

SYDTRUG NEWS

SYDNEY TRS-80 USERS GROUP NEWSLETTER

Volume 4 Issue. 10

JUNE 1984

IN THIS ISSUE.

Well Gary Bryce has gone Interstate again and has left it to me to put the magazine together.

First off there is more rumblings from the Secretary.

He has a few words to say about the bulletin board, also he has received some requests.

Darrell Hegarty has come good again with a simple mod to allow you to use 4 disk drives.

Yes Darrell has acknowledged the fact that he had an error in his last article but it shouldn't have caused too much of a problem. (at least he is contributing articles)

There is a review on Dosplus 3.5 by Ross Placing

Ross has been using this Dos for some time now, so if you have problems he should be able to put you on the right track

Gary has left an article on the NEWDOS 80 Pdrive table. Everybody using this Dos should find this article of some value

The Prophet and Oracle Speak. Larry Lewis & Rowan Evans (I have only presented only some of the material because I had problems getting rid of imbedded codes, Ed.)

Larry will also be running a Bulletin Board in the future so come on all that are interested in LDOS start reading the Prophet & Oracle column.

They have supplied some notes on Model 4.

LC the LDOS "C" Compiler,

The TRS-80 WORDSTAR.

Penultimately we have The Presidents Desk.

The President has kindly given us some information that we all should find interesting and he has something to say about the Special Interest Groups.

Finally there is a Special Note that I would like everyone (who attends Sydtrug meetings) to read.

Don't forget your contributions are welcome

your Assistant Editor.

Denis Pagett. 773-4433.

MEETING DATES.

The dates for the forthcoming meetings in JUNE and JULY appear below.

Meetings commence at 1.00pm at the rear of Patterson's Florist 1120 Botany Rd Botany (turn off Botany Rd into Bay St and then into Chegwyn St.) phone 666-4716.

JUNE

9th Monthly meeting

16th Interest Group

JULY

14th Monthly Meeting

21st Special Group Meeting

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Reprinted from SYDTRUG NEWS

Mild Rumbblings from the Secretary
by Jim Whittaker. 772-2009.

Well there were no takers for external courses in BASIC. Dan Lawrence is instituting a course in Program development and details will be announced at the meetings. Lets all support this project and we can all learn something.

Renewal dates are now printed on your mailing labels and I hope you will avoid the wrath and scepticism of my renewal letter, and save the club 40c. For people who post cheques to me, I staple your receipts to the application forms and file it. If you require the receipt then let me know and I will dig it out.

We have a few expert Hardware and Software people who have graciously offered their services to man a Question and Answer column in this news letter. Any question you may have, be it large or small will be attempted by our panel, so send them on disk, post or word of mouth c/- secretary or editor or Post Box.

Another idea, that I fully support. For a small fee we will reproduce your Business card on the inside back page of our newsletter. Duration will probably be 12 months. This is cheap advertising and if your Business is in the Electronic field then you will be reaching the "People most likely" and we can all benefit. We will not restrict this to Electronics only. Any takers please contact as above.

BULLETIN BOARD SYSTEM

The BBS has struck its first major problem. The SYSOP is O/S on holidays and Murphy has struck, making access to the system, rather random. This fits in with some discussions I had late one night. It was suggested to me that we needed another BBS, and my first reaction was to dismiss the suggestion outright. Further thought gave more credence to the idea, and I am now in actively in favour of it. We have the offer of a duplicate BBS, running as a secondary system to our present one and implemented at a minimal cost. When one becomes busy, the other will supplement. It will be physically located in another location and available only for BBS members who are also members of SYDTRUG
****QUESTION**** Should the committee spend the necessary funds to implement this generous offer. ****ANSWER**** Not unless I am inundated with letters, calls and visits at meetings.

CORRESPONDENCE:

I receive news letters from some other clubs by reciprocal arrangement. So if you would like to see Adelaide Micro User News or MICOM then see me.

I have received a letter from Elliot Humphries who lives up country and needs to correspond with someone about know-how and workings of computers. He is in his final year of Teaching and needs some helpful hints about programing and DOSs. Elliot has also offered a holiday on his property at LAKE CARGELLIGO in return for some time spent helping him with the computer. This genuine offer would be fabulous for some members in the Xmas school holidays. Its near Condobolin about 450k West of Sydney as the cockatoo flies. See me for details.

Next is from Harry Turner who has a SYS-80 and is after some software for his Grand children. SPEED READING (DS X3692) MUSIC COMPUTER (DS X3640) and SKETCH 80 (DS X3646). Anyone who would like to sell or swap these copies can contact me. Also anyone with EDUCATIONAL software to sell or give away would be helpful for Harry.

I hope you are all thinking of whom you want on the committee at the next AGM (soon to be announced). Keep in touch and I will see you at the next meeting.

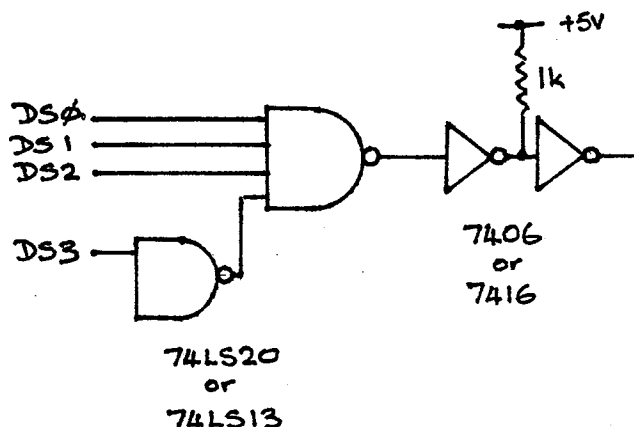
SIMPLE MODIFICATION TO ALLOW 4 DRIVES ON MODEL1/SYSTEM80 WITH SOME DRIVES DOUBLE-SIDED

by Darrell Hegarty 02-624 2824

This is a very simple modification which can be done to a single-sided drive to allow use of up to three double-sided drives AND one single-sided drive on a Model 1 or System 80. As you probably know, if double-sided drives are used on the Model 1 or System 80, the total drive count is limited to three, unless you are using a modified DOS, such as the one written by Alan Johnstone. This mod will allow four drives using unmodified operating systems.

The only constraint with this modification is that drive 3 MUST be a single-sided drive (or used as a single-sided drive).

The mod consists of using a 74LS20 (or 74LS13) dual 4-input NAND gate to combine the drive-select signals in such a way as to give an output to drive 3 when ONLY the drive 3 select signal is active. If this signal is active TOGETHER with any other drive-select signal, then drive 3 WILL NOT be selected. Naturally, drive 3 cannot be a double-sided drive, as the same signal is used to both select the drive, and select the side. See the attached circuit diagram.



One section of the 74LS20 (LS13) is used as an inverter for the drive 3 select, while the other section is used for the gating required. The chip could be mounted within the drive, however, a 7406 or 7416 hex inverter is also required, together with a 1k ohm resistor, in order to source the required drive current for the 150 ohm terminating resistor on the drive select line. A 74LS chip will only source about 8-10 mA, and a 'normal' 74-series chip will only source about 20 mA. The 150 ohm resistor dictates a current of 33 mA, which can only be sourced by some 'special' 74-series chips. The 7406, 7416 and 7438 are three suitable chips which WILL source this rather large current, and thus for reliability, I suggest that you use one of these chips as the driver section. A 7407 or 7417 could also be used, but as these are non-inverting hex buffers, only one buffer is necessary.

Both +5 volts and ground, together with ALL drive select signals are required for this modification. I used a small piece of 'veroboard' for my mod, and bought out the required signals on a piece of 14-way ribbon cable which I connected to the 'select socket' via a 14-pin header. The +5 volts was connected to a spare pin on the socket, and the ground was obtained from the socket where it is meant to be used as part of the 'mux' jumper. More modern drives than mine (Shugart SA400), have different methods of selecting the various options, and thus the method of obtaining the required signals is best left up to the individual constructor.

Lastly, an apology to all for my allowing the (in)famous Murphy to have a hand in the preparation of my article for last month for the buzzer mod to the FAX-80 printer. As shown in the diagram, it WON'T work! The two leads to the buzzer need to be transposed for correct operation. So sorry if any hassles were encountered, and I assure you all that I'll TRIPLE CHECK this, and any further articles for the magazine.

A Review of MICRO-SYSTEMS SOFTWARE's DOS PLUS 3.50 by Ross Placing.

I have been using DOS PLUS 3.50 for approximately 12 months now. I began to use it within a week of purchase and although I had some difficulties that I found to be caused by my disk drive, DOS PLUS 3.5 behaved excellently while I was sorting out the drive difficulties and has continued working properly since.

It is very easy to use in that if you want information about any command all you have to type is 'HELP command'. It has automatic density recognition, can support 5 inch, 8 inch, and hard disks with 5 inch being the default size, but for 8 inch and hard disks all you need is the appropriate driver assigned to the drive, and it can support up to 8 drives consisting of 4 floppies and 4 hard disks or file disks.

Also supported are, serial/parallel printer, the ability to force, join, filter, copy, rename, and kill drive/device/file-specs.

There is a program on the master disk called HELP/CMD which is a help utility and can give assistance with the syntax of any of the following library commands:

APPEND	ASSIGN	ATTRIB	AUTO
BOOT	BREAK	BUILD	CAT
CLEAR	CLOCK	CLS	CONFIG
COPY	CREATE	DATE	DEBUG
DIR	DO	DUMP	ERROR
FILTER	FORCE	FORMS	FREE
LIST	LOAD	PAUSE	PROT
RENAME	RESET	RS232	SCREEN
SYSTEM	TIME	VERIFY	

and also the following utilities:

BACKUP	CONVERT	DIRCHECK	DISKDUMP
FORMAT	MAP	PATCH	RESTORE
SYSGEN			

There are 2 basics included with DOS PLUS 3.5: TBASIC which is the tiny basic which has all TRSDOS disk basic features excluding the long form error messages, and BASIC which is the extended basic which has features like labels, renumbering cross referencing, CMD"Q" string and numeric sort, short command forms for most frequently used commands (like list, load, run, save, goto and edit), dynamic variable dump, global search and replace, controlled screen input (INPUT @), any DOS PLUS 3.5 command from basic, duplicate lines, delete and insert a replacement line and long form error messages with highlighting of errors, and all the usual disk basic features.

Getting on to the utilities, if a utility is not mentioned here, it is because it is similar to the same utility under TRSDOS. CONVERT - to copy any double density TRSDOS (mod 1& 3) disk onto a DOS PLUS 3.5 disk.

DIRCHECK - to check the disks directory and optionally repairs the directory. DISKDUMP - a file dump and edit program. DISKZAP - a disk edit/repair utility similar to superzap in NEWDOS80V2.0.

HELP - a quick reference to the correct syntax and parameters.

Dos REVUE (cont)

MAP - shows where each file is on the disk. PATCH - to modify any file to alter it's machine code contents. RESTORE - recover a killed file if it hasn't been overwritten. SYSGEN - generate a new system disk (e.g sysgen a double density disk or a double sided disk).

TAPE - transfers machine code programs to and from tape and disk with optional offsetting amount. TRAP - traps any disk I/O errors and asks the operator which option is wanted.

CODIR - a DOS PLUS 3.5 interfacing program that allows you to do almost anything that you could do from DOS.

JCL - Job Control Language, an interface between the user and any program that is being used.

The DOS PLUS 3.5 uses the ROM drivers unless the device is assigned a non-standard driver which is included on the master disks with the extension of /DVR, but the non-standard drivers support filtering which the ROM ones can't. Also included is a file called 'FILE/DVR' which is the driver for creating disks in one file on another disk, here there is a small error in the manual in that you have to specify the size in sectors rather than K.

The Manual is thick at approximately 400 pages but it is very readable to the point where you could sit down on the train and read it, and includes a very good technical section which includes the source code for a hard disk driver and a RS232 driver.

Please note, that although DOS PLUS 3.5 is similar to DOS PLUS 3.4 and LDOS, it is a complete re-write of the dos.

The only difficulty I have found to date is that DOS PLUS can't read NEWDOS 80 double density disks without first converting them to a single density disk under NEWDOS 80 or using MULTIDOS to read them.

In general if you use a TRS-80 model 1 or 3 or a SYSTEM 80 disk system and you want something better than average as your dos, I would recommend you look at DOS PLUS 3.5 as it is the most up to date DOS about.

The Prophet & Oracle Speak

By Larry Lewis & Rowan Evans 628-7030

Welcome to the first of the Prophet & Oracle Speaks articles. Rowan and I hope that we will be able to produce a series (hopefully each month) of articles dealing with a wide range of topics relating to the TRS-80 and programming generally.

The format of the articles will vary from month to month depending on the material to be presented and your input (questions, requests, ideas etc).

What we will attempt to present is:

Series of articles dealing with various subjects (eg COBOL programming, using LDOS).

Answers to questions: Small news items, patches etc.

Useful programs, utilities etc.

What we want from you is:

Ideas (things you want to see, article subjects etc)

PROPHET and ORACLE (cont)

Questions (reasonable ones of course). Any small (or large) item that you would like to share with other members, but would not do it as a separate article.

If you have questions etc please either write it down (for something small, or questions) or put it on a diskette (35 track single density single side with the directory on track 17) and give it to me or Rowan (if you cannot find us Gary Bryce or Denis Pagett).

TRS-80 MODEL 4 NOTES:

A patch (provided by LSI) is listed below that will allow you to change the separator in the Date & Time prompts from '/' & ':' respectively to '.'.

What use is this you ask? Well how do you put in the date normally? 'MM/DD/YY' means reaching across for the '/' key, if the separator is changed you may input 'MM.DD.YY', which is a lot quicker as you can now use the numeric key pad! Neat isn't it!!

To enable this feature, build the following patch files. Instructions are contained within the file itself.

T611SYS0/FIX

Patch to TRSDOS 06.01.01 as distributed by Radio Shack

Use the Build command or an editor to type in this patch as shown, and then PATCH SYS0/SYS.LSIDOS T611SYS0/FIX

This patch forces boot-up date and time prompts to accept the period as a delimiter instead of the slash or colon

This part changes the date prompt

D0E,B3=2E

F0E,B3=2F

This part changes the time prompt

D0F,9E=2E

F0F,9E=3A

End of patch

T611SYS7/FIX

Patch to TRSDOS 06.01.01 as distributed by Radio Shack

Use the BUILD command or an editor to type in this patch as shown, and then PATCH SYS7/SYS.LSIDOS T611SYS7/FIX

This patch forces the DATE and TIME commands to accept the period as a delimiter instead of the slash or colon

This part changes the date command

D01,EB=2E

F01,EB=2F

This part changes the time command

D03,05=2E

F03,05=3A

End of patch

PDRIVE TABLE

by Gary Bryce

The PDRIVE table of NEWDOS80 version 2.0 is stored in the third sector of the file BOOT/SYS (normally Track 0, Sector 2 of the disk), this sector also contains the data associated with the SYSTEM parameters (a later article will discuss the SYSTEM table).

While I do not make any guarantee about the total accuracy of the information herein, it is as complete as I have been able to make it at this time (in other words be careful, APPARAT have done some other odd-ball things).

The PDRIVE data takes up the first 160 bytes (00-9F) within sector 2 of BOOT/SYS. There are 10 table entries each 16 bytes long, each entry describes one drive. Only part of the table is loaded into memory (beginning at 4371H) at while the other part is used for the display of the parameters when using the PDRIVE command.

The PDRIVE table entry for each drive is constructed in the following manner:-

BYTE - 0
bits 0 - 7 = DDSL (Drive Directory Start Lump)

BYTE - 1
bits 0 - 7 = Number of Relative Tracks (LUMPS) on the drive.

This value is calculated by the system from the TC, SPT and GPL parameters as there are always 5 sectors/granule in NEWDOS80 (when formatted in double density or when using 8" drives grans may span tracks and as LUMPS contain a multiple of 5 sectors, Track and Lump counts may differ.)

BYTE - 2
bits 0 - 1 = TSR (Track Stepping Rate, 0=6 mS, 1=12 mS, 2=20 mS, 3=40 mS)
bit 2 = 1 if TI=A (Standard Interface)
bit 3 = Unknown
bit 4 = 1 if TI=C (Percom Doubler)
bit 5 = 1 if TI=M (TRSDOS 2.3B, 2.7DD or 1.3) Byte 7, bit 4 = 1 also (Flag I)
bit 6 = 1 if TI=K (Track 0 opposite density) Byte 7, bit 1 = 1 also (Flag J)
bit 7 = 1 if TI=H (Head settle delay on, 8" drives)

It must be noted that as the TI flag may have more than one parameter (ie: CK, AH, AL, CM, CKL etc.), more than one bit may be set.

BYTE - 3
bits 0 - 7 = TC (drive Track Count)

BYTE - 4
bits 0 - 7 = SPT (Sectors Per Track)

BYTE - 5
bits 0 - 7 = GPL (Granules Per Lump)

BYTE - 6

bits 0-4 = unknown
bit 5 = 1 if TI=D (see also bit 7) (APPARAT Mod III interface)
bit 6 = 0 if 5" drive (TD=A,C,E or G) , = 1 if 8" drive (TD=B,D,F or H)
bit 7 = 1 if TI=B or D

BYTE - 7

bit 0 = 0 if Single Den (TD=A,B,C or D). = 1 if Double Den (TD=E,F,G or H)
bit 1 = 1 if TI=J (Tracks number from 1)
bit 2 = 1 if TI=L (Double step drive, ie: read 40trk in 80trk)
bit 3 = Unknown
bit 4 = 1 if TI=I (Number sectors from 1)
bit 5 = Unknown
bit 6 = 0 if One Side (TD=A,B,E or F). = 1 if Two Side (TD=C,D,G or H)
bit 7 = 0 if 5". = 1 if 8"

BYTE - 8

bits 0 - 7 = DDSL (Drive Directory Start Lump)

BYTE - 9

bits 0 - 7 = DDGA (Drive Directory Granule Allocation)

BYTE - A

bits 0 - 7 = DN (physical Drive Number, Alan Johnstone's mods only)

BYTE - B

bits 0 - 7 = DS (Drive Select bits, Alan Johnstone's mods only)

BYTE - C

bits 0 - 7 = TSR (Track Stepping Rate)

BYTE - D

bit 0 = 1 if TI=A
bit 1 = 1 if TI=B
bit 2 = 1 if TI=C
bit 3 = 1 if TI=D
bit 4 = 1 if TI=E
bit 5 = 1 if TI=F (reserved flag)
bit 6 = 1 if TI=G (reserved flag)
bit 7 = 1 if TI=H

BYTE - E

bit 0 = 1 if TI=I
bit 1 = 1 if TI=J
bit 2 = 1 if TI=K
bit 3 = 1 if TI=L
bit 4 = 1 if TI=M
bit 5 = 1 if TI=N (reserved)
bit 6 = 1 if TI=O (reserved)
bit 7 = 1 if TI=P (reserved)

BYTE - F

bits 0 - 7 = TD flags

These bits are set according to an algorithm involving the ASCII code for the flag, by subtracting the ASCII code for A from the ASCII code of the flag to be set. (ie: to set TD=B, B=42H, A=41H and as 42H - 41H = 1, therefore BYTE F=01).

This article was inspired by Denis Pagett and aided by a similar article by Rowan Evans which appeared in the Newsletter some years ago (in a less complete form).

LC the LDOS "C" Compiler.

What language has currently taken the computer world by storm? What language has system implementors, university professors, hackers and software authors in raptures? What language allows you to move program source from a PDP 11/780 to an IBM PC or TRS-80, re-compile it and RUN?

The language is "C" - developed by Brian Kernighan and Dennis Ritchie at Bell Labs (the Unix place) as a language to write operating systems in, and since transported "in full" to micros and mainframes.

"In full", you say, surely its an integer only implementation on a micro? But no, because of its beginnings on a PDP 11/34 with 64k words (128k bytes) as an operating system language, "C" is available with both single and double precision numeric types implemented.

After grabbing your interest with the philosophy behind "C", I'll now introduce you to LC (Elsie to her friends (lovers??)).

LC - A review.

LC from MISOSYS - available from L.A. & H.M Lewis Computer Services - is a floating point implementation of the "C" language as defined by Kernighan and Ritchie (see footnote 1) (hereafter abbreviated to K&R). Double precision and long integer routines are available from the LC Interest Group (see footnote 2) as well as random disk I/O Routines.

To a "C" compiler, K&R standard means that there is source level compatibility between machines (PDP 11/780, IBM PC, MODEL 16, etc.) as well as the maintenance of functionality of routines - the routine will always do the same thing in any implementation.

LC comes with a 200+ page binder describing the library of functions (subroutines), operators guide, how to add your own libraries and sample programs. Due to the method of compilation, EDAS 4.1, a complete MACRO assembler is also included in LC, along with its documentation.

LC includes I/O redirection (no need to ROUTE *DO TO DISK/FIL:1 or LINK *DO *PR), device independence using stdin/stdout devices of UNIX, passing of command line parameters to the program and dynamic memory allocation. Using these features, a COPY program in LC can be written as simply as -

```
/* CLONE/coc */
main()

int c;
while((c = getchar()) != EOF)
    putchar(c);
```

In English, while there is input from device stdin, output to device stdout. This means that if we execute the command CLONE <FILE1:0 >FILE2:1, the file FILE1 will be copied to file FILE2. Useless, you say? Then executing CLONE <*KI >FILE:0,

will result in all keyboard input being sent to the file FILE, until <BREAK> is pressed or the command CLONE <*CL >*PR

will print any input from the RS232. And all this without any program alterations or LINKing or ROUTEing!

As far as speed goes, LC is faster than Pascal-80, Microsoft Fortran, Microsoft Basic Compiler and Alcor Pascal. ZBASIC 1.0 is faster, but doesn't offer as many facilities to the user (I know - I had to do PEEKs to get a command line input for one program) also try using 1.0 compiled programs under LDOS (CRASSSSHHHHHH!!!!).

In program size, the CMD files produced by LC are smaller than for the Pascals and Fortran and BASCOM. To my mind, this makes LC the ideal language for those people who want to develop small fast programs ie games or utilities and this is what I have currently been using LC to do (write utilities I mean!).

As an example, I recently downloaded a %\$@#%\$# LAZY WRITER document file and wanted to transfer the text into WordStar. Now we all know that Lazy Writer uses an "Inverted ASCII" format where Upper Case is stored as

Lower Case and vice versa, so how do I fix it? Simple, write a filter program (no Virginia, not an LDOS device filter) that will read a character from a file, change its case if necessary and write it to a new file - what to write it in? - LC. Using an existing byte-by-byte file copy program,

within 1/2 hour I had the text ready for WordStar (why 1/2 hr? - LW sets SOME high order bits of characters - I had to add several lines of code to fix this (and another bug too!)).

LC requires two disk drives with 48k of RAM and LDOS 5.1.x operating system to run. Compiled programs will run under other operating systems provided that no "funnies" are used - eg device redirection, DOS Command execution or any Operating System dependant functions (calls to LDOS @DODIR or @PARAM).

Conclusions.

If you have the need for a language that is portable, fast and small, buy LC. At \$US150.00, its a steal considering that EDAS (normally \$US100.00 itself) is included.

If enough interest is shown, I'll consider a beginners guide to "C" for later newsletters.

Footnotes (all good reviews have them) :

1. "The C Programming Language" by Brian W Kernighan and Dennis Ritchie - Prentice Hall.

Other good references are -

"C Programming Guide" by Jack Purdham - Que.

"Learning to program in C" by Thomas Plum - Plum Hall.

"The C Primer" by Les Hancoock and Morris Krieger - Byte Books.

2. The LC Interest Group c/o Earl C. Terwillinger 647 North Hawkins Ave, Akron OHIO 44313. Membership is \$US5.00 and there are five or six disks chock full of C programs (double density 40 track) for \$US5.00 each to group members.

TRS-80 WORDSTAR (Word processor).

by Rowan Evans.

As an extremely experienced user of WordStar under the CP/M Operating System, when LSI announced in April 1983 that Micropro had written a version of WordStar (henceforth referred to as WS) for the TRS-80 Models I and III, I resolved that I would purchase a copy.

After several months (from late July to mid September of waiting, it finally arrived - and what an arrival! Instead of a parcel containing WS I received a nasty note from Customs \$185.93 later WS was mine.

WS runs on both Model I and III with 48k of RAM (won't run on 32k fellas), but really needs double density on the Model I. as all the files won't fit on a single density system disk. Any printer can be used, it's simply a matter of installing the required control codes into WS at installation time. So far I have tried CITH 8510/1550, MX-80/100, LP VIII installations without any hassles.

Comparing WS to Tandy's abominable SuperSCRIPSIT is easy - WS by a country mile! The only feature that the WS user misses out on is proportional print capabilities, but the 8510 user never had this with SS anyway. WS uses standard ASCII files in its Non-document mode, allowing files of disk capacity to be edited without trouble (gee a 751k file!).

This means that Pencil, Scripsit and NewScript files will load in immediately, as well as EDTASM, EDIT-80 and EDAS source code files. The WS document mode uses high-order bit settings to denote special formatting capabilities, etc, but these can be stripped off using a utility called SCRUB (written in LC).

WS gives the user the option of 4 help levels during input, superscript & subscript, overstrike, underlining, alternate pitches. It can left and right justify text, has horizontal scrolling of text, allows the user to set his/her ruler line for tabs, margins and decimal tabs (align numerics on a decimal point).

The only minor criticisms I have of WS are -

1. Block operations in memory (ie move or copy a block from one part of a file to another) is restricted to a single line.

However, block operations to and from disk can be as small as one character or as large as the file itself. WS can read another file into the current document, not merely the currently marked block a la SS.

2. WS on the MODEL I is relatively slow, in that a lot of WS is in overlays, as compared to LAZY WRITER, PENCIL and SCRIPSIT which are all in memory. This failing is mitigated by the use of LDOS's keyboard type-ahead, which allows you to keep typing while the disk is being accessed without losing characters, whereas using SS I can lose characters simply in typing (and I'm no speed typist - ask my computer).

3. It cost so %\$:c#"&*&c% much !

Apart from these trivial problems, WS is my word processor of choice partially because I'm lazy and don't want to have to memorise another word processor just for my MODEL I, and partially for its features.

THE PRESIDENT'S DESK.

by Dan Lawrence.

Current Affairs Snippets.

(a) Trends in Microcomputing

1984 heralds the ascendancy of the 16 bit microprocessor and the beginning of the demise of 8 bit microcomputing. The market place is being inundated by 16 bit machines, with the IBM PC dominating the scene.

The 8088 microprocessor in the IBM machine uses an 8 bit data bus which slows down the input/output from the processor, although some of the PC clones use the 8086 chip which has a 16 bit data bus.

Even better is Tandy's MS-DOS compatible model 2000 which uses the INTEL 80186 processor. Operating at 8 MHz, it is claimed that the model 2000 operates "almost three times faster" than the IBM PC.

There is a clear shift in emphasis of third party support by the reduced volume of software currently being produced for 8 bit machines.

(b) Copyright Protection

The Australian Government has decided to make amendments to the Copyright Act to protect computer software, by including software in the definition of "literary works".

The Government appears to be acting under pressure from the computer industry lobby which claims that overseas software producers would place an embargo on sales to Australia because their software could be easily copied here and pirated overseas.

(c) NEWTECH - A Rising Aussie Star.

An Australian company, Newtech Development Corp. has acquired a new non-volatile, high density, RAM device, called RAMPAC which makes it possible to store information for many years without corruption. Implications are that disc and tape storage in their present form will be obsolete. MOS (Metal Oxide on Silicon) memory systems, which currently account for 91% of the market by 1985 would also become obsolete.

Commercially, the product is expected to become available in the US in two years time.

(d) Cash Discounts (also known as "Bring Your Money with you")

The committee of SYDTRUG is pleased to announce that the Microbits man, Mick, located at 1120 Botany Rd, Botany, has agreed to provide club members a Cash Discount on hardware purchases. To obtain the discount, you must :-

- (i) Pay cash on the knocker, and
- (ii) Identify yourself as a current financial member

Do NOT embarrass yourself, or the Group and the committee, if you are able to arrange some form of credit purchase, even if payment is delayed for only a few days. Such purchases are definitely NOT subject to any form of discount. Bankcard purchases are classified as credit and not cash payments.

Special Interest Groups.

Most members will have noticed that the second meeting each month is advertised in the newsletter as being set aside for use by Special Interest Groups.

To date, members have not made any arrangements amongst themselves to develop any such groups. Consequently the committee has made the decision to promote the following :-

- (i) A practical BASIC programming course.
- (ii) An Assembly language study course.
- (iii) Demonstration tuition courses in such subjects as-
 - (a) Spread Sheets (ie Visicalc)
 - (b) Word Processing
 - (c) Disk Operating Systems

The main responsibility for developing these courses (and others not yet mentioned) will fall on my shoulders and I will assume the role of Special Interest Groups Organiser (SIGO).

Programming in BASIC - instruction course.

A course in BASIC programming will commence on Saturday the 21st of July, between 1 and 2PM.

The main feature of the course will be to use a simple sequential DBMS (Data Base Management System) as the starting point. The DBMS will operate on both Disc and Cassette systems.

Instruction will proceed by way of explaining the purpose and functions of the various modules (main program routines) and sub-routines, as well as making additions and modifications which will improve and speed up the operation of the DBMS.

In addition new modules will be added so as to increase the functions available from the DBMS.

For the purpose of data processing, disc is the ideal environment and, no doubt users limited to cassette storage will eventually upgrade to a disc system. Cassette users will find that their main constraint will be I/O speed.

To enrol for the course, please approach the President, Dan Lawrence, who will be the course instructor. He will arrange to provide you with a copy of the simple DBMS on disc or tape.

Because of the practical nature of the the DBMS, it is hoped that the feedback from students will enhance the instructors own knowledge and understanding of BASIC.

Assembly Language Study Course.

This course will commence on Saturday the 21st of July, and run between 2 and 3PM. Unless we can find a volunteer tutor for this course, it is proposed to form a small group which will arrange for the study group to function on a self help basis with perhaps, assistance and guidance from any person, member or not, who can be approached to help the group to progress in its studies.

It is obvious that there is ample study material around. This consists of audio visual tapes as well as a number of useful books.

Dan Lawrence would like to hear from you if you are interested in:-

- (a) Studying Assembly Language programming.
- (b) Being a tutor to the study group.
- (c) Joining an organising group.(if necessary)
- (d) Being a consultant to (or finding one for) the group.

NEWDOS/80 LECTURE

Alan Johnstone (famous for his enhancements to NEWDOS/80) will be showing us how to get the most out of your NEWDOS with his alterations. Alan will give his talk between 3 and 4PM. Saturday the 21st of July.

ANNUAL GENERAL MEETING

An official announcement covering all the formal details of the AGM should appear in the July issue of the newsletter.

SPECIAL NOTES.

Mick's Micro Bits will not be open all afternoon during Club meetings. The shop will be open between 2.30 pm to 3.00 pm and 3.30 pm to 4.00 pm. As Mick is also a club member he wants to participate in the meetings. Members are advised that Club meetings do not start till 1.00pm therefore you are requested not to arrive at the club till after 12.30pm on meeting days. You may stay as long as you like after the meeting or as long as Mick stays awake.

From June:

1st Saturday of the month an APPLE USERS GROUP will be using the premises.
2nd & 3rd SATURDAYS of the month SYDTRUG " " " " "
4th SATURDAY of the month an IBM USERS GROUP " " " " "

DISCLAIMER

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