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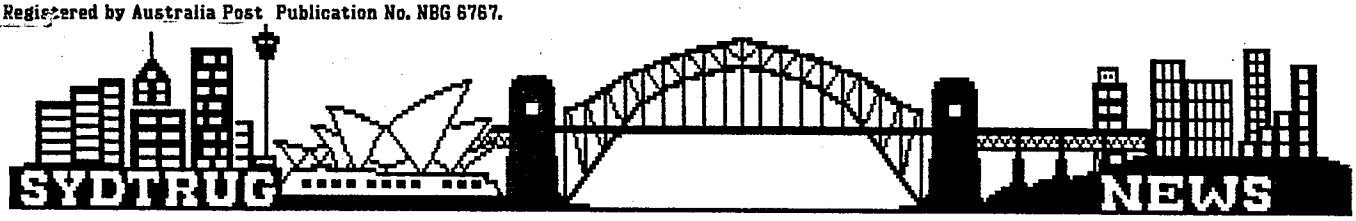

SYDNEY TRS-80 USERS GROUP NEWSLETTER

P.O. BOX 297, PADSTOW 2211.

Volume. 6 Issue. 11 July 1986

Meeting News

As always the first and second monthly meetings (on the second and third Saturdays of mthe month) will be held at the rear of Pattersons Florists, Botany Rd, BOTANY (entrance from Chegwyn St), while the third meeting (on the fourth Saturday of the month), will be held at the 1st Sefton Scout Hall, 2 Waldron Rd, SEFTON, all meetings commence at 1 PM on the following dates :-

July 12th	Botany	August 9th	Monthly General Meeting
July 19th	Botany	August 16th	Special Interest Meeting
July 26th	Sefton	August 23rd	South West Meeting

Who's Who

President	Ted Romer	498-2399
Vice President	Jim Whittaker	772-2009
Treasurer	Gordon Symonds	74-1901
Secretary	Darrell Hegarty	560-9681
Newsletter Editor	Gary Bryce	628-5058
Club-80 Sysop	Michael Cooper	331-7136
CBBS Secretary	Peter Wignell	759-8024
Hardware Co-ordinator	Errol Rosser	709-7646

MEMBERS : if your newsletter label is still dated 86/06 then our records show that you have not yet renewed and as such this will be the last newsletter you will receive.

SYDTRUG Bulletin Board

CLUB-80 Bulletin Board operates for members, seven days a week twenty four (24) hours a day on (02) 332-2494. The data format used is as follows :- 8 data bits, 1 stop bit, No parity, Full duplex, CCITT V21 modem standard 300 bps (set your modem to ORIGINATE mode). Limited access is granted for visitors. Articles for publication may be left in the News Room of CLUB-80 for collection by the Editor.

Editor's Soapbox

by Gary K. Bryce 628-5058

First of all I will take the time and space to thank all of the contributors to this month's issue, they are all very much appreciated and especially those that are left in the News Room of the BBS or given to me on disk.

As you can see this is a bumper issue this month and I hope that this will continue for the incomming Editor after the AGM. I know I will be doing my utmost to continue with articles for publication and I hope that some of you who have not managed to find time as yet will in the future.

Now, off the specifics of the newsletter (to which I generally tend restrict any comments), and on to some points which have lately "rankled" me to the point of making comment in print. I have previously tried to keep any critisisms off personalities (especially when that person is not there!). At various times there have been disagreements and even "slanging matches" but where it involved other people I left it up to them to "defend" themselves if they wished. As the "slanging" has now been directed at me, I will now take this opportunity to join in "Boots and all".

I take great exception to the statement made at the June General Meeting by Jim Whittaker (and related to me by four people at the Sefton meeting) to the effect that "It appears that the Editor has lost interest in the Newsletter and that HE (Mr. Whittaker) will take action to see that the newsletter is not late again!!". Particularly when I was not at the meeting to give the meeting an explanation of why the newsletter was late!! (I was at the time laid-up in bed with a dislocated shoulder, and had telephoned to say that I would not be able to get there.).

The Committee had met on the Wednesday night prior to the General meeting where, during the Editor's Report, I related the circumstances which had caused the newsletter to be delivered late (and which I asked to be related to the members should I not be able to attend the general meeting). I had been sent on a "One Day" job to Newcastle and the Central Coast, without prior notice, which had lasted the full week!!! (Needless to say I had to buy a few things up there!). Admittedly I had not been able to stay for the full meeting, but I had stated this fact before the meeting started, and if anything was to be said I feel this was the place to say it!

As I have said before, being Editor does have some advantages and I am taking the one of having last say in any issue right now. As I no longer feel restricted to keeping my comments "Non-personal", and being the longest serving current committee member, having seen various Presidents, Vice Presidents, Secretarys and Treasurers come and go, let me first say that I regret that personality conflicts have been put in front of "getting on with the job".

In his column Jim brings up a number of points :-

(1) Being on the committee gives him a chance to "try out some of my own ideas on management".
(2) The trouble with people like Dennis and Geza is that everything is so serious and static and based upon what has gone before.
(3) Dennis also has a way of creating "RULES FOR RULES SAKE", where the latest farce is.....etc.
(4) ..look ahead at what you can acheive and strive for some attainable goals.

I will take each point and give my opinions of them :-

(1) If his penchant for trying to take the "glory" for anything and everthing that has been done by the committee over the last two years is an example, I don't think much of his "ideas on management"! The actions of the committee have been a combined effort of all members past and present and will, I hope, continue to be so!
(2) If Denis and Geza (along with the other committee members) had been static and only concerned with what had been done before, we wouldn't have the excellent BBS (thank's Mike), the Public Domain Library, the Ribbon Re-inker, the group Modem, Public Liability Insurance at group meetings, and simple things like the membership badges and the Publication Library. Because all of these services have been a result of the hard work done by all members of the Committee over the last two years.
(3) I don't know what he means about the "latest farce" as this business about "UNOPENED MAIL" was first raised by the secretary earlier this year after he complained that he was not receiving the mail from Al Bizys in an "UNOPENED" condition (see Letter to the Editor in the March issue and Secretary's Sayings in the April issue).
(4) I agree and feel that these are the very actions that we have been attempting to follow (at least during the time that I have been able to see, as a member of the Committee).

After getting all of that off my chest (and it really took an effort to make the decision to put it all in print), I do really hope that the committee to be elected at the upcoming AGM (where I will be standing for the position of President) can get on with the job and not let personality differences reduce its' effectiveness.

Until next month - Keep on computing!

SECRETARY'S SAYINGS

by Darrell Hegarty (02) 560 9681

This month I have a fair bit to say about nominations for the ensuing years' Committee. PLEASE HAVE A SERIOUS THINK ABOUT IT, AND CONSIDER NOMINATING FOR A POSITION. In other words, G.O.Y.A. You will see a nomination form in this issue, to make your nomination easier, although you DON'T need a form - just a slip of paper with your name and required position, handed to a present Committee member will suffice. Remember, one of the present Committee will second your nomination if you can't find a seconder.

I should remind you all, that the quality of YOUR Club is only as good as the ideas which are usually originated by the Committee, and any Committee can get 'tired' after a period of time, so we NEED new blood every so often to keep the Club going ahead in the proverbial leaps and bounds.

We have had a reply from Neil Corkindale - Store Manager, TANDY BANKSTOWN, to our Vice-president's column of last month. This reply is printed in this issue.

The whole story of the Hard disk is one of contention, and I don't intend to buy into it, but to show that we are fair, the reply has been printed in FULL, for all members to see. I think this reply has driven our SYSOP to pen and paper (or should that be keyboard and screen??), and Michael has written his own reply to the TANDY reply. Form your own opinions.

New membership badges will be printed as soon as possible after the end of July, and distributed at meetings and in the earliest possible Newsletter after printing - probably September. The reason for waiting to produce the badges, is that we will know who does not wish to renew their membership by then, and so not waste time and effort in producing a new badge which will only have to be destroyed. Please be patient.

I have had a number of phone calls - initiated from enquiries at various TANDY centres - about problems the caller is having with his/her Co-Co. I know very little about the Co-Co, but fortunately, have been able to help all callers. This brings me to a point that we don't have any resident 'experts', except for Errol Rosser on hardware. I thus propose to add a list of names and phone numbers to the front page of the Newsletter, informing all readers who they can call for help on the listed subjects. I now want NAMES. If you feel even mildly confident that you may be able to help others on a particular aspect (or more than one aspect), of TANDY computers, please contact ME either by phone, or at metings, and give details. I will add you to the list. Each member is not limited to one subject, nor is each subject limited to one member. Think about it - yet another G.O.Y.A. project, but none the less, a VERY important one.

The financial report for the month of May is a little more detailed, as the Treasurer gets the hang of using VISICALC.

The report follows:-

Income to 31/5/86		Expenditure to 31/5/86	
New members	199.95	BBS phone	30.00
New BBS memb	24.00	Newsletter print	100.00
Member renewal	160.00	Newsletter post	62.72
BBS renewal	40.00	Newsletter sundries	36.00
Items for sale	414.08		
TOTALS	$837.63		$228.72

The members at the Botany meeting in May decided that the time was not yet ripe to hold an MS-DOS meeting, so we have dropped the subject for the time being, but it WILL be raised again, I can assure you.

There were about 20 phone enquiries about the Group, 5 new members, and a number of mail enquiries during May. There was also an advertising blurb for a 'do-everything' modem for a mere $1800.00 odd, an enquiry for some software for one of our clock projects, more updates on PENCIL from Tony Briggs, an enquiry for hardware, one about CP/M and some samples of graphics printed on a Gemini printer.

The June newsletter was once again very late - partly due to the Editor being called away from Sydney work-wise. We are working to ensure that this does not occur again, but sometimes these circumstances are beyond the control of the Committee as a whole, and are only in the hands of one person. I do sincerely apologise on behalf of the Committee for these abberations, and can assure you all that everything possible is being done to prevent this happening again.

The Committee has decided to purchase two copies of the Sourcecode for TRSDOS 6.2 from MYSOSIS for the very good price of US$99.00 each. These copies will be placed in the library for borrowing by members. A Co-Co book on peeks and pokes will also be purchased and placed in the library. The advert from MYSOSIS also had an offer for LDOS 5.1.4 (M1 and M3) being available for only US$20.00. This does NOT include a manual, bu DOES include registration and a quick reference card. We will negotiate a bulk purchase with individual registration, for members. Please indicate if you are interested to any Committee member, and become the REGISTERED OWNER of LDOS 5.1.4!!

We discussed the availability of the Club services and facilities to non-members, and decided that ALL facilities and services offered by the Club are to be made available to MEMBERES ONLY. This includes re-inking of ribbons, purchase of year books etc. The BBS will remain as it is at present, and offer limited access for non-members. The main reason for this decision is that we are in a rather 'grey area' regarding trading with the general public, and could be liable for tax etc. All members who get ribbons re-inked for their friends, please note that this service is now available ONLY to members, and not friends of members.

We have purchased some Nashua 'flippy' double-density disks for re-sale to members, as well as using these for the PD software. The purchase price has fallen to $2.90 each in bulk (no cases, labels or WP tabs), and we will sell them for the same price. See the PD librarian at any meeting, or indicate by mail, enclosing a cheque or money order plus a small amount to cover postage.

Incidentally, I had occasion recently to go to 'WILBROPRINT' on the corner of Abercrombie and Cleveland Streets, Chippendale, where I purchased some more paper for the BBS. Whilst there, I noticed that they now have coloured ribbons for CITOH and EPSON printers in RED, BLUE, GREEN and BROWN. They also have EPSON refills in colour. These ribbons cost $3.00 more than BLACK ribbons for the same printer - eg CITOH black are $7.50, and colour are $10.50 each. Remember also, that we can re-ink your RED, BLUE, BALCK, BROWN and PURPLE ribbons. At this stage, we have no GREEN ink.

Michael HARRIS has kindly offered to demonstrate his new AEM Supermodem at the July Special Interest Meeting (Botany, Saturday 19th July). This modem was described in the April/May/June AEM, and is 'Hayes-compatible' software controlled. Should be an interesting demo - please come along.

Well that about covers it for this month, sorry for the shortish column, but I also wrote an article (see elsewhere in this issue), which took up a bit of my time as well. Happy computing .....

GROUP POSITIONS NOMINATIONS REQUIRED

If we are to remain active as a Group, and to go ahead, we MUST have nominations for positions within the Committee and volunteer group for the ensuing year, commencing September. Following is a list of elected positions to be filled, and non-elected volunteer positions required.

ELECTED POSITIONS - NOMINATIONS REQUIRED NOW !!

1. President - chairs both Committee and General meetings. Ensures that the Group is running smoothly, and takes appropriate action.

2. Vice-president - chairs meetings in the absence of President. General backup to president, and usually has some time to come up with some ideas.

3. Secretary - probably one of the heavier workloads. Answers all mail which requires an answer, maintains the membership database, takes and distributes minutes of all Committee meetings, prepares agenda for same, prints membership lists, prints newsleter mailing labels etc. etc.

4. Treasurer - possibly the most important - keeps the books. Banks all funds, controls the cheque book etc.

5. Editor - the most visible - collects, assembles, edits and prepares the newsletter copy for printing. Has a fairly free hand in the layout etc. The Group will now supply a 15" printer for use by the Editor in preparation of the Newsletter.

6. Returning Officer - conducts the annual election, and any other election required under the Constitution.

7. Auditors - two positions required for the annual auditing of the Groups books. The books must be audited each year in July.

NON-ELECTED VOLUNTEERS REQUIRED

The following positions are required to be filled by volunteers from the Group. These people are ESSENTIAL to the smooth running of the Group, as the five elected Committee members CANNOT efficiently carry out their own duties as well as these.

1. Book and magazine librarian - maintains the book and magazine library. Continue the cataloguing of books and magazines started by the present librarian. This position should be preferably filled by two or three volunteers, who between them, attend EVERY meeting at Botany.

2. Software librarian - maintains the small software library, mostly of cassettes. This position would be ideal for somebody with a Model 1 or System80, and NO disk drives.

3. Public domain librarian - maintains the library of PD software, duplicates the software for sale to members, and does the selling. This position takes quite an amount of time to do the duplicating, but the Club's Model III is used for the duplicating. Preferably should attend as many meetings as possible.

4. Sefton key holders - these positions require that the two occupants between them, attend EVERY meeting at Sefton (fourth Saturday each month), to open the hall, tidy up after the meeting, and close and secure the hall.

5. Newsletter wrappers - at least two volunteers required, who preferably live close to each other. Required to wrap, label and post the Newsletter each month. At present, the Newsletter MUST be posted at Padstow post office.

The President, Vice President, Secretary, Treasurer and Editor are required to attend Committee meetings held once per month, at a time OTHER than the Saturday afternoon meetings. These Committee meetings are held at a place convenient to all Committee members, and this place is decided upon by the Committee itself. They should also be

able to attend most of the other Group meetings, although attendance is NOT compulsory.

The non-elected volunteers should be able to attend meetings as detailed in the position description above.

All nominations received will be published in the August AND September Newsletters, so please fill in a nomination NOW, and either send it to the Padstow PO Box, or hand it to any of the present Committee at a meeting.

Bits of Vice

by Jim Whittaker

Howdy. Well at least I seem to have triggered some open discussion. Boy, the lengths one has to go to to get Tandy to contribute to the Newsletter.

As is usual, our general meeting was held at Botany on the second Saturday of the month. By the way, did anybody spot our advert in Tuesdays Australian in the "For Your Diary" section. Sorry, it didn't have flashing LEDs.

Among the things we discussed was the fact that MISOSYS is advertising the complete commented assembler source code for TRSDOS 6.2.0 for $100.00 (US). The also have LDOS 5.1.4. for $20.00 (US). The group will be buying the first and we suggest that you all throw in and we do a bulk buy of the 514 DOS and become a fully registered user of at least one dos. If we get enough, we should be able to do a bulk deal. Contact somebody on the committee if you are interested. It should be about $35.00 - $40.00 landed.

Up till now, we have allowed non members to partake in the services we offer e.g. PD Disks, Re-inking, Year books etc. Well, in the light of discussion, it may be seen as running a business for profit. From now on, group services will only be available to group members.

Shortly, we will publish a list of experts who can be contacted for help with anything from DOS to DBASE or Basic to Bliss. If you have some knowledge of a particular facet of computing and don't mind getting the odd call from members in trouble then would you please give us your name for publication.

It was about here that Dennis popped up and concluded that his way of "handling" Tandy and mine both end with the same result. Well there are two answers to that :
- Yes, but the group has a Hard Disk Drive to show for it
- The article was presented as my experience in an effort to show how I feel about the whole episode. I bear no animosity to those involved but do hope that they learn from the experience.

In a later article, I will present my views on Tandy, the organization and its salesmen. We will publish any experience, good or bad, all you have to do is tap it in and send it via the Bulletin Board.

Nominations for the committee are being accepted from now until the AGM. Please please don't leave it all up to the same old people. Its always easier to criticise someone else but if you don't give some input soon then we'll just dry up and fade away. My election speech comes later.

The group is selling Nashua Flippy Disks (guaranteed) for $29.00 per box of 10. Thats what we buy them for in bulk. Hop in quick.

Would all COCO owners please give us some articles to publish. We are also buying some COCO books eg 1001 peeks and pokes for the COCO. Whoops almost said 1001 uses for a dead .....

Special Interest Groups. (SIG's). As can only be expected, the mainstays of our SIG's have run out of puff and ideas so it is now UP TO YOU (no not up you). We have to keep our SIG's alive and we need your ideas. Please help. Next year, I'll be able to give a few COBOL lessons but what are we going to do until then. If you have some knowlege about a subject then see me and we will be able to give you all the help and support that you need. As Daggles says G.O.Y.A. and share some of the information that is locked up in your heads.

On to the election speech. These are my views, not necessarily anybody elses.

Being a member of the committee means having a bit of fun and a chance to try out some of my own ideas on management. As I see it, the trouble with people like Dennis and Geza is that everything is so serious and static and based upon what has gone on before. There is nothing wrong with that method, but it leaves no room for innovation or forward planning.

Dennis also has a way of creating "RULES FOR RULES SAKE", where the latest farce is that eventhough I pick up the mail, I am to give it to Darryl UNOPENED. Well, who is ever going to know?? I have an arrangement with Darryl, as I have had for a long time and I have no intention of breaking it. If you want me to tell you that I don't open the mail then I'll do so but I'll be lying (or will I).

This all reminds me of a song by James Taylor called "DAMN THIS TRAFFIC JAM" where he runs into the car in front because he is looking in his rear view mirror, worried if the car behind is going to run into him. The car behind is doing the same thing, as is the car behind that.....AD INFINITUM (Thats greek). Well the moral of the story is not to keep worring about what's happened or how it was done but to look ahead at what you can acheive and strive for some attainable goals.

I will be nominating for both of the top positions and I will again make it painfully clear as to what you can expect from me if I am elected. I promise you nothing. I know I said the same last year and I ended up running around organizing Hard Drives, RAM, Printer Buffers and the like but these things just happened.

Until my course is finished (no Charlie not penicillin course) I will not be able to devote much time to the group but as to what happens after that, well who knows.

To end off this month I present JIMBO's HONOURS LIST. (One day you will all wish to be bestowed or is it endowed).

Darryl Heggarty for taking all of my moaning and making up for all of those things I can't do.

Bill McDougall for doing everything that is asked of him without so much as a whisper.

Andrew Bruno, Charlie Samuel and John Agapidos for just keeping me amused.

Mike Cooper not for his patience but for his wisdom and innovative ideas expressed through the BBS.

Diane Whittaker and the kids for all their support.

Errol Rosser for his perseverence on the System 80.

Gary Bryce for putting this all together in a cognitive format.

Kevin Sheil for his dog like determination.

Johnny Mercer for his behind the scenes typing.

Greg North for giving it a go.

Dennis Pagett for at least trying.

Jimmy Burns who should have been a Short Story writer.

Mick Rowney of Micro Bits fame who has contributed a great deal of hardware behind the scenes for little or no return.

Well I know you will all strive just that little harder to get onto next years list. Until then or next month (whichever comes first) regards Jim Whittaker.

THE COMM LINE

by Michael Cooper (SYDTRUG Sysop)

Lots of news this month about the BBS, and also Part 5 of the continuing series on building your own BBS or remote system. To begin with, here is the BBS news.

BBS NEWS

Well so much has happened in the last month I barely know where to commence, however I'll do my best to cover everything.

Current callers now exceed 12,100 and I'm pleased to report renewed activity by lots of members. A few old friends have finally remembered to give to system a ring to see whats happened and most were rather surprised at so many changes.

The Model 4 purchased by SYDTRUG to run the CLUB-80 BBS is now back with me and is running the system at the moment. I have altered to software to allow it to run with a RAMDISK as drive 0, this has caused lots of changes. The first is the running speed which has improved by over 15%. An additional benefit for me is the release of about 10K of high memory which held LDOS system files SYSRES'ed in the configuration file. You will see the effects of this extra memory as I start to add more features in each room.

The AVTEK Multi-MODEM used on the BBS has been modified by Darrell Hegarty to permit 1200/75 operation as well as 300 Baud. He has also kindly built a liitle add-on relay box that permits me to change speed using the cassette relay in the Model 4 under software control. Preliminary work has been done, and I have had the BBS running at 1200/75 in test mode - WOW, does it go !! Unfortunately the mode switching box doesn't work quite right, but this was caused by my specifications, not Darrell's work. He now has it back and is making a couple of mods to allow me to try further experiments.

When I have the 1200/75 operation functional this is how it will work, SO PLEASE TAKE SPECIAL NOTICE. The BBS will answer the phone at the 1200/75 rate to allow auto-MODEMS to lock onto this carrier. If after 8 seconds no 1200/75 MODEM is found at the calling end the tone will STOP BRIEFLY (1 sec) and then return at 300 Baud for another 8 seconds. If you have a manual 300 baud MODEM you will need to wait until you hear the speed change before connecting.

The Hard Disk has also arrived (YEA and VERILY etc). It works fine except I can't use it on the BBS without another type of hardware clock to one I am currently using (a NEWCLOCK-80). Apparently there is a port address conflict between this clock and the Hard Disk I/O ports. As soon as another clock can be built and tested with the Hard Disk I will make the changeover.

Changes to the Library mean that all catalogue listings show the most recent files first. The DATE prompt now requires an ENDING date rather than a BEGINNING date, this eliminates the system searching for a starting date and allows you to find the goodies quicker.

BUILDING YOUR OWN BBS (Part 5)

Last month you will recall I discussed the file output routines used by the BBS system. That was the last of the strictly Z-80 code to be used. This month I will show you the TOP Level routines that pass arguments between your BASIC program and the machine language routines published over the past 4 months.

All of the programs expect some parameters passed from BASIC as a STRING arguement, and return an INTEGER Status Code. The status code can be used by your BASIC program to determine what course of action to take. For example, one error code informs that the Carrier signal from the caller has been lost. You can then take the appropriate action depending on your needs.

Some quick background on USR (User Subroutines) as defined by Microsoft BASIC. You have 10 available USR calls, numbered as USR0 to USR9, and each of these will have an "entry" address. The "entry" address is set in BASIC using the "DEFUSR" statement, one for each of the 10. For example to tell BASIC that a USR numbered 3 started in memory at address F000H you would use a statement such as DEFUSR3 = &HF000. You must tell BASIC this address BEFORE attempting to call your USR, otherwise CRASH !!!!!

When calling the USR from BASIC you have 2 variables to play with. One variable is used to pass data into the USR and the other is used to get data out. Depending on your program, these can be Strings, Integers or Floating Point variables, in our cases (except one) we pass a string into the USR and get an integer out. The BASIC statement takes the form "Data Out = USR (Data In)", to be more specific in our case J=USR0(VARPTR(B$)).

The first thing a USR must do when called is to extract the input data from BASIC via a ROM call. It then processes the data in some way and finally passes the result back to BASIC via another ROM call. Study the code and you will quickly follow the technique.

```
10040 ;
10050 ;=================================================
10060 ;       BASPRIMS/BB2            *=*=*=*=*=*=*=*=*=*
10070 ;               Include File for BBSDVR20/ASM
10080 ;
10090 ; This module contains the BASIC Interface routines
10100 ; that work with SUPERBBS/BAS Runtime Supervisor.
10120 ;
10130 ;*********************************
10140 ;*                               *
10150 ;*  BASIC Interface Primitives   *
10160 ;*                               *
10170 ;*********************************
10180 ;
10200 ;**********
10210 ;*
10220 ;*      Get Varptr to HL
10240 ;*
10250 ;**********
10260 ;
10270 ; Get VARPTR to HL and length in B
10280 ; String is terminated by a 0H byte
10290 ;
10300 ;       Returns :
10310 ;               HL <= Points to 1st byte in string
10320 ;                B <= Length of string
10330 ;
10340 ;               IX is used
10350 ;
10360 HLPARM CALL    @GETHL         ;Get pass string VARPTR
10370        PUSH    HL             ;Transfer to
10380        POP     IX             ; IX
10390        LD      B,(IX+0)       ;Length of string in B
10400        LD      L,(IX+1)       ;LSB of string address
10410        LD      H,(IX+2)       ;MSB of string address
10420        RET                    ;Done
10440 ;
10450 ;*********************************
10460 ;*                               *
10470 ;*     USR Mainline Routines     *
10480 ;*                               *
10490 ;*********************************
10500 ;
10520 ;**********
10530 ;*
10540 ;*      Input String fromCALLer
10560 ;*
10570 ;**********
10580 ;
10590 ; Basic string input routine for SUPERBBS/BAS
10600 ;CALLed as J=USR1(VARPTR(SAV$))
10610 ;
10620 ;RETurns :
10630 ;       The string (if any) will be in SAV$
10640 ;       J =  0  OK
10650 ;       J = -1  Carrier Lost Error
10660 ;       J = -2  Timeout Error
10670 ;
10680 ;       HL, DE and BC are used.
10690 ;
10700 GETSTR CALL    @GETHL         ;Get VARPTR of SAV$ to HL
10710        LD      ($INVPTR),HL   ;Save the VARPTR
10720        LD      HL,$INPBUF     ;Start of Input Buffer
10730        CALL    INPSTR         ;Get the string
10740        JR      C,GSCDER       ;Go if Carrier Lost Error
10750        JR      Z,GSTOER       ;Go if Timeout
10760        LD      HL,($INVPTR)   ;Get VARPTR
10770        LD      (HL),B         ;Set String Length
10780        LD      DE,$INPBUF     ;Point to Buffer Start
10790        INC     HL             ;Bump VARPTR Pointer
10800        LD      (HL),E         ;Save LSB BUffer Address
10810        INC     HL             ;Bump VARPTR Pointer
10820        LD      (HL),D         ;Save MSB Buffer Address
10830        LD      HL,0           ;J=0
10840 GSEXIT JP      @PUTHL         ; and Exit to BASIC
10850 ;
10860 GSCDER LD      HL,0FFFFH      ;J=-1
```

```
10870         JR      GSEXIT        ; and exit
10880 ;
10890 GSTOER  LD      HL,0FFFEH     ;J=-2
10900         JR      GSEXIT        ; and exit
10910 ;
10920 ;=======================================
10930 ;
10940 ;**********
10950 ;*
10960 ;*      Output a String
10980 ;*
10990 ;**********
11000 ;
11010 ; Basic String output routine for SUPERBBS/BAS
11020 ;
11030 ;CALLed as      J=USR2(VARPTR(A$))
11040 ;
11050 ;RETurns :
11060 ;         J = 0   OK
11070 ;         J = -1  Carrier Lost Error
11080 ;         J = -2  Timeout during XOFF
11090 ;         J = -3  (ESC) or (Ctl-C) fromCALLer
11100 ;
11110 ;
11120 PUTSTR  CALL    HLPARM        ;B=Length, HL=)1st Char.
11130         CALL    OUTSTR        ;Send String
11140         JR      C,PSCDER      ;Go if Carrier Lost Error
11150         JR      Z,PSTOER      ;Go if Timeout Error
11160         CP      1             ;Check forCALLer abort
11170         JR      Z,PSABRT      ;Go if (ESC) or (Ctl-C)
11180         LD      HL,0          ;All Done OK
11190 PSEXIT  JP      @PUTHL        ;Exit to BASIC passing HL
11200 ;
11210 PSCDER  LD      HL,0FFFFH     ;J=-1
11220         JR      PSEXIT        ; & exit
11230 ;
11240 PSTOER  LD      HL,0FFFEH     ;J=-2
11250         JR      PSEXIT        ; & exit
11260 ;
11270 PSABRT  LD      HL,0FFFDH     ;J=-3
11280         JR      PSEXIT        ; & exit
11290 ;
11300 ;=======================================
11320 ;
11330 ;**********
11340 ;*
11350 ;*      Output a File
11370 ;*
11380 ;**********
11390 ;
11400 ; Routine to Output and Format a File from BASIC
11410 ;
11420 ; Basic File Output routine for SUPERBBS/BAS
11430 ;
11440 ;       CALLed as :     J=USR3(VARPTR(FI$))
11450 ;
11460 ;       RETurns :
11470 ;               J  =  0  OK
11480 ;               J  = -1  Carrier Lost Error
11490 ;               J  = -2  Timeout during (XOFF)
11500 ;               J  = -3  (ESC) or (Ctl-C) from CALLer
11510 ;               J  = -4  Error
11520 ;
11530 OUTFIL  CALL    HLPARM        ;B=Len,
11535                               ;  HL=)1st Char Filename
11540         LD      A,B           ;Get Length
11550         OR      A             ;Check no No Filename
11560         JR      Z,OFEROR      ;Go if error
11570         CALL    GETFIL        ;Send the File
11580         JR      C,OFCDER      ;Go if Carrier Lost
11590         JR      Z,OFTOER      ;Go if Timeout
11600         DEC     A             ;Test forCALLer Abort
11610         JR      Z,OFABRT      ;Go if Abort
11620         LD      HL,0          ;J=0
11630 OFEXIT  LD      A,(@OUTFLG)   ;Turn Paging Mode
11640         RES     0,A           ; OFF
11650         LD      (@OUTFLG),A   ;
11660         JP      @PUTHL        ;Exit to BASIC passing HL
11670 ;
11680 OFCDER  LD      HL,0FFFFH     ;J=-1
11690         JR      OFEXIT
11700 ;
11710 OFTOER  LD      HL,0FFFEH     ;J=-2
11720         JR      OFEXIT
11730 ;
11740 OFABRT  LD      HL,0FFFDH     ;J=-3
11750         JR      OFEXIT
11760 ;
11770 OFEROR  LD      HL,0FFFCH     ;J=-4
11780         JR      OFEXIT
11800 ;
11820 ;=======================================
11830 ;
11840 ; Strip Right Spaces from String (From BASIC F & 8)
11850 ; ********************************************
11860 ;
11870 ;       CALLed by:      J=USR0(VARPTR(B$))
11880 ;
11890 ;       CALL :
11900 ;               HL =) VARPTR for string
11910 ;
11920 ;       RETurns  :
11930 ;               B$ =  B$ with Right Spaces stripped.
11940 ;
11950 ;       Uses HL, BC and A
11960 ;
11970 STRIP   CALL    HLPARM        ;B=Len,HL=)1st Byte
11980         PUSH    IX            ;Save VARPTR
11990         LD      C,B           ;Len in LSB
12000         LD      B,0           ;
12010         ADD     HL,BC         ;Ptr to end of string +1
12020         DEC     HL            ;Ptr to end of string
12030 SSLOOP  LD      A,C           ;Prepare for pre-test
12040         OR      A             ;Pre-test for zero length
12050         JR      Z,SSEXIT      ;If length=0 thenRETurn
12060         LD      A,20H         ;Space code to Acc.
12070         CP      (HL)          ;Compare char & space
12080         JR      NZ,SSEXIT     ;Done if not space
12090         DEC     C             ;Subtract 1 from length
12100         DEC     HL            ;Point to 2nd last char
12110         JR      SSLOOP        ;
12120 ;
12130 SSEXIT  POP     HL            ;Get VARPTR to string
12140         LD      (HL),C        ;Set new length
12150 .       RET                   ;Exit to BASIC
12160 ;
12180 ;=======================================
00600 ;
00610 END     EQU     $     ;End of Program
00620         END
```

Well thats the lot for this time. Next time the final part of this series, and hopefully lots more action on the BBS front. Until then, happy MODEMing.

Gamer's Corner

by Morris Jones

EARTHLY DELIGHTS: Suggestive? well, er, maybe....

Interactive fiction, or "adventure" games, as they are more commonly known, have been immensly popular amoung users ever since they were first created on large mainframes that occupied rooms in the seventies, being an attracive alternative for most people after tiring of Space Invaders. Today I look at yet another to surface from the cold stone halls of Silicon Valley where programmers are chained to their terminals and only let out on Sundays and the Count of Monte Christo's birthday.

"Earthly Delights" is a 64K adventure for the IBM PC which to me was a refreshing change from my earlier aimless wanderings through the subterranean caverns of the Great Underground Empire. Calm down, the title is merely a reference to a painting which you, as the main character in the story, inherit from an uncle, only to have it stolen soon afterwards. Your mission therefore is to track down the culprits, recover the painting, and discover what secrets make this painting so important.

The style in which the game works is almost the same as Zork or any other adventure game, where the computer describes your current situation, and asks you what you want to do. The program makes good use of the IBM's ten function keys, which allow you to execute common commands such as "LOOK AROUND" with a single keystroke. The numeric keypad controls direction, with "8" meaning "north", "2" meaning "south", etc. The vocabulary is unfortunately more restricted than similar games, and often you have to type in exactly the right words to make something happen.

The program carries the famous Infocom remark of "waking up inside a storybook" a bit too far. The game is divided into five "chapters", which you complete one at a time.

Once you have finished all the tasks you need perform in one, the computer flashes the image of a book on the screen, from which a page slides out, informing us that we are progressing to the next chapter.

Earthly Delights requires no colour graphics card, being purely a text adventure but it does have some good sound effects, playing us a short tune at the start of the game. It keeps the player interested, throwing up new challenges all the time, and part of your mission involves international travel, punch-ups, gunfights, escapes and car chases. I found it became more addictive than Zork or any of the others, but was rather short, and ended just when I expected much more. In any case, it is an interesting challenge for any gamer.

HINTS ON ZORK:

Alright, I haven't yet completed it, but nevertheless I have gleaned some information others may be interested in:-

* Try praying at the altar: it does get you somewhere, quite literally.
* You may need to recover a treasure from Hades: you will need the candles, bell and book from the altar, and the matches from Flood Control Dam #3. Take these to the entrance to Hades and work a spell: the first step is to ring the bell.
* The jewelled egg which you find in the bird's nest in the tree contains yet another treasure: to open it, you must give it to the theif and recover it from him later by killing him: he will have opened it by then.
* The sceptre from the Egyptian room is more than a treasure: take it outside and raise it to the rainbow.
* The garlic in the sack is necessary to defeat the vampire bat in the mineshaft.
* To restore order to the Loud Room, type "echo".
* It is necessary to open the sluice gates on FCD #3. Sunken treasure?

SOFTWARE COMES DOWN

I walked into Tandy at Hurstville the other day and found TRS-80 software priced incredibly low. "Haunted House" was less than ten dollars and "Quick, Watson!" was less than five, as was "Micro Marquee". Yes, they're trying to shift it all. Check in soon, and if it's all too expensive for your tastes, remind them that you may well be the only person who is going to buy it. Sure sign of insanity: "Bedlam" was nearly thirty five dollars!.

MODEM NEWS

by Bob Barnes - A134

In response to ANDREW BRUNO's letter SYDTRUG (vol 6 - issue 10/JUNE 1986)

The history of kit modems to date has been of questionable success. The following summary of every modem/kit produced in the popular electronic magazines should assist the newcomer to these items of devilment.

(1) The first to arrive was the Electronics Australia 80DM9 an accoustic modem and it surfaced 1980 SEPTEMBER - seemingly works and no mods to date. Other than background noise to cause interference it worked fine and with no problem for telecom to say naughty !!!.
(2) The next to appear was the Electronics today int. ETI-644 direct connect well after revision A,B,C,D,E,F, I still have not met any one who has got this one to work yet. circa 1982 october nov etc. Not even ETI mention this in their 10 year index of all projects. This unit was the greatest turn-off for now and future modem kits.
(3) Next was the presented only , available from AVTEK themselves. This was the first kit modem available to use the WORLD CHIP 7910 and NOT derived from previous modem projects. (THANK GOODNESS). The only similarity is that it also uses a 240 volt 3 pin plug. A bit like comparing a ROLLS ROYCE to a push bike in previous modem to date projects . This was reviewed in EA january 1984. It was the landmark reference to build all future modems to be regarded "as good as an AVTEK." This particular unit has 300 and 1200 (later 1200/75 added) P.S. they also have a minimodem using a world chip - 300 Baud - NO I am not getting a dollar out of this but this is still the standard to go against.
(4) Then along came the first el-cheapo 7910 model : ETI-699 (1985-may) they saved their soul after the ETI-644 debacle. Specifications 300 Baud only , good for local bulletin board stuff. To date no mods so it's the best little unit available now days.
(5) Then a unit presented to Aust Electronics monthly and duly printed called the AEM 4600 mk1 & mk2 (hmmmm). But the AEM 4600 MK3 is the only one to actually work from a kit and can purchased from Geoff Wood Electronics, this one has ALL the mods to accomodate all components straight onto the board. It has 300 and 1200/75 the 2 most commonly used baud rates at the flick of a switch.
(6) Now we have in AEM the next generation ? of modems that is the whistle blowers, fancy do every thing auto answer-baud rate etc. And to it they have the AEM 4610 . This kit is packaged at Gosford and distributed through the mag. Again the heart is the World chip so it is to be assumed that this one would be ok, and have frills.
(7) FINALLY the latest to come on the scene in kit form will be the ETI-684 , and no doubt this will be better whistle blower etc. The ETI-684 pcb sets will be commonly available , but unfortunately the saga of it spread out over x number of magazines makes it difficult to follow. One would hope that ETI package the 2 modems they have presented into a "MODEM BOOKLET".

One point I raise is, Do we the humble operator need a whistle blower? No doubt if it is to be a remote operated unit e.g. a bulletin board, then it is a MUST. But for value and less number of do-dads to break-down the manual ones must be considered priority one. (courtesy BOB HAWKE)

The commercial ones available also have reputations which if honestly printed one would never be out of court. It is advisable to have a telecom approved unit ,but there is no doubt it won't work any better if it's got a sticker on the back. The more recent ones to come available are the NICE (W.A.) & Thunderer at (Bass hill), and the new Dataphone 2 (D.S.E.) wow., to name a few. However if it has the 7910 then I don't believe there would be much difference between them all. Bottom line = dollars , what it does and backup service available

SUMMARY

So for the ordinary do it yourself kit the following:-
If it's a manual.. the ETI 699 . 300 Baud only - 1985 MAY
the AEM 4600 . 300 & 1200/75 - 1985 DEC

And for the auto everything kit - whistles etc.
the AEM 4610 . 300 1200/75 - 1986 APRIL
the ETI 684 . 150-9600 1200/75 - 1986 JULY

P.S. so for my money a kit then its the AEM 4600 manual or the automatic ETI-684 top dog (whistle blower), and if I want one made up then it's an AVTEK.

LDOS / TRSDOS Corner

by Gary Bryce 628-5858

In the May issue I described the seven Character I/O SVC's which are common to both LDOS 5.1.x and TRSDOS 6.x, @KEY, @DSP, @GET, @PUT, @CTL, @PRT & @KBD. This month I will deal with the remaining two Character I/O SVC's which are supported on TRSDOS 6.x only :- @VDCTL and @CHNIO.

As a note, those registers listed as being used are either used in setting up the SVC, altered in the execution of the SVC or in the result output of the SVC, and as such must be saved before setting up the SVC if their contents will be required after SVC execution.

@VDCTL -> SVC-15 (TRSDOS 6.x only)

This SVC is very useful for handling direct video access, it performs various video functions depending on the function code passed in the B regiter, they are as follows:-

VIDEO PEEK

Registers Used :- AF, BC, DE, HL.

B => 1, Get the character at the position specified by HL.
H => Screen row (0-23) where 0 is the top row.
L => Screen column (0-79) where 0 is the leftmost

column.
A <= Character found at position specified by HL.
Z <= Set if the operation was successful.

VIDEO POKE

Registers Used :- AF, BC, DE, HL.

B => 2, Put the character in register "C" at the position specified by HL.
H => Screen row (0-23) where 0 is the top row.
L => Screen column (0-79) where 0 is the leftmost column.
C => Character to be put at position specified by HL.
Z <= Set if the operation was successful.

SET CURSOR POSITION

Registers Used :- AF, B, DE, HL.

B => 3, Move the cursor to the position specified by HL.
H => Screen row (0-23) where 0 is the top row.
L => Screen column (0-79) where 0 is the leftmost column.
A <= Contains error code if an error occured.
Z <= Set if the operation was successful.

NOTE: The cursor position is moved even if the cursor isn't currently displayed.

GET CURSOR POSITION

Registers Used :- AF, B, HL.

B => 4, Obtain the current cursor position - row & column.
H <= Screen row (0-23) where 0 is the top row.
L => Screen column (0-79) where 0 is the leftmost column.
A <= Contains error code if an error occured.

BUFFER TO VIDEO

Registers Used :- AF, BC, DE, HL.

B => 5, Moves a BLOCK of RAM to the Video RAM.
HL => Pointer to the user's RAM BLOCK to move to video.
HL <= Pointer to the last byte moved to video +1.
A <= Contains error code if an error occured.
Z <= Set if the operation was successful.

NOTE: BLOCK is 1920 bytes for TRSDOS 6.2, 2048 bytes for ver 6.0 & 6.1.

VIDEO TO BUFFER

Registers Used :- AF, BC, DE, HL.

B => 6, Moves a video RAM image to a RAM BLOCK.
HL => Pointer to the user's RAM BLOCK.
A <= Contains error code if an error occured.
Z <= Set if the operation was successful.

NOTE: BLOCK is 1920 bytes for TRSDOS 6.2, 2048 bytes for ver 6.0 & 6.1. Also if in 40x24 char mode, there must be a char in each alternate byte for a proper display.

SCROLL PROTECT

Registers Used :- AF, BC, DE.

B => 7, Scroll protect the number of lines specified in the C register from the top of the screen.
C => Number of lines to scroll protect (0-7).

NOTE: Once set, scroll protect must be removed by executing the @VDCTL SVC with B=7 and C=0, or by resetting the system. Clearing the screen with <SHIFT><CLEAR> still erases the scroll protected area, but scroll protect still remains. Also, if C is greater than seven, it is treated as modulo 8.

CURSOR CHARACTER

Registers Used :- AF, BC, DE.

B => 8, Change cursor character to that given in C.
C => Character to use as the cursor character.
A <= Contains the previous cursor character.
Z <= Set if the operation was successful.

NOTE: If the cursor is currently not displayed, the character is accepted anyway and is used as the cursor when it is turned back on.

VIDEO LINE TRANSFER (version 6.2 only)

Registers Used :- AF, BC, DE, HL.

B => 9, Transfer an 80 character line to or from the video.
C => Transfer direction, 0=Line from buffer to video.
1=Line from video to buffer.
H => Video line to transfer (0-23).
DE => Pointer to user's 80 character buffer.
A <= Contains error code if an error occured.
Z <= Set if the operation was successful.

=*=*=*=*=*=*=*=*=*=*=

The following example demonstrates the use of the VIDEO PEEK and VIDEO POKE functions of the @VDCTL SVC. The code is taken from an article titled "A Display of Character" by Robert Refinetti that appeared on page 60 of the May '86 issue of 80 Micro.

EXAMPLE :-

```
@VDCTL EQU    15              ;Declare VIDEO SVC
PEAK   LD     A,(HL)          ;Get X from BASIC
       LD     H,A             ;and put it here
       LD     A,(DE)          ;Get Y from BASIC
       LD     L,A             ;and put it here
       LD     A,@VDCTL        ;Select SVC
       LD     B,1             ;Select PEEK function
       RST    28H             ;Run SVC
       LD     HL,ADDRESS      ;Get RETURN address
       LD     (HL),A          ;and put result there
       RET                    ;Return to BASIC
POAK   LD     A,(HL)          ;Get X from BASIC
       LD     H,A             ;and put it here
       LD     A,(DE)          ;Get Y from BASIC
       LD     L,A             ;and put it here
       LD     A,(BC)          ;Get character from BASIC
       LD     C,A             ;and put it here
       LD     A,@VDCTL        ;Select SVC
       LD     B,2             ;Select POKE function
       RST    28H             ;Run SVC
       RET                    ;Return to BASIC
```

@CHNIO -> SVC-20 (TRSDOS 6.x only)

This SVC is used to pass control to the next module in a device chain. It's use is restricted to device filters.

Filters are written to perform all I/O via the @CHNIO Supervisior Call. This SVC uses the contents of MODDCB (which contains the DCB pointer for the module) within the filter invoking the SVC. Thus, the filter I/O is independant of any address by being handled completely through the SVC. If you perform a system command such as :-

FILTER *PR USING *XO

the operating system will swap the first three bytes of the *PR DCB with the *XO DCB. This will change the DCB table from that shown in Fig. 1 to that in Fig. 2.

VECTOR	NAME	MODULE/MODDCB
PRINTER	PR	PRINTER/*PR
XLATE	XO	XLATE /*XO

Fig. 1

VECTOR	NAME	MODULE/MODDCB
XLATE	PR	PRINTER/*PR
PRINTER	XO	XLATE /*XO

Fig. 2

Closely examine the arrangement in Fig. 2, note that the contents of MODDCB for each module are exactly what they were initialised to. Although the *PR device has been filtered, the module itself needs absolutely no change whatsoever. An @PUT to the *PR device is now more complex, but functions perfectly well. The system first passes control to XLATE (which is pointer to by the *PR vector). This filter performs its necessary functions and sends characters down the chain by picking up the pointer contained in its MODDCB (a pointer to the *XO DCB) then issuing the **@CHNIO SVC**. The SVC handles the call by passing control to the PRINTER which is the pointer now stored in the VECTOR field of *XO. Upon completion, a series of RET instructions pass the return code back through the modules making up the chain.

For further reading on this SVC and Filtering, refer to Chapter 2 - Device Input/Output Interfacing of Roy Soltoff's - Programmers Guide to TRSDOS 6 and/or the Software section of TANDY's Model 4 Technical Reference Manual - Device Driver and Filter Templates (page 222).

Registers Used :- depends on the chained filter modules.

IX => Contains a pointer to the DCB assigned to the filter module. This is recovered from the MODDCB field located in the module header. NOTE :- IX should be saved before loading and restored upon return from @CHNIO. B => Contains the I/O direction code (GET=1, PUT=2, CTL=4). C => Contains the output character to GET or PUT

EXAMPLE :-

```
@CHNIO EQU     20              ;Declare @CHNIO SVC
       LD      C,A             ;Get char to PUT
PFPUT  LD      B,2             ;Init for PUT
       PUSH    IX              ;Save the IX
       LD      IX,(PFDCB)      ;Grab the DCB vector
       LD      A,@CHNIO        ;Select SVC
       RST     28H             ;Run SVC
       POP     IX              ;Recover DCB pointer
       RET
```

Over the following months I will continue with these descriptions of the SVC's, probably dealing with the System Control SVC's :- @IPL, @PAUSE, @ABORT, @EXIT, @CMNDI, @CMNDR, @ERROR, @DEBUG, @HIGH$, @FLAGS$, @BANK, @BREAK, @CKBRKC & @CLS.

I may at times devote the column to other issues but I will return to the SVC's until they have all been covered.

COMPDIAL/CMD

by Wayne McIllhatton 681-1315

COMPuter DIALer is a programme I wrote to make the Avtek Multi Modem II auto dial. COMPDIAL was developed on a Model I using NEWDOS/80 for the Avtek Multi Modem II which is the setup I have, so I can't guarantee that it works on other models (3 and 4) or other DOS's. The ROM and DOS calls, the programme uses I believe, are common to most DOS's and TRS-80's, but again I am in the dark about compatibility. We are a self help group of computerists so if you have a different setup to me and you change the programme to run on say, a Model III then let others know what you did.

Ok, COMPDIAL does nothing more than accept a telephone number of up to 15 digits in length, dials the number and waits for a signal from the Avtek saying a Data Carrier Detect has been received, upon receiving this signal COMPDIAL jumps to Modem80 in memory and away you go. Its wise to check that you enter the correct phone number into the computer because just as you dial a wrong number yourself, COMPDIAL will dial the wrong number you give it, and when a person answers there phone all they hear is your modem whistling. Because the Avtek is waiting for a carrier tone ONLY, it does'nt know if its talking to a person, a Busy line or a Queensland Cane Toad so, make sure you enter the right phone number, of course the programme prints on the screen each digit its dialing, when you see that you've entered the wrong number you can abort the dialing by hitting the break key or, the @ key to return to DOS.

I assume that most of us use some version of Modem80 and knowing that there are a few different versions around you will have to find the ENTRY POINT of your copy of Modem80, and change the EQU M80 in the source code of COMPDIAL to this entry point. There are any number of programmes around that can tell you where a programme is entered such as cmdfile, lmoffset ect. ect.

After you have assembled your version of COMPDIAL to disk its best to write a short JCL file to do the loading ect. such as this :

```
LOAD MODEM80/CMD
COMPDIAL
```

you can of course make the JCL file as long as you want so long as you know where the prompts go etc.etc. As you can see to use COMPDIAL you must LOAD Modem80/cmd in memory before running COMPDIAL which is ORGed above where Modem80 sits.

I know that the Model 3 has a faster clock than the Model 1 so the loops in COMPDIAL will have to be lengthened so you get the right delays when dialing. COMPDIAL calls a delay routine at 60H in ROM for its delays, the EQU's you have to alter for a Model 3 are clearly marked in the source code.

```
00100 ;************************************************
00110 ;*                 COMPDIAL/CMD
00120 ;*             (COMPuter  DIALer)
00130 ;*       Written by  Wayne McIllhatton
00140 ;*     Sydney TRS-80 users group (SYDTRUG)
00150 ;*                (C).  May 1986.
00160 ;************************************************
00170 ;*         (N)Edas vers.4.2    Model 1
00180 ;*  Change EQU M80 to the ENTRY point of your version
00190 ;*  of Modem80.  You will have to lenghten T1 & T2
00200 ;*  for Model 3 faster clock.  T2 (33ms) must be at
00210 ;*  least half of T1 (66ms).  You will also need to
00220 ;*  increase T3 for a Model 3.  T3 is the delay
00230 ;*  between each digit 800ms or more
00240 ;************************************************
00250 SCAN    EQU   002BH         ;Rom char. input
00260 PRTCHR  EQU   0033H         ;Rom char. print
00270 DELAY   EQU   0060H         ;Rom delay routine
00280 CLS     EQU   01C9H         ;Rom clear screen
00290 CURPOS  EQU   4020H         ;Cursor position
00300 DOS     EQU   402DH         ;DOS return vector
00310 M80     EQU   0B50AH        ;Change to suit
00320 T1      EQU   122FH         ;Increase for M3. **
00330 T2      EQU   917H          ;Increase for M3. **
00340 T3      EQU   0F000H        ;Increase for M3. **
00350 ;-------------------------------------------------
00360         ORG   0C000H
00370 START   CALL  CLS
00380         CALL  RESET
00390         LD    HL,TITLE
00400         CALL  WRITE
00410 L0      LD    HL,3FC0H+22
00420         LD    (CURPOS),HL
00430         LD    HL,ENTKEY
00440         CALL  WRITE
00450         CALL  MAX
00460 L1      LD    A,1FH         ;cls from cursor to end
00470         LD    HL,3D00H      ;of screen.
00480         LD    (CURPOS),HL
00490         CALL  PRTCHR
00500         LD    HL,MESS1
00510         CALL  WRITE
00520         LD    HL,BUFF
00530         PUSH  HL            ;Save start of buffer
00540         LD    B,15D         ;Max 15 chrs for tele #
00550         CALL  INPUT
00560         LD    A,3           ;Byte 3 ends message
00570         LD    (HL),A        ;Terminate input
00580         POP   HL            ;test for null input
00590         LD    A,(HL)
00600         CP    03H           ;No tele number entered
00610         JR    Z,L1          ;loop back to L1
00620 RD      LD    A,1FH
00630         LD    HL,3DC0H
00640         LD    (CURPOS),HL   ;cls screen from cursor
00650         CALL  PRTCHR
00660         LD    HL,MESS2
00670         CALL  WRITE
00680         CALL  DIAL          ;Dial number routine
00690 L2      CALL  CARRIER       ;Test for a carrier tone
00700         JR    Z,OK          ;good carrier
```

```
00710 LC      CALL  RESET          ;hang up modem
00720         LD    HL,3DC0H       ;carrier signal may have
00730         LD    (CURPOS),HL    ;been noisy tele line or
00740         LD    A,1FH          ;loud busy signal
00750         CALL  PRTCHR
00760         LD    HL,MESS4
00770         CALL  WRITE
00780         JR    L0
00790 OK      LD    HL,MESS3       ;HL must point to CR so
00800         JP    M80            ;Modem80 can operate
00810 ;*-* READ K/B FOR @ (DOS) OR BREAK (ABORT)
00820 ABORT   PUSH  AF             ;SAVE
00830         CALL  SCAN
00840         CP    '@'            ;RETURN TO DOS
00850         JR    Z,DORA1
00860         CP    1              ;BREAK KEY
00870         JR    Z,DORA2
00880         POP   AF             ;NO KEY THIS TIME
00890         RET
00900 DORA1   POP   AF
00910         POP   BC             ;pop loop counter
00920         POP   AF             ;pop call carrier
00930         CALL  RESET          ;DISCONNECT MODEM
00940         LD    HL,0DH
00950         JP    DOS
00960 DORA2   POP   AF
00970         POP   BC             ;pop loop counter
00980         POP   AF             ;pop call carrier
00990         CALL  RESET          ;DISCONNECT MODEM
01000         JP    L1
01010 ;*-* KEYBOARD INPUT ROUTINE
01020 INPUT   CALL  SCAN
01030         CP    '@'
01040         JP    Z,DORA1        ;@ = ret dos via dora1
01050         CP    1              ;Is it break key
01060         JR    Z,DORA2        ;Yes cls & reprint mess1
01070         CP    ':'            ;Greater than number 9
01080         JR    NC,INPUT       ;Yes than ignore it
01090         CP    0DH            ;Enter key
01100         RET   Z              ;End of input
01110         CP    '0'            ;Less than 0
01120         JR    C,INPUT        ;Yes than ignore it
01130         LD    (HL),A         ;put input into buffer
01140         INC   HL
01150         CALL  PRTCHR         ;print input
01160         DJNZ  INPUT
01170 MAX     CALL  SCAN           ;15 chars reached
01180         CP    0DH            ;wait for enter key only
01190         JR    NZ,MAX
01200         RET                  ;we got the enter key
01210 MESS5   DM    '*-* CALL UNSUCCESSFUL *-*'
01220         DB    03
01230 MESS2   DM    'Dialing number now...'
01240         DB    3
01250 TITLE   DM    '              COMPUTER DIALER'
01260         DB    0AH
01270         DM    '      (C). 1986  by W. McIlhatton'
01280         DB    0AH
01290         DM    '    Sydney TRS-80 Users Group SYDTRUG'
01300         DB    0AH
01310         DC    64,179
01320         DW    0A0AH
01330         DM    'LOAD MODEM80 into memory before running
COMPDIAL.'
01340         DB    0AH
01350         DM    'Set  the  modem to  ORIGINATE, and
flick the  connect'
01360         DB    0AH
01370         DM    'switch to  MANual.  COMPDIAL will dial
the remote 88S repeatedly,'
01380         DB    0AH
01390         DM    'until the remote modem answers. You may
ABORT dialling with'
01400         DB    0AH
01410         DM    'the BREAK key, or return to DOS with
the @ key.'
01420         DB    0AH
01430         DB    3
01430 ENTKEY  DM    '*PRESS ENTER KEY*'
01440         DB    3
01460 MESS3   DB    0DH
01470 MESS4   DM    'Busy signal or noisy line'
01480         DB    3
01490 ;***   RESETS & DISCONNECTS MODEM FROM THE TELE LINE
01500 RESET   LD    A,191
01510         OUT   (0EAH),A
01520         RET
01530 MESS1   DB    191
01540         DM    '    @ KEY = DOS              '
01550         DB    191
01560         DM    '    BREAK KEY = ABORT        '
01570         DB    191
01580         DC    64,131
01590         DB    0AH
01600         DM    'Remote BBS telephone #  ==> '
01610         DB    03H
01620 BUFF    DS    16             ;Tele No. buffer plus 1
01630 ;** PRT MESSAGE ROUTINE. MESSAGE MUST END WITH BYTE 3
01640 WRITE   PUSH  HL
01650 WRITE2  LD    A,(HL)
01660         CP    3
01670         JR    Z,DONE
01680         CALL  PRTCHR
01690         INC   HL
01700         JR    WRITE2
01710 DONE    POP   HL
01720         RET
01730 ;**Dialing routine
01740 DIAL    LD    A,125          ;Set DTR on.
01750         OUT   (0EAH),A       ;via data bit 1
01760         LD    D,3            ; Loop 3 times
01770 DELAY1  CALL  ABORT          ;Read K/B
01780         LD    BC,-1          ;WAIT for dial tone
01790         CALL  DELAY          ;ROM delay rtn
01800         DEC   D
01810         OR    A
01820         JR    NZ,DELAY1      ;Wait some more
01830         LD    HL,8UFF        ;Get 1st tele number
01840 DIALNUM LD    A,(HL)
01850         CP    3              ;Last number yet ?
01860         RET   Z              ;Yes return
01870         CALL  A8ORT          ;Read K/8
01880         CALL  33H            ;Print digit
01890         CP    '0'            ;Test for zero
01900         JR    NZ,X1
01910         LD    A,0AH          ;Zero = 10 pulses
01920         JR    X0
01930 X1      SUB   30H            ;Make binary
01940 X0      LD    B,A            ;Swap for saving
01950 X2      PUSH  BC             ;Save it
01960         LD    A,127          ;Disconnect line
01970         OUT   (0EAH),A       ;for at least 66ms
01980         LO    BC,T1
01990         CALL  DELAY
02000         LD    A,125          ;Connect line
02010         OUT   (0EAH),A       ;for at least 33ms
02020         LD    BC,T2
02030         CALL  DELAY
02040         POP   BC             ;Get org. digit
02050         DJNZ  X2             ;dec it pulse again
02060         LD    BC,T3          ;digit delay - 800ms
02070         CALL  DELAY
02080         INC   HL             ;point next # in buff
02090         JR    DIALNUM
02100 CARRIER LD    B,14H          ;Increase for Mod 3 *
02110 CDR     PUSH  8C             ;save numb. of loops
02120         LD    BC,-1          ;delay
02130         CALL  DELAY
02140         IN    A,(0E8H)       ;Read modem status
02150         BIT   5,A            ;Carrier detected ?
02160         JR    Z,BUSY         ;Yes, make sure!
02170         CALL  ABORT          ;Read K/B
02180         POP   BC             ;get numb of loops
02190         DJNZ  CDR
02200         POP   AF             ;time out, clean up stack
02210         CALL  RESET          ;hang up modem
02220         LD    A,1FH
02230         LD    HL,3DC0H       ;Clear
02240         LD    (CURPOS),HL    ;The
02250         CALL  PRTCHR         ;Screen
02260         LD    HL,MESS5
02270         CALL  WRITE
02280 HANGUP  LD    D,6
02290 SL      LD    8C,-1          ;allow line to settle
02300         CALL  DELAY            ;after hanging up
02310         DEC   D
02320         OR    A
02330         JR    NZ,SL
02340         JP    RD             ;No carrier, redial
02350 BUSY    POP   8C
02360 8USY1   LD    8,0FFH         ;monitor carrier line
02370 8USY2   LD    A,(0E8H)       ;for loss of carrier tone
02380         BIT   5,A            ;recheck carrier
02390         JP    NZ,LC          ;carrier dropped out
02400         DJNZ  BUSY2
02410         RET                  ;carrier good
```

02420 END START

Keyboard Peeking with BASIC

by Neil Porter

I have frequently been frustrated at having to continually press <ENTER> after a single key input - too many programs make you do this. The INKEY$ function is one answer to this problem. However, this often produces those funny black lines that flicker across the screen (I did read an explanation of exactly what the cause of this is, somewhere, but I forget now! Something to do with the screen hardware.). The technique of PEEKing the keyboard is a faster, cleaner, and more versatile method of obtaining single key input. It is obviously not as widely known as it should be, judging by the number of otherwise excellent commercially available programs that insist on you typing in a single key followed by a <ENTER> key.

Further, INKEY$ and normal INPUT are both case sensitive when you use an IF to check the string value that has been typed in. PEEKing the keyboard just registers whether or not a key has been pressed, regardless of whether or not you are currently in upper or lower case. Similarly, the key is detected as having been pressed, whether or not it is shifted. - e.g. 1 and ! both register that that particular key has been pressed.

So, what then is this keyboard PEEKing? There are eight main memory locations related to the keyboard. Each position on the keyboard is identified acscording to the current contents of that memory location. The following table shows the relationship between the memory locations, their contents, and the keys pressed.

MEMORY ADDRESS	VALUE contained when key has been pressed							
	1	2	4	8	16	32	64	128
14337	∓	A	B	C	D	E	F	G
14338	H	I	J	K	L	M	N	O
14340	P	Q	R	S	T	U	V	W
14344	X	Y	Z					
14352	0	1	2	3	4	5	6	7
14368	8	9	:	;	,	-	.	/
14400	ENT	CLR	BRK	U/A	D/A	L/A	R/A	SPC
14464	SFT							

ENT= Enter CLR= Clear BRK= Break U/A= Up Arw
D/A= Down Arw L/A= Left Arw R/A= Right Arw SPC= Space
SFT= Shift

14351 <> 0 when a LETTER is being pressed - i.e. no numbers

14591 = 0 when NO key at all is being pressed.

How does it all work? Well, for example if you had just pressed :-

(i) Letter A, then 14337 would have a value of 2.
(ii) Letter F, then 14337 would have a value of 64.
(iii) Number 3, then 14352 would have a value of 8.
(iv) Up Arrow, then 14400 would have a value of 8.

etc....

(**Ed.Note** :- The ROWs of the keyboard may be addressed as 14336 + Rn, where Rn = 1, 2, 4, 8, 16, 32, 64 or 128. By using this method it can be shown that you may scan more than one row at a time, i.e. to scan all rows at once 14336+1+2+4+8+16+32+64+128 = 14591, or for all keys except the SHIFT, 14591-128 = 14463.)

Further , both keys and values are ADDITIVE for a particular memory location (e.g. - if you simultaneously press the CLEAR and BREAK keys, then 14400 will have a value of 6 [2+4]).

How can this be done in a program? The answer is to PEEK the memory location, use an IF statement to check its' value (thereby identifying which key has been pressed), and THEN take appropriate action. If you wish to check a SHIFTed key, you will have to check that PEEK(14464)=1 AND PEEK(memory)=value are both true, and THEN take appropriate action (e.g. - if you simultaneously press the SHIFT and 1 keys, then 14464 will have a value of 1 AND 14352 will contain a value of 2 - i.e. you have identified an exclamation mark !).

Some further examples follow. These have been taken from popular games that most users are likely to already own.

The game TAIPAN has several questions that must be answered before you can get started. Although you are expected to type in the full response, the program actually does a LEFT$ on the input string and checks only a single character.

The following line is an example :-

```
187 PRINT@832,Z"SHALL I BUY, SELL, OR QUIT TRADING";
:INPUTQ$=LEFT$(Q$,1):IFQ$="B"THEN188ELSEIFQ$="S"THEN189ELSE
IFQ$="Q"THEN300ELSE187
```

So, altough you might be silly enough to fully type in "BUY", "SELL" or "QUIT", only a single key input for the letters "B", "S" and "Q" is really needed! The following lines are a suitable replacement :-

```
187 PRINT@832,Z"SHALL I BUY, SELL OR QUIT TRADING?"
189 IFPEEK(14337)=4THEN190ELSEIFPEEK(14340)=8THEN195ELSEIF
PEEK(14340)=2THEN300ELSE189
```

Line 189 translates as "IF key B has been pressed, THEN GOTO 190, ELSE IF key S has been pressed, THEN GOTO 195, ELSE IF key Q has been pressed, THEN GOTO 300, ELSE IF none of these three keys have been pressed, THEN GOTO 189 and try PEEKing again".

NOTES -
You may have to do a bit of line renumbering to fit the changes in. Also, especially note that, it is essential to return to line 189 after finding that none of the selections in the list have been chosen. i.e.- either the wrong key has been pressed, or none at all.

If you chose to S(ell), a problem arose when editing the next line of the program. The original program line follows :-

```
189 PRINT@832,Z"WHAT ITEM SHALL I SELL, TAIPAN?";:INPUTQ$:
Q$=LEFT$(Q$,1):PRINT@832,Z:IFQ$="O"THEN210ELSEIFQ$="S"THEN
230ELSEIFQ$="A"THEN250ELSEIFQ$="G"THEN270ELSE189
```

(Where O is OPIUM, S is SILK, A is ARMS and G is GENERAL goods. Remember that the program originally asked you to waste time actually typing in the WHOLE of each word).

The replacement lines are as follows (renumbering as necessary) :-

```
195 PRINT@832,Z"WHAT ITEM SHALL I SELL, TAIPAN?"
196 IFPEEK(14338)=128THEN210ELSEIFPEEK(14340)=8THEN230ELSE
IFPEEK(14337)=2THEN250ELSEIFPEEK(14337)=128THEN270ELSE196
```

Line 196 translates as "IF key O has been pressed, THEN GOTO 210, ELSE IF key S has been pressed, THEN GOTO 230, ELSE IF key A has been pressed, THEN GOTO 250, ELSE IF key G has been pressed, THEN GOTO 270 ELSE IF none of these keys have been pressed, THEN GOTO 196 and try PEEKing again".

Well, the line looks perfect, so what was the problem? This method of single key input is FAST compared to other methods. So if, in the first question above you had selected S(ell), you have no time to lift your finger off the "S" key before you find that you've selected S(ilk) in the next question, whether you wanted to or not! Sort of wrecks your game a little! What is needed is a delay loop which slows the response time down just enough to give you time to lift your finger of the key before the next screen question appears, but not too long to negate the speed of PEEKing the the keyboard. About 1 second is O.K.

i.e. FORZZ=1TO300:NEXTZZ

This needs to be placed after every screen question. It allows you to lift your finger of the previous selection key, but no time is lost because it takes you more than 1 second to read the next question anyway.

e.g. 195 is now :-

```
195 PRINT@832,Z"WHAT ITEM SHALL I SELL, TAIPAN?":FORZZ=1 TO300:NEXTZZ
```

(**Ed.Note:-** A better solution would be to scan the keyboard until keys are no longer depressed, then continue with the next line.

```
195 PRINT@832,Z"WHAT ITEM SHALL I SELL, TAIPAN?":IFPEEK (14591)()0THEN195
```

This has the advantage of looping to itself until all keys are released and continuing to the next line as soon as all keys are released. So that if you hold a key for longer than 1 second it won't fall through to the next line and result in the original problem.)

This problem becomes more apparent when there is a series of questions that require a YES/NO response. This is a pain in the neck when running the Inn Keeper program for "The Temple of Apshai" game. There are several questions of the type "Hast thou a ....." or "Wilt thou bu a ...." that require a YES/NO response. The original program insists that you press (ENTER) after every single key entry. By PEEKing the keyboard you save yourself a lot of typing and time, but if you don't include the above loop, you could accidentally say "NO" to 4 or 5 questions in a row, if you are too heavy-handed on the keys!!

An interesting case arose when editing this Inn Keeper program. In the above examples, if either no selection or a wrong selection had been made, the program looped back and PEEKed again. The following lines show a case where you can't do that. The original program lines are :-

```
2840 INPUT"WILT THOU BUY A SHIELD";A$:IFLEFT$(A$,1)="N"THEN GOSU82885:RETURNELSEPRINT"SHIELD WEIGHT ASK":PRINT"SMALL" TA8(11);SW(1);TA8(22);SP(1):PRINT"LARGE"TAB(11);SW(2);TAB (22);SP(2):INPUT"WHAT SORT";C$
2842 IFLEFT$(C$,1)="L"THENN=2ELSEIFLEFT$(C$,1)="S"THENN=1 ELSEN=0:POKEKB,0:PS=0:RETURN
```

The line of interest is 2842, wherein, if you selected a L(arge) shield then N=2, if you selected a S(mall) shield then N=1, but if you made any other response, then N=0. i.e. - when PEEKing the keyboard, you can return to rePEEK ONLY when NO key at all has been pressed. i.e.:-

```
2840 PRINT"WILT THOU BUY A SHIELD":FORZZ=1TO300:NEXTZZ
2842 IFPEEK(14338)=64THENGOSUB2885:RETURNELSEIFPEEK(14344) =2THENPRINT"SHIELD WEIGHT ASK":PRINT"SMALL"TAB(11);SW(1); TAB(22);SP(1):PRINT"LARGE"TA8(11);SW(2);TAB(22);SP(2): GOTO2844ELSE2842
2844 PRINT"WHAT SORT?":FORZZ=1TO300:NEXTZZ
2846 IFPEEK(14338)=16THENC$="L":GOTO2848ELSEIFPEEK(14340) =8THENC$="S":GOTO2848ELSEIFPEEK(14591)=0THEN2846
2848 IFC$="L"THENN=2ELSEIFC$="S"THENN=1ELSEN=0:POKEKB,0: PS=0:RETURN
```

Thus, in line 2846 we need to check that NO key at all has been pressed :- i.e. IF PEEK(14591)=0 then NO key at all has been pressed, so return to the beginning of 2846 and rePEEK. For keys "L", "S" and ANY other key, we end up at line 2848.

There are many other examples but you must have the idea by now, and can try a few of your own variations. The big questions is - "Is it all worth it?" If you have read this far, then you must be interested in programming, and if that is so, then you must know that, the easier it is for the user to use, the more nit-picking it is for the programmer to program! Have fun! - Neil.

MYSTERIES OF FILENAME EXTENSIONS REVEALED

by Darrell Hegarty (02) 560-9681

I have had a number of members remark to me that the content of the Newsletter is "way over their head", but they still like the Newsletter as it is, so here is an attempt at an article for disk users who are relatively new to the world of flippies and floppies.

I will begin with some common filename EXTENSIONS (the part which follows the '/' (or '.' for MS-DOS), in the filename. These (up to) 3-character extensions can give a whole new meaning to a filename, and there are some "standard" extensions which are used for certain types of files. There are also some "reserved" extensions (CMD,COM,EXE,BAT,BAS,JCL & SYS are a few), which you should NOT use for anything other than the correct file types.

I will attempt to cover TRS-80 type DOSes, as well as MS-DOS in the following table, as the same, or similar extensions are used for the two systems. Similar conventions apply between the two systems as well. There are some terms which will be used in the descriptions below which may need explaining.

(1) **ASCII** - American Standard Code for Information Interchange - this is a 7-bit code with 128 possible combinations describing, amongst other things, the Alphabet. It is used in microcomputers to store TEXT files which are readable by mere humans. But my computer has 8 bit words, you say - what about the eighth bit?? ASCII only uses seven of the eight bits available, the eighth bit being used during the transfer of machine-code programs over the lines between computer and disk drive.

(2) **TOKENISED** - A method of storing BASIC files on tape or disk so that they take up less room. Each BASIC keyword or command is stored as a single byte on the disk. This generally makes such a program unreadable by humans, when read directly from the disk or tape.

(3) **BYTE** - 8 bits of information. Each 'bit' may be a 1 or 0 - TRUE or FALSE - ON or OFF - HIGH or LOW - +5 volts or 0 volts. There are many different terms for the states of a 'bit', all meaning the same. The main thing to realise about a 'bit' is the fact that it can have ONLY TWO states. Bit is short for BInary digiT, where binary means having TWO states.

FILENAME EXTENSIONS

/ASC (.ASC for MS-DOS) - Generally a BASIC file stored in ASCII, but may be just plain text. ALWAYS an ASCII file, so it can be read by LISTing (TYPEing for MS-DOS), PRINTing to the printer, or by loading into a WORD PROCESSOR. If the file is NOT a BASIC file, it CANNOT be loaded into BASIC. It will generally give a "Direct Statement in File" error if this is the case.

/ASM (.ASM for MS-DOS) - This is used to signify an ASseMbler source code file. These files are normally created by an Editor/Assembler before assembly to a Command (/CMD OR .COM) file. Sometimes /SRC (.SRC for MS-DOS) is also used, but ASM is the preferred extension, being automatically supplied by at least one Editor/Assembler.

/BAK (.BAK for MS-DOS) - Usually signifies a BAcKup of the file with the same filename. A lot of MS-DOS programs, such as word processors, automatically create a backup (.BAK) file before saving the document in the memory buffer, to disk.

/BAS (.BAS for MS-DOS) - A BASIC source code file, may either be in ASCII or TOKENISED, but is usually tokenised. BASIC programs downloaded from a Bulletin Board sometimes give a "Direct Statement in File" error when attempting to load into BASIC. This is generally caused by one or more lines being longer than 255 characters (the maximum allowed length). How is this so ? You may ask. This happens when the program in question has been saved in ASCII, and thus all the TOKENS (1 byte, remember), are E-X-P-A-N-D-E-D out to their full keyword. The ONLY way to correct such a problem is to load the program into a word processor, find out the offending line number(s), and split the line(s) if at all possible. This will be usually be possible because the offending line(s) will probably be multiple statement lines with a colon (:) separating each statement.

.BAT (No direct TRSDOS equivalent) - BATch file processing for MS-DOS machines, allows a form of automated execution of a series of DOS commands and executable programs. Very useful for 'menu' oriented operation.

BLD - Usually a file built by the DOS command 'BUILD'. This is normally a 'DO' file for automatic processing. Note that not all DOS's have the BUILD command.

Bol - This is an extension used by the later versions of Multidos to indicate that the file is a BASIC overlay file.

CIM - Normally a Core IMage file. This type of file is created by a special form of the DOS DUMP command, and IS NOT executable, or cannot even be LOADed into memory. It is readable by most disk 'zap' programs, and is normally used in debugging.

CMD (.COM or .EXE for MS-DOS) - Signifies "executable" code. Any file with these extensions can be directly executed by the computer - just enter the filename, without the extension, and the computer will execute the file. These /CMD or .COM files are written in machine code, and are normally loaded into memory as a 'core image' and executed. The MS-DOS .EXE files are slightly different and are rather slower in loading. These .EXE files are usually the result of a program initially written in BASIC or some other high-level language, and then compiled.

CHN - Files with this extension are usually the result of the Microsoft BASIC Compiler, and are the final 'executable' code. They are run by issuing the command 'BRUN filename'. There must be a file called BRUN/CMD on the disk to execute these files. MS-DOS has no direct equivalent.

COB (.COB for MS-DOS) - Usually signifies a COBOL source file.

CTL - Superscripsit 'control' or system files, which make up the complete Word Processing system.

DAT (.DAT for MS-DOS) - A DATA file, usually created by a BASIC program, and accessed by the statement 'OPEN'. This extension could also be used for any other type of DATA storage file accessed from any program.

DEM (.DEM for MS-DOS) - A DEMonstration file of some kind, usually in BASIC, but could be almost anything.

DIF - VISICALC Data Interchange File. One of the two extensions used for Visicalc files, and used on this particular method of data saving.

DOC (.DOC for MS-DOS) - Usually DOCumentation for another command file or BASIC program, and quite often a Word Processor document. These files are plain ASCII and cannot be loaded into BASIC. They can be read by LISTing (TYPEing for MS-DOS) to the screen, PRINTing to the printer, or loading into a WORD PROCESSOR and printing from there.

Dol - This is the extension for Multidos DOS overlays.

DVR (.DVR for MS-DOS) - Normally a 'DriVeR program' for one of the connected devices (printer, keyboard, RS-232 etc.). This file usually needs to be invoked through a library command or a a .SYS file (for MS-DOS).

FIX - A patch file for FIXing another program. Used with LDOS and TRSDOS 6.x for applying patches (updates) to programs.

FLT (.FLT for MS-DOS) - A FiLTer file, used to filter some input or output before processing or printing. Used mostly with LDOS/TRSDOS 6.x for keyboard filters, print filters etc.

FOR (.FOR for MS-DOS) - Usually signifies a FORTRAN source file.

GRF (.GRF for MS-DOS) - Graphics data file. May also be GPH or similar.

HIS (.HIS for MS-DOS) - Used for saving HIgh Scores from some games programs.

HLP (.HLP for MS-DOS) - A HeLP file, usually called from the main program by typing the 'H' key at a certain point in time, or by typing (CTRL-H) or similar.

INX - INdeX file, usually created and used by a BASIC program. May also be IND or similar.

JCL - Job Control Language file. This type of file allows some form of automated responses and command execution. Most DOS's use JCL files and they are extremely versatile in allowing an automated function. You can set up a demonstration using a JCL file and leave the computer unattended for the demonstration. MS-DOS has a similar type of file called a 'BATCH' file, which uses the extension of .BAT, but is rather limited in comparison.

K16, /K32, /K48, /K64 etc - Usually indicates the memory required to operate the program.

LIB (.LIB for MS-DOS) - LIBrary file extension, usually used with compilers as their Library of subroutines.

LC - Scripsit Lower Case file.

LST - Microsoft BASIC Compiler LiST file.

M1, /M3, /M4 - These extensions usually mean that the file is a Model 1, 3 or 4 version. The program could be a BASIC or Command file.

MUS - MUSic files for CHORD/CMD (Model 1/3/4).

NOW (.NOW for MS-DOS) - This extension is usually associated with the filename of 'README'. A text file to be read BEFORE using the disk or programs on it, as it usually tells how to use the programs, or contains other important information.

NTS (.NTS for MS-DOS) - Virtually the same as DOC. This file is a documentation file in ASCII - NTS stands for NoTeS.

OBJ - OBJect code files, usually the same as machine executable code, but not yet finalised for execution.

ORC - ORChestra 80/85/90 music files.

OVL (.OVL for MS-DOS) - This extension indicates an OVerLay file for the program indicated by the filename. DOS overlays are also sometimes given this extension. The OVL extension can also take the form of OV# for OVerlay number #.

PCL (.PCL for MS-DOS) - Files with this extension are invariably ELECTRIC PENCIL text files. PENCIL is a word processor, and gives the extension PCL automatically to all its text files.

PIC (.PIC for MS-DOS) - PICture ASCII file, usually a picture file to be PRINTed to your line printer. Often a nude female form embracing a calendar to make it somewhat respectable.

PR, /PRI - Dotwriter font files.

REF (.REF for MS-DOS) - A REFerence file of some sort. Often contains a table of references. Could be ASCII, or coded.

REL (.OBJ for MS-DOS) - Microsoft Compiler RELocatable object code files.

SCR - SCRipsit files. Could also refer to SCREEN dump files.

SRC (.SRC for MS-DOS) - Used to signify a SouRCe code listing, usually from an Editor/Assembler, although it could be ANY source code listing (from COBOL, FORTRAN, C, etc), and not necessarily an Assembler source. The extension 'ASM' is probably the preferred for Assembler source, 'COB' for COBOL, and 'FOR' for FORTRAN.

SYS - DOS SYStem files, PENCIL overlay files etc. You should not use this extension for any of your files, as they could get confused with the SYSTEM in some cases.

TST (.TST for MS-DOS) - Usually indicates a TeST file of some sort. Could be BASIC, Machine code or a word processor text file.

TXT (.TXT for MS-DOS) - A TeXT file from either a word processor or some other editor. Always in ASCII

UC - Scripsit Upper Case files.

VC - VisiCalc files saved in the normal format.

XRF - A cross reference table, often produced by an Assembler.

Some programs, usually word processors, have a "default" extension which is given to the document files when they are saved. PENCIL is a notable one, and gives the extension of /PCL to its documents, unless the user stipulates his/her own extension.

Often, on a disk, you will see a program called 'RUNFIRST/BAS' (RUNFIRST.BAS for MS-DOS) or a file called 'README/NOW' (README.NOW for MS-DOS) or similar. You should do just this, as the program or file will usually give you important instructions for using the rest of the disk. This is becoming more frequent with more programmers distributing their software documentation on disk. It is easier and cheaper to duplicate this way. Naturally, the file called README/NOW (README.NOW) cannot be read by loading into BASIC - you MUST LIST, TYPE or PRINT this file to read it. The listing can be paused after each screenful to read (see your DOS manual for how to do this).

The above list is by no means complete, nor is it meant to be hard and fast rules which MUST be followed. It is merely a guide to the use of filename extensions, and the meaning of some of the more common ones. I will follow up with more articles for 'beginners' (time permitting), in future issues of the Newsletter. Please let me know, either by phone or a short note, of some subject you would like to see in the Newsletter, and I will try to write an article for YOU.

The following is the reply from the Manager of the TANDY Bankstown store, to Jim Whittaker's column in the June issue of SYDTRUG NEWS, reproduced EXACTLY as it was received by me - warts and all. I have formed my own private opinion to the saga, and it will remain private. I can only suggest that you form your own opinion as well, and if you wish to relate any of your own experiences (GOOD or BAD) with TANDY, please feel free to do so via this Newsletter. But let's not have a long, drawn-out slanging match, just for the sake of saying something nasty.

(page 1)
Tandy Electronics (Australia),
Cnr.Brandon Avenue and Chapel Road,
Bankstown,
NSW 2200.

The Secretary,
SYDTRUG,
P.O.Box 297,
Padstow,
NSW 2211

Tuesday,17th. of June,1986.

Dear Mr.Hegarty,

Thank you for sending me a copy of June's SYDTRUG News,it certainly made interesting reading !

As I believe "there are still some responsible people"at SYDTRUG,I am sure you will only be too happy to allow my side of the story to be told.Naturally I expect this to be printed in a future copy of SYDTRUG News;and I await written confirmation from you concerning this matter.

Although the "facts" from my point of view detract from Mr.Whittaker's eloquent contribution to the magazine,they do,however,give a truer and more balanced view of the problem.What readily springs to my mind is the well known saying "Why spoil a good story with the facts".

I have enclosed a copy of the "facts" that I have submitted to my superiors;naturally such complaints are treated very seriously indeed.

Yours faithfully,
(signed)
Neil Corkindale - Store Manager.

(page 2)

MODEL 3 HARD-DISK FOR SYDTRUG,26-1130

1) GOODS BOUGHT ON 7/12/85,TKT NO 293431.SOLD BY STEVE COOPER;PAYMENT WAS BY CHEQUE.
2) GOODS SENT OVER FROM PERTH,ALTHOUGH THE GOODS WERE ORIGINALLY FROM THE THE NOW CLOSED DOWN STORE OF SUBIACO ,ACCORDING TO THE MANAGER THERE,AS FAR AS HE WAS CONCERNED THE GOODS WERE OK.
3) ACCORDING TO MIKE GREGORY(WHO WAS PRESENT DURING NEGOTIATIONS)THE UNIT WAS TO BE SOLD FOR $750 ON A STRICTLY "AS-IS" BASIS.IE ANY REPAIRS WERE TO BE PAID FOR BY SYDTRUG,NO MANUALS CAME WITH THE STOCK ETC.
4) THE GOODS WERE RETURNED TO THE REPAIR DEPT.(WHO RECEIVED IT ON 24/12/85.ON 3/1/86 THE GOODS WERE RETURNED TO 2334 WITH A TECHNICIANS REPORT,WHO SAID IT WAS B.E.R. AND WOULD COST ABOUT $968 TO REPAIR.A SCREW HAD BEEN PUT IN THE BUBBLE,BUT ALTERATIONS,MODIFICATIONS ETC HAD BEEN MADE,WITH A VERY POOR LEVEL OF EXPERTISE. (BY THE WAY,IT TOOK SYDTRUG FROM THE 7/12/85 TO 22/12/85 TO RETURN THE GOODS.)
5) ON 7/1/86 STEVE COOPER RETURNED THE GOODS TO SERVICE,WHO RETURNED THE GOODS TO 2334 ON 24/2/86.THE CHARGE WAS $968.25.
6) SYDTRUG INSISTED THAT SOFTWARE,LEADS ETC WENT BACK WITH THE ORIGINAL REPAIR(IE 22/12/86).ACCORDING TO PERTH,NO ACCESSORIES WERE SENT OVER,AND NONE WERE LISTED ON THAT ORIGINAL REPAIR TAG,# 7994.
7) CONSEQUENTLY I ORDERED THESE FROM NAT PARTS,AND CUSTOMER SERVICES,(WHO ARE STILL PHOTO-COPYING THE MANUAL,TO MY KNOWLEDGE).THIS TOOK APPROXIMATELY ONE WEEK TO ARRIVE.
8) SYDTRUG BROUGHT THE UNIT BACK IN THE SHOP AND TRIED TO FORMAT THE HARD DISK,USING THE NEW SOFTWARE,THEIR LDOS DISK AND THE INTERFACE LEAD.THEY HAD PROBLEMS,BUT TODK THE UNIT AWAY WITH THEM.
9) THIS WAS BROUGHT BACK TO THE STORE,AND WAS RECEIVED BY SERVICE ON 11/3/86.SERVICE SAID THAT IT WAS OK,AND HAD NOT BEEN FORMATTED.THAT WAS THE PROBLEM,SYDTRUG COULD NOT GET IT TO FORMAT.THE UNIT WAS RETURNED TO 2334 ON 17/3/86 WITHOUT THE THE INTERFACE AND POWER LEAD,WHICH HAD BEEN LISTED ON THE REPAIR TAG (#07618).THERE WAS ANOTHER DELAY OF A WEEK AS I WAITED FOR THE INTERFACE AND POWER LEAD TO BE RETURNED.
10)THE UNIT WAS RETURNED AGAIN ON 19/4/86,AGAIN PROBLEMS IN THE FIRST FEW HOURS OF USE,THEN IT WAS OK.SERVICE RETURNED THE UNIT TO ME ON 16/5/86,AND SAID THAT THE UNIT'S CASE HAD BEEN OPENED.I MENTIONED THIS TO SYDTRUG WHO WENT MAD!!APPARENTLY THE SERVICE STICKERS PEEL OFF EASILY,AND THIS CAUSED THAT PROBLEM.NO POWER LEAD WAS RETURNED AGAIN,AND I HAD TO GIVE ONE FROM MY STORE STOCK.
11)TO CONCLUDE,THE DEAL WAS $750 FOR THE UNIT AND SYDTRUG PAY ANY REPAIR BILLS.THE TOTAL COST OF THE SERVICE BILL TO 2334 HAS BEEN $1078.25 PLUS APPROXIMATELY $75 IN CUSTOMER SERVICE CHARGES,EG DISKS ETC. SYDTRUG HAVE NOT PAID $1 SO FAR.

A REPLY TO TANDY

from Michael Cooper

(NOTE: This letter expresses the opinions of the author and not necessarily those of SYDTRUG.)

Most members would have seen the letter received from Neil Corkindale of the Bankstown TANDY store and published elsewhere in this newsletter. Because I was the prime motivating factor in having SYDTRUG purchase the now notorious Hard Disk for the BBS, I felt moved to respond to the letter. As Neil says, never let the facts get in the way of a good story.

Since the letter makes several points, I will deal with each in its turn.

Point 1. I have no dispute with this.
Point 2. This begs the question; Did the Manager know the goods were IN FACT in working condition, or perhaps just ASSUME.
Point 3. The unit was purchased NOT "As-Is" but rather as "A second hand, but working shop demonstration unit".
Point 4. There are several issues covered in this one point.
a. The long delays were due to the fact that Christmas was near.

b. I reject the implication categorically that we conducted - "Alterations, Modifications etc had been made, with a poor level of expertise".- If you want a definition of "Poor Expertise" just look at any Model 4 Logic board; wires and mods everywhere like like tangled spaghetti, straight from the factory.

c. From the amount of "Customer Support" that SYDTRUG needs to provide to TANDY purchasers, it seems to it seems to me that any "poor level of expertise" is more likely to be found at store level.

d. I am amazed that Neil Corkindale thinks TANDY should be able to sell SYDTRUG goods that are not in working condition. Unlike many of his customers, we DO know the difference between a Hard Disk and a Horses Arse, and thus are most unlikely to want to spend $750 of our money for what essentially was:

1 x Power Supply
1 x Hard Disk Controller Card
1 x Plastic Box
1 x Hard Disk Drive Unit (thoroughly fu...d)

As secondhand parts the value is no more than $300 ($150 for Controller, $80 for Power Supply, $70 for Plastic Box, $0 for Drive Unit).

Point 5. I have no dispute with this point.

Point 6. Selling a Hard Disk Drive without cables, manuals software and even a 240 Volt Power Cable is, to say the least, rather strange business practise.

Point 7. As at 24/6/86 we still have no manual from Tandy (6 months + from date of purchase). Never mind, I got one from the U.S. in 2 weeks flat.

Point 8. Obviously the unit was taken away to ensure that it was a hardware problem and not simply an "operator error" - not easy to establish without a user manual.

Point 9. Yet again TANDY service shows how effective they are in ensuring that the customers property is returned intact and complete.

Point 10. Again several points are covered here.

a. According to TANDY service the problems were due to the "mis-alignment" of a supposedly BRAND NEW, ALIGNED, TESTED and FACTORY SEALED 5 Meg Hard Drive Unit. (Sold at about twice the going rate for full height 5 Meggers).

b. That TANDY should assume service stickers not adhering correctly meant we had tampered with the unit was gross arrogance, a typical trait of so many micro manufacturers.

c. The unit as it now stands has yet again loose stickers, and was returned from TANDY service in this condition. Many a cynic like myself would probably feel this was deliberate attempt to weasel out of further obligations on a tissue thin pretext. I wonder how many other TANDY customers have loose stickers ?

POINT 11. This final point is the most fallacious of all. The real agreement was for SYDTRUG to pay $750 for a "5 Megabyte Primary Hard Disk Drive used in a TANDY store in W.A. as a shop demonstration unit and currently working". This we never received.

Having dealt with each point raised in Noel's letter, I feel a few further personal observations are in order.

I am rather disappointed that both SYDTRUG and TANDY should have to engage in this rather unpleasant public slanging match when we are all trying to push in the same direction.

As a computer professional I can also say with some authority that the level of support provided to TANDY customers by SYDTRUG would be equivalent to the efforts of 3 Customer Support Officers. If TANDY needed to employ these people to replace the efforts of SYDTRUG, the wages and on-costs would mount to nearly $100,000 per year.

It is also worth noting that unlike say Apple Australia, or Commodore Australia, who have both supplied user groups with thousands of dollars of free equipment for clerical and BBS use, TANDY have never so much as given SYDTRUG a free lunch (although they did give Geza, Denis and I a free morning tea once!).

How about it TANDY. SYDTRUG saves you about $100,000 per year in customer support and allows your stores to concentrate on selling, without lots of customers cluttering up your system with minor questions and problems.

SYDTRUG disseminates information and facts about your products at NO COST TO YOU, and provides facilities that match the best other user groups can provide at NO COST TO YOU, yet here we are quibbling about a mere 1000 bucks or so, chicken feed to a large organisation. YOU should have provided all the Hardware we needed to set up the BBS in the first place, its a great tax deduction, and it would have been the the cheapest P.R. bargain around.

Perhaps its better you didn't though, otherwise I may have had to pull my punches.

PUBLIC DOMAIN SOFTWARE

Following is the last release of our Public Domain Software, to be released this month (July). Each disk contains TWO volumes as described on the catalogue disk, and there will be 6 disks (12 volumes) released this month. These disks will be available at the Botany meetings for $5.00 each to MEMBERS ONLY. Each disk is a true 'flippy', formatted in single-density, 35 tracks, and containing about 2x88k (176k) of software.

Country and interstate members may order via mail, by sending a cheque or money order for $5.00 per disk plus $1.00 postage for each 4 disks or part therof ordered, to SYDTRUG PO Box 297 PADSTOW NSW 2211. Cheques should be made payable to 'Sydney TRS80 users Group' please.

Since this is the last release of the PD software, all disks may now be ordered, or purchased from the PD librarian at Botany meetings. It is suggested that the first disk purchased be the catalogue, and this way you may see what is available.

PDGAME27 : Games

BACKPACK/BAS	Backpacking expedition
BACKPACK/INS	BACKPACK instructions
CHECKERS/BAS	Game of checkers
CONVOY/BAS	You're in charge of an army convoy
GOMOKU/BAS	Japanese five-in-a-row game
PINBALL/BAS	You can't tilt this pinball game
QUBIC/BAS	Variation of dice game
REALTREK/BAS	Star Trek variation
STARLANE/BAS	Keep trade lanes open from planet to planet
TROLGOLD/BAS	Can you find the troll's gold

PDGAME28 : Games

DRAWPOKR/BAS	Play draw poker with the computer
GAMEPLAY/BAS	Eight games of chance and skill
LUNAREXP/BAS	Lunar lander & explorer
MEDIADV/BAS	Medieval adventure
POTATOES/BAS	The invading Space Potatoes are here
SALAMI/BAS	Rule the mythical kingdom
SCIFI/BAS	Science fiction episode
SLOTI2II/BAS	Slot machine variation
SPACEGAL/BAS	Space battle game
SPACTREK/BAS	Star Trek game variation
STARWAR1/BAS	Star Trek game variation
STUDPOKR/BAS	Play five-card stud poker

PDGAME29 : Games

ANROID/BAS	Play ancient game of nim with the androids
BASEBALL/BAS	Computerized baseball (1 or 2 players)
DOOMSDAY/BAS	Can you stop the destruction of earth?
FDRDOWNS/BAS	Bet on the ponies at FDR Downs
GYPSY/BAS	Computer tells your future
IMHOTEP/BAS	Become an Egyptian architect
JUMBLE1/BAS	Scramble words
LONESTAR/BAS	Adventure in the old West
MORSEPLY/BAS	Practice morse code
ODD1OUT/BAS	Elimination game
PEEKDRAW/BAS	Drawing board
ROACHRAC/BAS	Race roaches down the hall
SAVIOR/BAS	The human race needs a rescuer
SCISSORS/BAS	Game of rocks, scissors, paper
SHOOTGAL/BAS	Turn your TRS-80 into a rifle range
SKETCH/BAS	Sketch pad
STARBLAZ/BAS	Blaze across uncharted space
STARS/BAS	Elimination game
STINGRAY/BAS	Destroy the socialist empire
TIGERSHA/BAS	Navigate the Tiger Shark into battle
UNJUMBLE/BAS	Unscramble words
WHEEL/BAS	Roulette

PDGAME30 : Games

BSKTBALL/BAS	Computerized basketball (1-2 players)
CRYPTOSO/BAS	Solve cryptograms
FTBALL1/BAS	Use the computer as a grid iron
FTBALL2/BAS	Variation of computer football
GOLDMINE/BAS	Search an abandoned mine for gold

GOLF4/BAS	Play the computer 18 holes
HANGMAN5/BAS	Word guessing game
HORSEBET/BAS	Can you pick the ponies?
LIFETWO/BAS	Build the perfect world
MSTRMIND/BAS	Code breaking game
POOL/BAS	Play pool and improve your geometry skills
SLED/BAS	Jump the space sleds
TREKIII3/BAS	Star Trek variation

PDGAME31 : Games

ANAGRAM/BAS	Word game
BOMSQUAD/BAS	Defuse the bombs
FOKUL/BAS	Return to your space craft before the Fokuls
GUESS/BAS	Guess-the-number game
INBTWEEN/BAS	Another guess-the-number variation
KAMIKAZE/BAS	Go on a suicide mission
NEWPOWER/BAS	Control a neuclar power plant
OTHELLO2/BAS	Variation of this board game
PICARIA/BAS	Medieval advanture
POKERI/BAS	Can you bluff the TRS-80 at poker?
STARGEM/BAS	Find the lost Stargem
STRMUSIC/BAS	Music Creator
SUPFOKUL/BAS	Enhanced version of FOKUL
SWORDS/BAS	Fence with the computer
TARGET0/BAS	Word game
XWING/BAS	Pilot a rebel fighter against the Empire
XYRON6/BAS	Fly the Xyron space craft
YAHTZ/BAS	Variation of dice game

PDGAME32 : Games

AMAZE/BAS	Maze printout
BANDIT/BAS	Try to beat this slot machine
BIORYTHM/BAS	Biorythm printing program
BRICKS/BAS	Stop the brick before it breaks the window
COKES/BAS	The loser of this game has to be buy the Cokes
DICE/BAS	Roll the dice and know when to stop
FIVECARD/BAS	Five-card poker game
JUSTLUCK/BAS	Version of Chuck-a-luck
MAGICSQ/BAS	Peg puzzle
MATCH/BAS	Don't remove the last match from the row
MUSIC/BAS	Music Maker Programs
NAUGHTS/BAS	Naughts and Crosses is Britsh Tic-Tac-Toe
ORCONV/CMD	Convert Orchestra-80 files
ORCONV/DOC	Documentation for ORCONV/CMD
ORGAN/CMD	Organ simulation for Model I or III
ORGAN4/CMD	Organ simulation for Model4
PAR2/BAS	Golf game
PLUS1/BAS	Trace the paths
REVERSE/BAS	Reverse your list before the computer does
RISK/BAS	Version of board game
RNDWORDS/BAS	Word game
SOUNDA/BAS	Sound demo
SOUNDB/BAS	Sound demo
SOUNDC/BAS	Sound demo
SOUNDD/BAS	Sound demo
TSOUND/BAS	Sound demo
TWENTY1/BAS	Variation of black jack
ULTRANIM/BAS	Version of Nim
VERBOTEN/BAS	Don't use the verboten words
WEAVER/BAS	Graphics demo
YATC/BAS	Dice game with the computer as judge

PDGAME33 : Games

ATLANTIS/BAS	Explore the Lost Continent
BLNKSLAT/BAS	Use Blank Slate as your drawing board
DECICPHE/BAS	Deceode secret messages
DOODLART/BAS	Doodle on the screen rather than paper
DRIVERL2/BAS	Test your driving skills
EMPIRE/BAS	Control your own world
FAKEOUT/BAS	Who can you bluff?
FORETELL/BAS	A fortune teller in your computer
KNOKOUT/BAS	Break through the walls
MATCHEM2/BAS	Match game
NEWSPHOT/BAS	Use your camera to catch the right view
RUSSIAN/BAS	Russian roulette
SNIPER/BAS	Get the sniper before he gets you
SOUTHPOL/BAS	Journey to the frozen continent

PDGAME34 : Games

CFLEET/BAS	Cross 32 parsecs of enemy space
CHICKEN/BAS	Legendary car challenge
DEATHRAC/BAS	Car accelerates with each spectator killed
DECIPHER/BAS	Word puzzles with three levels of play
EXPLORE/BAS	Treasure hunt in the many-chambered cave
GALERYL2/BAS	Shooting gallery with nine skill levels
GOFISH/BAS	Relive your childhood with this old favorite
HYPERSPC/BAS	Destroy 20 ships in the enemy fleet
ISLATION/BAS	Isolate you opponent so he can no longer move
LABRINTH/BAS	You are King Minos's prisoner on Crete
MINEFLD/BAS	Trudge through a heavily mined field
MOONBASE/BAS	Opposing moon bases fight it out with nukes
NORETURN/BAS	Don't fall off the edge of the flat earth
RACERL2/BAS	Realistic simulation of a race for Level II
ROBOTWAR/BAS	Destroy the ever-producing enemy robots
SOCCER/BAS	Two players compete in a soccer game
SPCTARGT/BAS	Shoot it out in space
SUBATTLE/BAS	You're outnumbered four to one
TRIVIA/BAS	Challenging game for trivia buffs

PDUTIL13 : Utilities

ART6809/TXT	Documentation for ASM6809, PONG, SETRES, VARS
ASM6809/BAS	A 6809 assembler in Microsoft BASIC
EDPATCH/ASM	Patch Model 1 version of EDTASM+ for Model 3
EDPATCH/TXT	Documentation for EDPATCH/ASM
JKL/TXT	Documentation for CENTRJKL and EPSONJKL
PONG/ASM	Sample file for ASM6809
SETRES/ASM	Sample file for ASM6809
VARS/TXT	Variable usage table for ASM6809
VERFILE/ASM	Assembly file for VERFILE/CMD
VERFILE/CMD	File verification utility
VERFILE/DOC	Documentation for VERFILE/CMD

PDUTIL14 : Utilities

BASICOMP/BAS	BASIC compiler for Models I & III
BASICOMP/DOC	Documentation for BASICOMP/BAS
BINCLOCK/ASM	Assembly file for BINCLOCK/CMD
BINCLOCK/CMD	Binary clock for Models I and III
BINCLOCK/DOC	Documentation for BINCLOCK/CMD
CODE/ASM	Assembly file for CODE/CMD
CODE/CMD	ASCII file encoding/decoding
SAMPLE/BAS	Sample program for BASICOMP
SD456/ASM	Assembly file for SD456/CMD
SD456/CMD	NEWDOS screen dump to disk file
SD456/DOC	Documentation for SD456/CMD

PDUTIL15 : Utilities

BASEDEC/BAS	Convert base 2 to 16 to decimal
BINDIST/BAS	Binomial distributions
DAYDIFF/BAS	Calculates number of days between two dates
DECBASE/BAS	Convert decimal to base 2 to 16
DIALER/ASM	Assembly file for DIALER/CMD
DIALER/CMD	Telephone dialer program
ENG2MET/BAS	Convert English to metric
EXPRESS/BAS	Expression input/output
EXPRESS/DOC	Documentation for EXPRESS/BAS
INOUT/FOR	Assigns logical unit numbers for FORTRAN
LINRCOEF/BAS	Correlates and interpolates two sets of data
LPDESC/ASM	Create DATA statements in LPDESC/BAS
LPDESC/BAS	Print lowercase letters with descenders
MATRIX/BAS	
LPDESC/DOC	Documentation for LPDESC/BAS
MERGLN/ASM	Merge short BASIC lines into longer ones
MERGLN/BAS	Merge short BASIC lines into longer ones
MERGLN/DOC	Documentation for MERGLN/BAS
MULTSORT/BAS	Sort alphanumeric or numeric data
STDDEVI/BAS	Calculates mean, deviation, and variance
SUBINOUT/TXT	Documentation for INOUT/FOR and TESTIO/FOR
SUPASS/ASM	Assembly file for SUPASS/CMD
SUPASS/CMD	Returns checksum byte for Super Utility Plus
SUPASS/DOC	Documentation for SUPASS/CMD
TESTIO/FOR	Demonstration program for INDUT/FOR
TRIGFUNC/BAS	Natural and derived trigonometric functions
TRSPATCH/BAS	Patches for TRSDOS 1.3

PDUTIL16 : Utilities

EWEBSTER/QRC	Quick reference for Electric Webster
NEWDBAS1/QRC	Quick reference for NEWDOS BASIC
NEWDBAS2/QRC	Quick reference for NEWDOS BASIC
NEWDOS1/QRC	Quick reference for NEWDOS utilities
NEWDOS2/QRC	Quick reference for NEWDOS utilities
NEWDOS3/QRC	Quick reference for NEWDOS utilities
NEWSCRIP/BAS	Quick reference for NewScript 7.0
PERMUTE/BAS	Calculates permutations and combinations
PRODUCER/QRC	Quick reference for The Producer
SINEWAVE/BAS	Calculate sine waves
VISICAL1/QRC	Quick reference for VisiCalc
VICICAL2/QRC	Quick reference for VisiCalc

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