slightly better results, but I still could not get the systems to function properly.

A solution to the second problem presented itself when I decided to disobey the usual instruction to remove all resistor packs from all but the last drive in a chain, and instead placed resistor packs in both of the drives which were then connected to the PEB. Bingo! It turns out that my Shugart Single Sided drive needs its resistor pack in at all times, contrary to general practice.

I now had one system working, but still could not get the second system to play ball. Gordon and I had even resorted to checking each cable, strand by strand, with a multimeter, and I had dismantled two of the edge connectors just to make absolutely sure that there were no bad connections.

Finally, at about 4 a.m., with failing neurons and bleary eyes, I happened to squint at the cut end of one of the problem cables, where it juts out of the other side of the edge connector.

It took a couple of seconds for it to register, but I almost woke the neighbours up to tell them what had taken Gordon and I over twelve hours to find: a couple of the strands of wire at the cut edge were sticking out past their insulation and had been bent over at some stage so that a few tiny wires were touching. I had failed to notice this when checking with the multimeter because all the tests had been conducted between the connector pins to make sure that there were no breaks within the connector.

The moral of the story? Wear a crash helmet when working with the 99/4A - it stops you pulling your hair out...

~~~~~

...WITH A LITTLE HELP FROM MY FRIENDS

Recently-joined OTIUser JOHN BAIRD from GLASGOW (see CONTACTS) wonders if anyone can give him some help or advice with a program he is attempting to devise. It is based on the PRK module I believe (perhaps Enhanced BASIC?) and concerns the

League Table. When he tries to produce fixtures he runs into problems. The constraints on the fixtures are that each team must play home and away; certain clubs have the use of their home ground on specific dates only; and clubs can be engaged in national competitions leaving others without fixtures or else games are cancelled for various reasons and need to be re-cast.

If anyone in the West of Scotland in particular can help out, please contact him at the address given on the Contacts page.

~~~~~  
HELP IS ON THE WAY  
-----

I have been unable to check this, but I am informed that a company is offering a repair service for the 99/4A. I have no details other than an address, and if anyone has any further details I would be pleased to publish them in TI-LINES:

COMPUTER FIX  
Camberley  
Surrey

Tel: 0276 66266  
~~~~~

ONE WAY TO EXPAND YOUR SYSTEM...

A recent editorial in the newsletter of the SASKATOON TI USERS COMPUTER CLUB (STICC) mentioned that they had held a lottery as a way of raising funds and as a cheap way for some lucky devil to expand his/her system. I'm not sure how we stand in this country with regard to lotteries - I know that the rules were relaxed a few years ago - and if anyone has any bright ideas I would welcome them.

~~~~~  
OFF WE GO AGAIN  
-----

At the time of writing I still have not found somewhere to live, but one thing seems certain: wherever I go, my costs are bound to soar (one place recently would have doubled my expenses literally overnight and forced me to discontinue OTIU or stop eating - some choice!), so I may not be able to be so liberal with my handling of postage costs etc. It also looks as though I may not be able to stay on the phone, and past experience has shown me that the vast majority of TI owners would rather spend a couple of quid on the phone than 17p on a stamp. Mind you, I'm the same these days: I can achieve far more, and do it quickly, on the phone compared with the post.

Whatever happens, I will endeavour to make myself available to OTIUers and all and sundry, even if it means issuing free pigeons with each subscription...  
~~~~~

REAL PROGRAMMERS DON'T EAT QUICHE

Recently IAN MARTIN of TIMELESS SOFTWARE sent me a couple of humorous items which have been circulating within the circle of professionals with whom he has been known to associate (hopefully they are ALL real programmers). One of the items deals in some detail with what a REAL programmer is - amongst other things a real programmer doesn't eat quiche (gulp) - and I hope to modify it a little to make it more TI-specific. Look out for it in coming TI-LINES.

The second item was rather more obscure as far as we professional amateurs are concerned: DEC WARS. It's a sort of Star Wars spoof, and is quite cleverly put together, but it contains vast numbers of references to things not of our ken.

It has given me a few ideas though, and I hope to be able to find time to revamp it to make it a little closer to home.

The old grey matter has been churning away as a result of the stimulus given by this material, and I will look out another item sent me many moons ago by a friend in Canada who has been through the academic mangle of Computer Science and is now working for a software house. It's a sort of pidgin-German (as opposed to pidgin-English) set of instructions to what it calls RUBBERNECKEN, and it will appear in a future edition of TI-LINES.

As an interesting aside, my Canadian contact, RICHARD MAW, an Englishman who worked towards his PhD in Canada, came back home a few years ago to finish off his doctorate. He developed an interest in Computing (I introduced him to the pleasures of the TI, so he went and bought a Sinclair ZX81) and spent several months rushing around the country attending interviews and aptitude tests set up by numerous computer firms, without any success whatsoever.

Eventually, almost in disgust, he returned to Canada, joined one of the Universities, did a crash course in Computer Science (he handled an enormous amount of work) emerging with the necessary degree in under two years. He was immediately taken on by a local software house and hasn't looked back since.

The UK firms would have put him through the same kind of training had they been smart enough to pick him up, but as seems usual these days, its the firms abroad who recognise our talented lads and lasses long before anyone here does.

No wonder British computer companies are crying out for programmers and other support staff if they can't see what's right under their noses.

ADDENDUM

Last issue I published details of power supplies available through GORDON PITT on the Bulletin Board. I omitted to add the information that the prices were EXCLUSIVE of post and packing (probably about £10 if done through DATAPOST), although if you are able to pick the item(s) up from Gordon obviously there is no post or packing involved. The expected price for cases will probably be about £10 or so.

STAINLESS 1 PIRATES 0

STEPHEN SHAW of STAINLESS SOFTWARE recently scored a direct hit on a pirate vassal - well, two vassals, actually - when Greater Manchester's Trading Standards Office successfully prosecuted STARTREK VIDEOS a.k.a. BLUE CHIP COMPUTERS. Two directors of the firm were fined a total of £1500 for pirating Stainless' tapes and supplying them to other firms supposedly with Stephen's consent.

CHECK YOUR ADDRESSES

In my haste to get the last issue out before the turn of the century I managed, as usual, to let at least one silly typographical error creep by. SYD MICHEL wrote to me (see later) and mentioned in passing that I had given a faulty address in the list of EXTENDED BASIC Unprotection addresses. The erring one is -32817; it should have been -32187, of course. Oops.

THE LOAD INTERRUPT CRASH SWITCH!

SYD MICHEL wrote to me after trying out the LOAD INTERRUPT SWITCH described in the last issue of TI-LINES. He followed the instructions given in the article originally published in the newsletter of the 9T9 USER GROUP, TORONTO, and after trying to use it, renamed it the Reset/Crash switch. He says that the ratio of Crashes to Resets is about 20:1, and on the odd occasion that the computer does reset, he finds that the test card sits on the screen and refuses to take any notice of his 'pressing any key to continue'. He wonders if anyone else has had similar difficulties, and so do I. If any other DTIUser has had problems, or better still, if they think they know what the problem is and how to solve it, I would be grateful for a letter.

COMING TO YOU LIVE...

A TI-LINES editorial is a living, breathing entity, which twists and turns and assumes new shapes even as it grows. That's a new way of introducing the fact that I have now found a new abode and telephone number, details of which you will find plastered on the front page of TI-LINES.

Which will probably have left you reading the earlier items about not having found somewhere to live and wondering whether there aren't a few marbles loose in the old Brooks' cranium.

You could have a point there...

ESPECIALLY FOR YOU!

Have you ever seen those TV programs where some viewer has written in and told some producer or other that his pet boa constrictor likes watching the program and will they please get the presenter to stand in a bucket of whitewash and say Hello Desmond 'cos it would mean a great deal to him ?

Well, this item is nothing like that at all.

It just so happens that a non-TI owner - or maybe a TI non-owner - occasionally grabs OTIUser IAN MARTIN's copy of TI-LINES just to read the editorial (you mad impetuous fool, you!). The result of this, recently, is that Ian thinks I haven't sent him a copy of TI-LINES and I dutifully send him another one. So, now we know who the culprit is - hello Diane - why not staple a quick note in Ian's toupé so he knows where his TI-LINES has gone ?

~~~~~

MORE FROM THE MOLES  
-----

It seems that TI have recovered all modules 'on consignment' with US distributors and retailers, and have dumped them in a landfill. Because of the lead in the solder, a specialist 'toxic waste' operator had to be used. Now modules will become harder to get, surprise, surprise.

~~~~~

FROM STEPHEN

STEPHEN SHAW of STAINLESS SOFTWARE (see earlier) tells me that the INTERNATIONAL USER GROUP is now definitely dead. It was formally wound up under Section 7, presumably of American Commercial Law. Stephen also pointed out that his Epson FX80 printer can have both the hash and the pound symbols in use simultaneously, where the pound symbol is on ASCII character code 6. It is activated using ESC I 1. It can be used with TI-Writer under the SPECIAL CHARACTER mode (CTRL U) via SHIFT F.

~~~~~

A DATE FOR YOUR DIARY  
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ANOTHER NATIONAL TI USERS MEETING is to be organised by CLIVE and AUDREY SCALLY of TI-EXCHANGE. The venue is the CIVIC CENTRE, BIRMINGHAM, and the date is SATURDAY, OCTOBER 26TH. 1985. Clive hopes to start between 9.30 and 10.00 am. I have no details on entry charges yet. There will apparently be less emphasis on the retail aspect, and more on swaps and private exchanges. Short of World War III stopping everything, you will find me there somewhere, hopefully a lot more organised than I was last time!

~~~~~

MSP99 TI USER GROUP

A FACELIFT FOR TI WRITER

by Glenn Davis

When I received my TI writer update, I was disappointed that some of the characters were so ugly. Of outstanding ugliness were the zero (which reminded me of "Gumby") and the asterisk (which looks like a squashed insect). To remedy that I used FORTH to change the bytes on the disk. To say the least, that was time consuming. The character set is in a separate file (called CHARAL) that is loaded by both the editor and formatter programs.

While using my debugger searching through GROMS of various cartridges (with a cartridge expander installed, so I can load the debugger and then switch cartridges) I ran across the filenames contained in the GROM of TI-Writer. To my great surprise, CHARAL was there, in GROM! The implication struck me immediately. All TI-Writers could use the CHARAL set, not just those who purchased the update (the update really seems to be on the formatter only).

To verify this, I created a file to assemble with the Editor/Assembler. After a few false starts (what I was doing was much harder than what I should have been doing), I developed the following file. The instructions for using it are in the header, and I would recommend that you copy those into the file in case you want to change them again or give the file to a friend. It will work with any TI Writer cartridge.

.....

This "program" will produce object code for use with TI-Writer. It must be saved in a file (for example, "TI-CHARS"). That file must be assembled. The resulting object file (named, for example "TI-CHAR") must be loaded into memory with the Editor/Assembler cartridge via the LOAD AND RUN option (3). Next, the SAVE utility from the Editor/Assembler diskette B must be loaded. Use SAVE as the program name. The SAVE utility will run and give several warning messages. The filename to enter is: DKSL.CHARL Save this file onto your TI-Writer program disk. That is all that is necessary. TI-Writer will load it on its own.

Graphics by: Glenn E. Davis
MSP99 User Group
St Paul, Minnesota

.....

DEF SFIRST,SLAST,SLOAD

SFIRST

SLOAD	DATA	0020,	0000,	1824,	2418	DATA	0038,	447C,	4444,	4400
	DATA	0020,	0008,	1808,	081C	DATA	0078,	2438,	2424,	7800
	DATA	0020,	0018,	2408,	103C	DATA	0038,	4440,	4044,	3800
	DATA	0020,	0018,	2408,	2418	DATA	0078,	2424,	2424,	7800
	DATA	0020,	0014,	141C,	0404	DATA	007C,	4078,	4040,	7C00
	DATA	0020,	001C,	1018,	0418	DATA	007C,	4078,	4040,	4000
	DATA	0020,	0008,	1038,	2418	DATA	003C,	405C,	4444,	3800
	DATA	0020,	001C,	0408,	1010	DATA	0044,	447C,	4444,	4400
	DATA	0020,	0018,	2418,	2418	DATA	0038,	1010,	1010,	3800
	DATA	0020,	0018,	241C,	0408	DATA	0004,	0404,	0444,	3800
	DATA	2020,	3800,	1C10,	1C10	DATA	0048,	5060,	5048,	4400
	DATA	0040,	0020,	2038,	2438	DATA	0040,	4040,	4040,	7C00
	DATA	0070,	5070,	4854,	1C14	DATA	0044,	6C54,	5444,	4400
	DATA	0070,	4070,	001C,	1010	DATA	0044,	6454,	4C44,	4400
	DATA	0020,	0018,	243C,	2018	DATA	0038,	4444,	4444,	3800
	DATA	0040,	0814,	101C,	1010	DATA	0078,	4478,	4040,	4000
	DATA	0040,	4040,	1824,	2418	DATA	0038,	4444,	5448,	3400
	DATA	0020,	2020,	2808,	0808	DATA	0078,	4478,	5048,	4400
	DATA	0040,	4058,	2408,	103C	DATA	003C,	4038,	0404,	7800
	DATA	0040,	4058,	2408,	2418	DATA	007C,	1010,	1010,	1000
	DATA	0040,	4054,	141C,	0404	DATA	0044,	4444,	4444,	3800
	DATA	0040,	405C,	1018,	0418	DATA	0044,	4428,	2810,	1000
	DATA	0040,	4048,	1038,	2418	DATA	0044,	4454,	5454,	2800
	DATA	0040,	405C,	0408,	1010	DATA	0044,	2810,	2844,	4400
	DATA	0040,	4058,	2418,	2418	DATA	0044,	2810,	1010,	1000
	DATA	0040,	4058,	241C,	0408	DATA	007C,	0810,	2040,	7C00
	DATA	0040,	4040,	1824,	3C24					
	DATA	0040,	4050,	101C,	141C	DATA	0038,	2020,	2020,	3800
	DATA	0040,	4040,	1C10,	101C	DATA	0040,	6030,	180C,	0400
	DATA	0040,	4444,	041C,	141C	DATA	0038,	0808,	0808,	3800
	DATA	0070,	7070,	7070,	7070	DATA	0010,	386C,	4400,	0000
	DATA	0040,	4C50,	101C,	1010	DATA	0000,	0000,	0000,	7C00
	DATA	0020,	1008,	0000,	0000	DATA	0020,	1008,	0000,	0000
	DATA	0000,	0000,	0000,	0000					
	DATA	0010,	1010,	1000,	1000	DATA	0000,	0038,	4848,	3C00
	DATA	0028,	2828,	0000,	0000	DATA	0020,	2038,	2424,	3800
	DATA	0028,	7C28,	287C,	2800	DATA	0000,	001C,	2020,	1C00
	DATA	0038,	5430,	1854,	3800	DATA	0004,	041C,	2424,	1C00
	DATA	0044,	4C18,	3064,	4400	DATA	0000,	001C,	2830,	1C00
	DATA	0020,	5020,	5448,	3400	DATA	000C,	1038,	1010,	1000
	DATA	0008,	1020,	0000,	0000	DATA	0000,	001C,	241C,	0438
	DATA	0018,	3030,	3030,	1800	DATA	0020,	2038,	2424,	2400
	DATA	0030,	1818,	1818,	3000	DATA	0010,	0030,	1010,	3800
	DATA	0028,	107C,	1028,	0000	DATA	0008,	0008,	0808,	4830
	DATA	0010,	107C,	1010,	0000	DATA	0020,	2024,	3828,	2400
	DATA	0000,	0000,	0030,	1020	DATA	0030,	1010,	1010,	3800
	DATA	0000,	007C,	0000,	0000	DATA	0000,	0078,	5454,	5400
	DATA	0000,	0000,	0030,	3000	DATA	0000,	0038,	2424,	2400
	DATA	0004,	0C18,	3060,	4000	DATA	0000,	0018,	2424,	1800

DATA	0038,	4054,	5464,	3800
DATA	0010,	3010,	1010,	3800
DATA	0038,	4408,	1020,	7000
DATA	007C,	0418,	0444,	3800
DATA	0018,	2848,	7008,	0800
DATA	007C,	4078,	0444,	3800
DATA	0038,	4078,	4444,	3800
DATA	007C,	0408,	1020,	2000
DATA	0038,	4438,	4444,	3800
DATA	0038,	4444,	3004,	3800

DATA	0000,	3030,	0030,	3000
DATA	0000,	3030,	0030,	1020
DATA	0000,	1830,	6030,	1800
DATA	0000,	7000,	7000,	0000
DATA	0000,	3018,	0C18,	3000

DATA	0000,	0038,	2438,	2020
DATA	0000,	001C,	241C,	0404
DATA	0000,	0028,	3420,	2000
DATA	0000,	001C,	300C,	3800
DATA	0010,	1038,	1010,	0C00
DATA	0000,	0024,	2424,	1C00
DATA	0000,	0044,	2828,	1000
DATA	0000,	0044,	5454,	2800
DATA	0000,	0024,	1818,	2400
DATA	0000,	0024,	241C,	0438
DATA	0000,	003C,	0810,	3C00

DATA	0018,	2020,	4020,	2018
DATA	0010,	1010,	0010,	1010
DATA	0030,	0808,	0408,	0830
DATA	0000,	2054,	0800,	0000

SLAST END

DISK_DRIVE/S_&_P.S.U.

"I've a second Disk Drive."

But, "I've no power supply unit (P.S.U.) to drive it!."

If you have purchased a second **INTERNAL** disk drive i.e. no dust cover or power supply as a cheaper way to add a second drive to your system rather than purchasing an **EXTERNAL** drive, with dust cover and p.s.u. then you are probably a little upset at trying to track (excuse the pun) down a supplier of dust covers and power supplies, and if you successfully find one your teeth will suffer from wind erosion when you hear the cost!. You may be clever enough to design your own p.s.u. but the time and components may be hard to gain.

First let us clear the air.

We "the owners of a Peripheral expansion box (PEB)" have a p.s.u. to enable us to use drive one.

The PEB has a receptacle on the right hand side which can receive either one full height or two half height (slimline) drives. Now then, imagine removing the full height to replace with two slimline drives, the first obstacles to overcome would be to provide a second power plug and data cable to supply the second drive, this we would do by simply jumping from the existing plug and cable.

Slimline drives needing less power to drive them would probably function alright whereas full height needing more power would be too much of a drain on the p.s.u. therefore causing failures when passing data.

I personally purchased an external drive (drive,cover,psu) and when I installed it on my system I made an observation, when I accessed DSK1 both drive motors powered up but only the head on DSK1 was activated, odd I thought, why power both motors when only drive one is needed?.

Thanks to a grand fellow by the name of ALAN KING of the MPI company all was revealed. On our system pin 16 "motor ON" is daisy chained to each drive therefore when motor on is activated by the controller ALL motors are turned on simultaneously pulling all that precious power from the psu which it cannot give, so ends the data passing with error messages.

Question to Alan, Is it possible to access only one motor at a time rather than all of them. "YES" was the reply and proceeded to explain!- Disconnect pin 16 "motor ON" and link to "head select" or words to that effect, "Do not let my little remarks put you off as Alan fully explained how to do the modification in HIGH LEVEL LANGUAGE for my purpose THANKS Alan."

Let us begin...

COMPONENTS NEEDED:- for each extra drive.

Four lengths of cable approx two feet in length.

one DC power connector "AMF mate-n-lock part No 1-480424-0"

one 16 pin/8 contact DIL switch.

BEFORE GOING ANY FURTHER :

THE ORIGINATOR, AUTHOR & PUBLISHER OF THIS ARTICLE DO NOT TAKE ANY RESPONSIBILITY FOR ANY DAMAGE TO SYSTEM OR DRIVES CAUSED DIRECTLY OR INDIRECTLY BY YOU ATTEMPTING THIS MODIFICATION. IT IS UP AND DOWN TO YOU.

Fig 1

F

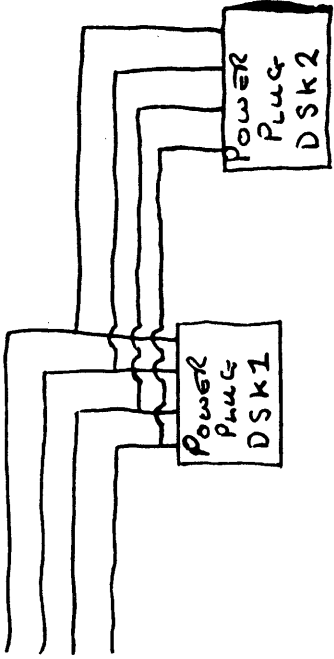


Fig- 2

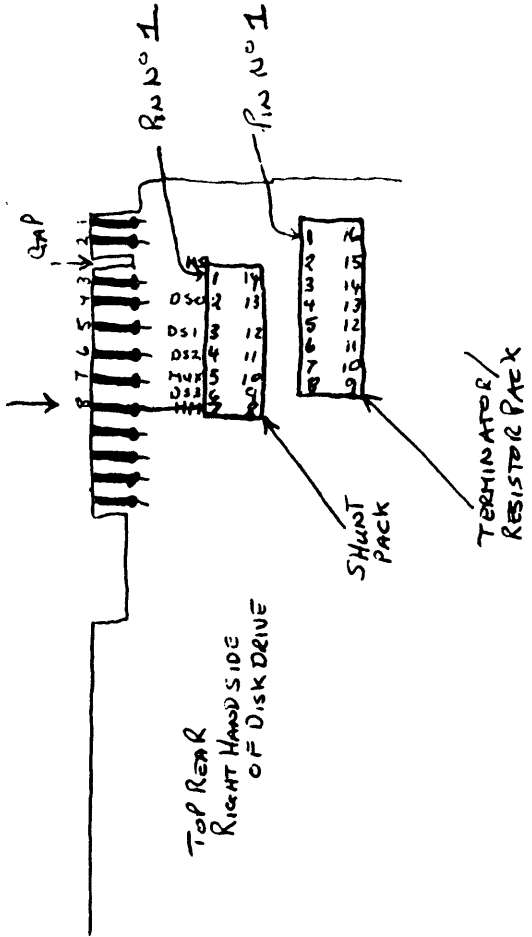
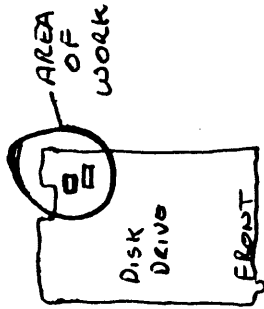


FIG 3

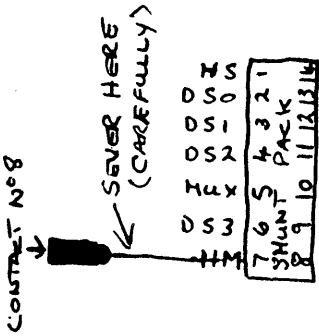
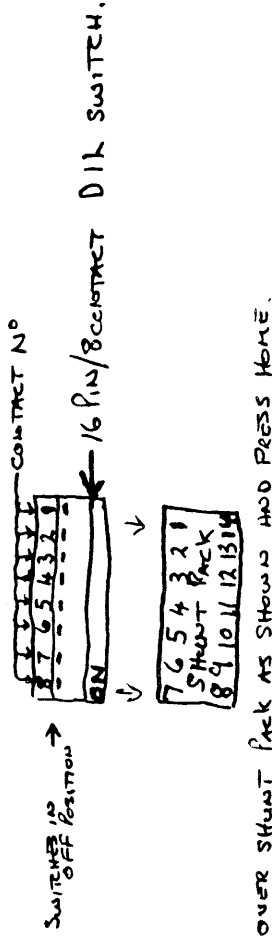
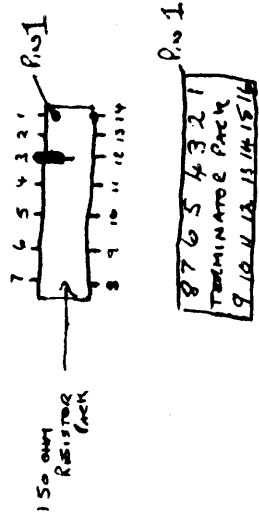


FIG 4



PLACE DIL SWITCH OVER SHUNT PACK AS SHOWN AND PRESS HOME.

FIG 5



NOTE "when replacing resistor pack, P. NO 1 of the resistor pack denoted by a white dot should be aligned with pin one of the terminator, leaving pins 8 & 9 unconnected."

TO POWER A SECOND/THIRD DRIVE FROM POWER SUPPLY IN PEB

Carried out on my system using TI controller and two MPI model 52 drives.

First, jump a second power lead from the existing plug in the PEB (see fig 1). (and a third from the second if required.) Secondly, we disconnect pin 16 from the drives (see fig 2). On the top side in the rear right hand corner of the drive board you will see an edge connector where the data cable from the drive controller attaches to the drive. With the front of the drive facing you count from the right hand side of the edge connector to the EIGHTH contact and mark it with a pen, from the EIGHTH contact should be a thin metal strand leading to pin 7 of the SHUNT PACK with the letters HM printed over the top of the metal strand, now sever this metal strand between the EIGHTH contact and pin 7 of the SHUNT PACK (see fig 3) with something like a model knife. "Care should be taken NOT to sever other strands on the board."

Next remove whatever is in the SHUNT PACK if anything, and replace with a 16 pin/8 contact DIL switch (position it so as contact 1 is in the (HS) pins 1-14 position on the SHUNT PACK.) (see fig 4).

NOTE that pins 8 & 9 (contact No8) of the DIL switch will overhang the SHUNT PACK.

SETTING UP DIL SWITCH:-

DSK1..CONTACTS Nos 1,2,7 ON the rest OFF.
DSK2..CONTACTS Nos 1,3,7 ON the rest OFF.
DSK3..CONTACTS Nos 1,4,7 ON the rest OFF.

The last drive on the system whether it be DSK1, DSK2 or DSK3 should have a TERMINATOR/150 ohm RESISTOR PACK installed. ALSO it is advisable to lift pin 3 of the TERMINATOR PACK when this modification has been carried out. To do this remove the TERMINATOR PACK and bend pin 3 (see fig 5) over the top of the component and replace the TERMINATOR PACK.
BEFORE trying out on system CHECK YOUR WORK FOR ERRORS.

I hope this article is of benefit to some users as a cheap and effective way of providing power to additional drive/s as it was to me.

Happy driving.

MALCOLM HEDLEY.

BULLETIN BOARD

FOR SALE FOR SALE FOR SALE FOR SALE FOR SALE FOR SALE FOR SALE FOR SALE FOR SALE

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ROGER MACEY has the following items for sale:

- PARSEC £10.00 ono
- HOUSEHOLD BUDGET MANAGEMENT £ 5.00 ono

Both modules are brand new and unused (apart from being checked to ensure that they are in working order) and are in their original boxes complete with instruction booklets and guarantee.

Contact him on 0604 46194.

oo

I have an item from non-OTIUer GRAHAM WOLSTENHOLME which I have agreed to place for him. He has no less than 10 Speech Synthesisers and 10 Speech Editors for sale - in pairs - at £21.50 for each pair. So for the price of one secondhand Synthesiser you are actually getting a BRAND NEW Synthesiser AND a BRAND NEW Speech Editor (which permits TI BASIC to make use of Speech).

Contact him direct on SHEFFIELD 655582 evenings.

oo

IAN MARTIN has a Single-sided, Single Density (SSSD) SHUGART disk drive (of the type which fits inside the PEB) for sale for £50 plus postage. Contact me in the first instance.

oo

There are also a number of items from the TIHOME SOFTWARE COLLECTION which might be of interest to OTIUers. I have a large number of cassettes which were specially wound for the late TIHOME. They are C12 leaderless, and are priced at 37p each, exclusive of post and packing. If you want any, submit your order but send no money now - an invoice will be sent with the cassettes.

There are a number of PUBLIC DOMAIN SOFTWARE items offered by TSC (the TIHOME SOFTWARE COLLECTION) and details will appear in the next issue of TI-LINES.

oo

STEPHEN SHAW has a graphics Adventure module for sale, complete with manual.

RETURN TO PIRATES ISLE manual & module: £7.00 incl. p+p.

This Adventure assumes that you have completed Adventure No. 2, the first PIRATE Adventure.

oo

oo

RICHARD OWEN has several things for sale:

- STATISTICS module (used once) £12.00 o.n.o.
- PARSEC £10.00 or 7 single-sided floppies!

He also has a couple of services which he would like to offer:

- WORD PROCESSOR (his own) You supply the medium
 - Disk version £1.00
 - Cassette version £0.50
- PROGRAMS LISTED 3p per line to a maximum of £5.00
- PROGRAMS CONDENSED IN EXTENDED BASIC
 - Multi-statement lines 10p per 10 lines or part of 10 lines

Contact him at 17, Highfield Avenue, Litchard, Bridgend, Mid-Glamorgan, CF31 1QR

oo

GORDON PITT of the WEST MIDLANDS TI USERS has been busy again, and has widened the range of items he can arrange to supply for TI owners. He is currently working on the 'mass production' of LOAD INTERRUPT SWITCHES, prices and general availability to be notified later. The intention is for you to send your Speech Synthesizer to Gordon, and he will arrange for the switch to be added and tested before returning it to you.

Other items he has come up with recently are:

- TI CONSOLES brand new and guaranteed £ 60
(From ASDA)
- HITACHI 14" COLOUR MONITORS in cases £135
The price here applies if you collect it, otherwise there are carriage charges to consider.
- MONITOR CABLES to connect the TI to the monitor price to be arranged

If anyone is interested in clubbing together to gain access to The Source in the States, Gordon would be happy to hear from you.

You can contact him at:

259 Sneyd Lane
Bloxwich
WALSALL
West Midlands
WS3 2LS

Tel: 0922 76373

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My source of full-height MPI 40 track DSDD drives is drying up - someone with the necessary cash has been and bought up almost all the remaining drives from my supplier - but there is the possibility of some half-height MPIS with the same specification becoming available very shortly. I have no definite price yet, so if you are interested, give me a ring or drop me a line.

Incidentally, for those of you with Extended BASIC, 32K, Disk Controller and at least one disk drive, there is a Public Domain loader for the TI-Writer word processing programs. You no longer need the module in order to make use of TI-Writer's facilities. The manual is another matter - it is rather large to photocopy (the cost would soar) - so I am fixing to have it put on disk. If you are interested, drop me a line or give me a ring. The price will be the usual low one that the TIHOME SOFTWARE COLLECTION charges: about £2.50 plus postage.

oo

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C O N T A C T S  
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|                   |                                                              |
|-------------------|--------------------------------------------------------------|
| JOHN M. BAIRD     | 23 Towerside Crescent, GLASGOW G53 5RU                       |
| D. A. FORD        | 31 Conifer Close, Church Crookham, ALDERSHOT, Hants          |
| CHARLES SKRZYNSKI | Suncroft, Green Lane, HENLEY-ON-THAMES, Oxon RG9 1LS         |
| HENRY D. L. CLARK | 60 St. Paul's Road, PETERBOROUGH, PE1 3DW<br>Tel: 0733 42642 |

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C L O S E F I L E

Finally, creakily, another issue of TI-LINES has made it out to its patient and long-suffering subscribers. Hot on its heels (well, you have to be optimistic in this game!) should come issue 2 in this second OTIU year. It doesn't feel like 16 months since I set the ball rolling, and I am not just saying that. I am suffering from a loss of long-term memory (that's my excuse) which is so bad that I frequently forget what it is I'm suffering from. I keep forgetting that I can't remember things, which is a blissfully ignorant state to be in. Ahem.

This issue, and probably future issues if possible, is being produced with the generous help of recent OTIUer and former TIHOMEr, JOHN MATTHEWS of WESSEX PRESS in Wantage, Oxon. John has kindly offered to make life easier by providing a source of cheaper photocopying, and for that I extend my grateful thanks. It means that this month I don't have to choose between eating and publishing this issue - and I am not joking. TI-LINES won't begin to pay for itself until at least June 1986, and thanks to my change in location all of my expenses have doubled, making life temporarily difficult. Come what may, though, TI-LINES will get produced and published, even if I have to print every copy by hand, so don't get too concerned about its future.

Here's to more useful information in the coming year,
Peter Brooks

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