

NATGUG NEWS

Volume 9, Issue 4 October 1987



OFFICIAL JOURNAL OF THE

***National Amstrad, Tandy
&
General User Group***

INFORMATION ON THE GROUP

Membership of the group is by subscription to the Newsletter which is published at regular intervals – application forms are available from the secretary. Membership is open to anyone with an interest in computers but special emphasis is placed on equipment within the Amstrad, Tandy and MS-DOS range.

Details of the groups accounts and constitution are available from the Treasurer – please ensure that your requests are accompanied by a S.A.E.

Members requiring assistance with problems related to the machines specified should contact the P.R. Officer who will endeavour to put them in touch with possible advisors.

Sub-groups exist in many areas and their secretaries are invited to forward details to our Editor/Publisher for inclusion in the magazine. The back page is being reserved for this purpose.

Public domain software libraries are maintained in five separate collections : Model 1, Model 4, CP/M, Amstrad and MS-DOS. Names of the appropriate librarians are available from the secretary. There is a copying charge of 1.00 per disk or tape. (see also Vol.8, Iss.10)

Back numbers of the magazine, in 6 month volumes, are available at the price indicated on the application forms.

The group has no paid Officers or employees, and the issue of the magazine depends on contributions from Members, who are also invited to submit responses to questions raised in the previous issue. To allow legible print, we prefer contributions to be submitted on 5.25" disk, direct to the Editor – ASCII files are perfectly acceptable but please indicate the disk format used (SS,DS,SD,DD, track count, DOS etc.). Your disk will be returned if you enclose an addressed label, normally within 7 days. The Editor will accept written or typed articles where members insist - publishing will depend on readability.

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OBITUARY

Very sadly I have to report that John Bedford, of Sussex, died suddenly on July 26th. John was a very long serving and much respected member of NATGUG, and I for one am very grateful that Peter Hall was able to attend the Service.
..... DW.!

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(It's Toe-Tectors time again this month)

Secretary's Report (formal this month !)

Six months on

"The time has come, the Walrus said, to talk of many things..."
Well, not too many, in fact only one - albeit a major one - the future prospects for NATGUG. You will be reading this approximately six months after the AGM and the change of Officers and I have finally conceded to my colleagues who insist that you all be told just how we, as a User Group, stand.

In March we all felt that the Group was on a downward slide, but none of us realised just how steep that slide was. At that time we had - probably quite justifiably - several 'complimentary' memberships and

we found that once these were dis-counted, we had a total paid up membership of 120. Ever felt like pressing the Reset button? You don't need access to financial reports to instantly recognise that that level of subscribers cannot be viable! We had three IMMEDIATE choices - double the subscription charge, at least double the membership, or quit.

None of us felt inclined to follow either the first or the third option and so we set about increasing membership - although we initially did the opposite in that we scrapped all the complimentary issues! (In view of services rendered, we were pleased to confer just two Honarary Life Memberships, to Leon Heller and to Brian Pain).

Several free mentions in PCW and Micro-Mart brought in sufficient inquiries to establish that not only were our potential members out there, but also that they needed the help and guidance that we are renowned for. If only we and they could get together

The sterling efforts of Roger in contacting all known past members brought several back to us; John has spent hours in building up his database and giving out help and assistance, and Gordon has gone to the lengths of providing a mains supply in his mobile workshop so that he can attend to correspondence during his lunch breaks. Gordon has also established a very good relationship with Tandy which should prove to be of mutual advantage. More on the extraordinary efforts of these three later.

Under the previous Editorship of Geoff Smith, our magazine improved beyond all recognition; his successor, Gordon Collins, has far more than maintained Geoff's high standards. We are also fortunate that our printer, John Bodsworth, is a very keen member of NATGUG and we must thank him for the new covers and for our new information and membership application forms.

Anyway, as a result of the efforts and actions outlined above, our membership now (12th September) stands at 184. Still periously low BUT OVER 50% up on the April figure! Were time on our side then we would have no worries - but time is rarely on anyone's side. Molimerx has gone, Northern Bytes has gone, the Genie has gone, August 80 Micro did not appear, and our traditional Z80 background is fast disappearing; we owe thanks to those members who forced us, two years ago, to embrace (reluctantly then) the new MS-DOS machines. Now, although we will never forget nor desert our origins, our future lies with these exciting (?) new machines. Daily I am receiving calls for help or advice, and I must confess that there is a new Model 3000 sat on my desk at work which I hardly ever switch on because I can't

remember which way the slash should go ! And I know that I am not alone, because Tony Evetts had the most attentive audience that I've ever witnessed when he gave his talk on Introduction to MS-DOS at the Blandford meeting (he is repeating it at Swindon, on the Friday night). Sorry, I digress. I was stating that in terms of expertise, then NATGUG has a great future, and the enthusiasm of its Officers will carry it far.

That last phrase worries me. I pointed out earlier the selfless efforts made by Gordon, John, and Roger; we are very, very heavily dependent on volunteers. Nothing wrong with that in itself (it sure keeps costs down, and we certainly couldn't afford paid officials anyway) but now is the time to recognise that volunteers do eventually become stale and jaded. For goodness sake, don't anyone misunderstand me - we certainly don't have that problem, now. But we could have later on and for that very reason I intend to table a motion at our next AGM that we limit volunteer service to a maximum two-year period. I might be wrong, but I think that you'll all agree with that. The reason I mention it now is that from experience I expect it to be quite difficult to find fresh volunteers to replace the present incumbents ! Don't worry, there's another year to go yet (unless any resign) so another motion might be that those members who recruit the least should be forced to serve !

So to recap. Financially, NATGUG can survive through both 1987 and 1988, although the Committee will have to monthly appraise cash flow against the size of the Newsletter that we can output and limit its size accordingly. (But PLEASE keep those contributions coming in). More importantly, as a User Group there is a great future ahead if we prepare for it now, both in looking after the TRS-80 models and their clones, AND in helping out with understanding and exploring the MS-DOS world. We already have a substantial PD software library for MS-DOS, together with over 100 disks devoted to CP/M and around fifty for the Model 1 and Model 4 libraries. Like someone else, WE have the ability, the technology, and the willpower, we just need a little more of YOUR involvement, encouragement, and even criticism. (constructive only please). I sincerely hope that we will see you at the forthcoming Swindon weekend (we do tend to emphasise 'weekend', but you will be made just as welcome if you only pop in for an hour or so).

The only possible despondency that I could possibly have is the fear that our Members continue to ignore me and my fellow Officers - we keep asking for feedback, for ideas for the workshops, subjects for debate, etc. Please understand that WE can only give YOU what you give US !!!

That's enough for now, I'm off to play Interlude ! (well, at least I can choose the options there !!!)

Late breaking news and ... I'm back

Stuart Ranson is actively pursuing the possibility of bulk supplies of the Model 4 XLR8er speedup + memory board and needs to know just how many members would be interested. The problem is that the price will vary according to total demand - and the demand will vary according to price ! Can you let Stuart have three decisions : Would you be interested at ninety pounds, at one hundred and ten pounds, and at one hundred and fifty pounds. Stuart needs to know by the end of the Swindon meeting so if you are not attending, please give him a ring on 0264 51388. D.W. (** Can I have 90 one PLEASE, Stuart ? Ed. **)

[illegible]

(**. Any program listing appearing in the Newsletter I should have in an ASCII format file. Should any member wish to save typing time, if you send me a formatted disk (please state clearly what format it is) together with a label and return postage, I will try to tranfere the file over onto your disk. Ed. **)

EDITORIAL

First, a big welcome to all the new members who have joined NATGUG recently, also welcome back to all those who have rejoined NATGUG. I understand that this has been the best month since April for an increase in membership. But please all try harder, we do need more members. Thank you to all those who have encouraged people to join/rejoin.

PLEASE READ DAVID'S ABOVE ARTICLE AT LEAST TWICE. It is your group, at the AGM you will be asked to make decisions.

David's article is not a report to give rise to any pessimism whatsoever, just enthusiasm. The committee now feel that we have a very viable group, we just have to control our income against expenditure, which can be done by regulating the size of the monthly issues of the Newsletter. Given the above size of membership we can output, on average, a monthly Newsletter of 36 pages - number of articles received permitting. Having more members would mean we would not have to exercise this limit so rigidly, lots more members, no limit at all, or can we put up the Membership subscription? Thousands of members and we could think of a smaller subscription. Your committee has also decided that they will cut down on the amount of space that they take up in the Newsletter, should YOUR article require that space. So come on ==>>>> squeeze <<<<== us out.

David mentions that we - NATGUG - have to move to MS-DOS, I agree. Please also note that he says that we will NOT be moving away from the original Models. With regard to MS-DOS, it may be that I will get out of my depth with this DOS. Should the membership note any confusion creeping in on my part, please speak out early, we can then ask if anyone is willing, then or now, to take over this part of the editing. I do not want a service to members to not function correctly because of my non-experience with that particular item.

I can not comment here on where the "slash" should go.

Your committee has also recognized and discussed that we are all Model IV users, for that reason we try our best not to show a bias. We

hope we don't.

I can understand David's reason for tabling a motion of limiting volunteer service to two years, but I would not vote for it - maybe I could be persuaded to change my mind if I saw a flood of volunteers.

I have served on many committees, this is the only one where I have found it possible to discuss points without any rancour whatsoever with any member of the committee. We can happily agree to disagree, the majority takes the decision. This has allowed each one of us to get on quickly with our own job, and the membership has then received more output. Since March we have had to make some harsh decisions, we are all still the best of friends. I would be very happy to continue serving you, with them.

David has pleaded for feedback. As Editor I find that it is starting to come in, both phone calls (even at 7.30 a.m. from Zimbabwe - sorry that I had already gone out Barry) and letters. I hope it will both continue and grow. We can only judge what the Membership requires from feedback. If YOU find that NATGUG is not the right "colour" for YOU and YOU have not contacted us, how could YOU expect us to be able to paint it YOUR colour ?

If any member has any doubts about anything to do with NATGUG, please contact one of us, we are only too happy to spend the time to explain further. We are here to make you happy in computing.

SWINDON, Oct. 16th - 18th 1987. Any member requiring a subject or query dealt with at Swindon, please give David advance written notice, we then have time to ask someone to do the correct research and then appear with the answer. This also applies to contacting Ariela prior to Swindon with reference to her CP/M lecture. Please also note that we are trying a new idea at the next Swindon meeting, that is to have forums on various subjects. Bring all your questions along for each forum. This should also include all those members not able to attend, if this is you, I will undertake to bring your query up at the appropriate forum. Don't forget that I need YOU to send me your query in writing first !!!!! (You did note the provisional schedule on Page 3 of Volume 9, Issue 3, didn't you ?)

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I have often wished for a crystal ball, never more so than since taking on this office.

Roger is hoping soon, to be able to put on one corner of the label which gets stuck on the envelope bringing your Newsletter, a date, such as "06/87". This will advise YOU when YOUR membership subscription expires, if you do not agree with this date, Roger will be very happy to receive your written reason why. DO NOT THROW AWAY THE ENVELOPE WITHOUT FIRST CHECKING THIS DATE, NATGUG would not like to loose you because we had not given you the opportunity to renew your membership in time. We would hope that this move will stop the cry of "I did not know when I had paid up till". Roger tells me that he is willing and able to accept any amount of money at anytime on behalf of NATGUG.

UPDATE - TANDY We are still in contact with Tandy-UK. At the moment we are concerned mostly, with being able to bring in new members.

80 MICRO:- We are 99.9% certain that the August issue of this magazine has not been shipped from the States. We are not able to find out why.

UPDATE - WEST MIDLANDS WORKSHOP The Committee have received two replies - thank you to those two - both apologizing for not being able to attend if one was held next May '88. Your Committee will therefore be taking no further action on this item.

If any Member has any suggestions, such as alternate venues, or on any other theme, and would like your committee to follow it up, please get in touch with one of us.

Members have tried to phone me and have heard instead from my answer machine. I am rarely at home. I am a self-employed service engineer who travels around England. It is not very convenient to return calls should you leave a message on the answer machine, (have you tried to find a public call box that works ?) you will most likely receive a written reply. Members may find that they will have just as quick response if they send a written message.

Due to the size the Newsletter is now getting, I am obviously spending more and more time editing. Members who have used a word

the CPMSDOSUG (they changed their name too !) have made their library available to members in a wide number of different 5.25" formats, although I personally never recognised any of those listed as being applicable to a TRS-80 ! Anyway, this is going to be a long enough story as it is without any history lessons, so lets get on with it. A very enterprising NATGUG member has built up a collection of some 239 volumes, on 5.25" disk, which now form the NATGUG CP/M library. However, before you rush off to get copies, you must understand the following points.

1. The disks that you send must be formatted by you FIRST, and must clearly show what format they are in. The most common CP/M used by TRS-80 owners is Montezuma 2.2 but there are an awful lot of other systems. We also need to know if your disk is 40 or 80 track, single or double sided. The reason that you format your blanks is to avoid any step-rate problems which might otherwise occur.
2. Now for the tricky part - if you have double-sided or 80 track drives you may skip this paragraph ! Still here ? Then you must have 40 track single sided drives, and the bad news is that we only supply 'volumes' and one volume ain't very likely to fit on one of your disks. Sorry, but you must format and forward TWO disks for each volume required - but the good news is that the librarian has agreed to charge the standard one pound as a volume copy fee rather than a disk copy fee.
3. If you didn't need to read paragraph 2 but did out of sheer cussedness, then this paragraph is to tell you that No, you won't get a reduction on YOUR copying fee !

The CP/M librarian for NATGUG is Peter Hall, 11 Gerrard Street, Brighton, BN1 4NN. (Neither Peter nor NATGUG issue an index for this library, partly due to its sheer size but mainly because anyone interested would be expected to be a member of CPMSDOSUG and would therefore have the full details anyway.)

For your reference, the volumes held by Peter are:-

If anyone has suitable copies of the missing volumes then they are cordially invited to send copies to Peter. The disks will be promptly returned.

David Washford.

[illegible]

One of the greatest tips that I ever picked up for use with Newdos80 v2.0 was the ability to boot up and go into BASIC with 15 files open - as you know, as standard you had three buffers allocated although you could always demand more from the keyboard. However it isn't always convenient to go back to DOS. Below is a working example of how I use this ability; we have gone into BASIC with an auto menu program from which we have entered sales figures for some 400 customers. This information has been entered into a main customer file called KINGS/DAT, and from this I can call up all kinds of report showing customer activity or non-activity (or both), for all customers, or just those canvassed by sales reps. However, although the datafile contained a geographical location code (the L0\$ in line 60005) it was exceedingly tedious to go through the file 12 times in order to obtain "area" reports. I therefore wrote BUILDLOC/BAS which automatically creates 12 data files (erasing previous files) and then copies the data to the appropriate file. Upon completion, another "for-next" program prints out the reports in town sequence.

```

10 'BUILDLOC/BAS
20 'TO ALLOCATE MAIN FILE TO AREA FILES
30 CLEAR10000:DEFINTA-Z:DIMLAS$(12),LN$(12),LZ$(12),LF$(12),SA$(15),
    LZ$(12)

```

```
40 FORX=1TO11:READLA$(X),LN$(X),LZ$(X)
50 IFLEN(LN$(X))>8THENLN$(X)=LEFT$(LN$(X),8)
60 LF$(X)=LN$(X)+"/DAT:0"
70 NEXTX
75 LF$(12)="OTHERS/DAT:0":LZ$(12)="50"
78 CLS:FORX=1TO12:PRINTX;LA$(X),LN$(X),LZ$(X),LF$(X):NEXT
80 FORX=1TO12
81 LI$="CREATE "+LF$(X)+",LRL=176,REC="+LZ$(X)
82 PRINTLI$:CMD"LI$"
83 NEXT
90 BA=1:BD=1:CM=1:FM=1:HN=1:KM=1:MN=1:RK=1:TR=1:WY=1:MD=1:OT=1
100 OPEN "D",1,"KINGS/DAT","FF",176
102 OPEN "D",2,"BATH/DAT","FF",176
104 OPEN "D",3,"BRADFORD/DAT","FF",176
106 OPEN "D",4,"CORSHAM/DAT","FF",176
108 OPEN "D",5,"FROME/DAT","FF",176
110 OPEN "D",6,"HINTON/DAT","FF",176
112 OPEN "D",7,"KEYNSHAM/DAT","FF",176
114 OPEN "D",8,"MIDSOMER/DAT","FF",176
116 OPEN "D",9,"RADSTOCK/DAT","FF",176
118 OPEN "D",10,"TROWBRID/DAT","FF",176
120 OPEN "D",11,"WESTBURY/DAT","FF",176
122 OPEN "D",12,"MAINDEAL/DAT","FF",176
124 OPEN "D",13,"OTHERS/DAT","FF",176
200 FORX=1TO500
210 GET 1,X,60000
220 PRINT@630,X;
222 IFLEFT$(N$,8)="RESERVED"THEN500
225 X2=0:X3=0:X4=0
230 FORX2=1TO11
240 IFLA$(X2)=LO$THEN 250ELSE280
241 PRINTLN$@(X2),LO$
250 X3=X2:X2=11:GOTO300
280 NEXTX2
290 GOTO420
300 ONX3GOTO310,320,330,340,350,360,370,380,390,400,410,420
310 PUT 2,BA,60000:BA=BA+1:GOTO500
320 PUT 3,BD,60000:BD=BD+1:GOTO500
330 PUT 4,CM,60000:CM=CM+1:GOTO500
340 PUT 5,FM,60000:FM=FM+1:GOTO500
```

```

350 PUT 6,HN,60000:HN=HN+1:GOTO500
360 PUT 7,KM,60000:KM=KM+1:GOTO500
370 PUT 8,MN,60000:MN=MN+1:GOTO500
380 PUT 9,RK,60000:RK=RK+1:GOTO500
390 PUT 10,TR,60000:TR=TR+1:GOTO500
400 PUT 11,WY,60000:WY=WY+1:GOTO500
410 PUT 12,MD,60000:MD=MD+1:GOTO500
420 PUT 13,OT,60000:OT=OT+1:GOTO 500
500 NEXT X
510 OPEN"D",14,"BUILDLOC/DAT","FF",25
520 LZ%(1)=BA-1
521 LZ%(2)=BD-1
522 LZ%(3)=CM-1
523 LZ%(4)=FM-1
524 LZ%(5)=HN-1
525 LZ%(6)=KM-1
526 LZ%(7)=MN-1
527 LZ%(8)=RK-1
528 LZ%(9)=TR-1
529 LZ%(10)=WY-1
530 LZ%(11)=MD-1
531 LZ%(12)=OT-1
535 PUT 14,1,61000
910 CLOSE
950 RUN"SALEMENU/BAS"
59005 END
60000 A%,(16)P$, (24)N$, (20)A1$, (15)A2$, (14)PT$, (8)C$, (8)AM$, (2)PS$, PH!,
60005 SA%(0),SA%(1),SA%(2),SA%(3),SA%(4),SA%(5),SA%(6),SA%(7),SA%(8),
      SA%(9),SA%(10),SA%(11),SA%(12),SA%(13), (8)DC$, (8)DS$, 00%, 01%,
      02%, (2)LO$, RP%, NU%, (7)Z3$;
60099 'NEXT IGEL ALLOWS FOR AREA ENTRY COUNT FIGURES TO BE STORED
61000 LZ%(1),LZ%(2),LZ%(3),LZ%(4),LZ%(5),LZ%(6),LZ%(7),LZ%(8),LZ%(9),
      LZ%(10),LZ%(11),LZ%(12);
65000 SAVE"BUILDLOC/BAS"

```

The Zap to enable 15 file buffers is to change:

3E 03 32 to 3E nn 32 (nn being the number of buffers required, in hex)
 The change is made to BASIC/CMD, on a Model 1 to sector 14, byte 46,
 and on a Model 3 to sector 14, byte 1F.

David Washford

[illegible]

=====

The new set of ram chips that are required are ones that have a faster 'speed' than the ones Tandy (in their infinite wisdom) fit, you need 16, they are quite cheap, less than 20 pounds the lot if you know

where to buy & it's just a case of taking out the existing ones & putting in the new ones the same way round.

A good firm to order from is:-

EVASHAM MICROS 63 Bridge street, EVESHAM.
Worcs. WR11 4SF

They advertised on page 89 of the September issue of Amstrad Professional Computing, selling a set of 18 4164-15 Dram chips for the Amstrad PC1512, so you have two spare. Order them as a set for a PC1512 so as not to confuse them, I have used them so I know they work.

The extra ram will never enable a basic program to work in more than 32K because that is the way Basic is written.

However if you want to be able to write notes in Scripsit or better still Lescrypt whilst using Visicalc or Multiplan as your reference, then with Double Duty installed you can switch between partitions to look at the information in your spreadsheet & write about it in your wordprocessor or any other similar situation where you want to be able to look at two programs at the same time. A lot more can be done, but that is up to what anyone can think up.

The advantage of an external clock is that it keeps going when you switch off & is not affected by disk access, extremely useful for people who need to time & date stamp files.

The XLER8er works with all existing model 4 software that I have tried. The setting-up procedure is very simple, most of it being 'sysgened' when you first set-up the disk, very simply explained in the manual, so that it is invoked automatically whenever the computer is switched on or reset.

Under TRSDOS it is possible to have 319K of ramdisk but under CP/M only 256K. The sort of things you can do are as I have done:- under TRSDOS I load PFS File & my Data file into ramdisk if I am spending more than a few minutes with PFS, then I don't have any further disk access, (which saves wear & tear), until I copy my data

file back at the end of the session & the speed at which one can go through a large set of data is very much faster than having to read it off the disk.

Under CP/M I load dBase & all my command files into ramdisk & get all the same speed advantages, it is especially useful when you are developing command files, because every time you want to try the latest change the file has to be written back to disk, as one is working in drive 'M' there are no alterations to the disk files until you are finished when you copy the files back to drive 'A' (don't you).

The extra speed & memory are quite independant of each other, it so happens that the HD64180 can directly address 512K of ram if it is fitted, (this is not possible at the moment) and the speed is adjustable according the way the system is set up.

Barry also asks in his other article about TRSDOS, BASIC, SCRIPSIT & EDTASM, well they are still being used by lots of people but the other programs he refers to are better, after all a working model T Ford will get you around but a Porsche is much more fun if you can afford it.

Model 4 Visicalc by the way will use up all your 128K of ram giving 90K of work space & with the XLER8er works considerably faster but does not use any more ram.

Reference John Coynes article about the model 4 in model 3 mode.

I have not tried an XLERer board in a model 4 only in a 4P, the 4 has the model 3 ROM installed & I don't know what would happen when trying to load a model III Dos. The snag with the 4P is that no matter how you set it up, the statement 'lost data error' comes up on the screen if you try to load the modela/III file.

The modification that Laurie Shields wrote onto the begining of the modela/III program enables Newdos 80 to be loaded but as soon as a basic program is run that accesses disk it crashes.

PRO John Kilpatrick

TREASURERS NOTES

On the the top right hand corner of the label on the envelope of this magazine you might have noticed a date. If you did award yourself 10 Brownie points. This is the expiry date of your NATGUG Membership Subscription. So please check the date, make sure you agree with it, and please write to me if it is wrong. All mail that goes out from me should in future carry this date. Chasing members for their subscriptions, which a large number of you think we should do, is very time consuming and expensive. We cannot afford it. We also cannot afford not to do it. It is a "CATCH 22" situation. Please remember that this is your club, it belongs to you and the more money it wastes in trying to survive the less there is to spend on you. To survive we must at all costs keep the membership up. The membership is rising quite nicely, we now stand at just over 180. We lost about 15 at the end of June who did not renew, but this has easily been off set by the gain made from new members and lapsed members rejoining. We shall shortly have the opportunity to gain new members at the PC show and our new involvement with Tandy-UK. My target of 200 additional members by the end of the year should be made. Then the whole merry go round starts again. You will all renew in December, won't you ?

The list below is the total membership as of 7th September. If you know of anybody who should be on this list please help me to correct the situation. Oz House has a copy of this list and it is those, and only those on the list, who will receive the discount he offers to club members

ABRAHAMS R.	BANNISTER D.	BODSWORTH J.	CHAMBERS K.
ADLER D.	BARNETT S.	BOOTHROYD J.	CHRISTIE J.
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ARCHER I.	BARROW F.	BULLARD R.	COLE MARTIN
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ARNTSEN K.	BAUST N.	BURNS J.	COLLINS G.
ARTHUR J.	BAZIN G.	BUTCHER J.	COWHIG W.
ASHFORD C.	BELL P. .	BUTLER C.	COYLE J.
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DREW P.	HILL TOM	NATHAN A.	STEPHENS I.
DUCKFIELD D.	HOLMAN DAVE	NORMAN ALAN	STORRS ROGER
DUNLOP JIM	HOUSE O.	NOWERS C.	STOUT A.
DUNN ROBERT	HOWARD WRIGHT	O'CONNOR B.	SUTHERLAND D.
DUNSBY B.	HOWELL K.	OLDMAN C.	SUTTON THOMAS
EAVES RAY	JAMES JOHN	OSBORN JOHN	SWAN BRYAN
EDWARDS B.	JEFFREY J.	OSWIND PAUL	TAYLOR A. E.
ELENA H.	JONES WILLIAM	PAIN BRIAN	TAYLOR ARIELA
ELLIS P.	JUKES ERIC C.	PICHEL-JUAN J.	TAYLOR KEITH
ENDERSBY ?.	KILPATRICK E.	POPE R.	TEASDALE K.
ERRINGTON P.	KING L.	PRICE C.	THRIPPLETON B.
EVETTS TONY	KIRBY W.	PURTON A.	TOOTILL PETER
FATTORINI T.	KITSON DONALD	QUARTERMAIN P.	TURNER MARTIN
FILDES W.	KJELLANDER M.	RABE CARL	UPPINGTON C.
FINNIE B.	KNAGGS LEO	RANDLE MAC	VIEIRA ROBERT
FLIGHT A.	KNAGGS PETER	RANKINE G.	WALBRIDGE A.
FOORD S.	LATKO GEORGE	RANSON C. S.	WALTON N.
FORDE-JOHNSTON	LIDDLE BARRY	ROBERTS DAVID	WARD NORMAN
FOSTER GEORGE	LINEHAM IAN	ROBERTS E & G.	WASHFORD DAVID
FULLER MERTON	LOGAN A.	ROBERTS JACK	WATSON J.
GALE JOHN	LUCAS A.	ROGERS KEN	WELCH R.
GARLAND MIKE	MACHLACHLAN J.	ROLISON R.	WHITELOCK J.
GERRARD A.	MACKIE RICHARD	ROWDEN B.	WILLIAMS JOHN
GIBBONS MIKE	MALVERN A.	RUMARY BRIAN	WILSON STOKER
GLADSTONE E.	MANN D.	RUTHERFORD P.	WINCOTT GEORGE
GLOVER G.	MARSDEN PHILIP	SAMPSON R. D.	YATES GRAHAM
GORDON-SAKER M	MARTIN D.	SAUNDERS A.	YOUNG GORDON
GOULDEN L.	MASON ROBERT	SHEPHERD H.	YOUNG GORDON
GRACE R.	MATTHEWS M.	SHERIDAN M.	
GRINDEY JOHN	MCLEAN A.	SHIELDS LAURIE	

As you will see elsewhere Peter Hall is to be the custodian of the CP/M library. Thank you Peter.

Selecting a Programming Language made easy.

By Daniel Sallman and David Rosenblueth.

(This article is brought to us courtesy of the Department of Computer Science, University of Waterloo, Canada. Please note that the cars have been Anglicized.)

With such a large number of programming languages on the market it is often very difficult to choose which one is the best for your needs, however, most people have an idea what kind of automobile would suit them best. Here are a few analogies for your perusal.

Assembler	A Formula 1 racing car. Very fast, but difficult to drive and expensive to maintain.
Fortran II	A Model T Ford. Once it was king of the road.
Fortran IV	A Model A Ford.
Fortran 77	A Six cylinder Ford Consul with standard transmission and no seat belts.
Cobol	A delivery van. It's bulky and ugly, but it works.
Basic	A Second hand Morris Minor with rebuilt engine and patched upholstery. Your Dad bought it for you to learn to drive. You'll ditch the car as soon as you can afford a new one.
PL/1	A Cadillac convertible with automatic transmission, a two-tone paint job, white-wall tyres, chrome exhaust pipes, and fuzzy dice hanging in the windscreen.
C	A red E-Type Jaguar, the all macho car.
Algol 60	An Austin Mini. Boy, that's a small car !
Algol 68	An Aston Martin. An impressive car, but not everyone can drive it.
Pascal	A Volkswagen Beetle. It's small and sturdy. Was once popular with intellectuals.
Modula II	A Volkswagen Golf with towing bar.
LISP	A Sinclair C5. It's simple but S..L..O..W.
PROLOG	Prototype concept car.
FORTH	A Land-Rover . Bolt together Mecano kit.
LOGO	A Kiddies replica of a Rolls Royce. Comes with a real engine and working horn.

Place the following code at 0924h

```

0920          11 03 01 CD   3B 26 11 A5 09 CD 3B 26
0930 11 CE 09 CD   3B 26 CD 6C   23 FE 0D 28 0A D6 31 38
0940 EF FE 07 30   E8 18 02 3E   04 21 78 09 06 05 5E 23
0950 56 23 D5 10   F9 6F 87 87   85 5F 16 00 21 82 09 19
0960 EB 06 05 E1   1A 77 13 10   FA 11 D2 09 CD 2B 26 AF
0970 32 03 01 2F   32 D0 2C C9

```

Place the following data at 0978h

```

0970 .                DF 09 DE 09 3B 13 1A 02
0980 53 01 08 09   CF 30 38 10   11 D7 31 30 18 19 DF 31
0990 38 20 21 E7   32 30 28 29   EF 32 38 30 31 F7 33 30
09A0 38 39 FF 33   38 0D 0A 45   6E 74 65 72 20 52 65 73
09B0 74 61 72 74   20 66 6F 72   20 42 72 65 61 6B 20 50
09C0 6F 69 6E 74   20 28 31 2D   37 29 20 3A 20 00 00 00
09D0 00 00 0D 0A   55 73 69 6E   67 20 52 53 54 20 00 00
09E0 68 20 66 6F   72 20 61 20   42 72 65 61 6B 20 50 6F
09F0 69 6E 74 0D   0A 4C 61 62   6C 65 73 20 61 72 65 20
0A00 43 61 73 65   20 64 65 70   65 6E 64 65 6E 74 0D 0A
0A10 00

```

The next problem was that in my source codes I like to use lower case labels (Sometimes of quite a length) and unfortunately when you configure Z8E to operate in Lower Case it converts all of the labels into lower case. Now as Zen will allow "Loop" and "loop" as two separate labels (This is a fetcher that I do use) then this automatic conversion to lower case is quite out of the question. Here is a patch to remove the automatic convert to lower case. Note after applying this patch you must type the label exactly as shown (IE the labels are now Case Dependent). Z8E does not do this conversion if in upper case mode, however there is a bug in Upper Case mode that hangs the system. The Alterations for this are :-

```

03C1 From      28 to      18          232A From A7 CB to 18 22

234C                                C5 D5 E5 0E   From
2350 0B CD 05 00   A7 0E 06 1E   FF C4 05 00   E1 D1 C1 E6
2360 7F C9 00 00   00 00 00 00   00 00

```

```

234C                                     18 06 A7 C8   To
2350 F6 80 18 D8  C5 D5 E5 OE   0B CD 05 00  A7 OE 06 1E
2360 FF C4 05 00  E1 D1 C1 E6   7F C9

```

Finally the program ZENTOSYM.PAS by Laurie Shield was supposed to take a ZEN Symbol table listing (S command) and convert it into a format that Z8E can read in. Now to my mind it did not do this too well, as it could only handle labels up to 8 characters in length. This as you might see, is of no use to me when I am using labels of up to, and in many cases, over 14 characters in length. Hence I have had to re-write the program to use another of the formats that Z8E can use that will allow Upper/Lower case labels of up to 14 characters in length. Also note that my version of the program does not limit the amount of labels that it can process by reading them into an array but actually creates the array on the fly so to speak, by using a Linked List. This then enables me to use the same "Output" file as I am using for the "Input" file. IE. overwrite the original zen file with the Z8E input file.

So here is a listing of the Pascal program to do the job. I have changed the name from ZENTOSYM to CONVZ8E to save confusion between the two programs.

```

(*****)
(*)
(*) Program : ZenToSym (*)
(*) Date : --/--/-- (*)
(*) Author : Laurie Shields (*)
(*) Function: Convert a ZEN Symbol table into a .SYM file for Z8E to (*)
(*) process (*)
(*)
(*) 5 Jun 1987 Total Rewrite to output Z8OASM.LST type files. (*)
(*) 6 Jun 1987 As they can handle labels of up to 14 characters. (*)
(*) Have also made user friendly. => Checks if over 14 (*)
(*) chars already defined, allows user to change label (*)
(*)
(*****)

```

```

Program Convert_Z8E (Input,Output);
{$U+,X-}

```

```

Const

```

```

    Space = ' ';
    Tab   = 9;
    Bell  = 7;

```

```

Type

```

```

    Str          = String[128];
    Item_Type    = Packed Record
                    label   : Str;
                    Address : Str;
                End;
    Pair_Pointer = ^Pair_Type;
    Pair_Type    = Packed Record
                    Item : Item_Type;
                    Next : Pair_Pointer;
                End;

```

```

Var

```

```

    Pair_List      : Pair_Pointer;
    File_In       : Text;
    File_Out       : Text;

```

```

Function Link_There (Find_String : Str) : Boolean;

```

```

Var

```

```

    Ref      : Pair_Pointer;
    Located  : Boolean;

```

```

Begin

```

```

    Ref := Pair_List;
    Located := False;

    While Not(Located) and (Ref <> Nil) Do
        With Ref^ Do
            If Item. label = Find_String Then
                Located := True
            Else
                Ref := Next;

```

```
    Link_There := Located;
End;
```

```
Procedure Upper(Var Line : Str);
Var
    X : Str;
    Count : Integer;

Begin
    X := Line;
    For Count := 1 To Length(X) Do
        X[Count] := UpCase(X[Count]);
    Line := X;
End;
```

```
Procedure Title;
```

```
Begin
    CrtInit;
    ClrScr;
    GotoXY(34,3); Write('Convert Z8E');
    GotoXY(34,4); Write('=====');
    GotoXY(19,6);
    WriteLn('Converts a ZEN Symbol table listing (. LST)');
    Write(Chr(Tab),' ');
    WriteLn('to a Z80ASM Symbol table listing (. LST) for use by
    Z8E');
End;
```

```
Procedure Get_Files;
```

```
Var
    Error : Boolean;
    Source_Name : Str;
    Destination_Name : Str;

Begin
    GotoXY(10,9); Write('Enter Source file name');
```

```

Repeat
Error := False;
GotoXY(40,9); ClrEol; Write('=> ');
ReadLn(Source_Name); Upper(Source_Name);
If Pos(' ',Source_Name) = 0
    Then
        Source_Name := Concat(Source_Name,'. LST');
GotoXY(43,9); Write(Source_Name);
{$I-} Assign(File_In, Source_Name); {$I+}
If IoResult > 0
    Then
        Error := True
    Else
        Begin
            {$I-} Reset(File_In); {$I+}
            If IoResult > 0 Then Error := True;
        End;
    If Error
        Then
            Write(Chr(Bell));
Until Not(Error);

GotoXY(10,10); Write('Enter Destination file name');
Repeat
    Error := False;
    GotoXY(40,10); ClrEol; Write('=> ');
    ReadLn(Destination_Name); Upper(Destination_Name);
    If Pos(' ',Destination_Name) = 0
        Then
            Destination_Name := Concat(Destination_Name,'. LST');
    GotoXY(43,10); WriteLn(Destination_Name);
    {$I-} Assign(File_Out, Destination_Name); {$I+}
    If IoResult > 0
        Then
            Error := True
        Else
            Begin
                {$I-} Rewrite(File_Out); {$I+}
                If IoResult > 0 Then Error := True;
            End;

```

```

    If Error
        Then
            Write(Chr(Bell));
    Until Not(Error);
    WriteLn;
End;

```

```

Procedure Say ( Message : Str );
Begin
    WriteLn(File_Out,Message);
    WriteLn(Message);
End;

```

```

Procedure Write_Pairs;

```

```

Var

```

```

    Ref : Pair Pointer;
    label : Str;
    Address : Str;
    Line : Str;
    Count : Integer;

```

```

Begin

```

```

    Count := 0;
    Line := '';
    WriteLn;
    Say('Symbol Table:');
    Say('');

```

```

    Ref := Pair_List;
    While Ref <> Nil Do
        Begin

```

```

            label := Concat(Ref^. Item. label, ' ');
            Address := Concat(Ref^. Item. Address, ' ');
            Line := Concat(Line,
                Copy(Address,1, 6),
                Copy(label, 1,16));
            Count := Count + 1;
        End;
    End;

```

```
        If Count = 3 Then
            Begin
                Say(Line);
                Line := '';
                Count := 0;
            End;
        Ref := Ref^. Next;
    End;

    If Count > 1 Then Say(Line);

    WriteLn;
    WriteLn('End of Symbol table');

    Close(File_Out);
End;

Procedure Read_Pairs;

Var Line : Str;
    Item : Item_Type;
    NewRef : Pair_Pointer;
    Position : Integer;
    Location : Integer;

Function Copy_Text : Str;

Var
    Sub_String : Str;

Begin
    While Line[Position] <> Space Do
        Position := Position + 1;
    Sub_String := Copy(Line,Location,Position-Location);

    While Line[Position] = Space Do
        Position := Position + 1;

    Location := Position;
```

```

Copy_Text := Sub_String;
End;

Begin
Pair_List := Nil;
While Not(Eof(File_In)) Do
Begin
    ReadLn(File_In,Line);

    Location := 1;
While (Line[Location] = Chr(10)) or (Line[Location] = Chr(13)) Do
    Location := Location + 1;
Line := Copy(Line,Location,Length(Line)-Location);

If Length(Line) > 11 Then
Begin
    Line := Concat(Line,' . ');
    Position := 1;
    Location := 1;

    Repeat
        Item. label := Copy_Text;
        Item. Address := Copy_Text;

        Repeat
            If Length(Item. label) > 14 Then
                Begin
Write('label ');
Write(Copy(Item. label,1,14));
LowVideo;
Write(Copy(Item. label,15,Length(Item. label)-14));
NormVideo;
WriteLN('' is too long. ');
Item. label := Copy(Item. label,1,14);
                End;

(* Check not already there *)

If Link_There(Item. label) Then
                Begin

```

```
        Write ('" ',Item. label:14,' " already exists, ');
        Write ('Change to => ');
        ReadLn (Item. label);
    End;

Until (Length(Item. label) < 15) and
    Not(Link_There(Item. label));

(* Link Item into Link List *)

    New(NewRef);
    NewRef^. Item := Item;
    NewRef^. Next := Pair_List;
    Pair_List := NewRef;

    Until Line[Location] = '. ';
End;
End;
Close(File_In);
End;

(* MAIN program loop *)
Begin
    Pair_List := Nil;

    Title;
    Get_Files;
    Read_Pairs;
    Write_Pairs;

    WriteLn('Converstion compleated');
    WriteLn;
    CrtExit;

End.
```

P.Knaggs. 12, Seymour Road, Chippenham, Wiltshire. SN15 3NH.

Things you did not want to know about the Tandy 1000 Pt 1.

Despite its pure white exterior so innocent looking, lies a conglomeration of hardware "funnies". Mind you I only found this out after buying one of the beasts, but to my surprising delight things were nowhere near as bad as I had first thought. The helpful salesman's, "It is fully IBM software compatible", left me as an engineer thinking, "What about its hardware compatibility? Alright I heard the one at the back say, I should have found out before handing over my money, but you must appreciate I was in the state where reason is disregarded and my pulse rate was as high as the asking price with anticipation of owning my MS-DOS machine.

Opening the cover revealed the quoted 3 expansion slots, however I was already occupied by the additional board making the 1000 up to 256K. If I needed to expand any further I had to fill in the missing RAM chips (16 in total) order a 516K memory board (another slot gone) and another set of RAM chips to fully propagate the machine to 640K. Cost = "How much?, you must be kidding, etc., etc.". I was not standing for that there must be a replacement for them, unfortunately MOSTEK U.K. did not know the American numbers would you believe (by the way I had no access to a technical reference manual) so it really was simply a matter of finding a replacement with an acceptable access time. This was duly done, you all must know by now that they are 4164-15 (4164's with a 150nsec access time). So I went ahead, obtained same and now the prompt said 384K Memory, a great improvement for under 20 pounds.

My enthusiasm knew no bounds, "What about a faster processor", I asked myself. A one hour drive later and a V20-5MHz made my IBM rating zoom from 1.0 to 1.7 and the speed was noticeable. Things are looking up, I said to myself, and in a state of mild euphoria asked Tandy the question that left me in a state of deepest depression, what was that question you may well ask? HOW much is a hard disk upgrade? The reply was at least 9.0 on the Frank Tyson scale.

The British Bulldog in me gradually broke forth like the HULK only more determindly. I was going to have a hard disk and at a reasonable price. To say I had few difficulties would have been the

understatement of the year. I tried the W.D. Programmable controller it seemed to recognize my ST225 MB disk but nothing else, no start to the low format I longed for. Boring bit, Boring bit, Boring bit. When you first switch on do you see the BIOS message, well mine said 01.00.00 response from you know who, "has a bug/not meant for hard disk/blah blah", so I part with 26 pound for a 01.01.00 and to my joy after entering debug and -G=C800:5 she started formatting beautifully and is still now up and running.

Any 1000 can be made a hard version for a sensible amount, it is a shame Tandy admitted this and made the cables standard and supplied us with info on all know bugs. Enough of that -ve outburst, I am looking forward to my upgrade in three weeks time to a 1000SX, I will keep you posted on the outcome. May all your back-ups be in time. Shalom,

John B.

(John, could the next article be on disk please? saves on typing, Ed.)

[illegible]

THE TRANSPUTER

I don't think I have contributed anything to NATGUG News since I relinquished the editor's chair, so I thought I'd bore everyone with an account of my latest toy, the Inmos transputer. Most of the following verbiage is taken from a little newsletter that I send to people who have enquired about the transputer systems I've developed.

The transputer is basically a microcomputer with on-chip memory and links for connecting transputers to each other. Inmos currently produce four types of transputer:-

- T414 - 32-bit, 2K bytes on-chip RAM
T212 - 16-bit, 2K bytes on-chip RAM
T800 - 32-bit, 4K bytes on-chip RAM, with on-chip maths
co- processor
M212 - 16-bit hard/floppy disk controller, 2K bytes on-chip RAM

32-bit transputers can address a maximum of 4G bytes of RAM (at current prices this will cost about 640,000 pounds using 1 Mbit devices!), and the 16-bit devices can address a maximum of 64K bytes of RAM.

Although transputers are extremely powerful devices when used on their own - the T800 is currently the most powerful 32-bit processor available, and makes the Intel 80386, Motorola 68030 and even the Fairchild Clipper look a bit sick - the transputer is best used as a parallel or concurrent processing element. That is, high performance concurrent systems can be constructed by using several transputers, connected together, via their links. The links are very high speed (10 or 20 Mbit/s) serial channels, with DMA, enabling rapid data transfer between transputers without slowing the processors appreciably.

Designing transputer-based systems is amazingly straightforward. The T414 and T800, for instance, have a built-in DRAM refresh capability. Because all transputers can be configured to boot from one of the links, EPROMs and ROMs are not needed in many cases. Memory locations may be PEEKed and POKEd via links, following a reset, which means that conventional monitors and debuggers may be dispensed with, and testing prototype hardware is greatly simplified. All transputers use a 5 MHz input clock which is multiplied by internal circuitry to give the 15 MHz, 20 MHz or 30 MHz processor clock. This means that one does not have the problem of distributing a high-speed clock signal around the system.

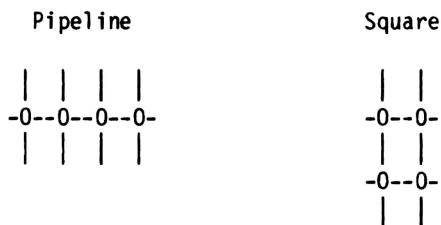
Conventional programming languages are not really suitable for applications involving parallel or concurrent execution of programs, so the occam programming language is generally used with transputer-based systems. A fundamental concept in occam (named after William of Occam, a philosopher whose dictum was, basically, keep things simple) is the 'process'. A software/hardware system is designed as interconnected processes, communicating via point-to-point channels. Processes may themselves consist of processes, in a hierarchy. Several processes may be run on a single transputer, using a conventional multi-tasking technique (it's part of the hardware), or, for maximum performance, processes can be run on separate transputers, in parallel, communicating via the links. Occam was designed first, by the way, and the transputer was designed to execute occam as efficiently as

possible. Other programming languages are available, however, such as C, FORTRAN and Pascal. Assemblers are also available from several suppliers.

With Inmos charging over 4000 pounds for a transputer development system, I decided I would produce something cheaper for my own use, and for sale to individuals and companies that wanted a low-cost transputer system. I have accordingly designed a couple of 'transputer modules'. The TM1 has a T414 transputer and 256K of RAM on a four-layer board about 75 mm by 95 mm. Some of you may have seen it at the last Swindon meeting. The new TM2 module is the same size but has 1 Mbyte of RAM, using the latest 1 Mbit (256K by 4) RAMs. The basic TM1 costs #450, and the TM2 starts at #650. With my PC interface which sells for #150 and the TM2 (you need at least 1 Mbyte for the various compilers) I can supply a complete development system ready to plug into a PC for #800, less software.

Because of their small size and flexible mounting arrangements, my modules are ideal for use in very compact, powerful, parallel processing systems. Southampton University have just purchased 16 TM1s for an Alvey-funded project to investigate a novel Fortran compiler, which will be distributed over the network of transputer modules.

A couple of simple configurations using my transputer modules are:-



When using networks of transputers, certain problems are best suited to particular types of network. Networks can get quite complex - some people use multi-dimensional hypercubes.

If you want to find out more about the transputer the Transputer Reference Manual is recommended. It's available from Inmos and their

If any members would like more details of this project, please get in touch. NATGUG members can have a discount of 10% off any of my hardware and software, provided it is for their own personal use.

[illegible]

When I retired at the beginning of May I resolved to use some of all that spare time to contribute to the Newsletter more frequently. What spare time - I seem to be busier than ever ! Now, though, shamed by the magnificent contributions in Vol 9 Issue 1, I will really make an effort.

I seem to have been one of the few people praising DOSPLUS 4 and think it is time I banged the drum a little more ! I have been doing some sums to add up the cost of all the updates and add-ons for TRSDOS, and comparing them with the total cost of DOSPLUS. Now that TRSDOS 6.3 has come along I am quite certain that DOSPLUS at around #100 offers much better value. I have been using it for 3-4 years now, and there have been no updates or add-ons required. It accepts dates to a.d. 2000, is fully compatible with TRSDOS files, and already has all those useful shorthand tricks that NEWDOS had, using up and down arrows to move through Basic programs, etc. Editing includes DI and DU, but adds DR, which moves a line to a new place and number, and renumbers all references to it. It comes with a set of Basic enhancements that make TRSDOS look silly, including cross-reference listing, a search and replace string function, and a very full array sort with key and tag arrays, both either string or numerical. INPUT@ has always been there, and the ability to use labelled lines instead of line numbers. Errors in basic statements are printed on the screen, not just line numbers.

and there is an ingenious use of OPTION to convert Model I/III programs to Model 4 by inserting the extra spaces. There is a MAP utility which lists every file on the disk showing all the sector numbers it uses, and a RESTORE utility which will recover killed files not yet overwritten. Particularly useful is the facility to write any number of configuration files to suit different applications, and store them on disk under different names. A diskfile editor and a disk zapping program are included, together with a full screen text editor, a linking assembler and a labelling disassembler. As well as a memdisk and a spooler, it also has a filedisk driver, enabling you to create a "disk" within a file. This is what LDOS calls a Partitioned Data Set and charges extra for. It is faster and more flexible than TRSDOS. The extraordinary thing is that the DOSPLUS people were able to put all this in the DOS four years ago, while LDOS periodically adds on one or two features at a price and calls it a break-through !

Having said that, there are one or two things NEWDOS would do, like single stepping through basic, and renumbering lines to move whole blocks around, that I miss. On the other hand, I have found NEWDOS80 with 80 track double sided disks is very prone to clobber them with "Sector Not Found " errors, usually in the directory. It may be my disk drives or the computer, but the other DOSes don't do it!

Programs to read and load complete memdisks have been much discussed recently. I am sending a couple I wrote, one each for TRSDOS and DOSPLUS, to the Model 4 librarian. The TRSDOS version loads a complete memdisk and installs its driver in 14 seconds flat ! Also a disk indexing program which is very fast and easy to use. I have a couple of programs for using Banks 1 & 2 direct from Basic which I will send in later - they need a bit of tidying up first.

I have been using Banks 1 and 2 recently to hold an alphabetical or numerical index to a database file on disk. This index, because it is in alphabetical order, makes it possible to use a Binary Search to find a particular item very quickly - I have a list of 450 chemicals with names up to 36 characters long, and the data on the one I want is found almost instantly. The great advantage of using the Banked memory is that a new item can be added in its correct place by using LDIR to shift everything above it up in one block move, whereas if it were on disk an endless succession of GETs and PUTs would be required. I was

appalled at the time dBase II took to do the same job when I tried it out for comparison.

There have been requests for hints and tips on the Model I, and the gold connector has been mentioned again. I got over this problem in a totally different way. Accepting that the exposed parts of the edge connectors were oxidising, I tried the traditional smear of grease which was a slight improvement, but it then occurred to me that the trouble must be when the connector was MOVED so that the oxidised part came under the contact on the connecting link. With the very short and stiff link, and the bashing most of us give our keyboards, this seemed a likely cause. So I took the computer board out of the keyboard case altogether and laid it naked on top of the expansion interface, and then connected it to the keyboard with a 4 foot length of 20-way ribbon. Its been that way collecting dust for four years now and still works every time. The flexible printer lead is probably the reason why the tinned connectors on the Model 4/4P don't give trouble.

A tip I gleaned from an advert in Micro-80 is too simple to be true, but I find it very useful. Cut a strip from a postcard or visiting card about an eighth of an inch wide and one and a half inches long. Slide this into the folded-over corner at the back of a floppy disk case so that it fills the write protect notch and you have a removeable/replaceable write protect device that is easier to use than the conventional sticky tabs, and doesn't make the disk messy. If you get the length right the white end sticks out of the front of the drive door and serves as an indicator. The sad news is that only disks with spot-welded envelopes will accept it; this excludes Os's excellent low price black disks, although his coloured ones are OK.

Further tip applying to Model I, III, and 4/4P users. Trying to print out formatted tables of text and data can be a terrible hassle, involving several lines of complicated string functions, tab(xxx), print@(x,y), and so on. If some of the columns may or may not be blank, and some may have text carrying across several columns, programming it becomes a nightmare. If on top of that you want to have the option of printing to the screen or on the printer, you then have to write the whole lot out again using lprint instead of print. I know there will be a chorus of "You should route the display to the printer", but it is not always that easy and routing instructions have

a nasty habit of going wrong for me ! Anyway for model 4P users at least (or some of them !), printing a pound sign on the screen means using CHR\$(0)CHR\$(6), which means nothing at all to the printer !

The solution I found is to open a dummy file and use the file I/O buffer space to build the line up. A file buffer has 256 bytes in it, and as the average printed line has 80 bytes, you could get 3 line buffers into one file buffer. I'll only talk about 1, though - any more are the same principle as the first.

Suppose you want to print a 10-column table with the following spacing:

Col 1: 6 bytes; Col 2: 8 bytes; Col 3: 36 bytes; Col 4: 10 bytes;
Col 5: 5 bytes; Col 6: 6 bytes; Col 7: 6 bytes; Col 8: 6 bytes;
Col 9: 6 bytes; Col 10: 11 bytes

All you do is open a dummy file:

```
10 OPEN"R",1,"DUMMY1/RND"
```

Field it to correspond with the column lengths:

```
20 FIELD 1, 6 AS B1$(1),8 AS B1$(2),36 AS B1$(3),10 AS B1$(4),5 AS  
B1$(5), 6 AS B1$(6),6 AS B1$(7),6 AS B1$(8),6 AS B1$(9),11 AS B1$(10)
```

Finally, remembering that you can field a buffer in as many ways as you like at the same time, you field the whole line:

```
30 FIELD 1, 80 AS B1$(0) and then close the file: 40 CLOSE 1
```

You must not now use 1 as a file number, but even though the file has been closed, the fielding will remain in force.

From now on, filling and displaying your table is simplicity itself. Simply use a succession of statements like:

```
100 LSET B1$(1)= A$ (to fill column 1)
```

```
110 LSET B1$(2)= B$ (to fill column 2)
```

.

. and so on

.

```
or 150 RSET B1$(5)= Q$ (if you want the column right-justified)
```

.

etc.

Because you are using LSET and RSET, any unused parts of the columns are filled with blanks automatically, saving you the trouble of using tabs, and also there is no garbage collection because all the work is being done inside a buffer.

To print or lprint the line, I use a print flag PF, and a line like this:

```
1000 PRINT B1$(0):IF PF THEN LPRINT B1$(0)
```

This prints the whole line in a single instruction. If I have the pound sign problem mentioned above I use additional statements:

```
1000 PRINT B1$(0):IF NOT PF THEN 1030
1010 X=INSTR(B1$(0),CHR$(0)+CHR$(6))
1010 IF X THEN MID$(B1$(0),X,2)=" x"
1020 LPRINT B1$(0)
1030 .....
```

(assuming that "x" comes out as a pound sign on your printer).

There may be occasions when you want text to carry straight across two or more columns. The fielding method might be made for this. All you do is add another line:

```
22 FIELD 1,14 AS DU$,51 AS B1$(11),35 AS DU$
```

This will enable you to write straight across columns 4,5, and 6 with one entry by LSETing or RSETing B1\$(11), without interfering with B1\$(4),(5) and (6). Don't forget to dimension the array at the start of the program if you are going above element (10).

There is one disadvantage of this method, and that is that you cannot use the PRINT USING"####.##";A! instruction to format and round up or down figures displayed. I had to write a complicated function to cope with all cases from .006 to 999, and display them as 0.01 and 999.00. In fact to keep it under-standable it took two nested functions:

```
FND1$(A!)=STRING$(-(A!<1)*2,"0")+MID$(STR$(INT(100*A!+.5)),2) and
FND2$(A!)=LEFT$(FND1$(A!),LEN(STR$(INT(A!)))-1)+". "+RIGHT$(FND1$(A!),2)
```

FND1\$ is never used on its own, it is merely a building block to use in FND2\$ (whose name came from the fact that it displays a single precision number to <2> places of <D>ecimals).

Has anyone any use for a Percom data separator ? (Used in the Model I in single density only to reduce disk read errors). It is superseded when you fit a double density adaptor.

Small requests re the Newsletter format:

- 1) Several contributions appeared without any indication as to who they were from. It makes the newsletter very impersonal when this happens.
- 2) We have a lot of Anons! May I suggest they adopt individual pen-names if they wish to remain anonymous ? At least they then have an identity !
- 3) I find it confusing when the editor's comments (good tho' they be) are inserted in the middle of a contributor's text. In the old days Leon used a different size print and a shorter line, which helped to keep them on a different plane, as it were! I know I'm nit-picking!

Finally (at last, do I hear?), congratulations to all on the rejuvenation both of the newsletter and, it appears, the group as a whole. The change is marvellous and let's hope it will continue.

Henry H. Shepherd, 3, White House Close, Shippon, Abingdon, OXON.
OX13 6LP. (0235-21921)

** Re: 1 & 2. At first, that is from Apr. '87, LETTERS appeared with only a "reference" as to who they were from, this was to be fair to the person who contributed, as no prior notice stating that all letters received would be printed. This notice, now having been given, means that all letters/articles have a name to them, unless a request to use ANON is also received. Anyone not wishing a letter to be printed should say so please. Since a member uses ANON, then he does not wish

Re: 2. Leon used to "Cut-and-Paste", so normally his print was different in style to the article. I use a word processor and daisy wheel printer (although this could change), I do not have the time to stop and change print wheels. I am very happy to take on board suggestions that will decrease my time editing the Newsletter, but you will have to please accept that most probably you will have a very hard time convincing me that I should accept something that is going to increase that time. Ed. **

[illegible]

An open Forum on MSDOS and associated subjects.

In the last forum you said that BASIC programs could be transferred to MSDOS, why won't they run under the Amstrad PC1512's BASIC?

The simple answer to that is that they will. However, Locomotive BASIC2 uses a different dialect of BASIC to MBASIC or TRSDOS BASIC. This is especially noticeable when it comes to file handling. Also BASIC2 runs under GEM, that operating environment that we have all come to love or hate as the case may be. This means that some of the

commands are not available direct from the keyboard but have to be accessed from the menu bar found in GEM. The major difference with BASIC2 is that there is no need for line numbers when writing programs, but programs with line numbers will run and can be renumbered in the normal way.

BASIC2 handles it's graphics in a vastly different way to other BASICs and this means that any program containing graphics will have to be extensively re-written if it is to run under BASIC2. This is not unusual as very few BASICs have compatible graphic commands. This also applies to PEEKing and POKEing which could not be compatible when using different machines. If you are having major problems running your programs under BASIC2 and if like me you don't like the fact that it runs under GEM, then there are alternatives for example BASICA, which is Microsoft's standard BASIC and is much more of a "standard" BASIC being very similar to to MBASIC under CPM. Also there is GWBASIC which is short for Gee Whiz BASIC and is said to be a better BASIC for PC Clones, it is very similar to BASICA. There are bound to be more specific queries on BASIC2 and I should be able to answer them if only for the fact that I bought the manual, not included in the price of the Amstrad PC 1512.

I have bought an Amstrad PC 1512 and am impressed with it's performance but some games programs run too fast for me to even attempt to play them. What can I do ?

This one is simple, well fairly simple. The Amstrad runs at 8 mHz instead of 4.77 mHz, which normal PC's run at. This means it runs about twice as fast, well that's the theory. Therefore any games which are not written specifically for the Amstrad will not have been written for 8 mHz and will run nearly twice as fast. How can you slow them down ? There are, so I am told utilities to make the computer waste about half of it's time when running programs, thus the result is a game which is playable. But beware these utilities will remain in operation until the machine is rebooted and therefore your Supercalc spreadsheet or your database program will run at half speed as well. I don't know any specific names of these programs and after some research have drawn a blank. Perhaps Ariella's library listing may come up with an answer.

Next not a question but some news. I have just bought a copy of Mix C for my PC 1512, it is a fast compiler and very well documented. For some time I have toyed around with the idea of writing C programs but understood it to be time consuming when you have to write the source with a text editor then compile this source then link the object code to finally produce an executable command program. All of this only to find that it has a bug. This put me off for some time, however Mix C's advertising blurb made mention of a trace program which would single step and more through your C9 program displaying various items of information as it went along. This was more like it so I phoned the UK distributor who gave me some very good information about it and without any hard sell tactics convinced me that this was what I wanted. I ordered a copy of the "Complete Works". This is a compiler, a linker, Ctrace, an editor, lots of examples and an assembler utility. All for 83.44 pounds inc. VAT. The UK Distributor is:- Analytical Engines Ltd., PO Box 35, Eastleigh, Hampshire. SO5 5WU. Tel: 0703 262099 (Answering Machine until 6 pm.)

I fired up the program, as usual skipping whole chapters of the manual. All was not doom and gloom and I found that a useful tutorial was contained in the very professional and glossy manual. Having written my first program I was eager to try out the CTRACE utility. I was pleasantly surprised to find that a control key was provide within the text editor to compile link and trace the current C Source file. This took about a minute to achieve. The trace program then allowed me to step through the program whilst watching variables change or move through at a slow (tracing) speed or execute the program at full speed. Not a difficult task when the program outputs "Hello World". I have not had time to fully evaluate this program yet but may be able to do a full review later. What does intrigue me is that there must be other C users out there, either using CPM or some of the TRSDOS Compilers (LC etc). Is it possible to hear from you a little more frequently as I may need help myself in using the language.

My brother asked me a question last week which had me stumped for a moment. He uses a PC 1512 and wanted to switch his Amstrad DMP 3000 printer into uni-directional (a big word for one way) printing so that the vertical lines on the forms he was printing would line up correctly. My first thought was what was the the point of printing in two directions if the printer does not line up vertically. However

maybe this is an inherent problem with all printers. How to solve it was another thing, we tried sending codes to the printer from BASIC. This worked fine but would involve booting GEM running BASIC and then running the word processor. A long winded process. From my days when I used the Model I and IV, I remembered various utilities that would set up and initialise printers, also that I had sent printer codes to my Epson by writing a dummy file containing just that code and then directing the file to the printer. Here surely was the solution. Just as work was about to progress on the matter I remembered that my latest copy of PC-Plus (an Amstrad Magazine) had a disk attached to the front and it contained a routine to initialise printers. This was found, PRCODES being its name. It did the job perfectly and my brother retired to his work a happy man. It just goes to show there is no need to reinvent the wheel. It still left me with the thought could I create a file containing just the printer code and could I direct it to the printer. Using a file editor I created a file containing the hex code 0F which sets my printer into condensed print. I then typed at the MSDOS prompt. COPY PR.DAT LST: PR.DAT being the file I created, LST: being the MSDOS name for the LiST device or printer. This worked a treat and configured my printer for condensed print as required. This now has me thinking and although it has been done many times before I want to write a printer setup program. So my next task with C is to do just that.

Finally a small batch file that I find very useful, I call it CAT.BAT. It saves you having to type the complicated DIR command to get a directory in column mode instead of the full listing with dates and times etc. The command in MSDOS to do this is DIR /W. CAT.BAT is simply an extension of this. Create the following file with any word processor or line editor. DIR %1/W/P The DIR part is the DOS Command and the /W sets the display into the column or Wide mode and the /P Pages the screen and prompts each time the screen is full of file names, usually only possible with a hard disk. That just leaves the %1 bit of the file. This is the Batch File Command to extract the first parameter from the command line and substitute it in the batch file where the %1 is located. This means that typing CAT *.COM will be interpreted by CAT.BAT as DIR *.COM/W/P thus listing all *.COM files, any parameters can be used on the command line for example CAT B:*.C?M to give DIR B:*.C?M/W/P listing all *.COM and *.CIM etc. I have set my command CAT to the SHIFT F10 key so that it

Dave Holman, 160 London Road West, Bath, Avon. BA1 7QU

[illegible]

While working on this programme I had an idea that I could use one of the windows to display a calendar. I have added some code to the basic programme to achieve this and the revised programme is reprinted in the listing as "CAL"

During the development of this code I made a few modifications to the basic programme as follows:-

1. SCR1 is now in the centre as a "scrolling" window. SCR2 at the bottom right is the window for calendar display.
2. The original programme left the <F1>, <F2> and <F3> characters displayed as the first character of the window. The two additional lines (1840, 1850) allow this character to be "overwritten" by the first of the keyboard input text keys.
3. There was no access to the "string" display routine within the original programme. As a demonstration I use this routine to display the "day" heading for the calendar.

USING THE WINDOWS

From DOS ready type CAL <ENTER>

Pressing <F1> will display a "cursor" at top left of window (screen) "0" and allow input of text in the "overwrite" mode.

Pressing <F2> will display a "cursor" near the centre of the screen and this represents the top left of window (screen) "1". Entering text in this window will demonstrate the scrolling techniques.

Pressing <F3> will display the current month calendar in the bottom right corner. While the calendar is displayed pressing the <UP-ARROW> will display the previous months calendar and pressing the <DOWN-ARROW> will display the next month. Continued pressing of the <ARROWS> will "roll" through the months of the current year.

Pressing <ENTER> at any time will return to DOS ready.

Some further enhancements that I can think of and which other readers may like to develop for their own applications are as follows:-

1. During keyboard input interface the <RIGHT & LEFT ARROW> keys to allow corrections to input.
2. Limit character display to ASCII characters (20H-7FH) only. Characters >7FH are already excluded.
3. Saving the text inputs or "windows" to a buffer and/or disk file to enable recall at a later date.
4. Access to "WINDOWS" or "CAL" from BASIC. A possible method is by use of USR routines and data statements. Note that "CAL" is written to be a relocateable programme although initially assembled at 3000H.
5. Use bank switching facility to enable use of alternate video screens.
6. Highlight the current date in calendar by use of inverse video.
7. Use the computer to create the MHTAB to suit other than the current year.
8. Use one window as a "calculator" window.

I have learned considerably by "playing" with "WINDOWS" and "CAL" and look forward to seeing other readers comments/inputs.

****.** Barry has supplied to me a copy of CAL/CMD and also CAL/SRC. The source listing is 373 lines long. Should there not be sufficient room in this issue to print the complete listing, and if any Member is in a hurry to have same, then please forward a disk to me, in a suitable mailer, together with 24p. return postage. If your disk is not formatted, I will format in LS-DOS 6:3, 40T, S/S, D/D, then copy the files over. I shall be at Swindon with the above files. Ed. ****.**

BITS and BOBS

Dear Gordon,

Just to keep the editor happy and to help with filling up the pages enclosed is disk containing 1,000+ words about nothing. The subjects are sometimes a bit difficult to find and, yet, I feel that I should make an effort.

I had four messages on Prestel as a result of quoting my MBX number and one of the chaps promised to write something on the subject of bits and bauds. I am also trying to get my friend in NI to put his fingers to the keyboard but I must remember to tell him that you can access IBM format disk.

Don Bannister sent me a message too (one of the four). He is very busy these days and hardly has any time to touch a computer apart from occasional logging onto Prestel. Best wishes, ANON.

Not a long time ago I wrote about Prestel and I included, in the closing paragraph, my MBX number. This time there were some results and I received four messages. So now I know - including my friend in N Ireland and myself there are at least six of us on Prestel. A few more and maybe we could have something in Clubspot 810. Tandy used to be on Prestel in the good old days, but it has disappeared as the number of Tandy users decreased or at least Tandy owners were not using the facilities. And yet it seems impossible that there are less Tandy machines than, let's say, were there four or five years ago. Machines are still sold and even those of us who replace equipment from time to time sell the old stuff and someone buys it and uses it. So why is our membership not growing? Of course there was a period when we stopped advertising the group in the computer papers and I don't think we are doing it now either - at least not in the Personal Computer World. Funnily enough, Personal Computer World published in the August and September issues a directory of users groups and we are listed but under contact there is still Brian's name. I don't know whether this is intentional or is the ACC not aware that we have now a different secretary?

Two of my contacts were from Scotland - one even further North than I am and one, I think, a couple of islands to the South of me. So I am not the only one in the Highlands and Islands.

Some time ago, when NATGUG used to run its own BB, there was talk about E-mail and using E-mail for submission of the articles, letters etc. dBASE group, who are now starting own BB at #23 pa for private member with the access limited to off-peak periods (I'm sorry Dr P - I won't be joining as it is too expensive for a retired old codger), also accept articles by E-mail (Telecom Gold) but I wonder whether it is worth it as far as the cost is concerned. In the days when I was still using Model 4 and MDM730, MDM told me on one occasion that the time necessary to send a medium size file at 300/300 speed would be (if I remember rightly) some 100 minutes. At this rate it is much cheaper to pay for a first class stamp. Somewhere recently I read an item about BT Gold's new price structure. Apparently they are lowering slightly the time charges but are increasing the charges for volume of data. This is a 'heads you lose, tails I win' situation. If one operates a slow modem BT Gold cashes on the access time (and BT on telephone charges) and, if one tries to reduce the time by using 1200/1200 modem then BT Gold coins it on the amount of data sent. E-mail is of value where quick transmission of data is important but, otherwise, too expensive for the amateurs. Those interested in BT Gold could do well to read an article by Peter Toothill in the September issue of Personal Computer World about a cheaper way of accessing BT Gold through Microlink.

My admission of ignorance regarding the difference between the bps and bauds provoked a threat to enlighten me on that subject by an article in NATGUG. I expect you to keep your promise, ???, and I will read it with pleasure but whether I will understand, that is quite a different matter. I find that as I am getting older (or got old) the ability to grasp is getting less and less. This applies not only to the brain - the hands are getting affected as well.

It is nice to read that Tandy will co-operate with NATGUG and that, maybe, we will gain some new members but what I would like to know is why Tandy is no longer attending the different shows. I have not seen Tandy represented (apart from Molimerx) at the last few Compecs, which I attended, and they will not be at this year's PCW show. Nor have I seen any adverts from them for quite a while in the Personal Computer World. Is it possible that Tandy (UK) tries to fade away without actually announcing that they are abandoning the UK market?

Some few weeks ago, before I smashed the car and had to order a new one, and also before the lowest tender for house extension (which we must have as half of our possessions including all my woodworking machinery are still in Oban store) turned out to be #44K, whilst the

surveyor costed it at #26K, I ordered an EX1000 printer as I suspect that my FX100, which is now about 3 - 4 years old, will require replacing sooner or later. Needless to say I have been talked into it by my NI friend - as usual. EX has turned up and I have been playing with it. This is a fairly heavy bit of equipment and has quite a few improvements on FX100. To start with it is much faster - printing at 300 characters per second in elite, 250 in pica and 50 in NLQ mode. It has both centronic and serial interfaces, 8K memory and it can work either in Epson or IBM mode. It has international character sets for 13 countries and can do some fancy graphics but I was never good at graphics so I don't understand that part of the manual at all. The type of print can be set on the dip switches or selected from the panel on the printer so there is no longer any need to send the control codes from WS. The panel selection can be: in draft mode - pica or elite and normal or condensed and in NLQ mode Roman in pica or elite, normal or condensed or Sans Serif as for Roman but proportional print can only be normal. Additional characteristics can be obtained through software control such as emphasizing, double striking italics, double width, condensed double width and, of course, the usual underlining, subscripts and superscripts. The manual lists some 98 different commands which can be sent to the printer. The printer has an in-built tractor on the back (controlling paper into the roller) and also a very nice arrangement for single sheet feeding. With the printer off-line the paper is pushed until resistance is felt, the paper bail pulled forward and the roller rolls, feeds the paper to about the top of the roller and, as the paper bail is pushed back, the paper is rolled back with the top edge under the printer head - fancy that. There are some optional extras too like single sheet feeder, memory buffers of 32K or 128K which can be installed by the owner (and the manual says how) and a colour option. Ribbons are expensive - about #9 each but no doubt cheaper clones will appear sooner or later on the market. The machine can only be described as noisy but it shifts. It just eats the paper. I used to have trouble with printing from FSE and the computer used to freeze after printing about six or seven complete lines. I suspect that the printer could not keep up in spite of mode LPT1:,,P and so was giving up and refusing to accept any more data for evermore. I used to get stuff printed but I had to print it in bits. EX1000 makes nothing of FSE - just belts through the text without pausing. Well, all I can say is I am glad that the extension tender and smashed car came after I ordered the printer as I have another expensive toy to play with. After all one does need some amusement after cutting expanses of grass with a strimmer whilst being surrounded by clouds of midges.

Anon.

Dear Editor,

I have not got a small rock that I could write on! but in response to your comments on page 7 of the August Newsletter.

(**. Ken goes on to say that he has already renewed for 80 Micro and Northern Bytes (note comment in Sex's Report [formal]) and is interested in The Misosys Quarterly and maybe in the West Midlands workshop, (no further action to be taken with this). Ed. **)

The last two paragraphs of Ken's letter are as follows:-

For sometime I have been going to do you a note on adding two external Tandon drives (as the internal) to the Model 4P. Basically as the Jan. '86 80 Micro. From my work notes however I was able to write to the Rev. R. S. Wilson to offer a possible solution to his query on page 59 of V.9, Is.1. He later wrote to say it had solved his problem!

I hope the forgoing is of some use to you, and thanks for the much improved Newsletter and all the work it entails.

Sincerely, Ken T. Rogers.

(**. Ken, Thank you very much for your comments and for sharing your work notes with us all. This has helped at least two of us, your Treasurer and myself, we had just been looking at using our ex 4P Tandon drives. Thank you also for your report of the "Blandford Open Day", I echo your thanks to Os, etc. Your notes now follow. Ed. **)

USING TANDON DRIVES EX.4P AS EXTERNAL DRIVES

As installed in the Model 4P the Tandon drives are obviously drives 0 and 1 and Tandy select the two drives by removing the appropriate pins from their internal edge connectors to de-select the unused drives. If one is going to use these drives externally then it would seem that all one has to do for drive selection, is to make sure that (D)rive (S)elect lines DS2 and DS3 are continuous to the appropriate external drive and that DS0 and DS1 are not connected externally. There is however a snag!

If you look carefully at the left rear of the drive PCB where the edge connector fits you will first see the empty socket for the terminating resistor block, than a series of "links" in a 16 pin DIL

socket marked U19. Viewed from the rear and counting from your right, the links are No.2 - DS0; No.3 - DS1; No.4 - DS2; No.5 - DS3. Note that 2,3,&4 all have 'solid' links but No. 5 (DS3) is broken.

To get a drive to work as No. 3, remove the link block, remake link No. 5 and 'open' links 2,3&4. For drive No. 2 merely 'open' links 2&3. The other links (1,6,7&8) are left undisturbed !

BLANDFORD OPEN DAY

Yes! its come and gone again and for those that did not make it this year, you missed a very good day not to mention the lunch.

By mid morning there were some twenty machines in the systems room and it was worth a walk round just to see the different types. There were two Model I's both working and the one attracting quite a bit of attention as it was sitting under a banner announcing its tenth birthday and displaying a 'rolling caption' (if that is the right term) discribing its history.

Possibly at the other end of the scale, Leon Heller demonstrating his Amstrad PC modified to take a board using a 'Transputer' was doing things at mind boggling speeds.

There was only one Model III in evidence and this was demonstrating Packet Radio in operation. At first one might think what has happened to all the III's so quickly but by the number of 4P's in use bearing in mind the 'P' stands for portable; perhaps as in my case the III stays at home and the 4P travels!

During my first look around I noticed two youngsters glued to a colour monitor which clearly displayed the words "Taxes to pay", I passed on thinking its all getting beyond me. Around mid-day however they were still sat there but this time the screen said something about "Monopoly", I felt better!

In addition to the systems room of course there were lectures in the "Chalet" and not to be missed, although actually at ground level, Oz's "Bargain Basement". Here were books, programmes and equipment much of it at greatly reduced prices. Some of the programmes on the racks clearly marked all at #1.00 each still carried their original prices - just to make you think!

Well one could go on, but to sum it up another gloriously hectic day among friendly people, plenty of help on tap, quite a few laughs, and of course Os's hospitality available all the time but highlighted by an excellent lunch, which thanks to the good weather was taken 'on the lawn'.

I am sure I can speak for all those who attended when I say a sincere THANK YOU to our club officers, to Os House personally, to his family and staff for their hard work in providing a very enjoyable day! - and - Please may we come again next year ?

[illegible]

For Sale:-

Alpha Clock - Real time clock for Model IV & IVP.
Date and time correct on power up. Brand new.
Documentation and software for LDOS (Model III mode) and TRSDOS VI.

50.00 pounds. (cost \$112)

J. D. Christie, 10 The Bramleys, LONGHOPE, Glos. (0452) 830141

[illegible]

Wanted for TRS-80 Model 1

Double Density board suitable for use in GNOMIC DP 1000; or alternately, DP 1000 or 2000 with DD board fitted.

Also, I recently ordered some Model 1 games direct from Infocom - unfortunately they sent 2 "Sorcerer"'s and no "Enchanter"'s (I had ordered one of each).

FOR SALE : Infocom's "Sorcerer" (Model 1, 32K, single density)

Mint, still-sealed, price 19 pound (incl. P&P)
WANTED : Infocom's "Enchanter" (Model 1)
OR : will exchange "Sorcerer" for "Enchanter".

Michael Cross, 41 Redland Drive, Kirk Ella, Hull, North Humberside.
HU10 7UX. Tele: (0482) 656866

=====

For Sale

This office has a TRS-80 Model 12 and a DWP II wide column printer for sale. Thus it maybe of interest to others who are currently operating on the TRSDOS System. Enquiries to:- Russell H Baker

AIM International, 37 Alexandra Park, Bristol. BS6 6QB. (0272) 429771

=====

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Two Tandy Model 16B Computers fully expanded
with
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- iv) Multi-User Scriptsit
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- vi) Multi-User Multiplan
- vii) All above complete with manuals

Price 1100 pounds each

Also available is one only Model 16A with twin 8 inch drives, this is offered free with the above. As are single copies of Tandy's Multi-user Stock control, Payroll and accounts packages.

The Aldersgate accounts package has recently been re-written for multi-user Xenix and this could be made available through Os House

[illegible]

READER'S FORUM

THIS IS WHERE YOU ARE INVITED TO ASK ALL THOSE QUESTIONS THAT YOU HAVE
NEEDED ANSWERS FOR, OR TO MAKE ANY COMMENTS, OR ???

FROM: The Gables, 21 Gilling Road, Richmond, North Yorkshire, DL10 5AB

Dear David,

I hesitate to comment on anyone's programs, but thought that you would like to know that in my opinion your program on page 19 of the August NATGUG News, will not work on a Model 1/Video Genie running under LDOS (my normal DOS) or under NEWDOS 80.

The first problem is in the second part of Line 60:-

"IF Y = "N" OR "n" then 30"

will result in an error message - probably type mismatch. It will run correctly if it is changed to read:-

```
"if Y = "N" OR Y = "n" then 30"
```

The second, third and fourth problems are in Line 61:-

- a. The second is I think a typing error. I'm pretty sure that you meant to put "y" not "n".
- b. The third is similar to that in Line 60 - Y <> "y" must be used.
- c. The most important problem is the "OR" in line 61 - it should be "AND".

As you have written Line 61 (using OR) if Y = "Y" then Y obviously cannot equal "y" so the program will branch to Line 60 when it tests Y <> "y". Similarly if Y = "y" then it cannot equal "Y" and the program will also branch to Line 60. So if Y = "Y" or equals there will be a jump to Line 60.

The way I think of the "OR" in Line 60 is to say:- if Y equals "N" or if Y equals "n" then GOTO 30. That is a jump to Line 30

must be made if Y equals "N" or "n". Whereas in Line 61 I say:- if Y does not equal "y" and Y does not equal "y" then GOTO 60. That is a jump to Line 60 will only be made if Y does not equal "Y" and it does not equal "y".

My last point on this program is that the "ELSE 40" at the end of Line 31 is redundant. Having it there will not effect how the program runs but it will run just as well without it. If the "ELSE 40" is removed when the program reaches Line 31 if A does not equal 999 then it will simply jump to the next program line which is Line 40.

Finally a comment on the rounding routine. You didn't mention that having used the rounding routine to get TA it should be printed using PRINTUSING with two places of decimals. If you don't then if T1 is for example "23.50" TA will equal "23.5" and printing it without the 0 will look untidy (PRINTUSING with two places of decimals will automatically put in the 0).

I must say that I am very pleased that you are reviving interest in the Model 1/Video Genie (I use a Video Genie by the way and am unlikely to change, especially if the 1M board is made available) and I do hope that this letter will encourage you to write more articles. At least you know that someone has read the current item with much interest and will read anything you write in the future with as much interest.

Hubert (Hubert Butler)

(** Dear Hubert, Your letter was passed onto me by David. I cannot let David take the 'blame' for all the incorrections that were in that article, some 'typos' got in as well from my fingers. Thank you for taking the time to send in the above. Ed. **.)

=====

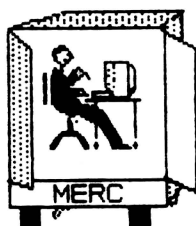
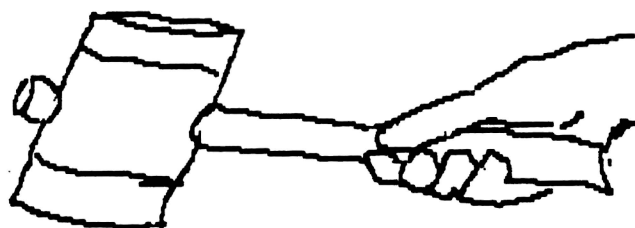
FROM:- Bamford House, 14 Silver Street, Tetbury, Gloucestershire.
GL8 8DH Tel: (0666) 52214

Dear NATGUG,

I have intended for the past year to write a letter to NATGUG News, but the usual "I'll do that next week." feeling has normally over-powered such good intentions. Anyway here goes !

For the 5 years that I have been the owner of a Video Genie system (notice I didn't say proud) it has been the source of some interest and some frustration. The acquisition of a printer, followed by twin floppy drives and then LDOS from MOLIMERX about 3 years ago improved matters but introduced new problems.

There is a mistake on the
previous page. The page
number should read $56\frac{1}{2}$
Not 57



Many years of computer programming experience - I'm not saying how many - and an enjoyment in assembler level coding led me to also purchase from MOLIMERX a copy of EDAS - an excellent product.

However the Model I is a BASIC system and it was a desire to speed up the operation of various BASIC programs that caused me to acquire ACCEL4. Yes, it works and gives a reasonable increase in throughput but ! - and its a big BUT - a large program, on an extended run with lots of string handling reveals a serious bug usually resulting in a system crash, or worse still, a sort of creeping system paralysis ! Anybody else had this experience ?

I then took the hardware approach, perilous (you haven't seen me with a soldering iron) and purchased a Hi-speed CPU (4 Mhz) from ARC Electronics. Installed and correctly adjusted it did result in the claimed average 60% increase in speed. However, what turned out to be a 'dry' joint (not one of mine I may add) resulted in about a years unreliable operation which, coupled with ACCEL4, almost killed it off.

The BASIC/S Compiler System, again from MOLIMERX, was the last straw. BASIC/S obviously wasn't released, it just escaped - anybody have any joy ?

Right, I thought, I can do better than this - why don't I write my own BASIC Compiler - staggers back in amazement ! So 18 months ago I started. The compiler itself had to be written in BASIC and capable of compiling itself. It had to support as many of the features of LBASIC as possible and it should also compile the standard tokenised (SAVEd) version of a BASIC program. The run-time support library also had to be designed and coded in assembler using the excellent EDAS, and had to use routines from the ROM and LDOS system calls wherever possible.

Against all odds I think I have succeeded, and now have a 2 pass compiling system that generates assembler source code for input to EDAS and produces a /CMD version of the original BASIC program. A point of interest for all Model I users is that the run-time system implements a completely different string handling mechanism to that of standard BASIC and avoids completely the 'garbage collection' freeze. Also the compiled programs occupy less memory than when run under LBASIC. The compiler itself, for instance, will no longer run interpretively as it is too large, but runs in compiled mode with 17K bytes to spare !

Needless to say the run-time speed is tremendous - the following benchmark test which can SORT 400 random strings takes for ever under

the interpreter, takes nearly 7 minutes with ACCEL4, but about 1 minute 20 seconds compiled !

Quick Sort Algorithm:- this may be of use to members.

```

100 CLEAR 10240: DEFINT A-Z: DIM X$(400),L(100),R(100)
200 INPUT "No. of values to sort";M: IF M<1 THEN STOP
300 PRINT "Quick SORT - Start: ";TIME$;: GOSUB 900:
    GOSUB 1000: PRINT " Finish: ";TIME$
500 GOTO 200
900 FOR I=1 TO M: X$="": FOR J=1 TO RND(32):
    X$=X$+CHR$(64+RND(26)): NEXT J: X$(I)=X$: NEXT I: RETURN
1000 S=0: L=1: R=M:
1100 I=L: J=R: A$=X$((L+R)/2)
1200 IF I>J THEN 1500 ELSE IF X$(I)<A$ THEN I=I+1: GOTO 1200
1300 IF J<I THEN 1500 ELSE IF X$(J)>A$ THEN J=J-1: GOTO 1300
1400 IF I=J THEN I=I+1 ELSE X$=X$(I): X$(I)=X$(J): X$(J)=X$:
    I=I+1: IF I>J THEN 1500 ELSE J=J-1: IF J<I THEN 1500 ELSE 1200
1500 IF I<R THEN S=S+1: L(S)=I: R(S)=R
1600 IF J>L THEN R=J: GOTO 1100 ELSE IF S>0 THEN L=L(S):
    R=R(S): S=S-1: GOTO 1100 ELSE RETURN

```

Would NATGUG members be interested in more information ? - field test perhaps. I could also offer a compilation service for those users without EDAS - please let me know. I would also be pleased to write a longer article on my compiler if asked.

Alan Stout.

=====

FROM: 28 Pound Road, Little Sutton, South Wirral. L66 1HU. 051-339 5696

Dear Gordon,

I have just rejoined the NATGUG after a few years of absence and am pleasantly surprised to see that the Mod 1 is still going strong. I still have mine, but it gets used very little these days.

I have been reading some of the back issues of the NATGUG News. Reading the article in Issue 8/9 from Ariela Taylor, which she bemoans the lack of a directory display or maintenance utilities in MS-DOS. Well I have some good news. There is an MS-DOS version of the CP/M programme SWEEP called CWEEN. It is PD, but I cannot remember where I got it from. Also I can recommend a programme called HDIR (HotDir) for improved directory displays. This is Shareware and the asking price is only 20 dollars. The programme is available on BB's in an archive file

called XANADU which contains various other utilities. Well worth the 20 dollars for HDIR alone. I will be at Swindon in October.

Donald Sutherland

Donald also supplied a copy of SWEEP.DOC the documentation for CWEENP which includes the following: CWEENP a SWEEP like program for MS-DOS. Copyright (C) by Gary M. Berg/Chemineer Inc. Software has been released to the public domain by the author. All commercial rights are retained by the author. It may be freely passed on to others as long as no charge is made except for possibly a small copying charge. Although this software is thought to work as described, no warranty of fitness is made for this software.

CWEENP is a program to provide the same capabilities for the MS-DOS user as the program SWEEP does for the CP/M user. It provides the ability to take a sorted list of the files on a disk and move forward and backward in the list. Files can be viewed, copied, deleted individually and in groups.

CWEENP (Display for 2.x version)

sp/cr Advance to next file [M] Mass copy tagged files
[A] Re-tag '#' marked files [N] Calculate CRC
[B] Back up one file [P] Protected mass copy
[C] Copy file to drive [R] Rename a file
[D] Delete a file [S] Sort directory
[E] Erase (un)tagged files [T] Tag a file
[F] Free space on a drive [U] Untag a file
[H] Hexidecimal display [V] View file
[I] Print size/time for file [W] Wildcard file tag
[J] Jump to a named entry [X] Exit program
[L] Log new drive/filename [Z] Change subdirectory
[?],[/]Print this message [=] Goto settings menu
[-?], [+?] List other help messages, [@] for printer

(I have not included all of the 17K file here. Thank you Donald, Ed.**)

=====

From: 17 Greygoran, Sauchie, Clackmannanshire. FK10 3ET. (0259) 213515

Dear Gordon,

First I would like to say how much I am enjoying NATGUG NEWS under your editorship. Knowing when in the month to expect it is also very helpful. (** Thank you Ian - I do like this man. Ed. **)

Having recently changed over from a Model 4 to an IBM clone, and needing all the help I can get, I am very pleased to see that Dave Holman is starting an MS-DOS column. I seem to have had an easier time than he had in transferring files and programmes across. I saw adverts for both TRSCROSS and HYPERCROSS in 80MICRO. The former claimed to transfer in both directions (which I did not need) but was quite a bit more expensive, so I plumped for HYPERCROSS, and was not disappointed.

I had fitted double sided drives to the Model 4 a couple of years ago, and found there was no problem in formatting 360k discs to the MS-DOS format in drive 1 of the Model 4. I had quite a few of these done before I bought my NTS/AT, and found that, contrary to what I had read, it had no difficulty in reading them or writing to them in the 1.2 mb drive.

In fact, transferring data with HYPERCROSS was amazingly easy. To give an example, I had one TRS-DOS 6.2 disc with 95 LeScript files on it, totalling nearly 360k. To format a blank MS-DOS disc in the Model 4, transfer all the files to it, put the disc into the AT and transfer all the files to the hard disc took all of 6 minutes!

BASIC programmes also proved to be no problem because HYPERCROSS translates Model 4 BASIC to BASICA "on the fly". I use "PRINT@(x,y)" a lot, and that is translated direct. Those who prefer "PRINT@(nnnn)" get a warning at each line where this occurs and have to calculate the row and column numbers themselves. All my BASIC programmes ran immediately.

All my programming these days is in ZBASIC, and those programmes, of course, ran completely unaltered because it is designed to be interchangeable between Tandy's, IBM's, Apples, and one or two other machines - all except the second line, that is. On the Model 4 I used a trick I learned from another NATGUG member which is to start all programmes like this:-

```
1 GOTO 10
5 CLS : PRINT "SAVING progname" : SAVE "PROGNAME" : STOP
10 rest of programme
```

ZBASIC on the IBM does not permit using "SAVE" and "RUN" in programme lines, so I have had to overcome this by making line 1 of every programme:-

```
1 REM - progname - A PROGRAMME TO ....
```

I then always press the HOME key to display this line before saving a programme - yes, I have in the past used the wrong name and over-written another programme just before it was backed up!

My main reason for changing to MS-DOS was lack of memory in the Model 4. One or two of my MULTIPLAN spreadsheets had no room left, and in one of my main ZBASIC programmes I have a 96k random access file with over 1000 records in it. When the record numbers were sorted into alphabetical or address order and then listed out it seemed to me that the disc drive head was working an awful lot harder than it should. Now, of course, with 1 megabyte of RAM to play with, it just gets stuck into the RAMDISC automatically whenever that set of programmes is loaded, alongside the full 80,000 word TURBO LIGHTNING dictionary and the full Thesaurus. Incidentally, it just takes 5.7 seconds to load all three of those files, 440k in total!

Speaking of memory, it is quite surprising how profligate you get when you have plenty of it. I was brought up with a start the other evening when a ZBASIC programme I was working on would not compile. I had exceeded the 64k limit for variables even though all the string variables had had their maximum lengths defined. But I must say it is a great help to be able to read into memory a whole file of 45 records, each one 1046 bytes long. It makes it so much easier, and quicker, to manipulate the data and produce a variety of analyses from it.

I would like to pass on one word of warning to anyone relying on the Norton Utilities 'undelete' facility. Late one night (or rather, early one morning) I wanted to check a directory I had been cleaning up before backing up. So I typed "DEL *.EXT" when I had meant to type "DIR *.EXT". After a minute or two of black despair I remembered the Norton Utilities. After a quick check in the manual I decided to use the QUICK UNERASE because nothing had been written to disc after the files had been erased. That was fatal. The programmes all reappeared, but on checking them I found that after the first 70 or so lines the rest was gibberish.

A frantic phone call the next day to John Miller revealed the cause. If a file is not stored in one continuous block, but is split up over several parts of the disc, then QUICK UNERASE cannot be guaranteed to find the start of the second or subsequent block. Apparently the full UNERASE utility needs to be used for a fragmented file - in other words, anything over 2k, to be safe. I was lucky that time because the really important programme which I was working on was the only one to be recovered fully - all 28k of it! I then ran LISTFRAG which showed that out of about 900 files on the hard disc

(where do they all come from?) about 115 were fragmented, some of them into as many as 15 different parts. One run through of PACKDISK, though, sorted all that and left none fragmented.

.....and another letter from Ian dated 13th Sep. 1987, follows:-

Dear Gordon,

I enclose another offering for NATGUG News. Thank you for returning the last disc. It was very interesting to see that you were able to transference my LeScript file over to your Model 4 so easily.

In reply to "What am I missing?" Part 1, there are several things that Barry Thrippleton might find his extra 64k useful for.

Rapid access to files. Under TRS-DOS the MEMDISK has to be fomatted and has its own directory track, so there is only about 57k available, I think. I have several sets of programmes in which I leave the files on the disc for the programmes which alter the data, but put them into MEMDISK for the programmes which access the data for reference or analysis.

This seems to me the best of both worlds, because when the data is written directly to disc file there is no chance of forgetting to transfer the files out of MEMDISK at the end of a session, and nothing is lost if (when?) the system crashes, but at the same time, I get the rapid access when the data is just being referenced. Generally, when altering records or creating them absolute speed is not really essential.

Yours sincerely, I. Howard Wright.

From: 20 Edison Road, Holland on Sea, Essex. (0255) 814455

Dear Editor,

Thank you for your prompt delivery of the data sheets for conversion of the Tandy Double Density board to Percom type. I have successfully carried out the conversion despite a number of errors in the text. I am very pleased with the results and would recommend the modification to anyone with a similar board. I list below corrections to enable the text to be ammended.

1. Fig. 3 U3 incorrectly marked - should be U9.
2. List of requirements should specify a 14 pin socket.
3. On chip U11 cut between pin 1 & 2 on chip side of board then between 2 & 13 on underside (The text specifies 1 & 13).

- I hope these comments will be of use to anyone else wishing to improve their equipment. Yours sincerely, F. W. Emery.

[illegible]

Programme changes so far :: A new talk by Wolfgang Lilliefelb on Saturday at 16:15 to discuss the new MS-DOS 'language', PCL. The review of the day scheduled for Saturday 21:00 now becomes Review of the Weekend to be held on Sunday at 15:30. We anxiously need to hear what more you want covered at this last meeting of the year. In particular, Ariela is waiting for dBase questions. D.W.

How many of you go around hiding your lights under bushels ? I ask because I've only just discovered that ages ago our own quiet little Peter Hall wrote and developed his own version of Tasmon for use on CP/M systems. Anyone interested should contact Peter on (0273) 684286 - but remember that Peter earns his living with his computer and this is definitely not PD software ! D.W.

For Sale Model 1000EX, fitted with second disk drive and colour monitor, only 4 months use. 450.00 pound is asked, contact:- Ms. T. Luhrmann, Christ College, Cambridge.

LOCAL CLUB NEWS

BOURNEMOUTH 1st & 3rd WEDNESDAY at Kinson Community Centre 7.30pm.
 Ring Carl Rabe on (0202) 730617

MS.DOS User Group. 2nd & 4th Wednesday 8 pm in rear room Sports Centre,
 Hurn. Contact: Mark Austin (0202) 428856.

CHELMSFORD 1st WED. of each month at 7.30pm. Contact: Richard
 Creak, Woodcote, 59D Little Baddow Road, Danbury, Chelmsford, CM3 4NT.
 (0245) 413725

MILTON KEYNES Alternate Sundays, October to March. Brian Pain
 (0908) 564271

LONDON Nth East London-80; 77 Old Church Road, Chingford, LONDON.
 E4 6ST. Meets first Sunday every month.

Nth West London; Central Common Rooms, Northwick Park Hospital. 1st
 Sunday of month 10.30-1.30. Geof Smith, 01-950 6345 after 8 pm.

SUDBURY 2nd Wed. at:- 3a Gainsborough Street. John Kilpatrick
 (0787) 79504.

SWINDON WEEKEND next meeting October 16th-18th.

If your club is not mentioned above then its your fault, not ours !
 For your FREE advert, write with details to:- Gordon Collins, Editor.

Could any member please let me know if any of the local groups listed
 below still meet.

East Mids TRS-80 User Group - Notts area. Was run by Mike Costello
 TRS-80/VG Users Group (Notts). Run by Geoffrey Hillier
 Educational User Group for TRS-80 & VG - Southhall. Run by Dave
 Futcher

Hull & District TRS-80 User group. Run by R. V. Souter

Isle of Wight TRS-80 Club. Run by M. Collins

Merseyside TRS-80/VG User Club. Run by Peter Tootill

Scottish TRS-80 User Group. Run by Dick Mackie

TRS-80 Level 1 User Group - Merseyside. Run by N. Rushton

TRS-80 Northwest Group - Bolton area. Run by Melvyn Franklin

Tyne & Wear TRS-80 User Group. Run by Dr. S. Tetlow

TRS-80 User Group London branch. Run by J. Wellsman

West Herts 80 User Group (St, Albans). Run by Terry Bradbury
 and a group listed as TOPIC run by a David Washford (Who ?)