

## USER GROUP - NEWSLETTER 3

**Pat Winstanley,**

Hello fellow STOSers!

First of all I must apologise for the delay in getting the newsletters together. This has mainly been due to the sheer volume of letters and phone calls I've been getting since Christmas. However things are beginning to settle down again now as all those who had STOS for Christmas get to grips with the package and learn to find their way around.

Many of the queries I receive concern sprites and screen scrolling, an area which seems to have confused almost everybody (me included!) so you'll be pleased to see a very short and bare routine in this issue for you to incorporate in your own programs. While on the subject, if anyone can write an article dealing with screens (ie. PHYSIC, LOGIC and BACK) many of your fellow members will be eternally grateful.

Latest news from Mandarin is that the delay in releasing the Compiler and Maestro is now confined mainly to the preparation of manuals and boxes. Both products should be available early in April, with prices fixed at £19.95 for the compiler, £24.95 for the Maestro software and £69.95 for the Maestro combined package of software and hardware. Expected a little earlier, towards the end of March is the disc of extra sprites which will retail at £14.95. Incidentally, please don't order any of these through me as the club is NOT dealing with the sale of the products. Go direct to Mandarin!

Finally, a word about the club and newsletters generally. Any club or user group depends on input from the members. While I am happy to answer queries at any time, the newsletter is the forum for YOUR views, opinions, discoveries etc..... not mine alone. My function is to collate the work of group members and see to the distribution. Running the group takes up a great deal of my time leaving little for developing articles and listings. That's up to YOU! The more you send in, the bigger the newsletter can be..... and vice versa!

Best wishes

P.S. Grateful thanks to the 5% or so of members who HAVE contributed to the newsletter and PD library.....

## MAESTRO

Last week I had my first look at STOS Maestro during a visit to Mandarin. At the time supplies of the hardware were limited so I haven't yet had 'hands on' experience of the package. However I was very impressed with what I saw and can't wait to get my hands on a copy to use at home! (Hint, hint Chris!).

Maestro consists of two parts, the software on disc which comprises an editor for fiddling about with samples, and also a good range of previously sampled sounds. These range from a voice gravely intoning such illuminating texts as "Game over" to booms, bangs and explosions. Since the version I saw was unfinished I imagine the final range will contain enough to keep most people happy without resorting to making their own samples.

To grab your own sounds you'll need the hardware which is included in the Maestro plus package. This is a small box which plugs into the left hand side of your keyboard, and also into a personal radio/cassette or similar. With access to the relevant cables and connectors you can grab sounds from televisions, videos etc too.

Whatever the source of your sample, be it one you've grabbed from your favourite pop record or perhaps your nearest and dearest yelling at you to "Leave that \*%\$!?\* machine alone", or one of the supplied samples, the editor is where you can really get going. (Incidentally, sounds sampled with other hardware should be compatible but check with Mandarin first to make sure yours will work. I haven't been able to get a list yet.

The editor adds a new set of commands to STOS and stores samples in banks where you can access them easily from within your program.

Once the sample is in the editor it can be manipulated in a wide variety of ways. Sections of the sample can be cut and pasted, played over and over in a loop, played backwards, have echo and reverberation effects added, mixed with other samples, faded in and out and so on.

One of the samples provided was the sound of a helicopter which Richard played about with to produce different sounds such as straight flying, hovering... and crashing.... all from one sample.

If you can't afford the full package, get the software.... It's wild.... there's even a drum machine with great animation!

## COMPILER

I also had a quick look at the compiler while in the Mandarin offices and the results seemed pretty impressive.

The example used to show off the speed of a compiled game was Bullet Train. Now I can't cope with that train when it runs slowly, but Richard reckons he's pretty good. However when it came to the compiled version even he couldn't handle the speed.

The compiler will be most effective on games which don't use lots of sprites etc. as these already run at M/code speed.

Using the compiler is simple - compilation can be to or from RAM or disc, depending upon the amount of memory in your machine. If you have enough the compiler can be resident in STOS (as an accessory?) and a comprehensive technical manual is promised. Again, more details direct from Mandarin.

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## WISH FULFILLMENT

While working with the STOS discs you are apt to discover new things. Well new to me that is. But there may be a tip for other STOS users.

When you put the accessory disc in the drive and then switch the computer on you get the usual icons on the screen. Among them is a READ.ME icon. Put the computer in medium res with the preference menu (then double click on the READ.ME file) and you get the necessary information about how to 'unarchive' the archive files on this disc. A few corrections for the manual are also given, but not all the mistakes in the manual are dealt with.

Next, when you put the discs with the unarchived files in the drive and then switch the computer on, you will get once more a series of icons on your screen. Among them are ASM.DOC and MAP.DOC.

ASM.DOC - It appears that a line assembler and a disassembler are incorporated in STOS. You are told how to use them. Unfortunately I met with difficulties here.

1. There is said to be a pseudo instruction :BDF (or DBF???) followed by a number of bytes. When you type it in you get the message : Command unknown. And is it BDF or DBF?

2. The instruction EVEN also results in the message : Command unknown.

3. This is also the case with the pseudo op ORG, an important instruction in machine language. After typing ORG you get again: Command unknown.

The instructions A,DC,n,Z,D and W work all right.

MAP.DOC - gives all the necessary information about how to construct rooms

with sprites. No trouble here.

On page 219 of the manual you see the command HEX\$ with which you can convert a decimal number into the corresponding hexadecimal number. At first I was disappointed that a command for converting hexadecimal numbers into decimal ones was not given. Much to my surprise I discovered a way to achieve this just by accident. You just use PRINT \$FFFF or PRINT \$ffff and you get the correct answer. This is not mentioned in the manual.

When I purchased STOS and wanted to make a back-up in the way described in the manual on page 1 & 2 it did not work. I have a program called PROCOPY and with that program I could make a back-up of the three discs.

I must say that STOS Basic fulfills many of my wishes. The fact that you can use your own programme, the sprite designer and the music maker simultaneously without having to load a separate sprite designer and music maker makes STOS a most useful and outstanding programme. In an article in the Dutch magazine START (p30 of the Jan/Feb 1989 issue) it says:

"If you look for a good working Basic, sprite and music editor then STOS is very good choice." (The author says that it is an exception from many other Basic languages in that STOS has practically not any bugs, and he appreciates that very much.)

I have a professional sprite designer (which alone costs practically as much as the complete STOS programme) but it is not a patch on the STOS sprite designer. Provided you have some knowledge of musical notation, scales etc. the music maker is nice to work with.

Like other club members I miss the 'pro-

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cedure' feature, especially the possibility of adding its local parameters.

In newsletter 2 I saw a listing of something I have tried to accomplish for years without any result: scrolling several drawings across the screen. My enthusiasm lessened somewhat when I looked at the listing: in line 230 it says GOSUB 240 but at the end of the listing there is no return. Have some lines been omitted? You did not mention anything in OOPS!

I made a programme with four Degas drawings scrolling across the screen, and thanks to STOS it works. If you want the listing I will send it to you.

Well that's all for now. I studied English but I am a Dutchman (with a German name). My English will not be faultless and I hope you will excuse me!

GEORGE N M MERZ, BEVERWYK, NETHERLANDS

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The assembler commands which produce a "command unknown" message don't appear to have been implemented in ASM.PRГ at all.

Yes... there was an "oops" in the four way scrolling routine as the very last line fell off the page. Simply add the line:

280 return

to the listing and all will be well. Sorry for the confusion.

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## LOOPING THE LOOP

I am writing to you in the hope that someone can answer my questions.

1. Is there any way of closing a window and leaving the previous graphics screen intact, without having to previously copy the screen to a bank, and copy it back to PHYSIC afterwards?

Eg.

```
10 reserve as screen 2 : hide on
20 load "screen.plf"
30 screen copy physic to 2
40 windopen 2,5,5,7,7
50 if mouse key = 1 then goto 60: else
goto 50
60 windel 2
70 screen copy 2 to physic
80 wait key
90 end
```

2. How can I load an ascii file such as from First Word Plus into a string to be used in STOS?

3. Do all machine code routines have to end in .PRG to be loaded or is there a way of loading other file extensions into memory banks?

4. Has anyone written a routine to generate more than 16 colours on screen at once, or to load into PHYSIC pictures created using Quantum Paint and Spectrum 512? If so I would be delighted to hear about them.

5. Can anyone help me with a problem which I have come across while using STOS. It concerns the animation of the mouse pointer on interrupt instead of using the usual for-next loop which is quitesimple with a few lines such as...

```
10 for m=1 to 10
20 change mouse m
30 for d=0 to 200:next d: REM delay
40 next m
```

This program is fine until it comes to a fast action game with many things happening at once. One cannot afford to use

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loops which may cause collisions to be undetected.

If anyone has such a routine to animate the mouse pointer on interrupt then I would be grateful if they would send it in for the next issue, and if they could send it straight to me.

I have now owned STOS for two months and, because I find the music creator quite hard to handle (I am tone deaf) I am about to purchase a sound sampler - either the IS digitizer or Pro sound. The reason I am writing to you is that I want to know whether the samples will run easily from Basic or whether I will have to write a machine code routine.

Another point which I am stuck on is that I wish to write a disk operating menu that will run un-STOS GEM programs. Is this possible in the actual language or will I have to write another machine code routine to load and run any GEM or TOS program?

KARL DRAGE,  
NUNEATON,

-----  
Your method of operating windows on graphics screens seems the most logical. Anyone else found another way?

The following listing will load an ascii file from disc and place it in the string A\$. It then prints the string to the screen. With a bit of directory work you could even get the length of the file automatically to create a simple "TYPE" program.

```
10 reserve as work 10,x rem x=length of
file (from disc directory)
20 blob "filename.asc",10
30 A$=""
50 for X=0 to 433
55 C=(peek(start(10)+X))
60 A$=A$+chr$(C)
```

70 next X  
80 print A\$

According to my information the filename extension of machine code programs to be loaded into a memory bank is irrelevant, but I haven't had time to try it.

For animating the mouse pointer, have you tried using CHANGE MOUSE at intervals through your main game loop?

Again untried, to run a TOS program from a disc directory how about modifying the loader elsewhere in this section to load the program into a bank from where it can be called?

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**READ.ME EASILY**

Please help me out. I need to know how to put a READ.ME file onto a disc. I know nothing about how to do it at all so if you could find time to write down a step-by-step guide for me I would be grateful.

DAVID GRAY, DAGENHAM

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A simple one this, all you need is a word processor or text editor, or even STOS itself to produce an ascii (or near ascii) file which is then saved to disc with the filename "README.\*\*\*" where the asterisks depend upon the program you use. This can then be clicked on from the normal GEM desktop to get the show/print/cancel option.

PD2 - Desk Accessories has a small editor which does the trick.

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**COPYRIGHT TROUBLE**

The program I have written was originally a table-top game from MB GAMES. Could you tell me if I would have any problems

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with copyright?  
D S CLEMENTS, BRISTOL.

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It all depends where MB GAMES got the game from. If it's something like snakes and ladders or chess which have been around for ever then unless you copy the table-top versions artwork, documentation etc, then you should have no problems. However where copyright still exists (eg. in games such as Scrabble) you will need to get permission from the copyright owner and probably pay a great deal of money for the privilege. In (very) general terms the copyright in a creation last during the lifetime of the creator and for fifty years afterwards.

## INVISIBLE SPRITES

I have recently bought a STOS package and already I have started producing some real good stuff. It might be interested to know that before this I have used ST Basic and 68000 assembler and I should say that I've found STOS Basic the best.

Anyway I have done my planning, draughting and drawing my game, even I have finished most of the sprites and their animation sequence. But since I started programming I've found the manual can't offer me over 70% of the answers to my questions, like "How can you limit a sprite movement without taking it visibility?" and so on. I even tried very hard to find the answer to the question above in the games included with the package. I know that it's something to do with READ and DATA but I just can't find it. So I decided that I will join the STOS club.

KAMBIZ MEMARZIA, LEEDS.

Load a sprite file into the bank then try the program below which doesn't use LIMIT SPRITE but instead sets up zones at each side of the screen and makes the sprite bounce back if it enters the zone. I presume you've been looking at ZOLTAR which holds data for the alien's movement patterns in the databanks.

```
20 set zone 1,0,0 to 50,199
30 set zone 2,150,0 to 200,199
40 sprite 1,100,100,1
45 move x 1,"(1,10,0)"
46 move on
80 rem
80 T=zone(1)
90 if T=1 then move x 1,"(1,10,0)" : move on
100 if T=2 then move x 1,"(1,-10,0)" : move on
120 goto 60
```

## LIGHTS - MUSIC - ACTION

This is a letter pleading for help! I have done a demo in STOS. At the moment there is not a way in which you can put sampled music on an ST. So if anyone out there can use the music editor program in STOS I need their help to add music to my demo. All I need is the music so please help.

Also has anyone done any good sprites for STOS? If so I am interested because I am intending to do a second demo that will be big but to do so I need sprites and music. Please help. All replies to the address below. All help will be mentioned in the demo.

DANIEL BATES,

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## BBC TO STOS?

Today I attempted to convert a program from "The Home Computer Advanced Course" (Vol 2: Issue 17:p333) to run from STOS. The purpose of the program is to take an equation for 'y' and convert it into a 3D graph. The program was written for the BBC.

STEPHEN CLARK,

=====
I've never used BBC Basic... anyone out there who can help? Let me know and pass Stephen's letter and listing on.
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## SUBTLE TRICKS?

Thank you for the first STOS user group newsletter and in response to your request for help I am writing to offer you my services.

To give you some background on myself I am a programmer by profession and have been using Basic regularly for 8 years. As I started on the VIC20 the layout (and structure) of STOS is very similar and so has caused me only a few problems (a bit tough if you are used to Hlsoft Basic and know no other.

I regularly wrote games on my VIC, not just to play but as a challenge as I enjoy all kinds of programming. In my work I frequently have to write training manuals and although I say it myself - If I can understand something I can explain it to others without having to get too 'boffy'.

I had to laugh at your comments about the STOS manual. I thought it might have been a subtle trick by Mandarin to get you into STOS by giving misleading information. I felt quite proud as I'd figured out most of the problems.

One guide that I have written could easily

be adapted for programming in STOS - A guide to programming without tears.

CHRIS CRUIKSHANK, DORKING.

## CAGED MICE

I am currently developing a program and have run into a problem. In the game I have several sprites and also use the mouse. I would like to limit the view of the sprites to one area of the screen and at the same time allow the view of the mouse over the whole screen.

When I use the "limit sprite x1,y1 to x2,y2" command it limits the sprites fine but also limits the mouse to the same area. Is there any way this can be fixed?

RICHARD GUTHRIE, FOUNTAIN INN, USA.

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I can't find any answer to this one I'm afraid. Presumably the mouse pointer is treated as a sprite for this command (which in a way it is).
=====

## CIRCULAR TOUR

Must all calculations involving angles be individually converted to degrees? It would be much easier if DEG could be specified just once.

Is there a simple way to read the first joystick port? It would be nice to be able to program a two player game without one player having to use the mouse.

TIM CALDWELL, BALTIMORE, USA.

=====
I asked Mandarin about the DEG problem as it's been driving me to distraction too. The response I got was "Oh? Oh dear!...." followed by a rather long silence.... I think

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It's an unnoticed "feature". Has anyone found a way round it for we who have trouble working in radians. Incidentally on page 209 the manual should read "A radian is approximately equal to 0.02 degrees."

I'm afraid there's no easy answer to the joystick problem.

## ST BASIC TO STOS

Could you advise how to transfer ST Basic programs into STOS Basic for modification please?

HARRY BILBOE, EAST MALLING.

Put a REM statement after every line number. Save the modified program out as an ascii file then load it into STOS. One in STOS work through the listing removing rems and modifying syntax etc. You may find that some routines can be compressed while others will expand.

## FORGOTTEN PALETTE

Could you please help me with the following problems?

1. When in the sprite definer when an animation sequence is tried with more than 8 sprites an error message appears.
2. When I save a bank of sprites from the definer and then run them in a program they do not have the palette saved with them. But if I load them back into the definer the palette is there. Could you please tell me where I am going wrong?
3. When the definer is loaded as an accessories load and the program I am working on is 32808 bytes long when I try to reload the definer with HELP I get a message of Not enough memory. Could

you please tell me why this is happening?  
GEORGE HART, ABERDEEN.

To grab the sprite palette add the following lines to your program.

```
10x = hunt (start(1) to start(1) +  
length(1),"PALT")+ 4
```

```
20 for a=0 to 15 : colour a,deek(x) :  
x=x+2 : next a
```

Your other problems are simply due to running out of memory because you're using it all! The accessories use lots of memory. Compare the HELP screen before and after loading the sprite designer and a file!

## HI-RES ICONS

I have several problems with STOS, an overall feeling is that a user with only high res is neglected. The Icon-Fonts editor has errors in them. No big samples like ZOLTAR in monochrome version.

A good example is (at least on my system) on high res and low res:

```
Load ICON.ACB, run
```

Select from menu "scroll" and move mouse. Look for ERROR type "for with-out next in 11105". I copied lines 11100-11110 several times and the error appeared always in the last copied block.

J WEBER, HEERLEN.

High res users of the icon designer should change the following lines.

```
10020 windopen 1,20,10,18,18,1,1 : windopen  
3,51,5,4,8,1 : windopen 4,20,20,40,1,0 : win-  
dopen 5,0,21,80,4,0 : windopen 8,42,13,6,3,1,1
```

```
10046 qwindow 8 : curs off : scroll off :  
set zone 15,xgraphic(0),ygraphic(0) to
```

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xgraphic(3)+8,ygraphic (0)+8

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## SCROLLING AND SPRITES

I am fairly good at programming in Basic and may be able to offer some advice to anyone who may need it if possible. I am usually in between 7 and 9pm and you are certainly welcome to let people know this especially as you are obviously short of helpers at the moment.

Whilst writing I have a query myself and it is to know if it is possible to move a sprite across or against the scroll of the screen (ie. def scroll:scroll 1 etc). I have tried several ways but the sprite always gets copied onto the screen and scrolls with it leaving several copies of the sprite. I do understand about wait vbl etc and have tried using this method amongst others.

JOHN LEAVER, ROEHAMPTON.

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The following routine (after you have loaded a picture to bank 10 and a sprite file) shows in the bare minimum number of lines how to scroll the screen while moving sprites.

```
10 mode 0
15 Y=1
16 X1=0 : X2=320
20 logic=back
25 for X=0 to 320
30 gosub 1000
40 sprite 1,X,100,1
50 redraw
60 screen swap
70 wait vbl
80 next X
```

```
1000 rem scroll background vertically
1010 Y=Y+1
1030 screen copy 10,X1,200-Y,X2,200 to
logic,0,0
1040 screen copy 10,X1,0,X2,200-Y to
logic,0,Y
1999 return
```

-----

## CALL FOR HELP

In the users guide I miss some examples how to combine assembler with STOS. Many thanks if you can send me someone. BRNHARD EHRICH,

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Can anyone oblige with some simple routines? How about something to help get around the 16 pixel restriction on screen copy etc?

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## MINCED CURRICULUM

I bought my STOS shortly after it was launched but now need some help with a few problems. I am experienced in Basic (particularly BBC) but new to sprites and animation. I have OCP Advanced Art Studio and wish to use it to load sprites into STOS. I can do it by copying the sprites onto a NEO screen then loading it into STOS and cutting out the sprites but this is inaccurate and loses transparency. Do you know of a routine to load the sprite files into STOS?

I have a couple of educational game conversions lined up and wish to make this as painless as possible. Any news of people who've used STOS to write Midl programs? I intend to try when I have time though being a Primary Deputy Head doesn't give much time. How about a

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program to destroy the National Curriculum and reassemble it in an easily understandable form.

PHILIP HOLLAND, MALVERN.

-----  
You appear to be using the best method already for grabbing sprites. Of course you could always use the STOS sprite designer.....!

Also see later letter regarding educational games.

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## SERIOUS TALKING

I am utterly captivated by STOS although I have no intention to use it for writing games. My programs are statistical and serious but I see here the facility to introduce clever windows, screen swaps etc. and maybe a little music and humour.

My normal medium is the HiSoft Basic Compiler. It has the speed I need to crunch numbers. We will have to see how well I can do with STOS. I wonder if they will ever make a compiler?

Whilst in the realms of wondering I would be genuinely interested to hear of any "speech" program to use with STOS - you know - similar to the one supplied with that awful "Fast? Basic".

LES BARCLAY, LONDON

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SPEAKTEX is a PD speech program currently doing the rounds (in fact it was on the cover disc of ST/AMIGA format recently). If anyone wants to try interfacing it with STOS you will find many eager recipients of your work - including me!

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## ALLSORTS OF TROUBLE

So far I've been totally unable to make the SORT command work, i.e. the manual example doesn't work on page 43. Other attempts have also been to no avail. Please advise.

Our computer club called TRACE (The Richmond Atari Computer Enthusiasts) has already put up a special SIG on our BBS for STOSers. ATARI WEST BBS (604-272-5888).

CRASH ST (604-299-5111) a private Atari only BBS of which I'm a sysop would very much like to obtain any demos and PD written in STOS (English and especially French). We have 220 users many of which are active GFA basic programmers who I know will be very interested in STOS.

R GRANT MAGNUSON.

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The SORT command works well once you are aware of the way it operates. When you sort an array STOS places all the 'null' entries first so if your array has 20 elements but only two of those actually have any data in them, the sorted array will, when listed out, show 18 null entries before getting around to the one you want.

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## STEALING SPRITES

Is there any way of loading sprites from commercial games such as Xenon into STOS as shown in ST Action as the way shown in the manual doesn't seem to work?

SIMON BUTLER, WANTAGE.

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Use the icons with hands to squash the screen then scroll up and down. Eg.

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Bubble Bobble needs to be squashed to a vertical coloured stripe of about 16 pixel width to find the nasties.

Other games which can be cannibalised (although I haven't seen the exact method for these) are Allen Syndrome, Super Sprint and Xenon. Anybody know of any others?

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## DIRECTORY STRINGS

I purchased STOS a couple of weeks ago and what I can tell from the documentation it is a very powerful language. I have hopes I can write a program with it especially if I can figure out how to get a program to read a disk directory and then save it to a datafile. I know that STOS was created to create great games but I want to create a disk index program with animated graphics and sound, so if you have any ideas at the present time please let me know.

CARL COX, BAUMHOLDER, W GERMANY

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The following listing is the basis of what you need.

```

10 dim FILE$(50)
20 FILE$(0)=dir first$("*.","",-1)
30 if dir next$("<" then X=X+1 else goto
60
40 FILE$(X)=dir next$
50 goto 30
60 for Y=0 to X
70 print FILE$(Y)
75 wait key
80 next Y

```

-----

## STRINGING ALONG

I have come across a few things not mentioned in the STOS manual (I have version 2.3). The command FKEY not only gives 1 to 20 when the appropriate PF key is pressed, but also returns a number for most of the other keys as well, as the following program will demonstrate;

```

10 repeat
20 A=fkey
30 until A<>0
40 print A
50 wait key
60 goto 10

```

Unfortunately the keys from 1 to 0 and Q to P will also give the values 1 to 20 which is the same value as SCANCODE (but without having to use INKEY\$ first).

Another undocumented occurrence is the fact that strings created using the STR\$ command have a control character added at the beginning. Therefore;

```

10 A$=str$(3)
20 ? len A$

```

.... prints a value of 2 instead of 1.

P BALL, BRENTWOOD

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## EDUCATION

In addition to shoot-em-up games I am particularly interested in producing software on the ST for young children; an area which seems to have been neglected by commercial software houses and Atari, despite the noises that Atari has been making about wanting to get the ST to be adopted by schools. STOS seems to be an excellent language for creating the

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sort of material that I have in mind for young children and I would be interested to know if other members have been thinking along similar lines.

D.J.W. ALEXANDER, LONDON,

=====
Yes.....ME!!! Anyone else out there? My kids are 4 and 5, one just reading and the other pretty fluent... similar abilities with number work/sums.

I'm looking for anything on those lines and would love to get together with a primary (preferably infant) teacher to discuss projects.

If anyone wants a couple of enthusiastic playtesters I'm sure Phillip and Jamie will be happy to oblige! If only to get Mummy off the computers and down to the kitchen sink!

## NORTH WEST MEETING?

I live in Maghull, Merseyside and my son ( who is 14 ) and I have been getting to grips with STOS since the Xmas show. I think that the user group is an excellent idea and the newsletter is an obvious way to circulate everyone. But would it be better for users to get together and talk about their ideas, findings etc?

Well for those who live in the North West I am prepared to arrange such a meeting of users if you are interested. I suggest that you

write to me enclosing an SAE. It may be helpful to let me know if you are a novice user or a more experienced creator of software using STOS ( and other languages ). It is possible that many of you are too young to drive, so let me know as I might be able to link several

users together. If you are prepared to share your transport then again let me know - It would also reduce your expenses. If you have access to a warm, comfortable meeting place let me know.

If you want to give it a try please get in touch as soon as possible. I will then liaise with Pat and get back to you. Hopefully it will only mean a maximum drive of 30 minutes. I look forward to hearing from you.

PETE EINIG, MERSEYSIDE,

=====
Perhaps we could even persuade someone from Mandarin to come along!

## SPRITE GRABBING

Please could you answer a question? What I want to do is draw a screen of sprites in an art package then load this screen into STOS and get each of these sprites from the screen and place them into the sprite bank ( bank 1 ) so that I can use the sprite commands and anim, move commands etc. I THINK Zoltar does this but I can't work it out. Please help!

DAVID HOOKWAY, SOUTHAMPTON.

=====
See the letter from Phillip Holland and also pages 98-99 of the STOS manual. Bear in mind that you need to have a sprite bank ready in memory with an entry for each sprite to be captured. The new sprite will replace the original bank entry at that number.

## STATISTICAL SPEECH

Although I find the "old" line numbers strange after a couple of years with the

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excellent HiSoft Basic/Compiler they (line numbers) offer some advantages in finding ones way around a program.

Without doubt STOS is a most remarkable interpreter. My ability ie. some years with various basics on many different computers and a pretty good grasp of the subject had not allowed me to so easily achieve many of the results I can get with STOS. I speak of writing my own accessories, playing music in the background, saving swapping and recalling screens from memory etc etc.

My useage is not for games writing - I am not sneering - that is very clever programming - but for statistical programming generally for my own amusement. I have yet to test STOS for speed with numbers.

Must get to the point or rather points I need help with.

a) A method of checking for printer on line.

b) Has anyone managed to use one of the PD "Speak" programs with STOS?

c) Having been accustomed to using long variable names and copious REMs will STOS allow the same. No mention is made in the handbook.

LES BARCLAY, LONDON

-----  
I see no difficulty with using either copious rem's or long variable names... I certainly haven't hit any problems up to now.

Can anybody throw light on the other two problems.

-----

**The monthly draws for champagne have been quietly taking place over at Mandarin with the following results.**

**Winner 1**

**L Thomas, Rushden, Northants.**

**Winner 2**

**K G Cockerell, Hounslow, Middx.**

**Winner 3**

**R Lee, Sheffield.**

**Winner 4**

**A Terry, Norwich, Norfolk.**

**Winner 5**

**M J McCarthy, Abergavenny, Gwent.**

**Congratulations to all these. Hope your Shtoshing didn't shuffer too mush whilsht you shelebrated!**

**Don't forget! The only names drawn out of the hat are those which have been received by Mandarin, so if you haven't sent in your registration card yet don't delay.**

**It might be YOUR name here next time!**

# KIDDIES KEYBOARD DESTROYER

Here is a very short and simple program for you to include in the newsletter. It is a little educational program which is used by my two year old daughter Katie. Whenever she presses a letter or number on the keyboard it is magnified on the screen. She then has to say what the letter or number is. Simple colour changes and a bell add to the effect. It may be of use to other people with small children. It is no great programming feat but Katie likes it.

```

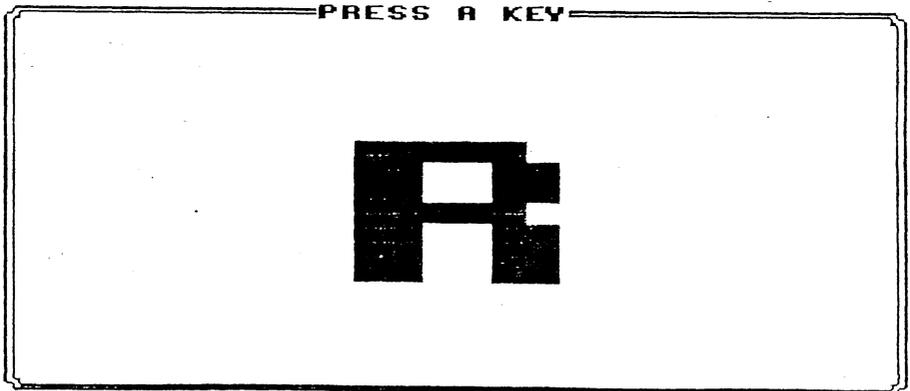
10 rem .....
20 rem KIDDIES KEYBOARD DESTROYER PROGRAM
25 rem by Dr Peter Millar
30 rem .....
40 key off : curs off : hide : mode 0 : flash off
50 palette $0, $702, $700, $750, $770, $470, $70, $75, $77, $57, $27, $7, $507, $707, $704
60 paper 9
70 windopen 1,0,0,40,24,7

```

```

80 title "PRESS A KEY"
80 curs off : click off
100 G=rnd(15)
110 If G=0 or G=2 or G=3 or G=8 then goto 100
120 pen G
130 P=rnd(15)
140 If P=0 or P=2 or P=3 or P=8 then goto 130
150 paper 9
160 A$=inkey$ : If A$<>"" then goto 160
170 A$=inkey$ : If A$="" then goto 170
180 locate 20,8
190 A$=upper$(A$) rem REM this line out to show the lower case equivalent of upper case keyboard presses - very useful for beginning readers who are better off using lower case..... Pat.
200 centre A$
210 Y1=ygraphic(9) : X2=xgraphic(xcurs) : X1=X2-8*len(A$) : Y2=Y1+8
220 zoom physc,X1,Y1,X2,Y2 to 112,64,26*8,18*8
230 bell
240 goto 80

```



# WHAT DAY

In this STOS Basic program the day of the week can be calculated for any dat in the years 1753 to over 2000. I had to use real numbers for exact calculation. Results have been checked and foud all right. I did this with a so-called perpetual calendar. I hope the program ls of use to some fellow members.

```

5 rem WHAT DAY
6 rem by George Merz
10 mode 0 : gosub 10010
15 dlm D$(7)
20 cls : lnk 15 : bar 0,0 to 319,199
30 pen 8 : paper 15 : windopen
1,0,0,40,6,11,3 : clw
40 pen 4 : paper 15 : windopen
2,0,7,40,5,11,3 : clw
50 D$(1)="Sunday"
60 D$(2)="Monday"
70 D$(3)="Tuesday"
80 D$(4)="Wednesday"
90 D$(5)="Thursday"
100 D$(6)="Friday"
110 D$(7)="Saturday"
120 qwindow 1 : pen 10 : hide : print " Enter
Day, Month and Year:"

```

```

130 print " (Example: 12,1,1921)"
140 pen 1: Input D#,M#,Y#
150 If Y#>1752 then 180
160 clw : cdown : print " Year must not
be prior to 1753!"
170 wait 300 : clw : goto 120
180 K#:=int(0.6+(1/M#))
190 L#:=Y#-K#
200 O#:=M#+12*K#
210 P#:=L#/100
220 Z1#:=int(P#/4)
230 Z2#:=int(P#)
240 Z3#:=int((5*L#)/4)
250 Z4# = int(13*(O#+1)/5)
260 Z#:=Z4#+Z3#-Z2#+Z1#+D#-1
270 Z#:=Z#-(7*int(Z#/7))+1
275 Z:=int(Z#)
280 qwindow 2 : pen 13
290 print "The day of the week is:"
300 pen 1 : print " >>>"; : pen 3 : print
D$(Z); : pen 1: print " <<<"
310 wait 200
320 pen 11 : Input " Another date?
(Y/N)";A$
330 If left$(A$,1)="Y" or left$(A$,1)="y"

```

**Enter Day, Month and Year:**  
**(Example: 12,1,1921)**  
**? 1,1,2000**

**The day of the week is:**  
**>>>Saturday <<<**

# WHEELS

Being a railway enthusiast I like to make stories on trains for my 1040STF. For steam engines you must be able to draw wheels. I made a program for that, it might be of interest for my fellow club members.

Remarks:

1. Drawing the wheels isn't a problem but drawing the spokes in them is!
2. The number of spokes is determined in lines 60 and 140 by:  
 ..... step pi/6 and ..... step pi/12  
 pi/12 results in  $2 * 12 = 24$  spokes  
 pi/6 results in  $2 * 6 = 12$  spokes  
 (pi/1.5 would result in  $2 * 1.5 = 3$  spokes)
3. You MUST use A#, (See user guide p.36 - Real Numbers), otherwise nothing will happen.
4. To prevent the spokes from jutting out of the rim of the wheel I used .9 \* radius for the y coordinate. Lines 70 & 80:  
 .9\*20=18 :lines 150 & 160: .9\*40=36

5 rem WHEELS  
 6 rem by George Merz  
 10 mode 0 : cls : ink 10 : hide

```

15 dim D$(7)
20 arc 25,120,23,0,3600
30 arc 25,120,20,0,3600
40 arc 80,120,23,0,3600
50 arc 80,120,20,0,3600
60 for A#=0 to 2*pi step pi/6
70 draw 25,120 to 25+20*sin(A#),
120+18*cos(A#)
80 draw 80,120 to 80+20*sin(A#),
120+18*cos(A#)
90 next A#
100 arc 160,100,43,0,3600
110 arc 160,100,40,0,3600
120 arc 250,100,43,0,3600
130 arc 250,100,40,0,3600
140 for A#=0 to 2*pi step pi/12
150 draw 160,100 to 160+40*sin(A#),
100+36*cos(A#)
160 draw 250,100 to 250+40*sin(A#),
100+36*cos(A#)
170 next A#
180 wait key
190 default : end
  
```

