MICRO'S GAZETTE

FOR SPECTRAVIDEO AND MSX COMPUTERS

ISSUE :– 004
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This months issue includes

– Beyond Basic (Part 6)

– 512 Colours on the X'Press

– Random Disk Files

– NINE Game Reviews

– Your letters answered

MSX DOS II Released

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EDITORIAL

Welcome to another great issue of Micro's Gazette. We have lots of new and interesting items.

First an apology for the absence of Adventurers Anonymous (As Alan's article did not turn up). We will get on to Alan and see if we can have a super Adventure section, next month.

Our letters column has gone from strength to strength and reaches record length. All I can say is keep'em coming, we will attempt to answer every one possible.

Due to the interest in our 'Shareware' column we have managed to collect about fifty new games, but we have changed some of the ordering rules (See Software Section). Also on the games line, Mad Axe has returned to review some more games for you. He gives his opinion on nine great games picked from our shareware selection. Being a lover of mindless violence, he mostly goes for the shoot-em-ups, but has been known to attempt other types of games on his less reckless days!

Gordon A Browell answers his own letter on Random Disk Files from last issue (with a few pointers). So anyone having problems in this area this is the column for you.

Tony's Beyond Basic column continues where it left off last issue with the last part to the Sprite Collision Routines.

A new magazine has graced the shelves of Australian news agents and guess what?. Its produced in Australia and has a MSX column. The name of this magazine is 'Megacomp' and it will set you back only $3.50 an issue. Most of the machines ever sold in Australia get a mention, with fairly equal coverage devoted to each. The MSX corespondant for the magazine is Damian Leslie, who you can send letters to by writing to Megacomp/MSX, c/- Post Office, Chelsea 3196, Australia. Find it in your newsagent today!

Keep up the support!

NEWS

MSX DOS 2!

MSX-DOS Version 2.0 has been released in Japan and Europe. The new version has some significant improvements over version 1.0.

The following features have been added-

- Access up to 4MB of memory.

- Use Hard Disk Drives as well as CD Drives.

- Sub-Directories can now be used allowing you to organise your files a lot easier.

- MS-DOS 2.0 disks can be read as the file structure is the same (This might allow you to actually run MS-DOS 2.0 compatible software!!)

At present you can get MSX DOS 2 for $240 on ROM cartridge and $300 on ROM with an extra 128k of RAM as well! Also a company is producing a 40Mb Hard Disk Drive with inbuilt MSX DOS 2 for about $1000.

We shall dig for more information on this interesting product.

Phillips Quitting!

Phillips, a long time supporter of MSX (especially MSX II) in Europe and Japan have pulled out of the computer market. We do not really have any more details and do not know the reason. There was no indication that their sales had dropped.

MSX Cartridges $45-00!!!

We are informed that the firm Computatronics in NSW are still supporting MSX and have stocks of the more popular ROM cartridges. One of the titles they are known to have is Salamander, the follow up to Nemesis. It is a 128k ROM cartridge and at only $45-00 presents excellant value for money. People interested in cartridge games should send a SAE to.

Computatronics

P.O Box 17, Ryde, NSW 2112

Data Base Delayed!

The new machine code Data Base program from Electric Adventures has been delayed due to problems with the disk routines. Hopefully these will be sorted out by next issue.

Some features of the upcoming package are:

- Up to 50 fields

- Each field can have up to 255 characters

- The number of fields can be changed and editted

- Index Data Base by a Field

- Free form Entry/Edit screen that can be set up to your requirements.

- Sort and display on any field to screen or printer, as well as only displaying the fields you want.

- Printer forms can be designed so you can print on non standard items, such as labels and invoice statements.

- Custom 64 characters per line screen designed used.

- Graphs on any of the fields can be displayed on screen and printed out to your printer

- Later the ability to use program files will be included, so complete applications can be written i.e. such as an accouting package.

Anymore ideas for additions to this program will be greatfully accepted, although they may be left for later versions.

Also planned when the Data Base is finally finished is a 64 characters per line word processor that will work for tape and disk owners. Stay tuned!

ELITE TIPS

By Phillip Christie

To get from one side of a galaxy to another with hopping from one planet to another is very simple. As you are linited to 7 light years of Hyperspace fuel when you to lock onto a planet outside this range and attempt to Hyperspace to it you are given the message "Out of Range". To get around this you simply find out the name of the planet you wish to go to but lock onto a planet within your fuel range. Then you press H to Hyperspace to the locked on planet, but you have 10 seconds until the Hyperspace Drive comes into force. In this 10 seconds you have to press 5 to get the Galactic chart, press F to Find Planet and when asked which planet, type in the planet you really wish to go to. You are then locked onto that planet and the locking is not overridden by your lack of Hyperspace fuel. This is very useful when you wish to get to a High Technology planet to get a Galactic Hyperdrive or the like and also on Mission numbers one and two when you have to follow the Constrictor across a Galaxy. I am not sure whether this is a fault in the program or it has been left in on purpose so if anyone knows whether this works on other versions of Elite I would be interested.

The second tip concerns Mission number five in which you have to destroy a space station taken over by Thargoids. The only way I've found of destroying a Space Station is FOUR full blasts of the Military Laser i.e. until the laser has overheated four times and recharged in between. This takes many tries as Thargoids are attacking you at the same time so as soon as you've destroyed the Space Station be ready to Hyperspace to a nearby planet straight away, otherwise the Thargoids that have gotten out of the Space Station while you were firing on it will probably destroy you.

LETTERS

MSX II ROM Chips

Dear Sir

Could you please advise if the MSX 2 ROM chips are available and the price.

Keep the mag going it's great and if possible could you include some utilities for MSX I. I've got your Assembler, but have problems on assembling. It refuses to look at the ASM program. I assume its because it's in CPM mode. Is it possible to configure MSX I to CPM the same as on the Spectra-Video.

Arthur Cartwright

Mount Barker

The MSX II ROM chips are not as yet available as we have not received any answers from overseas, except for a few more contact addresses.

Music Help

Dear Sir,

This letter is in answer to your request on behalf of Tony Morgan for information on the CX5.

1. Set one of the 8 parts to the following -
Enter MKON=100 #=?? (Desired voice number)
RPB=255

Then press the [SELECT] key and enter at least eight bars of rests (0 then 1 the [ENTER] eight times). Press [SELECT] [ENTER] RPE.

Enter PLAY=? (Part No.)

The music keyboard will now play until the time expires (Approximately 1 hour). It can be cancelled by pressing [STOP]

2. The following is an excerpt from page 31 of the YRM501 manual.

(1) Select the bank by entering the bank = n command (n= the number of the bank you want to listen to). (CX5M has bank 1 only)

(2) Enter the play = command without any part number.

This procedure starts the simultaneous performance of the 8 parts contained in the selected bank.

* Entering **play = m** causes the bank to start playing from the position indicated by the score cursor.

* Pressing the [RETURN] key after typing loop will repeat the play until you press [CTRL] plus [STOP]. Parts cannot be designated in the same way as the play command: all parts of the bank will play with the loop command.

3. Yes but I haven't tried yet.

4. The sound module SFG01 was updated to SFG05 which allows the use of MIDI in and also allows a disk drive. The music composer YRM101 was also updated to YRM501 to handle disk commands. The ROM and wiring are different in the sound modules, but I am hoping a mod can be done.

5. Only with YRM501.

I hope that this information is a help. Keep up the good work.

Peter Nielsen

Moonah TAS.

Thanks Peter for answering Tony Morgans questions (Peter has agreed that we need a music column and we hope to start it next issue). Peter also requires a copy of the instruction manual for a program called "SONY Quick Notes". He is quite happy to pay for a copy.

Disk File Corruption

Dear Sirs,

I am having trouble with corruption of disk files, so I trust you will be kind enough to provide some help.

My computer is a Sony HitBit (MSX) and I have a Yamaha FD030 3.5 inch disk drive. In the past, I have experienced corruption of programs (a program loaded may include lines from another program – I suspect programs saved in ASCII format are the cause), and more recently, copying files from one disk to another in DOS (MSX-DOS 1.0) using wildcards. Copying files individually is OK, but using wildcards corrupts the target disk (which may have just been freshly formatted) so that e.g. 199 clusters suddenly disappear, and the "bytes free" value just happens to be exactly the "bytes free" value on the source disk (which may also have been corrupted on a previous occasion, incidentally). Testing the disk with CHKDSK on an MS-DOS PC (IBM-AT) reports lost clusters found and file allocation errors, and using the /F (fix) switch seems to correct the problem. Norton's Utility (also MS-DOS) reports the 2 FAT's as different. Sometimes FORMAT does not free up all the lost space on a previously-corrupted disk. Can you shed any light on the problem? When I bought the disk drive from interstate (L.P.G. Software), it was obviously subjected to some pretty rough handling during transit (so that the card was even ejected from the slot) even though it had been packed well.

The instructions with the disk drive say that a disk should never be removed while the red light is on, and yet when copying from one disk to another, the red light remains on and the disk keeps spinning while it prompts for the target disk to be inserted – is this normal, or does it suggest a fault?

Thankyou in anticipation for your reply.

Don Weldon

MORLEY, WA 6062.

The problems you are having are a mixture of two things.

(1) Yes the disk drive is probably slightly out of alignment or needs cleaning with a cleaning disk. You might think about having the drive serviced at a place that services 3 1/2 " drives (MS-DOS servicer would do). This would be causing your formatting programs and some (see 2) of your coping problems.

(2) MSX-DOS 1.0 is full of bugs! It is just a cut down version of MS-DOS 1.0 (Also full

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of bugs). The biggest bugs are (wait for it) in the COPY command and quite often you find that the directory (and sometimes FAT) are saved on the wrong disk. To have the least hassles when copying using *.* do the following.

(a) Insert the destination disk in the drive and type DIR.

(b) When this has finished type DIR B: and insert the original disk when asked for drive B: (Not before!!!!)

(c) Now type your copy command COPY B:*.* A: and the programs will start to load off the original (Swap disks when told). For best results wait a couple of seconds after you are asked to change disks.

(d) When your copy is finished REBOOT your computer before doing anything else. The disk drive in use light is a separate to the disk drive read and write heads so it does not really indicate when the drive is in use. The best way is to follow on screen instructions and wait a couple of seconds to be sure.

Extra Drive

Dear Sir,

Many thanks for your prompt attention to my first subscription. I received gazette #3 with great anticipation and enjoyed it very much. Congratulations on an excellent magazine. I've already gleaned innumerable bits of information, and find the letters section, along with your answers, most interesting.

I recently obtained a Sony 3 1/2" disk drive and controller card, and was told that it might be possible to connect this into the SVI-707 (**Disk Drive Ed.**) by removing the card and making up a suitable connector. Could you tell me if this is correct, and if so, what is involved.

I also have an 80 column card and desperately want an 80 column. disk based, word processing program – is there anything in CPM that will do the job? (or any other format?)

Thanks for all your efforts.

Chris Barrenger

Lower Barrington TAS.

P.S. My Two sons asked if I would send in their top scores for your column. I have verified them.

Thanks for the praise Chris (Although Vicki gets a little hot under the collar when all the letters are addressed "Dear Sir").

It is possible to attach your 3 1/2" disk drive to your SVI-707 drive. But what I would suggest, is that since disk drive controllers are as rare as hens teeth; that you sold the drive and controller as a complete unit and bought a bare drive to attach to the SVI-707. This is because the power can be taken from the SVI-707. If you would like some more technical advice on this matter, please feel free to contact Robin Young of 21 Oaktree Road, Youngtown TAS 7249. Robin has quite a few Spectravideo spares and is a qualified technician.

All we have in the 80 column word processor area is the CPM text editor, which is quite good but not quite a word processor. This month we have added

Tasword, to the software library. Tasword will not use your 80 column card, but instead uses the graphics screen to get 64 columns of text. This is just enough to do word processing.

Your sons scores have been added to the high score table and they should have their high score badges by the time you read this. Once again, thanks for your letter.

Games Reviews?

Dear Editor,

I would like to commence by thanking you for the support you are giving to Spectravideo and MSX Computers in Australia. I would like to congratulate you on a very good magazine and hope you will be producing it for some time to come. I would like to know were the game reviews went in issue 003? I always found them interesting and missed them in the latest issue and hope they will soon return.

I would like to offer help for the program "Elite", which I am sure many MSX owners are spending many hours on trying to build up to Elite status. I am at the moment on 2 days 8 hours game time, with a score of 225,000 and am still on dangerous level.

Phillip Christie
BLAIRGOWRIE VIC

Thanks for your letter Phillip and your tips you will notice appear in this month's tips section. "Axe" our in house games reviewer was given an issue off so we could get the computer repaired from the last time he did the reviews!!! Any companies out there who want their joystick controllers and computers tested to the extreme, we have the perfect test subject! If it can survive the bite of "The Axe" it can survive anything.

Also, for your efforts in Elite you have been sent a 'High Score' badge.

Word Processing

Dear Sir,

We have a SVI-728 MSX computer and a Citizen 5200 printer which we want to use mainly for school home work etc

I would appreciate it if you could send me details of any word processing packages that are available.

Mrs M. Sayer
Moonah TAS

The perfect word processor for you would be Tasword, which we have listed in our software selection. It comes on disk and uses the graphics screen to produce a 64 column display.

New Spectravideo Games

Dear Micro's Gazette,

Seeing that you are still supporting the Spectravideo, it is appropriate that I give notice that I have some yet unseen games for the Spectravideo - two of which employ machine code subroutines. It is a shame that the lack of technical information prevented me from writing games in machine code, when I still possessed the enthusiasm.

I am declaring my remaining games public domain and they are available from my address by sending $10-00 to my address. Among the other programs I have written is a fairly limited non-user friendly

3-dimensional graphics program which is also available if indicated. It is also a shame for MSX and Spectravideo computers that the video memory is not accessible through the main memory as accessing through the input and output ports is too slow to create genuinely 3-dimensional racing game.

Nicholas Karadimas
85 Consett Street
Concord West 2138
Sydney NSW

P.S. Note I can only supply the afore-mentioned on tape for the SVI-318/328.

Well Spectravideo owners out there, see if you can get Nicholas's enthusiasm going again and order his software.

By the way Nicholas I completely disagree with the graphics being too slow to do a 3-D racing game. (What! you want proof, alright then read next issue)

Changing the Prompt

Dear Sir/Madam,

I thought that this program might be of use to your readers. It redirects the normal ROM routine that prints the 'OK' prompt. To return the normal 'OK' prompt remove the REM at line 170. Also I would like to know if you have any information about the ROM routines of the 64k MSX. Like addresses of the routines and information of what register to be loaded and what it does.

```
10    REM N.SINGLINE
20    REM
30    REM 16/7/79
40    REM
50    FOR T=&HE0A0 TO &HE0A0 + 9 :
READ A$:POKE T,VAL("&H"+A$):NEXT
60    A$="PROMPT STRING"
70    FOR Y=1 TO LEN(A$)
80    A=ASC(MID$(A$,Y,1))
90    POKE &HE0A0+9+Y,A
100   NEXT
110   FOR T=&HE0A0+9+ Y TO &HE0A0 +9+
(Y+2):READ A:POKE T,A:NEXT
120   DATA CD, 23, 73, 21, AA, E0, CD, 31,
41, C9
130   DATA 10,13,0
140   POKE &HFF09,&HE0
150   POKE &HFF08,&HA0
160   POKE &HFF07,&HCD
170   REM POKE &HFF07,&HC9 :' DELETE
REM FOR NORMAL OK
```

Nigel Singline
Penguin TAS

I am sure our readers out there will appreciate this tip. We have received a copy of the MSX BIOS and are adding more information to this and hope to start listing them next issue.

Music Problems Answered

Dear Ed,

I have just received my first edition of Micro's Gazette and was most impressed with the content. I am writing in response to Tony Morgans letter printed in your Gazette issue number 3.

Qu 1: Notes cannot be played on the music keyboard when the FM composer is in the cartridge port.

Qu 2: When editing performance data on the composer you can go to any given bar without

going to the start each time. The MIDI input and output sockets are expressly for use with external MIDI devices e.g. synthesisers, sequencers and drum machines. Yamaha CX5 requires an adaptor to be placed in the rear slot to allow a disk drive to operate. Both these and Yamaha RAM cartridges are available.

If any readers are having difficulty in obtaining musical software or hardware for Yamaha CX5 e.g. disk drives, manuals etc (see Adds section), I can be contacted at:

Stringz Music
153-155 Mollisin Street
Kyneton VIC 3444 PH (054) 221635

Also any readers with a Spectravideo 738 Express who would like to exchange software and ideas, I would also like to hear from you.

Rod Gillett

The response to Tony Morgan's letter has been outstanding, and I am sure his problems can now be solved.

Confused!!

Dear Sir,

Congratulations on a fine magazine and may it never fold except to be stapled. As I have recently purchased an X'Press 738, is there anything that can be done with my old SV-328, Coleco Games Adaptor and software on tape. The software on tape I am willing to donate to the gazette, but the 328 and games adaptor (as there is no market for 328's anymore) can they be cannibalized for any useful purpose? If so then that leaves 1/2 doz Coleco game cartridges without a cause, can anyone or anything use them? My wife Thelma also is hoping for a badge and sends in her high score for Thexder at 285,980.

If all goes well with us next year I may also be investing in the Sanyo PHC-70FD. Would it be possible to include a photo of the computer in your magazine and could you give more details on the RAM-Disk please.

Also what would be required to interface two MSX computers and would they have to be I on I or II on II or II+ on II+, would an RS232 interfacing cable be enough? If so what are the obvious advantages? If any, in having two MSX computers interfaced, apart from the manufactures point of view?

Which brings me to DOS! What is MSX DOS? After careful perusal of SV's manuals, I have come to the conclusion that there are 34 pages divided up into two lots of commands, internal and External and that there are 11 commands in each and both are identical. Therefore 17 pages could have been deleted from the manual and 17 cents saved on the purchase of the 738.

So apart from a couple of identical commands on disk basic is there a special program that the other 9 commands can utilize, so far all I can do with these commands is Format a disk, Copy a file onto disk and manipulate the filename of a file (as there are pages devoted to filenaming - I could think of a few names myself!)

Conclusion: Disk basic works. I can do all the above as well as alter and manipulate programs, which I presume is what its all about. So is SVI misleading in their manuals as they sometimes tend to do, or am I too dumb to work the thing out (the latter being quite possible). My equipment was brought second hand so is it possible that there could be a fault in

the system somewhere?

I have just discovered a new Aussie magazine called Megacomp. The issue that I have is just the third, and the reason I mention this is beacause they support MSX! as well as the usual crowd of Comabores! One contributer and a supporter of MSX is Damien Leslie **(Address in editorial Ed)**

The address for the magazine is -
MEGACOMP PUBLICATIONS
1/40 GLENHUNTLY ROAD
ELWOOD VIC 3184
TELEPHONE (03) 5256369
VIATEL PAGE 666115

I was wondering if Micro's could contribute articles and support MSX via Megacomp. Also Micro's subscribers could support Megacomp.
Confused Geriatric
Roger Landriat
Ingham QLD

Oh! my poor fingers, that was a long one (Hopefully this answer should not take too long).

The parts in the SV-328 and Coleco adaptor are not really useable in any projects that I can think of (Any suggestions?), but I am sure some SVI-318/328 owner out there would love to have a Coleco adaptor with games for a reasonable price.

That makes two badges for Thelma (My mailbox is going to burst with everyone sending two letters. but as they say 'The more the better')

Hopefully Craig Hursey of the Circular Head Software group can enlighten you on the Sanyo RAM-DISK and we will print a picture of the Sanyo as soon as the person who has borrowed my digitizer returns it! You can connect up any of the MSX models as long as they both have a RS232 port and the same software running at both ends. This is mainly used for transferring software when the disk drive size or format differs between machines and when you wish to play games with more than one person participating at once. This is quite easy to do. but since it requires you to have quite a bit of hardware. no body has bothered to produce any software like this. (Well not in Australia anyway)

Now for the big one! MSX-DOS is another means of controlling your computer and because Basic is not active you get to use about 50K of RAM at a single time. This means copy files and even whole disks can take considerably less time. Also programs such as Assembler/Debuggers and Data-bases which sort large amounts of data. work a lot faster when they have more memory. Also MSX DOS allows the use of greater than 64k at once allowing even more complex programs. So generally MSX DOS is a faster more convenient way of manipulating files. as you have plenty of memory. and lots of information about each file. But this does not mean you have to use it! It is completely optional. (Personally I could not live without it)

Adventure Variation

Dear Sir,

Although we all need help from time to time with our 'Adventures' I wonder if Alan Crawford's column is really the best way of going about it. Giving all the answeres would rather spoil the game for me. I would like to suggest that a questions answered format. plus a few hints and tips would be more appropriate.

I hope this letter doesn't upset Alan cos' I need help now! I have been wandering round the cockpit of the "Starcross" for some time now, trying to get on with the game. I obviously have to programme the computer to move out but I can't find the right instructions. H.E.L.P.!

Some answers for Tony Morgan.

1. Yes, the command MKON will do this. see pages 69 and 56 of your manual.

2. This is something which has given me a lot of problems, having to start from the beginning again every time is hopeless. I overcome it in two ways.
(a) I start at the end and work backwards, about eight bars at a time, or
(b) After saving what I already have under the original name I start again with twenty odd rest bars seperating the two parts. When finished I move all the parts around to their correct places. One really has to keep one's wits about one when doing this, so it pays to save it under a new name knowing that you have the original to fall back on if you err.

3. I have never used either so I can't help you.

4. The MIDI input socket is used. You can punch your rhythm machine or midi guitar or midi organ into it. I have two CX5Ms working side by side and use a midi patcher to interface everything together.

5. Yes, the Yamaha PD03 is a single sided disk drive which plugs into the cartridge slot. There are also double sided versions (more expensive) and other makes of disk drive.

6. Yes, cartridges are available and most programmes have facilities for using them. I keep scouring MSX magazines hoping someone is going to give me a lsiting to enable me to use it in my own Basic programmes.

7. I'd like to be able to catalogue my cassette collection myself. I have tried the odd listing without success. Perhaps the editor will share with us the one he wrote to keep up with the subscriptions.

If you would like any help with your CX5M you are welcome to write to
Deigh Davies
P.O Box 58
Papakura New Zealand
Fax (09-2997242)

**I am sure Alan Crawford could change his column so it had a bit of each. but for him to answer letters and give hints he needs more letters and pleas for help.
Alan can you solve Deigh's problem?
I think Tony Morgan should be pretty well sorted out by now. I personaaly wish to thank all the people that have written in answer to Tony's plea.**

Hints and Tips

For MSX Users,

Well after playing Elite for 115 hours and reaching the level of dangerous. I was sent on a mission. I had to chase and destroy a space ship called the 'Constrictor' built by the navy. Believe me that Thargons are not a threat to the speed and laser power of this ship. When I destroyed it I received 400 credits and when I docked at the Star Base, I was payed 10,000 credits reward for all the hassle of chasing and destroying it.

Well are you sick and tired of going from planet to planet to reach the destination you want to get to, well I am. Here is a small tip on how to jump to a planet that is more than 7 light years away. **(See page two for tip Ed)**

And now for some input in the way of loading addresses:

Game		Start	End	Run
BATMAN	(PT1)	8800H	D868H	D804H
	(PT2)	8800H	DF3EH	DF02H
GUARDIC	(PT1)	9000H	D13AH	D000H
	(PT2)	9000H	D027H	D000H
SOCCER	(PT1)	9000H	D13AH	D000H
	(PT2)	9000H	D027H	D000H
PAYLOAD	(PT1)	9000H	D027H	D000H
	(PT2)	9000H	D027H	D000H

If anybody out there has a game called 'Amaurote' it is a 3D game with really good graphics & sound. When first loaded you can see a crab like creature with four legs walking on a grid blowing bubbles out the top of his head. I have a copy on disk but when loaded, you hit the spacebar to start and it freezes. So if anybody has a copy of this could they let me know, I will give a full disk of games away to any one that can supply me a working copy of this game on disk.
Brian Leonard
3 Elliot Street
Queenstown TAS 7467 - Phone (004) 711336

Thanks for tips Brian. as you can see we have doubled up on tips this month. turn to page two to see the Elite tips.

MSX-Disk Basic Random Files

By Gordon A Browell

Last time I wrote with Hints and Tips I rashly hinted at submitting more items in support of your magazine. At that time I had embarked on a time-consuming investigation of random disk files and suggested you did a feature on those MSX Disk Basic commands such as FIELD, CVI/S/D, PUT, MKI/S/D$, L/RSET and GET. However, my experiments have been so successful that I now venture to offer you a submission based on my experience. At the risk of criticism from some expert lurking in the wings, here is my effort. Hope you can use it...

For readers who have added a disk drive to their MSX computer and who have not yet investigated the full potential of using disks as an alternative to computer memory, here's an avenue of programming which they may find very useful. RANDOM disk files will hold masses of data, while eliminating entirely some of the serious drawbacks often encountered when attempting to store relatively modest amounts of data in RAM. With BASIC word-processors and databases, the computer soon begins to take time out to recover unused memory which has been uselessly reserved. These pauses are called "Garbage Collection". One way of dealing with such slowing of a word program is to force garbage collections at more convenient times rather than during text or data INPUT, by using the FRE("") command. Random disk files have no such problems. Another big plus is that filing to and retrieving from disk is actually faster than using RAM (Depends how you do it! ED.)

To illustrate the commands involved set up a formatted blank disk and enter and save the following program. Relevant commands occupy lines of their own so that ERROR MESSAGES will indicate lines where you may have made typing mistakes. After running this test program, enter FILES and you will see that your disk now contains the filename TESTDATA. That is the text that you entered and retrieved using the test program.

Before proceeding, there is a WARNING. Should the program BREAK, enter CLOSE [RETURN] before attempting to edit any program lines. If the disk file has been left OPEN on a BREAK, editing can corrupt your files. This kind of program obviously needs error traps.

You can see that this test program has been written in two parts, an INPUT ROUTINE and a RETRIEVAL ROUTINE. CLEAR is used to ensure that all variables are empty of values so that we can be sure the commands in the two routines work independently and do not rely on values left over from previous runs. To LOAD"TEST" and then RUN200 will work on existing data. Of course, if there is no DATA to retrieve, the program will crash. It needs error traps. However, the program will serve to illustrate how random commands work.

Now look at line 40. This sets up the "fields" for all the subscripted String Variables to be used. In effect this command says "expect only 4 characters in A$(0) but expect 30 characters in A$(1) to A$(6)".

Random files must be strings, never numbers. A$(0) is four characters because this is used to record the file number only. All the others are for your text. Lines 50 and 80 ensures the number of characters that can be allocated to the string variable in the FIELD command must not exceed 256. This may seem like a serious limitation, but the number of records that can be used is only limited by the capacity of the disk. A file may be of hundreds or thousands characters long. In line PUT #1,Q places the completed text onto disk. Then our test begins the RETRIEVAL ROUTINE. GET #1 in line 230 would often be followed by a record number in the form of a variable, example GET #1,Q. Here we are pretending not to know what the file number is. We want the program to find it. With no file number specified, GET #1 will find the first file initially and if used again, would look for the second file and so on. If there are no files to find, the program would BREAK unless protected by an ON ERROR GOTO. In this test program Line 240 converts the string representing the file number back to a proper number. Line 250 should print RECORD 1. GET #1 actually retrieved the entire file so the loop FOR I=1 to 6 is all we need to print the original text.

Back to the letter. I now have a most efficient program which has 100 RECORDS, each with 4 PAGES of 8 LINES per PAGE. The lines have fields of 30 characters. The program was devised as an alternative to a card INDEX for keeping track of MUSIC CASSETTES.

The program permits exchanging records to group artists and composers together and SEARCH will find names and titles. The PRINT routine prints out LABELS to fit cassette cases. The program, MICRO-RECORD, uses RANDOM files and is also structured for speed of execution. It runs very fast indeed. Such a program may have limited appeal to your

readers. They'll need both a Disk Drive and a Printer. Do you consider it worth publishing? Alternatively, I could simply describe the program and offer copies to anyone interested at a price to cover the cost of a disk and postage.
Best wishes and HOOROO!

We thought some feedback on this article would be appreciated.

Firstly Spectravideo SVI-318/328 owners would like to note that these programs will work on their machines as well! (Get rid of the KEY OFF and WIDTH 30 commands on line 10)

You have done very well Gordon to get this far and are starting to get the idea of random disk files, but you are missing out on some of the more powerful features your system offers.

The main point to note is about the record number. You have stored the record number twice, once in each record and then again in the one the disk system uses. Answer – Use the one provided by the system. If you need to keep a record of how many records are in the file use the first record in the file to store the number of records.

The second point, which unfortunately is not available to Spectravideo SVI-318/328 users, is that you can specify the length of each record to be stored on disk. For example in your above program each of your records took up 184 characters, but each record took up 256 characters on the disk. By including LEN=184 on the end of your OPEN command you can save a lot of disk space and speed up the program even more.

For an example I have re-written your program and included it in the listings section. Hope this is of some help.

Listing

```
10    CLEAR: CLS: KEY OFF: SCREEN 0: WIDTH 30: COLOR 4,15: Q=1: F$ = "TESTDATA"
20    OPEN F$ AS #1: FIELD #1,4 AS A$(0),30 AS A$(1),30 AS A$(2),30 AS A$(3),30 AS
A$(4),30 AS A$(5),30 AS A$(6)
30    PRINT"RECORD ";Q: PRINT
40    Q$=MKS$(Q)                        - Converts numbers to strings
50    LSET A$(0)=Q$                     - Ensures four characters
60    FOR I=1 TO 6
70    LINE INPUT Q$
80    LSET A$(I)=Q$                     - Ensures 30 characters
90    PRINT: NEXT I
100   PUT #1,Q                          - Puts completed text to disk file
110   CLOSE #1
120   CLS: PRINT"TEXT NOW ON RANDOM FILE": PRINT
200   PRINT"TO RETRIEVE, PRESS ANY KEY": PRINT: Z$=INPUT$(1)
210   CLEAR: CLS: KEY OFF: SCREEN 0:WIDTH 30:COLOR 4,15: F$="TESTDATA"
220   OPEN F$ AS #1: FIELD #1,4 AS A$(0),30 AS A$(1),30 AS A$(2), 30 AS A$(3),30 AS
A$(4),30 AS A$(5),30 AS A$(6)
230   GET #1                            - Loads first record found
240   Q=CVS(A$(0))
250   PRINT"RECORD "Q: PRINT
260   FOR I=1 TO 6
270   PRINT A$(I)
280   PRINT: NEXT I: CLOSE #1
300   GOTO 300
```

BEYOND BASIC

(Part 6) by Tony Cruise

This issue I continue with the collision test routine, listing the supporting routines and full Basic loader program. This issue's code is located before the routine published last issue. The BASIC listings are in the listings section.

Part 1

The SVI-318/328 use the port 8C to change slots. So to change between the RAM and ROM slots use.

ROM to RAM	RAM to ROM
LD A,0FH	LD A,(FE64H)
OUT(88H),A	OUT(8CH),A
IN A,(90H)	
LD (FE64H),A	
AND FDH	
OUT(8CH),A	

Parts 2 Onwards

Here is a list of ROM calls, RAM locations and HOOK addresses to use instead of the MSX values.

HGONE = FF57H. HTIMI = FF5AH. SCRMOD = FE3AH

SETWRT = 373CH. SETRD = 3747H

Change the following port calls to

OUT(98H),A becomes OUT(80H),A

IN A,(98H) becomes IN A,(84H)

This list will be expanded if necessary, each issue.

Machine Code Listing

```
                      1 ; Program to test the Collision of Sprites
                      2 ;
C000                  3         ORG C000H
                      4 ;
                      5 SETRD   EQU 0050H    ;
                      6 TEST    EQU C0FAH    ;
                      7 ;
C000  3A98C0          8 START   LD A,(SPRNUM) ;
C003  CB27            9         SLA A        ;
C005  CB27           10         SLA A        ;
C007  4F             11         LD C,A       ;
C008  0600           12         LD B,0       ;
C00A  21001B         13         LD HL,1B00H  ;
C00D  09             14         ADD HL,BC    ;
C00E  CD55C1         15         CALL RDVRM   ;
C011  FED1           16         CP 209       ;
C013  C8             17         RET Z        ;
C014  E5             18         PUSH HL      ;
C015  21D9C0         19         LD HL,COLBUF ;
C018  0620           20         LD B,32      ;
C01A  3600           21 CLP1    LD (HL),0    ;
C01C  23             22         INC HL       ;
C01D  10FB           23         DJNZ CLP1    ;
C01F  3A98C0         24         LD A,(SPRNUM) ;
C022  CB27           25         SLA A        ;
C024  4F             26         LD C,A       ;
C025  0600           27         LD B,0       ;
C027  219900         28         LD HL,SIZTBL ;
C02A  09             29         ADD HL,BC    ;
C02B  7E             30         LD A,(HL)    ;
C02C  0E0F           31         AND 15       ;
C02E  47             32         LD B,A       ;
C02F  23             33         INC HL       ;
C030  7E             34         LD A,(HL)    ;
C031  CB27           35         SLA A        ;
C033  CB27           36         SLA A        ;
C035  CB27           37         SLA A        ;
C037  CB27           38         SLA A        ;
C039  B0             39         OR B         ;
C03A  47             40         LD B,A       ;
C03B  3E00           41         LD A,0       ;
C03D  32F9C0         42         LD (TEMP),A  ;
C040  21001B         43         LD HL,1B00H  ;
C043  DD21D9C0       44         LD IX,COLBUF ;
C047  3AF9C0         45 CLP2    LD A,(TEMP)  ;
C04A  5F             46         LD E,A       ;
C04B  3A98C0         47         LD A,(SPRNUM) ;
C04E  BB             48         CP E         ;
C04F  2834           49         JR Z,SKIP    ;
C051  CD55C1         50         CALL RDVRM   ;
C054  FED1           51         CP 209       ;
C056  282D           52         JR Z,SKIP    ;
C058  E5             53         PUSH HL      ;
C059  C5             54         PUSH BC      ;
C05A  4B             55         LD C,E       ;
C05B  CB21           56         SLA C        ;
C05D  0600           57         LD B,0       ;
C05F  2199CD         58         LD HL,SIZTBL ;
C062  09             59         ADD HL,BC    ;
C063  C1             60         POP BC       ;
C064  7E             61         LD A,(HL)    ;
C065  E60F           62         AND 15       ;
C067  4F             63         LD C,A       ;
C068  23             64         INC HL       ;
C069  7E             65         LD A,(HL)    ;
C06A  CB27           66         SLA A        ;
C06C  CB27           67         SLA A        ;
C06E  CB27           68         SLA A        ;
C070  CB27           69         SLA A        ;
C072  B1             70         OR C         ;
C073  4F             71         LD C,A       ;
C074  D1             72         POP DE       ;
C075  E1             73         POP HL       ;
C076  E5             74         PUSH HL      ;
C077  CDFAC0         75         CALL TEST    ;
C07A  EB             76         EX DE,HL     ;
C07B  DD360000       77         LD (IX+0),0  ;
C07F  3004           78         JR NC,SKIP   ;
C081  DD360001       79         LD (IX+0),1  ;
C085  23             80 SKIP    INC HL       ;
C086  23             81         INC HL       ;
C087  23             82         INC HL       ;
C088  23             83         INC HL       ;
C089  DD23           84         INC IX       ;
C08B  3AF9C0         85         LD A,(TEMP)  ;
C08E  3C             86         INC A        ;
C08F  32F9C0         87         LD (TEMP),A  ;
C092  FE20           88         CP 32        ;
C094  20B1           89         JR NZ,CLP2   ;
C096  E1             90         POP HL       ;
C097  C9             91         RET          ;
                     92 ;
                     93 ; Variables
                     94 ;
C098                 95 SPRNUM  DEFS 1       ;
C099                 96 SIZETBL DEFS 64      ;
C0D9                 97 COLBUF  DEFS 32      ;
C0F9                 98 TEMP    DEFS 1
```

REVIEWS
by Mad Axe

GUTT BLASTER

A good name for a shoot-em up don't you think?. Actually the game isn't that bad. As blast-em games go, this one is fast with power select weapons and enough variety to keep me interested for the first three levels. I didn't say it was easy but it looks basic with not too many "difficult" aliens to deal with. That changes. Firstly the craft that you control moves sideways all too easily making it hard to get fine control. Secondly it's fast. Your missiles (it has auto fire) move extremely fast and when you power up, those new weapons move as fast. The aliens also aren't lacking in the speed department. Despite the colour limitations of the machine, I think the background moonscape (vertically scrolling) is very effective and tastefully done.

A good game for venting those pent up emotions on.

STAR SOLDIER

Another shoot-em up (is there anything else?). Compared to the one I just reviewed, there is a world of difference; this one (written by Hudson Soft) relies on detailed interactive backgrounds, power ups, vertical scrolling, dumb aliens and one new feature-partial sideways scrolling to give a larger play-field. Unlike Gutt Blaster, Star Soldier has a Star Brain to kill at the end of each level. What annoyed me most about playing this game was the way I kept turning "black" or invisible at random moments, probably some kind of shield but I don't know how it is operated so when I didn't need to, I found that I couldn't pick up weapons, materializing inside aliens etc.

PIPPOLS

With a title like that I didn't know what to expect and was pleasantly surprised by this charming game. A little boy (elf, pixie) goes hopping through orchards, fields, forests and Easter island rock faces towards his goal, collecting money, fruit and various other things. Ha you say! BORING! you say. Not so. All along the way he is besieged by insects, fuzzballs, skulls, blobs et al. and has to defend himself by throwing out his heart to them (killing them with kindness!). Quite a paradox. Anyway I digress. The game is good, not too demanding and the music won't make you want to throw your computer through the window after the first five minutes (it took me 5.21 minutes) so it's worth having it (a bit like magical tree).

ROBOT WARS

A blast from the past. Remember Bezerk, the limited colour robot slaying game?, well here it is for the MSX1. It is surprisingly good with digitized speech and fast no nonsense graphics (it does use some colour) making it practically as good as the arcade. All this game entails is shooting cyclopean robots with your laser before the smiley (bouncing ball) arrives and kills you. Oh there is one thing I forgot to say, all the walls have been electrified causing instant death on contact. Nice huh!

LAPTICK II

From the title of this game I had absolutely no idea what I was running and the title screen wasn't too helpful either. But I was surprised again! (for some reason I thought this was a French conversion with a title like Laptick 2. I wonder what Laptick 1 was like?). It's basically a hard platform game but the sprites are soooo cute! You play a green thing with pointy ears (Mr.Spock I presume) being attacked by blobs with blinking eyes who get beside you and take a humongus bite of you and swallow you whole! The next level has a pig that turns red and bowls you over and a red thing that hammers you flat. Can't say much more because I didn't get any further. A cute game.

BANK PANIC

This is a very good SEGA conversion of the arcade game of the same name. Smooth animation even though there isn't much of it. The only problem I had with the game was that the keys seemed to be set up for a SONY Hit-Bit MSX and I was running it on a Spectravideo MSX so they weren't in the right places. Protect the public! It is your duty as a hero to save pretty women and hard working men from bandits and crooks (tax collectors and bankers they mean) by shooting them dead and collecting the bounty for them. Shoot people to make money huh? sounds like fun!

When the game starts you are positioned in front of three doors which open revealing innocent people or the bad guys. All you have to do is shoot the innocent and protect... no sorry that should be shoot the bad guys NOT the innocent. Above each door is an indicator to show how far away someone is from opening the door which is handy because some of those bandits put dynamite on the doors which sort of kills you in a big way. Finish the round by getting a bag of dough dropped in front of every door. A likeable game that tends to be a bit tedious a times but at higher levels it gets really hectic with heaps of bandits and dynamite.

KNIGHTMARE

My all-time favourite MSX game! (I wish they would do a 16 bit conversion). Joy of joys, to get to play this game and call it a job! You are a knight throwing little arrows at various demizens while also shooting tiles to reveal different bonuses; ranging from points, time stop and smart bomb, to secret level advances. Also two other bonus type devices appear, a multi purpose power-up and weapon power-up. The multi purpose power-up has many forms, light blue for speed up, lighter blue for shield, red for invulnerability, white for invisibility and flashing for points. The weapon power-up however is slightly different. You have a wide range of types to choose from and the second time it comes around you can increase the weapon you chose the first time by re-selecting it.

The basic scenario is to survive until the end of level guardian, defeat it and go on to the next level. Sounds simple and boring but... and I mean a big but... if you know where some of the hidden tiles are you can skip levels. For example there is a tile on the first level that will take you to the second and one on the second to the third etc. The problem is finding them. The end of level guardian for the first is a giant fireball spitting Medusa. I don't know what the second is because I never get there! (I think it might be a giant knight).

The graphics in this game are excellent, although not the best they are fast and sprites are always prolific. I advise you to go and buy this game if you like shoot-em ups with a challenge.

TWINBEE

Made by the same company as Knightmare it stands to reason that it might be a clone and lo and behold-it is! I don't think it as good as Knightmare but all the same it isn't that bad either. You fly a craft of some kind in this vertically scrolling shoot-em up that very vaguely resembles a bee (I think) that can have its wings shot off and still fly. Clouds conceal bells (pretty obvious I thought, when you think about it) that change colour when you shoot them; green for "ghost"ships, red for shields, white for double fire, blue for speed up, yellow for points and black for death-your death. I must admit the backgrounds that you fly over were very impressive and scrolled smoothly but the foreground action seemed to lack a bit. I was casually watching the background when I realized that small yellow mushroom type things were actually shooting at me. Normally I like mushrooms but this wasn't nice so I tried to shoot it and found that it could kill me but I couldn't kill it! Not bad.

ZANAC

I left the most impressive alien shoot-em up until last. And wasn't it impressive?. It certainly was! Incredible bacgrounds and shading, fast and responsive as well as hard in the bargain. Just your normal kill everything on the screen type game with power ups (which I was too preoccupied with staying alive to wonder what they did half of the time) and ubiquitous end of level guardian. The level lengths seem to change almost randomly. One game can see you at the end of the level in no time and the next takes forever. If you buy one shoot-em up because you hate them, buy this one if only to watch the graphics.

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Dungeon Advent.	Philip Brouwer	Level 3
Dorodon	John Knight	45,540
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Exa Innova	Sean Davidson	75,160
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Demon Attack, Sea Diver, Death City

Program Pack VII (MSX/SVI $10.00 Tape $15.00 Disk)

Lunar Rescue, Sky Base, Quasimodo

Program Pack VIII (MSX/SVI $10.00 Tape $15.00 Disk)

Munch Man, Escape from Planet Beta

Program Pack IX (MSX/SVI $10.00 Tape $15.00 Disk)

Artillery Fire, Tennis, Number Puzzle, Towers of Hanoi

Program Pack X (MSX/SVI $10.00 Tape $15.00 Disk)

Gold Rush, Pyramid

Program Pack XI (MSX/SVI $10.00 Tape $15.00 Disk)

Missile Command, Master Mind, Leaky Roof

Program Pack XII (MSX/SVI $10.00 Tape $15.00 Disk)

Mini Golf, BlackJack, Break Out

Program Pack XIII (MSX/SVI $10.00 Tape $15.00 Disk)

Space Fighter, 3D-Maze, Surround

Program Pack XIV (MSX/SVI $10.00 Tape $15.00 Disk)

Crazy Kong, Star Base I, Lunar Lander II

Program Pack XV (MSX/SVI $10.00 Tape $15.00 Disk)

Twister, Reverse, Fox and Geese

Program Pack XVI (MSX/SVI $10.00 Tape $15.00 Disk)

Grand Prix, Substrike, Snake

Program Pack XVII (MSX/SVI $10.00 Tape $15.00 Disk)

City Bomber, Spectra Derby, Bug Catcher

Program Pack XVIII (MSX/SVI $10.00 Tape $15.00 Disk)

Spectra Kong, Tennis, Musical Keyboard

Program Pack XIX (MSX/SVI $10.00 Tape $15.00 Disk)

Bombs Away, Mirkwood Forest, Chopper Pilot

Program Pack XX (MSX/SVI $10.00 Tape $15.00 Disk)

Jumping Cowboy, Super Smasher, Fruit Catcher

Program Pack XXI (MSX/SVI $10.00 Tape $15.00 Disk)

Pro Golf, Astro Fighter, Asteroid Shower

Edu-Pack I (MSX/SVI $10.00 Tape $15.00 Disk)

Copy Cat, Memory

Edu-Pack II (MSX/SVI $10.00 Tape $15.00 Disk)

Monkey Maths, Missing Letters

Edu-Pack III (MSX/SVI $10.00 Tape $15.00 Disk)

Table Invaders, Hangman

Edu-Pack IV (MSX/SVI $10.00 Tape $15.00 Disk)

OZMap, OZQuiz, Math Duel

U.F.O (MSX $10.00 Tape $15.00 Disk)

In this machine code game, you are under attack from UFO's. Watch out for the alien unit moving across the bottom of the screen - this will fire smart bombs. Watch out for the meteor shower and refuel when the truck appears on the screen. Requires 15k of RAM and has smooth scrolling, fast response with good sound effects.

Meteor Swarm & Birds of Orion (MSX/SVI $15.00 Tape, $20.00 Disk)

Two machine code games on one tape/disk! Meteor Swarm has you stuck in a meteor belt and you must blast your way out. Other ships are caught in the belt and will try and shoot you if you do not shoot them first. In Birds of Orion you must defend your Galaxy and against the alien invaders, but what's this! They look like birds.

Munch Mania (MSX/SVI $15.00 Tape, $20.00 Disk)

Race munchy around the screen chomping the pills and dodging the ghosts. Grab a power pill and get your revenge against the ghosts. Four different speed levels, written completely in machine code.

Pyxidis (MSX/SVI $15.00 Tape, $20.00 Disk)

Fast, action packed vertically scrolling shoot-em-up with three completely different screens, two speed levels, extra weapons and challenge stages. Written in machine code and using MSX/SVI graphics to the fullest.

Video Graffiti (MSX/SVI $20.00 Tape, MSX $25.00 Disk)

Draw colourful pictures with this easy to use painting package. It uses pull down menus and includes a zoom function for you to get the most out of your MSX/SVI computer. Written in BASIC and machine code.

Stranded (MSX/SVI $15.00 Tape, $20.00 Disk)

Your have been shipwrecked on a deserted island and have to find a way the leave before night falls. This is a text adventure where you instruct the computer with two word commands like GO NORTH, CLIMB ROPE (Requires Extra Memory on the SVI-318)

Spectra-trivia & Compu-Trivia (MSX/SVI $10.00 Tape)

The famous trivia game now on your computer. These are trivia quiz games for up to four players. The computer rolls the dice and each player moves in turn. At certain points you will be asked questions. There is a provision for you to create your own question and answer file

Lethe Castle (MSX Only $15.00 Tape)

Try and solve the mystery of Lethe Castle in this graphics adventure of high standard.

Best of the Basics I (MSX/SVI Disk $40.00)

Super Basic Compilation including - Sprite Designer, Lunar Lander, Road Racer, Galactic Assault, Hopper, Space War, Othello Challenger, Painter, Dungeon Adventurer, Bomb Scare, Pitfall, Android Alert, Parachute, Space Invaders, Sea Diver, Memory, Copy Cat

Best of the Basics II (MSX/SVI Disk $40.00)

Super Basic Compilation including - Death City, Lunar Rescue, Sky Base, Quasimodo, Munch Man, Escape from Planet Beta, Artillery Fire, Tennis, Number Puzzle, Towers of Hanoi, Gold Rush, Pyramid, Monkey Mathematics, Missing Letters

Best of the Basics III (MSX/SVI Disk $40.00)

Missile Command, Master Mind, Leaky Roof, Mini Golf, Black Jack, Break Out, Space Fighter, 3D-Maze, Surround, Crazy Kong, Star Base I, Lunar Lander II, Table Invaders, Hangman

Hardware

X'press ROM version 1.2 ($40.00) - Eliminates the need for the disk patch and allows you to use double sided 3 1/2" disk drives externally or internally. Comes complete with full installation instructions

MSX Printer cable ($50.00) - Full 2 metres long allowing you to connect up to any Centronics campatible printer.

Add on Double Sided 3 1/2" Disk Drive ($220.00) - Connects up to your X'press computer letting you store and extra 720k of data. Or install the drive inside your computer and use the cable to use the single drive already in the machine. Please note you require ROM version 1.2 to use these drives. (Internal mounting brackets are $10.00)

MSX Cassette Cable ($15.00) - Connect your MSX up to standard tape recorders.

Box of 10 Blank 3 1/2" Disk ($30.00) - Double sided, double density disks. (Will fit single sided drives as well)

MSX 32K Expansion Cartrdige ($100.00 fully assembled, $85.00 full kit) - Expand you computer by 32k. This is best for people with only 32K machines

MSX 64K Expansion Cartridge ($140.00 fully assembled, $110.00 full kit) - Expand the memory of your computer by 64k.

CPM Software (All $10.00)

ORMATS AVAILABLE - SVI-318/328 SINGLE SIDED 5 1/4", MSX SINGLE SIDED 3 1/5", MSX DOUBLE SIDED 5 1/4"

Z80 Assembler

Z80 Disassembler

Fast Full Screen Text Editor

Utilities Disk 1- includes FCOPY, NULU, NULU.DOC, MFT, NSWP2, CLS

Utilities Disk 2- Includes ADM3, ADM3A, NULU12, CPMADR, CPMCALC, CPMPOWER, MEM24, MEM32, MEM6, MEM8, SORTDIR, SS/DR-B, SUPERZAP, SURVEY, WASH, XDIR5 (Supplied by John Rudzinski)

Please note that some of these Utilities are SVI-318/328 specific.

Advent80 - The original 128k adventure game

Zork I - Part one of the famous INFOCOM adventure

Hitch Hikers Guide to the Galaxy - Humourous adventure game based on the popular book by Douglas Adams.

SHAREWARE (MSX ONLY)

This is our new addition to the software section. The following titles are comercial MSX I games that are no longer possible to buy in Australia as originals. This is totally a non profit offer, all programs are only **$5.00** each plus either $5.00 for either disk or tape. Each disk can hold up to six programs and each tape can hold four. When you order, your order must come to more than $15.00 e.g if you order your software on tape you must buy at least two programs, making it $15.00 for your order. Please note, this software will only work on full 64k MSX machines, if you wish to get this software and your machine only has 32K RAM then you will need to buy one of the memory expansion cartridges. Please state your machine brand and number as well as some alternate selections when you order. NOT ALL TITLES WORK ON ALL MACHINES!

Shoot-em-ups

Adonis (*)
Alpharoid (*)
Army Moves (Part 1)
Army Moves (Part 2)
Battleship Clapton II
Battle Cross (*)
Beam Rider
NEW - Boom
Buck Rogers
Car Fight (*)
NEW - Chexder
NEW - Chopper I (*)
Choplifter (*)
NEW - Cyber Run
NEW - Desolator
Exa Innova (*)
Exerion
NEW - Exerion II
NEW - F16 Fighter
NEW - Fire Hawk
Galaga
Galaxia
Green Beret (*)
Guardic
NEW - G.U.T.T Blaster
H.E.R.O
Hydlide (*)
Jet Bomber (*)
NEW - Macross
NEW - Megalopaiaus
NEW - Moon Patrol
Polar Star
NEW - Robot Wars
River Raid
Scion
NEW - Senjo
Sky Jaguar (*)
Space Busters (*)
Space Walk
Star Blazer
NEW - Star Force
NEW - Star Soldier
Super Cross Force
NEW - Super Cobra
NEW - Tank Battle
Time Pilot (*)
Trantor
NEW - Twin Bee
NEW - Valkyr
NEW - Venom Strikes Back
Volguard (*)
NEW - Zanac
Zexas

Action

Antartic Adventure (*)
NEW - Anty
Alibaba and the Forty Thieves (*)
Arkanoid (*)
Athletic Land (*)
NEW - Bangu
NEW - Beach Head
Blagger
NEW - Bomba Man
Boogaboo the Flea (*)
Boulder Dash I
Boulder Dash II (*)
Bounder
NEW - Cannon Ball
NEW - Chack n Pop
Chiller
Chimachi (*)
NEW - Circus Charlie
NEW - Dig Dug
NEW - Dorodon
NEW - Driller
Ghostbusters (*)
NEW - Grog's Revenge
Gun Fright
Hunchback
I.C.E (*)
NEW - J.P Winkle
NEW - Kagea
Krak Out
NEW - Laptick II
Mac Attack
NEW - Magical Wiz Kid
Magical Tree (*)
NEW - Mazes Unlimited
Mouser (*)
Mutant Monty
Mr Do's Wild Ride
Outroyd
Panel Panic
NEW - Pico Pico
Pinball
NEW - Pippols
Pyramid Warp
Raster Scan
Skate Dragon
NEW - Ski Commando
NEW - Sky Vision
Sweet Acorn
NEW - The Protector
Turmoil
Vacuumania
Warroid (*)
NEW - Warp and Warp

NEW - Wonder Boy
Xyzolog (*)

Racing Action
NEW - Car Jamboree
NEW - Coaster Racer
Formula #1 Simulator
Grand Prix
Hang On (*)
Hyper Rally (*)
Le Mans (*)
Road Fighter (*)
NEW - Speed Boat Racer
Speed King

Action Adventures
Alcazar
Alien 8
NEW - Arano
NEW - A View to a Kill
Avenger
NEW - Back to the Future
Batman
NEW - Championship Lode Runner
Cosmo Explorer (*)
NEW - Disk Warrior
Dota
NEW - Finders Keepers
NEW - Heist
Future Knight
NEW - Jet Set Willy I
Knight Tyme
Lode Runner I (*)

Lode Runner II
Mutant Monty
Nightshade (*)
Pitfall II
Raid on Bungling Bay (*)
NEW - Rambo
NEW - Soul of a Robot
Spy vs Spy II
Star Quake
NEW - Stone of Wisdom
NEW - Temptations
Terminus
NEW - The Wreck
NEW - Vampire
Wizards Lair

Strategy
Cluedo
NEW - Crazy Train (*)
Cyrus II Chess (*)
Kuma Chess
Minder
Ocean Conqueror
NEW - Shogi II
Spectra Trader
NEW - Sony Chess
Spitfire 40
Traffic Controller (*)
NEW - Triversi

Sports
3D-Golf

7 Card Stud Poker
Baseball
Billiards (*)
NEW - Championship Baseball
NEW - Darts
Decathlon
Draughts
NEW - Hudson Baseball
Hyper Sports I (*)
Hyper Sports III (*)
Hyper Olympics I (*)
Hyper Olympics II (*)
NEW - Ice Hockey
NEW - Konami Baseball
NEW - Konami Boxing (*)
NEW - Konami Soccer
MSX-21
Ping Pong (*)
NEW - Play Ball
Samantha Fox Strip Poker
Steve Davis Snooker
NEW - Super Golf
Tenth Frame Ten Pin Bowling

Martial Arts
International Karate
Kungfu Master
Ninja I (*)
Ninja II (*)
Yie Ar Kungfu I (*)
Yie Ar Kungfu II (*)

Educational
NEW - Monkey Academy

Word Processors
NEW - Tasword (*)
NEW - WDPRO (Saves to Tape Only)

(*) INDICATES TITLE IS ONLY AVAILABLE ON DISK AND WILL NOT AT THIS STAGE WORK FROM TAPE.

ORDER FORM

NAME: _____

ADDRESS: _____

: _____

: _____

COMPUTER TYPE: _____

: _____

PLEASE RUSH ME THE FOLLOWING TITLES:– _____ $_____

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IF YOUR ORDER IS UNDER $30.00 PLEASE ADD $2.00 ____ $_____

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*** PLEASE LIST ALTERNATIVE SELECTIONS FOR SHAREWARE TITLES AS NOT ALL OF THE TITLES WORK ON EVERY MACHINE

SEND YOUR CHEQUE OR MONEY ORDER TO –

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OVERSEAS BUYERS PLEASE INCLUDE $2.00 PER PROGRAM (SURFACE MAIL – MAX $10.00), $5.00 PER PROGRAM (AIR MAIL – MAX $25.00)

LISTINGS

Entering Listings

The listings in each issue have to be printed, most of the time for the two different machines. When this happens the complete listing for MSX owners will be printed and then the lines you should replace for the program to work on SVI-318/328 machines. This way space is not wasted by printing the same line twice, since the two machines only have slight differences.

You will notice each new line of a listing has two letters to the left of the line. If you are typing in a listing and not using the program INPUT (explained next) **DO NOT TYPE THESE IN** as the computer will not understand. Also when you enter listings be careful not to get the letter 'O' and the number 'O' mixed up. The number '0' is now printed with a slash '/' across it to help you recognise it.

The only errors that can be in our listings are either ones that were in the original program and mistakes made when you type them in. Each listing is taken straight from the computer using a listing program and pasted into the magazine.

Program Input

Program Input allows you to enter the listings using the two letter checksum at the start of each line. After you have typed in a line, the program will tell you if you have made any mistakes and let you correct them. Only the spaces marked by the small triangles are counted (usually in PRINT statements) by the program, so you can leave out all other spaces if you want. Basic does not really care where you put spaces except if they are in the middle of a statement e.g LOCATE not LO CATE

The line must be exactly the same otherwise the program will not accept it. We will update the INPUT program gradually so it becomes easier to use.

To use the program, type it in slowly making sure you do not make any mistakes. Save it to a tape (as detailed below) and then type RUN and press the [ENTER] key. Now the program will ask you if you want to load a program you have been working on previously. Just press 'N' if you are starting a new program. The screen will now clear and details of which line you are on and where the cursor is on the screen are shown at the top of the screen. You can now type in one of the listings, make sure you have a blank tape handy to save the program on.

If you are editing a program you have been working on previously insert the tape or disk you saved the program on and follow the instructions on screen. This feature allows you to type the program in over several sessions instead of all in one go.

Saving Programs to Cassette

After typing in a program type **MOTOR ON** and press the [ENTER] key

You can now position your tape to the place you want to save your program. As a general rule, leave at least two counts on your tape counter at the start of each new tape.

To save your program type.

CSAVE"NAME"

(NAME should be the name of the program you are saving e.g SKI-JUMP) and press the **PLAY** and **RECORD** buttons on your tape recorder. Let the tape wind for a couple of seconds and then press [ENTER].

After a period of time, which depends on the length of the program the Ok prompt will come up on the screen. Your program is now saved to cassette. But how do you know it was saved correctly? Easy you can check by doing the following.

Type **MOTOR ON** and press the [ENTER] key.

You can now rewind your tape to where you saved the program.

Now type **CLOAD?** and press the **PLAY** button on your tape recorder and then press the [ENTER] key.

After a couple of seconds the computer should print **FOUND:NAME** and then after a short while the Ok prompt will appear.

If the computer printed up **DEVICE I/O ERROR** or **VERIFY ERROR** you know that the program has not saved to the tape correctly. If this happens, try saving the program one more time. If the error happens again and in the same place, the tape you are using is damaged and you should use another. If you get an error but in a different place on the tape your tape recorder may need cleaning.

Saving Programs to Disk

To save a program to disk use the following command.

SAVE "NAME" for MSX machines

SAVE "1:NAME" for SVI-318/328 machines

Reloading Programs

To load a program that you have type in using program input from tape, insert the tape you were using, positioning the tape to the spot where you recorded the program and type.

LOAD"CAS:" and press the [ENTER] key

You can now save the program using **CSAVE** so it loads quicker and uses less tape.

To load a program that you have typed in using program input from disk, insert the disk you were using and type.

LOAD"1:NAME" for SVI-318/328 users

LOAD"NAME" for MSX users

Once loaded your program can be saved normally so it takes up less disk space.

To load a program from tape that you have saved using the **CSAVE** command just insert you tape, positioning the tape to the spot you saved the program at and type.

CLOAD"NAME" and press the [ENTER] key

To a load a program from disk that you have saved using the **SAVE** command just insert your disk and typr.

LOAD"1:NAME" for SVI-318/328 users

LOAD"NAME" for MSX users

Program Input (MSX Listing)

```
GF  10 CLEAR8000:DEFINTA-Z:COLOR15,4,5:SCREEN0:WIDTH39:DIML$
       (100):H$="A:":ALPHA$="ABCDEFGHIJKLMNOPQRSTUVWXYZabcde
       fghijklmnopqrstuvwxyz-/."

JC  20 CLS:LOCATE5,2:PRINT"PROGRAM INPUT":LOCATE2,4:PRINT"LO
       AD WORK FILE [Y/N]..?";

AF  30 A$=INPUT$(1):A=INSTR("YyNn",A$):IFA=0THEN30ELSEPRINTA
       $:IFA>2THENL=1:GOTO110

IP  40 LOCATE2,6:PRINT"LOAD FROM -":PRINT"     [1] DISK":PRIN
       T"     [2] TAPE":PRINT"  YOUR CHOICE [1 or 2] ?";

EI  50 A$=INPUT$(1):IFA$<"1"ORA$>"2"THEN50ELSEPRINTA$:IFA$="
       1"THENF$=H$ELSEF$="CAS:"

DO  60 LOCATE2,10:PRINT"FILE NAME:":P=0:N$=STRING$(8,32)

GP  70 LOCATE12,10:PRINTN$:LOCATE12+P,10:A$=INPUT$(1):IFA$=C
       HR$(8)THENIFP=0THENBEEP:GOTO70ELSEMID$(N$,P,1)=" ":P=
       P-1:GOTO70

EG  80 IFA$<>CHR$(13)THENIFINSTR(ALPHA$,A$)=0THENBEEP:GOTO70
       ELSEIFP=8THENBEEP:GOTO70ELSEP=P+1:MID$(N$,P,1)=A$:GOT
       O70

FM  90 LOCATE2,12:PRINT"LOADING..":F$=F$+N$:OPENF$FORINPUTAS
       #1:L=1

OP  100 LINEINPUT#1,L$(L):IFNOTEOF(1)THENLOCATE10,12:PRINTUSI
       NG"###";L:L=L+1:GOTO100ELSECLOSE:L=L+1:FORA=1TOL-1:IF
       LEN(L$(A))<245THENL$(A)=L$(A)+STRING$(245-LEN(L$(A)),
       32):NEXTELSENEXT

AC  110 CLS:IFL$(L)=""THENL$(L)=STRING$(245,32)

EM  120 PX=0:PY=0:F=0:LOCATE11,0:PRINTUSING"FREE ####K";FRE("
       "):LOCATE25,0:PRINT"INSERT OFF":LOCATE1,1:PRINTUSING"
       LINE ##";L

EM  130 FORA=0TO6:LOCATE1,A+2:PRINTMID$(L$(L),A*35+1,35):NEXT

FL  140 LOCATE1,0:PRINTUSING"X:## Y:##";PX,PY:LOCATE1,2+PY:PR
       INTMID$(L$(L),PY*35+1,35):LOCATE1+PX,2+PY:A$=INPUT$(1
       ):IFA$=CHR$(8)THENPX=PX-1:GOSUB1000:MID$(L$(L),PY*35+
       PX+1,1)=" ":GOTO140

DA  150 IFA$=CHR$(28)THENPX=PX+1:GOSUB1000:GOTO140

CO  160 IFA$=CHR$(29)THENPX=PX-1:GOSUB1000:GOTO140

CD  170 IFA$=CHR$(30)THENPY=PY-1:GOSUB1000:GOTO140

CF  180 IFA$=CHR$(31)THENPY=PY+1:GOSUB1000:GOTO140

DM  190 IFA$=CHR$(127)THENIFPX=35ANDPY=6THENBEEP:GOTO140ELSEI
       FPX=0ANDPY=0THENL$(L)=RIGHT$(L$(L),244)+" ":GOTO130EL
       SEL$(L)=LEFT$(L$(L),PX+PY*35)+RIGHT$(L$(L),244-(PX+PY
       *35))+" ":GOTO130

BD  195 IFA$=CHR$(18)THENIFF=0THENF=1:LOCATE32,0:PRINT"ON ":G
       OTO140ELSEF=0:LOCATE32,0:PRINT"OFF":GOTO140

AM  200 IFA$<>CHR$(13)THENIFF=0THENMID$(L$(L),PX+PY*35+1,1)=A
       $:PX=PX+1:GOSUB1000:GOTO130ELSEIFPX+PY=0THENL$(L)=A$+
       LEFT$(L$(L),244):GOTO130ELSEL$(L)=LEFT$(L$(L),PX+PY*3
       5)+A$+MID$(L$(L),PX+PY*35+1,244-(PX+PY*35)):PX=PX+1:G
       OSUB1000:GOTO130

MC  210 C1$=LEFT$(L$(L),1):C2$=MID$(L$(L),2,1):IFINSTR(LEFT$(
       ALPHA$,54),C1$)=0ORINSTR(LEFT$(ALPHA$,54),C2$)=0THENL
       OCATE1,10:PRINT"CHECK CODE INCORRECT - PRESS ANY KEY"
       :A$=INPUT$(1):GOTO110

FF  220 LOCATE1,8:PRINT"WAIT...":F=0:I1=1:F1=0:FORI=3TOLEN(L$
       (L)):C=ASC(MID$(L$(L),I,1)):IFC=34THENIFF1=0THENF1=1E
       LSEF1=0
```

```
CE  230 IFC=32ANDF1=0THEN250ELSEIFI1/2=I1\2THENF=F+CELSEF=F-C

BF  240 I1=I1+1

NI  250 NEXTI:F=ABS(F)MOD256:F1=F\16+65:F2=FMOD16+65:IFC1$<>C
        HR$(F1)ORC2$<>CHR$(F2)THENLOCATE1,10:PRINT"LINE INCOR
        RECT- PRESS ANY KEY":A$=INPUT$(1):GOTO110

NG  260 LOCATE1,10:PRINT"LINE CORRECT":LOCATE2,12:PRINT"[1] G
        OTO NEXT LINE":LOCATE2,13:PRINT"[2] GOTO PREVIOUS LIN
        E":LOCATE2,14:PRINT"[3] EXIT AND SAVE":LOCATE2,15:PRI
        NT"YOUR CHOICE [1-3] ..?";

DF  270 A$=INPUT$(1):IFA$<"1"ORA$>"3"THEN270ELSEPRINTA$:IFA$=
        "1"THENL=L+1:GOTO110ELSEIFA$="2"THENIFL=1THENBEEP:GOT
        O270ELSEL=L-1:GOTO110

KN  280 CLS:LOCATE2,6:PRINT"LOAD FROM -":PRINT"    [1] DISK":
        PRINT"    [2] TAPE":PRINT"  YOUR CHOICE [1 or 2] ?";

JC  290 A$=INPUT$(1):IFA$<"1"ORA$>"2"THEN290ELSEPRINTA$:IFA$=
        "1"THENF$=H$ELSEF$="CAS:"

AF  300 LOCATE2,10:PRINT"FILE NAME:":P=0:N$=STRING$(8,32)

GI  310 LOCATE12,10:PRINTN$:LOCATE12+P,10:A$=INPUT$(1):IFA$=C
        HR$(8)THENIFP=0THENBEEP:GOTO310ELSEMID$(N$,P,1)=" ":P
        =P-1:GOTO310

DG  320 IFA$<>CHR$(13)THENIFINSTR(ALPHA$,A$)=0THENBEEP:GOTO310
        ELSEIFP=8THENBEEP:GOTO310ELSEP=P+1:MID$(N$,P,1)=A$:G
        OTO310

GP  330 LOCATE2,12:PRINT"CONDENSING..":FORA=1TO500:IFL$(A)<>"
        "THENFORB=245TO1STEP-1:IFMID$(L$(A),B,1)=" "THENNEXTB
        :L$(A)=""ELSEL$(A)=MID$(L$(A),3,B-2):NEXTA

AF  340 LOCATE2,12:PRINT"SAVING......":F$=F$+N$:OPENF$FOROUTP
        UTAS#1:FORA=1TO500:IFL$(A)=""THENCLOSE:END

BL  350 PRINT#1,RIGHT$(L$(A),241):LOCATE10,12:PRINTUSING"###"
        ;A:NEXT:CLOSE:END

AF  1000 IFPX<0THENPX=35:PY=PY-1ELSEIFPX>35THENPX=1:PY=PY+1

BJ  1010 IFPY<0THENPY=6ELSEIFPY>6THENPY=0

BD  1020 RETURN
```

Program Input (SVI–318/328 Conversions)

```
HF  10 CLEAR8000:DEFINTA-Z:COLOR15,4,5:SCREEN0:WIDTH39:DIML$
       (100):H$="1:":ALPHA$="ABCDEFGHIJKLMNOPQRSTUVWXYZabcde
       fghijklmnopqrstuvwxyz-/."
```

Gopher (MSX and SVI–318/328)

A very well programmed game of unkown origin. You are pitted
against the ultimate flower bed wreckers 'Gophers', which you have
to fend off by hitting them on the head with a shovel. Enjoy!!

MSX Listing

```
AK  10 GOSUB560

IM  20 DEFINTA-Z:D=300:X=192:Y=176

CE  30 COLOR15,3,4:SCREEN2,2:OPEN"grp:"AS#1

BJ  40 STRIG(0)ON:STRIG(1)ON:GOSUB240:ONSTRIGGOSUB190,190:GO
       TO120

EJ  50 ST=STICK(0)+STICK(1):ONSTGOSUB80,70,90,70,100,70,110,
       70

FP  60 PUTSPRITE1,(X,Y),1,1

BH  70 RETURN

BA  80 IFY<3THENRETURNELSEY=Y-3:RETURN

BK  90 IFX>193THENRETURNELSEX=X+3:RETURN
```

```
FA 100 IFT>176THENRETURNELSEY=Y+3:RETURN
EH 110 IFX<3THENRETURNELSEX=X-3:RETURN
DD 120 G1=INT(RND(1)*30):GOSUB50:IFG1>270RG1<4THEN120ELSEIFF
       (G1)=0THEN120
EM 130 IFF=23THEN140ELSEIFG1=LPTHEN120ELSELP=G1
KB 140 PUTSPRITE2,(X(G1),Y(G1)+8),10,2
BG 150 FORT=1TOD:GOSUB50:NEXT
AA 160 IFGH=1THENGH=0:GOTO120
DE 170 F(G1)=0:BEEP:PUTSPRITEG1,(0,209):F=F+1:GOSUB520:IFF=2
       3THEN530
AD 180 GOTO120
FM 190 STRIG(0)OFF:STRIG(1)OFF:IFX<X(G1)-60RX>X(G1)+80RY<Y(G
       1)ORY>Y(G1)+20THEN230
HG 200 SOUND6,31:SOUND7,55:SOUND8,16:SOUND12,8:SOUND13,5:PUT
       SPRITE2,(0,209):FORI=1TO20:PUTSPRITE1,(X(G1),Y(G1)+16
       ),15,4:PUTSPRITE1,(X,Y),1,1:NEXT:PUTSPRITE1,(0,209):G
       H=1:SC=SC+1:GOSUB520:GOSUB50:GOSUB520:FORT=1TO200:NEX
       T
FF 210 IFD>50THEND=D-10ELSED=D-1
BI 220 PUTSPRITE31,(0,209)
CA 230 STRIG(0)ON:STRIG(1)ON:RETURN
HJ 240 DIMF(30),X(30),Y(30):N=RND(-TIME)
AG 250 SPRITE$(0)=STRING$(8,255)+STRING$(8,128)+STRING$(8,25
       5)+STRING$(8,0)
AJ 260 A$="":FORI=1TO29:READA:A$=A$+CHR$(A):NEXT
BE 270 SPRITE$(1)=A$
BB 280 A$="":FORI=1TO12:READA:A$=A$+CHR$(A):NEXT
BH 290 SPRITE$(2)=A$
CL 300 A$="":FORI=1TO8:READA:A$=A$+CHR$(A):NEXT
AP 310 SPRITE$(3)=A$
AK 320 A$="":FORI=1TO23:READA:A$=A$+CHR$(A):NEXT
BC 330 SPRITE$(4)=A$
IG 340 FORL=2TO180STEP40:LINE(L,0)-(L+39,10),1,B:LINE(L,180)
       -(L+39,190),1,B:NEXT
CH 350 LINE(0,10)-(0,180),1:LINE(201,10)-(201,180),1:LINE(82
       ,180)-(121,190),12,BF
GB 360 LINE(202,0)-(256,191),6,BF:COLOR15:PRESET(210,20):PRI
       NT#1,"GOPHER":PRESET(214,30):PRINT#1,"COUNT":PRESET(2
       10,80):PRINT#1,"FLOWER":PRESET(214,90):PRINT#1,"COUNT
       "
GC 370 FORP=4TO27:F(P)=1:READX(P),Y(P):PUTSPRITEP,(X(P),Y(P)
       ),12,3
BI 380 CIRCLE(X(P)+4,Y(P)+20),4,1:PAINT(X(P)+4,Y(P)+20),1:NE
       XT
BH 390 RESTORE510:FORI=140TO180STEP10:READM$:PRESET(210,I):C
       OLOR14:PRINT#1,M$:NEXT
CH 400 IFSTRIG(0)+STRIG(1)=0THEN400ELSELINE(210,410)-(256,19
       1),6,BF:RETURN
II 410 DATA8,28,62,127,255,127,62,29,8,0,0,0,0,0,0,0,0,0,0,0
       ,128,0,0,0,128,64,40,16,32
AM 420 DATA60,126,94,254,254,28,62,127,191,191,31,31
AF 430 DATA56,56,146,214,124,56,16,16
DN 440 DATA241,138,138,242,130,130,129,0,0,0,0,0,0,0,0,0,145
       ,81,81,85,85,91,145
CH 450 DATA18,5,66,5,114,5,162,5
CK 460 DATA42,35,90,35,138,35,186,35
BD 470 DATA18,65,66,65,114,65,162,65
CA 480 DATA42,95,90,95,138,95,186,95

CJ 490 DATA18,125,66,125,114,125,162,125
BN 500 DATA42,155,90,155,138,155,186,155
AE 510 DATApress,fire,button,to,start
BB 520 LINE(210,50)-(256,70),9,BF:PRESET(210,50):COLOR1:PRIN
       T#1,SC:LINE(210,110)-(256,130),9,BF:PRESET(210,110):P
       RINT#1,24-F:RETURN
FG 530 PUTSPRITE0,(X(G1),Y(G1)-4),9,0
CP 540 LINE(60,90)-(140,100),1,BF:PRESET(70,91):COLOR15:PRIN
       T#1,"WE WIN!!"
AG 550 GOSUB390:CLEAR:GOTO20
IM 560 COLOR15,13,13:SCREEN3,2:PRESET(48,80):OPEN"grp:"AS#1
PF 570 P$="r64c64r64d64r64e64r64d64r64c64r64":PRINT#1,"GOPHE
       R":PLAYP$:PLAYP$:PLAYP$:PLAY"r64d64d64r64c64c64c64"
AH 580 FORT=1TO1000:NEXT
BN 590 SCREEN0:PRINT"Use your joystick to move the shovel":P
       RINT"around the garden.Whack those pesky":PRINT"gophe
       rs by pressing the trigger before"
DK 600 LOCATE3,9:PRINT"they disappear with your flowers":LOC
       ATE2,12:PRINT"when there is only one flower left,":LO
       CATE10,13:PRINT"the gophers have won"
II 610 LOCATE2,15:PRINT"You are also hampered by not being":
       LOCATE7,16:PRINT"able to move diagonally":LOCATE15,18
       :PRINT"GO GET EM"
MN 620 LOCATE6,20:PRINT"press the spacebar to start"
BD 630 CLOSE#1
BE 640 I$=INKEY$:IFI$<>" "THEN640ELSE RETURN
AK 650 END
```

SVI-318/328 Conversion

```
GK  30 COLOR15,3,4:SCREEN1,2
DJ 360 LINE(202,0)-(256,191),6,BF:COLOR15:LOCATE210,20:PRINT
       "GOPHER":LOCATE214,30:PRINT"COUNT":LOCATE210,80:PRINT
       "FLOWER":LOCATE214,90:PRINT"COUNT"
CN 390 RESTORE510:FORI=140TO180STEP10:READM$:LOCATE210,I:COL
       OR14:PRINTM$:NEXT
DB 520 LINE(210,50)-(256,70),9,BF:LOCATE210,50:COLOR1:PRINTS
       C:LINE(210,110)-(256,130),9,BF:LOCATE210,110:PRINT24-
       F:RETURN
CL 540 LINE(60,90)-(140,100),1,BF:LOCATE70,91:COLOR15:PRINT"
       WE WIN!!"
BO 560 COLOR15,13,13:SCREEN2,2:LOCATE48,80
FP 570 P$="r64c64r64d64r64e64r64d64r64c64r64":PRINT"GOPHER":
       PLAYP$:PLAYP$:PLAYP$:PLAY"r64d64d64r64c64c64c64"
```

Full Screen Text Editor (MSX Disk Only)

This is a short program written by Tony Cruise to demonstrate the use of Random Disk Files. The number of lines that can be editted is only limted by available disk space. Each line only takes 36 bytes of storage on the disk drive allowing an enormous file to be editted. It also demonstrates how to do a limited input routine i.e. only input the keys you want.

```
KL   10 CLEAR1000:DEFINTA-Z:COLOR15,4,5:SCREEN0,1:WIDTH39:KEY
        OFF:ONERRORGOTO370:ONSTOPGOSUB410:STOPON
GG   20 CLS:LOCATE8,0:PRINT"TEXT.EDITOR":LOCATE8,1:PRINT"====
        =======":LOCATE0,3:FILES"*.DOC"
AK   30 LOCATE1,22:PRINT"FILE.NAME.(8.CHRS):";
DJ   40 INPUTF$:IFLEN(F$)>8THENF$=LEFT$(F$,8)
FL   50 CLS:OPENF$+".DOC"AS#1LEN=36:FIELD#1,36ASZ$:GET#1,1:NL
        =CVI(LEFT$(Z$,2))
EH   60 LOCATE0,21:PRINTSTRING$(39,"_")".....F1...|..F2....|..F3
        ...|..F4....|..F5";:LOCATE1,23,0:PRINT"PAGE.UP|PAGE.DN
        |START...|END.....|EXIT";:ONKEYGOSUB280,300,330,340,360
        :FORA=1TO5:KEY(A)ON:NEXT
EO   70 X=1:Y=1:L=1:I=0:S=1:FF=0
DM   80 IFY=21THENY=20:S=1
JF   90 A$=MKI$(NL):LSETZ$=A$:PUT#1,1:IFS=0THEN110ELSEFORA=1T
        O20:LOCATE1,A,0:R=L+(A-Y):IFR>NLTHENPRINT"@"+STRING$(
        36,32)ELSEGET#1,R+1:PRINTZ$
BG  100 NEXT:GOTO120
HA  110 GET#1,L+1:L$=Z$:LOCATE1,Y,0:PRINTL$
FA  120 GET#1,L+1:L$=Z$
NA  130 LOCATE1,0,0:PRINTUSING"X:##.Y:##.";X,Y;:PRINTUSING"LI
        NE:###...INSERT.";L;:IFI=0THENPRINT"OFF"ELSEPRINT"ON.
        "
CO  140 LOCATE1,Y,0:PRINTL$
GM  150 LOCATEX,Y,1
BC  160 A$=INKEY$:IFA$=""THEN160
LG  170 IFA$=CHR$(8)THENIFX=1THENBEEP:GOTO150ELSEFF=1:X=X-1:L
        $=LEFT$(L$,X-1)+RIGHT$(L$,36-X)+".":GOTO130
EA  180 IFA$=CHR$(18)THENIFI=0THENI=1:GOTO130ELSEI=0:GOTO130
IN  190 IFA$=CHR$(28)THENIFX=37THENBEEP:GOTO150ELSEX=X+1:GOTO
        130
BP  200 IFA$=CHR$(29)THENIFX=1THENBEEP:GOTO150ELSEX=X-1:GOTO1
        30
HD  210 IFA$=CHR$(30)THENIFL=1THENBEEP:GOTO150ELSEGOSUB270:L=
        L-1:Y=Y-1:S=0:IFY=0THENY=1:S=1:GOTO80ELSE80
MJ  220 IFA$=CHR$(31)THENGOSUB270:S=0:Y=Y+1:L=L+1:IFL>NLTHENA
        $=STRING$(36,32):LSETZ$=A$:PUT#1,L+1:NL=NL+1:GOTO80EL
        SE80
NI  230 IFA$=CHR$(13)THENGOSUB270:S=0:Y=Y+1:X=1:L=L+1:IFL>NLT
        HENA$=STRING$(36,32):LSETZ$=A$:PUT#1,L+1:NL=NL+1:GOTO
        80ELSE80
EJ  240 IFINSTR("ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqr
        stuvwxyz.,/?':;[{}]'"+=-_\|!@#$%^&*()",A$)=0THENBEEP
        :GOTO90
IA  250 IFX=37THENBEEP:GOTO150ELSEFF=1:IFI=0THENMID$(L$,X,1)=
        A$:X=X+1:GOTO130
EB  260 L$=LEFT$(LEFT$(L$,X-1)+A$+RIGHT$(L$,37-X),36):X=X+1:G
        OTO130
HK  270 IFFF=0THENRETURNELSELSETZ$=L$:PUT#1,L+1:FF=0:RETURN
BL  280 IFL=1THENRETURNELSEGOSUB270:S=1:L=L-20:Y=1:IFL<1THENL
        =1
BB  290 RETURN80
AG  300 IFL=NLTHENRETURNELSEGOSUB270:S=1:L=L+20:Y=20:IFL>NLTH
        ENL=NL
AP  310 IFY>NLTHENY=NL
BJ  320 RETURN80
BA  330 IFL=1THENRETURNELSEGOSUB270:S=1:L=1:Y=1:RETURN80
AF  340 IFL=NLTHENRETURNELSEGOSUB270:S=1:L=NL:Y=20:IFY>NLTHEN
        Y=NL
BG  350 RETURN80
BM  360 CLOSE:CLS:END
AK  370 IFERR=53THENPRINT"NO.DOCUMENTS.ON.DISK":RESUME30
GO  380 IFERR<>55THENLOCATE1,20:PRINT"ERROR"ERR"IN.LINE"ERL:E
        ND
GO  390 LOCATE35,0:PRINT"(N)":NL=1:A$=MKI$(NL):LSETZ$=A$:PUT#
        1,1:A$=STRING$(36,32):LSETZ$=A$:PUT#1,2:RESUME60
BD  400 A$=INPUT$(1):PRINTASC(A$):GOTO400
CD  410 RETURN
```

Beyond Basic 6 Machine Code Loader (MSX)

This program will create a machine code file on tape or disk that will test the collision between sprites.

```
GE   10 CLS:CLEAR200,&HBFFF:DEFINTA-Z:A=&HD000
MK   20 READA$:IF A$<>"@" THEN POKE A,VAL("&H"+A$):A=A+1:GOTO
        20
DN   30 PRINT"INSERT.DISK/TAPE.TO.SAVE.PROGRAM"
NC   40 PRINT".....AND.PRESS.ANY.KEY"
AP   50 A$=INPUT$(1):PRINT:PRINT"SAVING....."
EK   60 BSAVE"SPRITE2.OBJ",&HC000,&HC15A
EC   70 END
AN  100 DATA 3A,98,C0,CB,27,CB,27,4F,06,00,21,00,1B,09,CD,55
DH  110 DATA C1,FE,D1,C8,E5,21,D9,C0,06,20,36,00,23,10,FB,3A
AP  120 DATA 98,C0,CB,27,4F,06,00,21,99,C0,09,7E,E6,0F,47,23
BM  130 DATA 7E,CB,27,CB,27,CB,27,CB,27,B0,47,3E,00,32,F9,C0
AH  140 DATA 21,00,1B,DD,21,D9,C0,3A,F9,C0,5F,3A,98,C0,BB,28
AJ  150 DATA 34,CD,55,C1,FE,D1,28,2D,E5,C5,4B,CB,21,06,00,21
BJ  160 DATA 99,C0,09,C1,7E,E6,0F,4F,23,7E,CB,27,CB,27,CB,27
EA  170 DATA CB,27,B1,4F,D1,E1,E5,CD,FA,C0,EB,DD,36,00,00,30
AH  180 DATA 04,DD,36,00,01,23,23,23,23,DD,23,3A,F9,C0,3C,32
EC  190 DATA F9,C0,FE,20,20,B1,E1,C9,E5,D5,C5,78,E6,0F,47,79
AH  200 DATA E6,0F,4F,CD,55,C1,80,47,EB,CD,55,C1,EB,B8,30,40
CB  210 DATA EB,CD,55,C1,EB,81,4F,CD,55,C1,B9,30,33,C1,C5,23
BO  220 DATA 13,CB,38,CB,38,CB,38,CB,38,CB,39,CB,39,CB,39,CB
AG  230 DATA 39,CD,55,C1,80,47,EB,CD,55,C1,EB,B8,30,12,EB,CD
BH  240 DATA 55,C1,EB,81,4F,CD,55,C1,B9,30,05,37,C1,D1,E1,C9
AL  250 DATA AF,18,F9,CD,50,00,DB,98,C9,@
```

Beyond Basic 6 - BASIC Example (MSX)

This program shows how to use the sprite collision routine. Experiment with different numbers of sprites and collisions.

```
JH    10 CLEAR100,&HC000:DEFINTA-Z:SCREEN2,2:DEFUSR=&HC000
CO    20 SPRITE$(0)=STRING$(32,255)
HI    30 SZ=&HC099:FORA=0TO63:POKESZ+A,15:NEXT
FA    40 CB=&HC0D9:SN=&HC098:ONSPRITEGOSUB80:SPRITEON
HA    50 PUTSPRITE1,(100,100),13,0:X=1:Y=1
CD    60 PUTSPRITE0,(X,Y),5,0:X=X+1:Y=Y+1
FK    70 SPRITEON:GOTO 60
EO    80 SPRITEOFF:POKESN,0:A=USR(0):IFPEEK(CB+1)<>0THENBEEP
BJ    90 RETURN
```

Pallette Selector (SVI-738 & MSX II Only)

This program allows you to change the standard 16 colours in your machine to any one of 512 colours. This lets you have real browns and oranges, as well as different shades of colours.

```
BJ    10 COLOR15,1,9:DEFINTA-Z:SCREEN2:OPEN"GRP:"AS#1:SPRITE$(
         0)=CHR$(&H18)+CHR$(&H18)+CHR$(&H24)+CHR$(&H24):SPRITE
         $(1)=CHR$(0)+CHR$(0)+CHR$(0)+CHR$(255)+CHR$(255):DIMC
         (15,2)
IP    20 FORA=0TO15:LINE(A*16,16)-(A*16+15,31),A,BF:NEXT
CA    30 FORB=0TO7:PRESET(16,120-B*8):PRINT#1,STR$(B):NEXT
HE    40 FORA=0TO2:READA$:FORB=1TO5:PRESET(32+A*32,136+B*8):PR
         INT#1,MID$(A$,B,1):NEXTB,A:CL=1:FORA=0TO15:FORB=0TO2:
         READC(A,B):NEXTB,A
OD    50 FORA=0TO7:READN$(A):NEXT
BA    60 PUTSPRITE2,(CL*16+8,32),15,0:A=STICK(0)+STICK(1):ONA+
         1GOTO90,90,90,70,90,90,90,80,90
CC    70 CL=CL+1:IFCL=16THENCL=1:GOTO90ELSE90
BP    80 CL=CL-1:IFCL<1THENCL=15
BP    90 IFNOT(STRIG(0)+STRIG(1))THENFORA=1TO50:NEXT:GOTO60
PM   100 LINE(32,64)-(105,127),1,BF:FORA=0TO2:FORB=0TO7:IFC(CL
         ,A)>=BTHENLINE(A*32+32,120-B*8)-(A*32+39,127-B*8),15,
         BFELSELINE(A*32+32,120-B*8)-(A*32+39,127-B*8),15,B
DE   110 NEXTB,A
BK   120 OUT&H99,0:FORZ=0TO15:A=VAL("&B0"+N$(C(Z,1))+"0"+N$(C(
         Z,2)))
BH   130 B=VAL("&B00000"+N$(C(Z,0)))
BM   140 OUT&H99,144:OUT&H9A,A:OUT&H9A,B:NEXTZ
AP   150 FORA=1TO100:NEXT
IB   160 PUTSPRITE0,(X*32+32,128),15,0:PUTSPRITE1,(X*32+40,120
         -C(CL,X)*8),15,1:LINE(X*32+32,120-C(CL,X)*8)-(X*32+39
         ,127-C(CL,X)*8),15,BF:LINE(X*32+33,113-C(CL,X)*8)-(X*
         32+38,118-C(CL,X)*8),1,BF
CP   170 A=STICK(0)+STICK(1):ONA+1GOTO220,180,220,190,220,200,
         220,210,220
GK   180 IFC(CL,X)=7THEN170ELSEC(CL,X)=C(CL,X)+1:GOTO120
PO   190 X=X+1:IFX=3THENX=0:GOTO160ELSE160
HM   200 IFC(CL,X)=0THEN170ELSEC(CL,X)=C(CL,X)-1:GOTO120
BP   210 X=X-1:IFX<0THENX=2:GOTO160ELSE160
ID   220 IFNOT(STRIG(0)+STRIG(1))THEN170ELSEVPOKE6912,200:VPOK
         E6916,200:FORA=1TO100:NEXT:GOTO60
EB   221 DATA "Green","Red..","Blue."
HN   230 DATA 0,0,0,0,0,0,6,1,1,7,3,3,1,1,7,3,2,7,1,5,1,6,2,7,
         1,7,1,3,7,3,6,6,1,6,6,4,4,1,1,2,6,5,5,5,5,5,7,7,7
LA   240 DATA "000","001","010","011","100","101","110","111"
```

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