

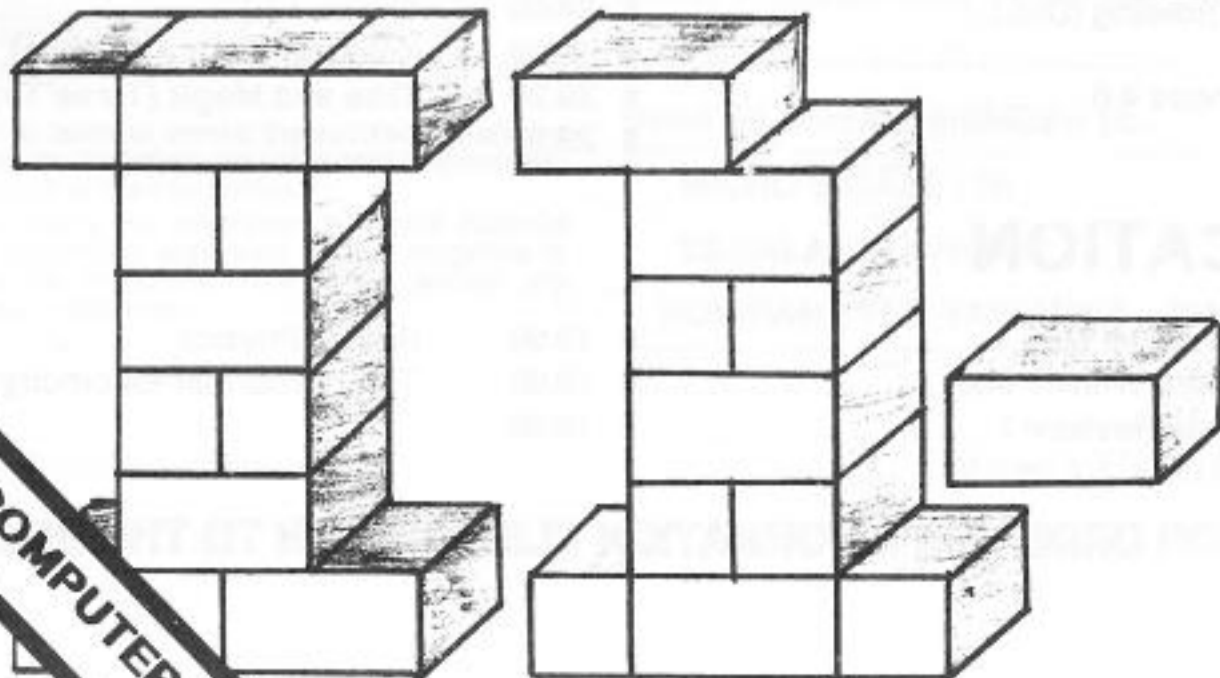
MICRO'S GAZETTE

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FOR SPECTRAVIDEO AND MSX COMPUTERS

- This months issue includes
- Complete map of Pitfall II
 - Software from Japan
 - King Solomons Mines Solution
 - Make your own RAM cartridges
 - Your letters answered



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EDITORIAL

Well here we go with another exciting issue of Micro's Gazette and once again I thank everyone for their letters and support since the last issue. We have received lots of orders for programs from the software section and if demand keeps we will expand the range, so you will have a bigger selection. Remember we are always on the look out for programs written in machine code and Basic for either our listings section or the software lists.

Sorry for the lateness of this issue, but we had a few problems with the computer. Basically the software program we are using has some small bugs which only become apparent when you start using big files (like this magazine)

Once again 'Basic Programming' has been delayed and will have to be shelved for a latter date. Geoffrey unfortunately does not have the time to finish his article at present. Also Alan Crawford was unfortunately late with his article, which will be printed next issue. So not to starve you adventurers out there Tom Sanders has sent us his solution to King Solomons Mines on the SVI-318/328 machines.

As mentioned in last months magazine we present the first of the articles from Elektor Electronics magazine. This issues article is the first part of constructing your own RAM expansion cartridge and will conclude in the next issue. Other projects will be slowly reprinted over further issues.

We have been sending out letters to all comers of the world seeking more information and sources of software and hope to get some answers soon. Some of our most promising contacts have been from Japan.

Turn to the news section for the latest update on MSX 2+ as well as the exciting information about the X'Press MSX computer being more than it seems. And don't over look the letters section were your problems are solved (Well mostly!)

Thats all from me this month. Happy reading...

Micro's Gazette is published by the following people-

Editor - Sebastian

Assistant Editor - Mark Packer

Technical Advisor - Tony Cruise

Artist - Vicki Spaulding

Basic Programming - Geoffrey Dickson

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Send all correspondence to-

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23 SALACIA AVENUE

HOWRAH 7018, TASMANIA PH (002) 442965

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news

MSX 2+

The Circula Head MSX and SVI Users Group have ordered one of the Sanyo WAVY70FD MSX 2+ units from Japan. The machine they have ordered is the cheaper of the three models available costing 78,000 Yen plus another 5,000 Yen for a power conversion unit. The manuals with the machine are in Japanese and a Basic Compiler is included on disk. This makes the cost per unit about \$830-00 and we are unsure whether import duty will be placed on units brought into Australia individually. As soon as the unit arrives (probably by the time you read this) we will test it out and find out all of the features available and present a report in our next issue. We are also contacting the Australia branches of the three manufacturers to see if they are importing the computers. At a guess I would say the units would end up being \$1000, but remember this will include English manuals and the correct power supply.

SVI-738 X'Press MSX 2?

Information that has come to light confirms earlier rumours that the SVI-738 X'Press was originally designed as an MSX 2 unit. The computer already has the MSX 2 video processor (VDP 9938) and anybody who has taken the cover off their computer will have noticed the empty places on the circuit board (especially under the disk drive). So what can be done to the X'Press to turn it into an MSX 2?

(a) You can upgrade the video RAM to 128K in about twenty minutes with the right components and a steady soldering iron

(b) Replace the MSX 1 ROM's with MSX 2 ROM's. The only problem is that the ROM's are not available in Australia. We have written to about a dozen places overseas asking about new ROM chips. We only need one set as ROM's can be easily copied. (Can anyone out there who has an MSX 2 help us with this problem).

(c) Replace the single sided disk drive with a double sided unit. This is only necessary if you want to run MSX 2 disk software.

(d) Upgrade the main memory to 128k. This is not necessary to make the machine MSX 2 compatible, but it can be a useful upgrade.

So how can you upgrade your computer? Well for the moment we can only offer you the disk drive upgrades as well as a slightly modified ROM that allows you to use the new drives and also fixes the bug in the existing X'Press operating system which erases the occasional disk and at the moment requires a software patch to fix. The video memory upgrades we

hope to supply in kit form with full instructions, new manuals and hopefully with a full set of ROM chips, costing no more than \$250 (or \$450 with a disk drive). The extra main memory we also hope to supply in kit form at a later date. If we can succeed in getting the ROM chips we can then access the huge range of MSX 2 software being sold around the world and further boost MSX support in Australia.

Japanese Software

We have got the prices (approximates only at the stage) of some Japanese software on cartridge and would like to test your interest. That is, if you are interested in one or more of the cartridges just drop us a line.

Castle Excellent (\$50.00) MSX ROM - God and the devil co-exist in a fantasy world. A puzzle and action game, it is played out in the castle which is the arena of action.

Red Zone (\$40.00) MSX ROM - Three dimensional, real-time action game. Added to the 3-D image are a sense of speed and simulation. All sixteen areas have to be cleared.

Topple Zip (\$50.00) MSX 1MEGA ROM - An adventure race game with pleasant characters continually appearing.

Relics (\$50.00) MSX 1MEGA ROM - At the start of the game, the player has no substance. The story may be developed by the player. This role-playing game is programmed with several possible endings.

Snak It (\$50.00) MSX ROM - When a four-leaf clover is eaten, the snake begins to grow and grow. When all the clovers is eaten, you can move on to the next level. A comical puzzle action game involving a sweet snake.

Kick It (\$50.00) MSX ROM - The heroine is a beautifully proportioned girl called Sexy Sue. A puzzle game in which a time bomb has to be de-fused.

Pyro Man (\$50.00) MSX ROM - The player is a firefighter. A puzzle game in which the firefighter has to extinguish the fires started by a pyromaniac (a person who has an irresistible impulse to start fires).

Also we can get the following hardware items:-

MS-10Z Mouse Controller (\$140.00)

- 1: Read format: Optical Rotary Encoder
- 2: Resolution : 200 count per inch
- 3: Connector type : D-Sub 9 pin female plug
- 4: Interface : Connection thru joystick port
- 5: Includes software

FS-FD1A 3.5 inch floppy disk drive with interface (\$950.00) - This unit is very com-

pact having the disk drive built into the actual controller card (This is the cheapest we can get drives at the moment. If we can just get the controllers we can add drives to them here in Australia, making them much cheaper)

High Scores

Antartic Adventure	Damon Burn	67,660
Athletic Land	Jared Hyland	122,600
Battleship Clapton	Jason Vespa	70,400
Beam Rider	Richard Johnson	81,112
Buck Rogers	Jason Vespa	149,000
Circus Charlie	Damon Burn	24,340
Dungeon Advent.	Philip Brouwer	Level 3
Dorodon	John Knight	45,540
Exa Innova	Sean Davidson	75,160
Golf	Damon Burn	6 Under
Green Beret	Peter Cotter	116,300
H.E.R.O	Tony Cruise	128,000
Hyper Sports	P. Quinn	475,000
Kings Valley I	Peter Cotter	49,300
Knight Tyme	Craig Hursey	95%
Le Mans	Matthew Hyland	35,250
Lode Runner	Peter Cotter	279,575
Manic Miner	Kevin Tate	66,663
Mouser	John Knight	35,900
Pinball	B. Rankin	870,450
Pitfall II	P.J. Christie	199,000
Raid on Bungling	P.J. Christie	112,030
Road Fighter	Craig Hursey	190,235
River Raid	D. Olson	56,650
Scion	John Knight	131,400
Super Cobra	Jared Hyland	113,440
Sweet Acorn	Jason Vespa	174,380
Track & Field I	Peter Cotter	704,630
Wizards Lair	Damon Burn	94495 46%
Xroid	Brian Leonard	870,000
Zaxxon	John Knight	52,200

LETTERS

MSX2+ Questions

Giddy...

I was glad to see that you had use for my submission. It did occur to me on reading over the Hints and Tips that perhaps I had assumed readers to have more computer knowledge than perhaps many of them have. Never the less, it may help drag some of them from those never-ending Arcade games. I'm still addicted to writing programs and the mental gymnastics of solving complex programming problems. Which is one way of leading into the subject of MSX2+.

Yes, I am very interested in obtaining MSX2+. All my Japanese pen friends are raving about it. You may add my name to the list of those interested. Of course, the availability of MSX2 programs is important. The brightly coloured brochures of software from Japan are one big drool.

Please keep us informed of the progress of MSX2+ in Australia. What extra equipment is needed to cope with manipulating VIDEO? Perhaps that side of the system is pitched more for semi-professional use. Also, what form does the language facility take? Is this intended to load, say, Japanese KANJI from disk, or is the language built into a chip?

I haven't come up with any ideas for anything to submit for publication. The trauma of moving meant packing my MSX gear back into original boxes and I've just now managed to get it all going again. Although I have had very good success with a random file program, I really do not feel qualified to write about it for others.

Best wishes, and HOOROO!

Gordon A Browell

Grandville QLD

Thank you for your letter and I am sure your article was well appreciated. Your name has been added to the growing list of people interested in MSX2+ machines and we will keep you informed of our progress. The MSX2+ machines come with MSX BASIC 3.0 built into ROM and work much the same as an MSX1. At this stage we can only get the Japanese versions of the computers which have the ability to use a second character set consisting of Japanese characters. At the moment we are not sure about what is needed to connect Video equipment but from the brochures we have it seems that this feature is widely used. (None of us can read Japanese yet)

More MSX2+ Questions

Dear Sir

Further to your interesting article in Micro's Gazette (Number 001) about the MSX2+. I would be extremely interested in finding out more about this machine.

I currently have a pioneer PX7 with SVI-707 MSX 5 1/4" disk drive. I would be interested to know if software written for my current machine would be compatible with the MSX2+ and also what software would be available for the MSX2+ system. I have found by sheer hand experience that much in the computer game is not technically supported and MSX seems to be a dying format. The scant articles suggest a leap forward for MSX in this country.

Keep up the good work with the magazine, I would find an article on memory swapping and how to do it and also BASIC programming structuring would be useful in the future.

D MacDonald

Bayswater VIC

Yes all your software will run on the MSX2+ machines, even some of the the pioneer specific functions regarding Video seem to have implemented in the new standard. From the brochures that we have there are about 20 titles available for MSX2+ ranging from state of the art shoot-em-ups and racing car games to very powerful video software. It is only early days yet, but remember that all MSX1 and MSX2 software will run on the new machines and that there are hundreds and hundreds of MSX2 titles available. Software Swap

Software Swap

Dear Sir

Good luck with the magazine and more details on machine code please. I am interested in the MSX2+ and hope you have more details next issue.

I have Pascal 80 complete with manual to swap with Devpac 80 both by Hisoft. I also have Knights Commander on tape which I have transferred to disc but I am unable to use it. It loads but does not run and I have strange happenings afterwards. If I list a program a 57000 number comes up. I have to switch off for 10 to 20 seconds to clear the machine.

Arthur Cartwright

P.O Box 474

Mount Barker 5251

Thank you for your letter. The Knights commander will not work on disk without quite a bit of modification as it uses areas of the memory reserved for the disk drive. I

have tried the modifications my self but have not had the time to continue. Has anyone else succeeded in this task? If so let us know.

MSX Addons

Dear Tony

Please find data for the track ball I hope this is of use to you. I am also enclosing a copy of a list of programs I have on a CPM disk. I obtained this disk with an SVI-738 I purchased a couple of years ago off Peter Deckert.

As I no longer have a SVI-738, these may be of use to members, I am not familiar with the use of them. If you would like a copy of the disk please let me know.

I would also like to impart with a bit of information for the magazine and to those members whom may like to make add-ons. Elektor Electronics produced five articles entitled MSX Extensions in their JAN 86, FEB 86, MAR 86, JAN 87, MAR 87 and APRIL 87 issue. These were an MSX Input/Output bus and Digitizer plus an 8-Bit I/O Port, Cartridge Board with user programmable EPROM, Eight Slot Bus Board, I/O Timer and Cartridge, EPROM Programmer. I obtained copies of these articles via the state reference library, I also obtained a book titled, easy add-ons for the AMSTRAD CPC464-664-6128 and MSX Computers by B Banani, by ordering through Birchalls Bookshop. It cost \$12.95 and is a small paperback, but is packed with information and worth the money.

Hope these may be of use to you.

CPM Software

ASM.COM, BIOS.ASM, CEBUG.COM, CFORMAT.COM, CLS.COM, CSYSGEN.COM, DDT80.COM, DISK.COM, DSKMOD.COM, DUMP.COM, FCOPY.COM, LOAD.COM, MULFMT.COM, PIP.COM, READ.ME, SD.COM, SUBMIT.COM, XSUB.COM, ZSID.COM, MFT.COM, ADHEX.COM, BBC.COM, CBIOS.ASM, CBUGWS.DOX, CHESS.COM, CP.COM, DDT.COM, DEBLOCK.ASM, DISKDEF.LIB, DUMP.ASM, ED.COM, FILECOPY.COM, MBASIC.COM, NSW.COM, PIPX.COM, REBOOT.COM, STAT.COM, UNERA.COM, ZDT.COM, /.COM

Mark Sands

ST Leonards TAS

Thank you for your information, we are looking at the track ball information and hope to incorporate it into a future article. You will notice that we have acquired permission to reprint the Elektor Electronics articles and will be showing them for quite a few issues. The CPM disk you have contains some standard programs as

LETTERS

well as some unknown ones, if you would like to send in a copy we will include the programs in our public domain library. Remember as a reward for supplying public domain software you will receive a game of your choice on disk or cassette.

Printers

Congratulations on your first issue, may there be many more. I'm enclosing my cheque for 12 months subscription with my thanks for continuing a much needed service. The people in W.A did well but I have a feeling that they weren't very solvent towards the end.

A selfish sort of suggestion from me; I am thinking of buying a printer, probably not an MSX printer and I don't even know many brands or which brands are compatible with my X'Press 738. Has anyone made up a list of printers compatible with our computers MSX and Spectravideo?. Names and model numbers would be sufficient, but a list of all features such as tractorfeed, friction feed, etc would be so much better.

Another suggestion which may sound like a complaint but isn't. When listings of programs are printed, I'd like to see the name of the person responsible, whether he/she wrote the program or adapted it from another one and some sort of resume of its functions or in the case of a game it's final goals. In some cases I would have liked to contact the writers of some programs to discuss various ideas. If the writer is open to this approach the address could be shown. If not his privacy would be respected

B Costello

Donvale VIC

Thank you for your letter and subscription. As long as you use an MSX printer cable most IBM compatible printers will work on your machine. For graphics make sure the printer manual states that it is fully EPSON MX80/FX80 graphics compatible as most MSX software uses this format as well as MSX format. We here at the magazine have recently purchased one of the latest EPSON models the LQ-500 a very low cost 24 pin printer, this comes with tractor feed as well as a single sheet feeder. Citizen also make quite cost effective printers in the 9 pin range. We have taken your suggestions for the listings section and now include the name of the programmer/ converter and give more details on each listing (You will notice we are using even smaller text to fit all of this in)

MS DOS?

The Editor

I have several questions that I hope you can

answer. They are as follows:-(1) Can my SVI-728 run MS DOS programs as well as MSX DOS?

(2) Is the MSX compatible with the IBM?

(3) In the programs I type in from your magazine there are data lines that are made up of letters, numbers and commas, or sometimes just numbers and letters

e.g. DATA 3F,7F,E0,80,1C,0C etc or

DATA 070F0D0F0F0D0E0F0702020 etc

What does all this mean and how can I use it in my programs?

I also have a tip for MSX owners, do you sometimes find that when you turn on your computer it has locked up and the computer just displays a blank black screen? Well next time this happens, turn the computer off again, insert a game cartridge and turn the computer back on. After waiting about 8 seconds turn the computer off, remove the cartridge then turn the computer back on. You will now find that the computer is not locked up and it is ready for use.

Matthew Fielding

South Riana TAS

The answers to your questions are:-(1) You can only read MS DOS files but cannot run actual programs because MS DOS machines use a different CPU i.e 8088, 8086

(2) See answer one

(3) The data statements are used in the programs to represent the shapes of sprites and screen patterns. The numbers after the data statements are in hexadecimal (base 16 not base 10) and are a more efficient way of storing data. The best method being to leave out the commas. If you wish to use these data statements in your own programs you will have to look at the section of the program that READ's the data into the sprite data section. Consult your manual on the use of sprites.

We are a bit worried about your computer, it seems that you have a dirty connector in your cartridge port and you should clean the contacts gently with a cotton bud and methylated spirits and then leave the computer to dry for about half an hour.

Problem Solved

In answer to Rob Newman's letter in issue 001

Rob,

I also have a CX5M and CX5M2/128 and I had a lot of trouble initially getting non music programs to run until I fitted the Spectravideo

SVI-747 64k RAM cartridge for MSX. This has shifted the memory around to the correct places and now everything runs just fine. I don't know what sort of problems you will face in Australia getting this piece of equipment, but I can assure you of its value.

Deigh Davies

P.O Box 58

Papakura

New Zealand

ADDONS

64Kbyte Static RAM Extension

(Reprinted from Elektor Electronics September 1988)

Although the concept of MSX allows the addressing of up to 1 Mbyte of memory, the number of computers that use more than 128 Kbyte is surprisingly low, and ready-made RAM extension modules thin on the ground. We decided to do something about this, and developed a plug-in RAM extension that enables MSX users to increase the total available memory of the computer in steps of 32 or 64 Kbyte.

With a mere 64 Kbyte installed as a standard, and 128 Kbyte available on newer models only, MSX computers do not follow the trend towards the use of vast amounts of system memory. The diagram of Fig. 1 shows the theoretical memory structure of the MSX concept, which was originally designed for 1 Mbyte of addressable memory. In practice, however, there is not a single MSX computer that actually used all of the available system memory.

In principle, any MSX computer can have up to four so-called primary slots, which are, in turn, subdivided into four blocks of 16 Kbyte. The BASIC and system ROM are located in the address range of the first slot (number 0). The two ROMs use up half the memory in this, occupying address range 000H to 7FFFH, i.e., two blocks of 32 Kbyte. Random access memory is usually located in another slot, and in address range 8000H to FFFFH. After a reset, the control system runs a test routine to examine which slots hold RAM.

A slot can be expanded with the aid of additional hardware. Slot expansion makes it possible to use four equal banks per slot. Like the slot itself, these banks are in principle composed of four blocks of 16 Kbyte. In practice, a slot expander circuit enables extending the memory capacity of a primary slot from 64 to 256 Kbyte.

Table 1 lists the slot structure of a number of MSX computers, and also shows which slots are expanded internally. The function of the so-called memory mapper in MSX-2 machines can be disregarded as far as the present RAM extension card is concerned. Most MSX computers have one or two non-expanded slots, so that 64 or 128 Kbyte of RAM can be added without problems.

More memory, more workspace?

When running in BASIC, MSX computers have relatively little free memory - in practice, this hardly ever amounts to more than 23 Kbyte. It may come as a surprise that adding 128 Kbyte of RAM does not resolve this limitation, since BASIC can not address this additional memory.

Does this make any RAM extension useless? Fortunately, the answer is no. Evidently, the present circuit would not have been developed if the computer could not benefit from it. There are programs capable of using the extra memory by by-passing the memory handling routines in MSX BASIC. Still other programs can only work when additional memory is installed, and the above limitations of BASIC are, of course, unknown when machine code is used.

In a number of cases, the RAM extension card described makes it possible to run older programs on more recently introduced computers. This is because the first releases of some programs did not assume that the 64Kbyte of memory was divided over several slots. This, however, is not strictly required according to the MSX standard. In the case of the present RAM extension, this rule is, of course observed.

In BASIC, the extension card offers an interesting feature by allowing memory to be made 'read-only' for testing whether a machine code or BASIC program can run from EPROM. Programs developed by the user and intended for storing in EPROM can, therefore, be tested in RAM, obviating the need to clear and load EPROMs for every minor change in the program (an EPROM programmer for MSX computers was described in (1)).

Because the internal memory is nearly always in a 'high' slot number, the control system does not encounter it until all other slots have been examined for the presence of RAM. The control system uses the first RAM bank found. Testing is done in blocks of 16Kbyte, i.e., in areas C000H through FFFFH and 8000H through BFFFH. This means that the 32 Kbyte RAM may be divided over two slots.

When a lower slot is selected, the control system will find the extension card before it finds the internal one, and use it as workspace. When, for example, the internal memory is located in slot 3, the RAM extension can be used in slots 0,1 and 2. The slot allocation of the internal memory is given in Table 1 for a number of commonly used MSX micros. For a computer not listed, consult the technical reference manual supplied with it. The internal RAM is always selected when it is in slot 0 or 1.

Circuit description

The circuit diagram of the RAM extension is given in Fig 2. Composed of only two 32 Kbyte static RAM chips, one CMOS IC, two resistors, three capacitors and one FET, the memory extension could hardly be simpler.

Connector K1 is formed by the (pre-tinned) contact fingers of the double-sided, through plated, printed circuit board. Gate N1 combines SLTSL and MERQ to enable addressing the memory chips. Since these have a capacity

of 32 Kbyte each, and SLTSL is intended for a range of 64 Kbyte, the selected address block needs to be divided in two 32Kbyte blocks. This is accomplished by N3 and N4 combining true and inverted signal A15 and A15 with the output of N1. Write protect switch S1 blocks the WR signal for both memory chips via gate N2.

RAMs IC1 and IC2 work independently, and one of them may be omitted when only 32 Kbyte of extra RAM is required.

A compact module

The construction of the RAM extension module on PCB Type 87311 is straight forward because the board is through plated and available ready-made. Before mounting the parts, use a jigsaw to cut off the two corners beside the slot connector along the lines printed on the overlay. Do the same with the area behind S1.

It is recommended to use good-quality IC sockets for the RAM chips, IC1 and IC2. Although the solder resist mask on the ready-made PCB affords protection against excess solder short-circuiting pins or closely running tracks, unexperienced constructors are well advised to work carefully here, and use a low powered soldering iron with a small tip. Switch S1 is preferably a miniature slide type that can be fitted securely in the clearance at the rear of the PCB.

A problem may arise with MOSFET T1. The Type BS170 may be supplied in a different enclosure under the type indication BS170P. The P version also has a different pin-out - see the circuit diagram. The component overlay for the RAM extension is correct for the standard BS170

Testing

The RAM extension should be tested before it is fitted in an enclosure. Figure 4 show the listing of a test program typed in under MSX BASIC. The actual test program is machine code loaded as DATA with the aid of a POKE instruction in a FOR/NEXT loop.

Before switching the computer on, close S1 to turn the extension card into a ROM block. After the computer has finished its initialisation, open S1, type in or load the test program, and make sure that it addresses the right primary slot, which corresponds to the value POKEd in line 130. It should be noted that the program tests the entire 64 Kbyte space. When the RAM extension functions correctly, the program show the message MEMORY OK in the top left-hand corner of the screen. When a fault is encountered, it displays MEMORY ERROR in the same location.

AIDONS

Finishing

The completed printed circuit board can be made into a compact and sturdy plug in module by fitting it in a music cassette box - see the drawing in Fig 3. After removing the lower panel of the box, the PCB is fitted by means of four screws and spacers. After spraying the box with paint, the extension module is ready for use

Reference:

(1) MSX Extensions - 5: EPROM programmer. Part 1 Elektor Electronics March 1987; Part 2 Elektor Electronics April 1987.

Fig 1. Theoretical memory structure of MSX computer

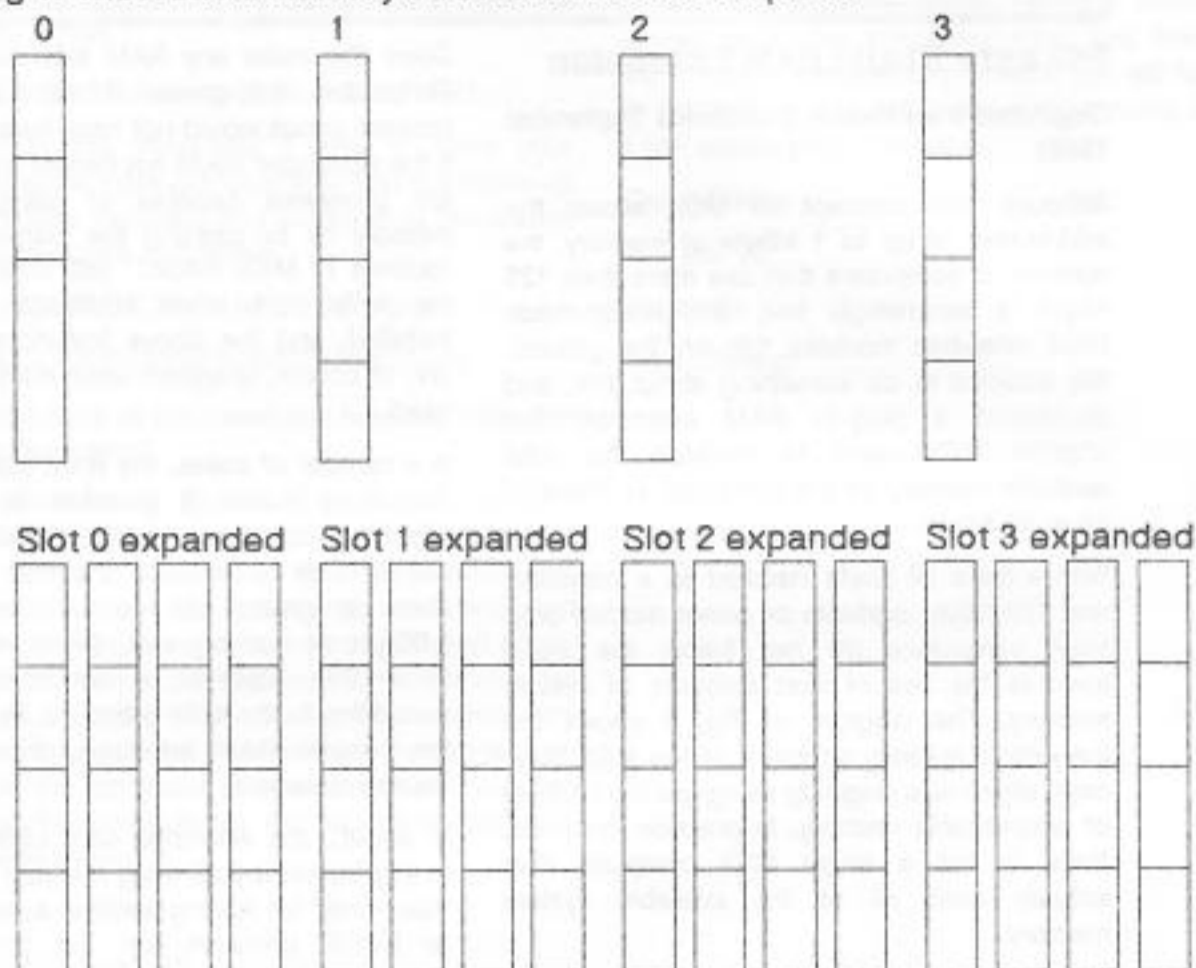


Table 1 Slot assignment of MSX computers

MSX1	RAM SLOT	REMARKS
AVT Daewoo DPC-200	1	
Canon V20	3	
Goldstar FC 200	2	
JVC HC-7-gb	2	
Mitsubishi MFL-FX 1	3-2	Slot 3 expanded, 64Kb RAM
Mitsubishi MFL-48	0	32Kb RAM
Mitsubishi MFL-80	1	
Panasonic CF2700	1	
Philips VG8020	3	
Philips VG8010	0	32Kb RAM, slot 2 not useable
V68020/20	3-2	
Sanyo MPC-100	3	
Sony HB201p	3	16Kb ROM firmware in slot 0
Sony HB75p	2	16Kb ROM firmware in slot 0
Sony HB55p	0	16Kb RAM, 16Kb ROM firmware in slot 0
Sony HB10p	3	
Sony HB501p	3	
Spectravideo 738	1	Slot 3 expanded, RS232/Diskrom
Spectravideo 728	1	
Toshiba HX-10	2	
Yamaha CX5M	0	32Kb RAM
Yamaha YC-64	3	Slot 1 not useable
MSX2	RAM SLOT	REMARKS
AVT Daewoo CPC-300	0-2	Slot 0 expanded. 128Kb Memory mapper
Sony HB-F500P	0-0 0-2	Slot 0 expanded
Sony HB-F700P	3-3	Slot 3 expanded, 256Kb Memory mapper
Sony HB-F900P	0-0 0-2	Slot 0 expanded, Video digitizer
Sony HB-F9P	3-2	Slot 3 expanded, 128Kb Memory mapper 16Kb ROM firmware
Philips VG8220	3-2	Slot 3 expanded. 16KB ROM firmware
Philips VG8230	3-2	Slot 3 expanded
Philips VG8235/8245	3-2	Slot 3 expanded. 128Kb Memory mapper
Philips VG8250/8255	3-2	Slot 3 expanded. 128Kb Memory mapper
Philips VG 8280	3-2	Slot 3 expanded. 128Kb Memory Mapper Video digitizer

ADVENTURE

Cheat Notes for "The Search for King Solomons Mine" [SVI Version]

The SVI version of this adventure is different to the MSX version in quite a few points.

We still start out at TRADER JIMS OUTPOST, on the ZAMBESI. Remember that typing 'L' or looking at something can reveal different things.

Starting at the trading post. You can buy five items, but you need only the ROPE, MATCHES and CANTEEN. You can choose two other things, I usually take the RATIONS but I don't think its really necessary. The other items have no use that I can find.

From the trading post go SOUTH until you come to a BODY, if you MOVE the BODY you will find a SPEAR and a JEWEL. You need to GET the SPEAR (first you will have to EAT RATIONS or DROP the unnecessary item, in fact now is a good time to do both).

Now go NORTH back to the river, and head EAST until you come to a marsh. Now type 'I' and make sure that you have the ROPE, MATCHES and CANTEEN, as once through the marsh you cannot return.

Once in the marsh you will be sinking fast, quickly THROW ROPE, and then PULL ROPE (three times), and you will be free. Don't forget to GET the ROPE as you will need it again shortly.

From here go SOUTH until you come to a rope bridge. You will see a ZULU guarding the bridge, if you try and cross he will throw a spear and kill you. You will have to kill him, but its quicker if you leave him for now.

Instead if you LOOK at the RAVINE you will see a ledge. JUMP or GO LEDGE. 'L' and you will see a ROCK, an OLD BLADE and a HAT, you should TIE ROPE and GET BLADE.

Now CLIMB the CLIFF, and you are back by the bridge. Go NORTH and 'L' and you will see a path so GO PATH. Here type 'L' and you will see vines hanging from the trees, and a SHOVEL, type CHOP VINE. You will need the VINE and SHOVEL, but leave them for now and CHOP JUNGLE, if you 'L' you will see an opening, so GO OPENING. Now you are by a dark lagoon, your canteen is empty so FILL CANTEEN. There is a sceptre at the bottom of the lagoon, to get it you have to DIVE LAGOON, GET SCEPTRE and SWIM, you will have to be quick or you run out of air. Go NORTH the WEST and you are now by a rock next to a stream. You use the sceptre to MOVE the ROCK and dam the stream. Now you can DROP the SCEPTRE.

To get back to the lagoon go EAST and then GO OPENING. Now you will see the skull on the cliff face. The skulls mouth is a cave so GO

CAVE and 'L', you will see a WEB and an AMULET. To get past the web you need to BURN WEB, and go SOUTH into the inner cave before the spider returns and repairs the web. Here you will find a cobra and a box, unlike the MSX version of this adventure you must kill the cobra, so THROW SPEAR and then GET BOX (Don't forget to GET your SPEAR). Before you can leave the cave you must first BURN the WEB again. To exit the cave go NORTH then EAST and then from the lagoon go NORTH EAST and SOUTH. This will bring you back to the bridge.

Now you can kill the Zulu, THROW the SPEAR and the Zulu will topple into the ravine. GO BRIDGE then RUN before the bridge collapses. You are now on the edge of the ravine (you didn't cross the bridge), the broken bridge is hanging down the other side of the ravine.

JUMP down to the ledge and DROP one item (it doesn't matter what, you will get it again shortly). Now CLIMB CLIFF and go back to where you cut the vines, GET the VINES and SHOVEL and return to the ledge, CLIMB the ROPE and you will find yourself on the river bank. Type 'L' and you will see ROCKS, RIVER and PEBBLES, you should GO ROCKS. You are on the rocks in the middle of the river, this is where you need the vine, if you THROW VINE you can CLIMB VINE, and you are on the other side of the river. Before you CLIMB VINE you must go back to the ledge and GET the item you dropped. To get from the rocks back to the bank type GO BANK then CLIMB ROPE to the ledge and GET the item you dropped. Cross the river and LOOK at the CLIFF and you will see the broken bridge. CLIMB the BRIDGE and you will find yourself on a plateau. Check that you are carrying the Shovel, Matches, Box, Amulet and Canteen. Now go SOUTH and you will see a hut and a native. If you are not wearing the amulet the native will kill you (if you do not have the box you must do five things, after which the native will ask you to bring him the serpents nest)

DROP the BOX and the native will rise, grab the box and drop a stone. GET STONE and head EAST, towards the desert.

SIDE TWO, PART ONE (THREE)

From here on the SVI version has little in common with the MSX.

We head into the desert. Two moves SOUTH, one EAST and another two SOUTH and you will be very thirsty, DRINK from the CANTEEN and then DROP CANTEEN and go EAST. This should bring you to a MOUND, go SOUTH and you will see a PALM TREE, SHAKE the PALM and when you awaken GET FRONDS. Now go back to the MOUND and DIG using the shovel, you will see an ARTIFACT. GET the ARTIFACT, and GO MOUND to crater and EAST again

into the crater. Here you are beside a lake with an island. To get to the island DROP the FRONDS and GO to the ISLAND on the floating fronds. On the island is a large statue, CLIMB the STATUE and on top you will find a hollow filled with fresh water. Do not drink the water as it is poisoned, if you 'L' you will see a hole where you should INSERT the STONE that you took from the native. You will hear a noise and should now CLIMB down the STATUE where you will see a hole. If you LOOK in the HOLE there is a PARCHMENT that you must GET and READ, if you don't READ the PARCHMENT you will not live much longer.

You are finished on the island so GO from ISLAND on the fronds and go WEST to the mound, then SOUTH until you meet an old man, if you TALK to the old MAN for a while he will give you a lamp. DROP the PARCHMENT, GET the LAMP and go SOUTH, your path will be blocked by steep cliffs. 'L' and you see a thicket, so GO THICKET, if you 'L' all you can see is trees. It will take you three attempts to CLIMB a TREE, after which you will be on a rocky ledge, 'L' and you will see a rock and a crevice. GET the ROCK and keep going EAST along the winding path until you come to a wide ledge, if you LOOK at the CLIFF a few times you will see a star shaped hollow into which you can INSERT something.

Before entering the cave that has appeared, you should LIGHT the LAMP and then GO CAVE. Inside the cave there is a crystal that you must GET and in a tunnel to the WEST is a message on the wall that you can READ, then from the cave go SOUTH out onto a wide ledge. If you 'L' you will see a valley, white road and some steps. Before going down the steps, check that you are carrying the CRYSTAL, MATCHES, LAMP, AMULET and ROCK. If so GO down the STEPS.

SIDE TWO, PART TWO (FIVE)

You are captured by natives, tied up and thrown into a hut. To escape you CUT the ROPE three times, you use the sharp crystal. Once free you BREAK WALL and then GO HOLE. You are now on the white road by a statue of a lion. GO STATUE and you are now behind the statue with the natives hot on your trail.

Remembering the message in the tunnel you PAT LION, a slab of stone slides aside and you GO DOOR loosing the natives.

You are in a dim chamber with steps leading up into the darkness, you cannot climb the steps, but if you 'L' you will see a ROPE which you need to GET, but first you have to DROP the AMULET. Now go WEST then SOUTH and you are back outside the hut, going SOUTH and then EAST will bring you to an ancient city. Go East again and you will be at the city walls,

ADVENTURE

the only way to go is a window, three metres above your head. To reach it you have to TIE ROPE, to what? the ROCK and now THROW ROPE, it will catch in the window and you can then CLIMB the ROPE.

You are in along room with stone pillars, 'L' and you will see an urn. LOOK URN and it will be full of oil (for the lamp), so GET URN. Go EAST again brings you to a chamber with four doors, if you GO DOOR you are asked for a number, 1-4. Doors 1, 2 and 4 will bring your life to a sudden end, so try door number 3.

You are in the treasure room and a chest sits against the wall. You cannot get the treasure but you can EMPTY the CHEST and then MOVE the CHEST and 'L' to see some stairs. LIGHT the LAMP and GO STAIRS, you are in a vault where there is a table and a wooden throne, if you LOOK at the THRONE you will see Tall Regal Skeletons. Don't hang around or the Skeletons will come to life and tear you apart, the lamp may also run out of oil, so go straight through SOUTH, where you will be confronted by a huge ancient door carved with a lions head. To open the door you will have to answer two riddles, when you get the answers correct you are asked if you are brave enough to enter, and to LOOK FOR PART TWO, as in the MSX version. In the immortal words of that great adventurer Alan Crawford "What a load of bat droppings" it really is a rotten ending, after all the work in getting so far to not be able to even finish. Its almost enough to make you buy a COOMADOORI! Has anyone out there got a copy of KING SOLOMONS MINES, PART TWO.

If anyone does have a copy (SVI or MSX) that they would like to sell, would they please drop me a line.

Tom Sanders, 7 Bambara Road, Hurstbridge, VIC 3099.

Memory Pointers

Every once in a while it is useful to reprint the following memory locations for new comers among our readers.

Label	MSX Addr	SVI Addr	Bytes	Explanation
USRTAB	F39A	F52B	20	USR Routine Adressess (10)
LINLEN	F3B0	F543	1	Screen WIDTH Stored here
CLIKSW	F3DB	FA02	1	Keyclick Flag 0 - OFF
CSRY	F3DC	FA03	1	Cursor Y location
CSRX	F3DD	FA04	1	Cursor X location
CNSDFG	F3DE	FA06	1	Bottom of screen protect
SCNCNT	F3F6	FE78	1	Input delay
FORCLR	F3E9	FA0A	1	Foreground colour
BAKCLR	F3EA	FA0B	1	Background colour
BDRCLR	F3EB	FA0C	1	Border colour
CURLIN	F41C	F548	2	Current line number
TTYPOS	F661	F791	1	Cursor position in screen line
MEMSIZ	F672	F7A2	2	Memory size
STKTOP	F674	F546	2	Top of stack
TXTTAB	F676	F54A	2	Program statement table
TEMPPT	F678	F7A4	2	Next available addr in LSPT
TEMPST	F67A	F7A6	30	Literal string pool
ENDFOR	F6A1	F7CD	2	End line with current FOR
DATLIN	F6A3	F7CF	2	Last DATA line read
AUTFLG	F6AA	F7D6	1	AUTO flag 0 - OFF, 1 - ON
AUTLIN	F6AB	F7D7	2	AUTO line number
AUTINC	F6AD	F7D9	2	AUTO increment
SAVTXT	F6AF	F7DB	2	Addr of string during input

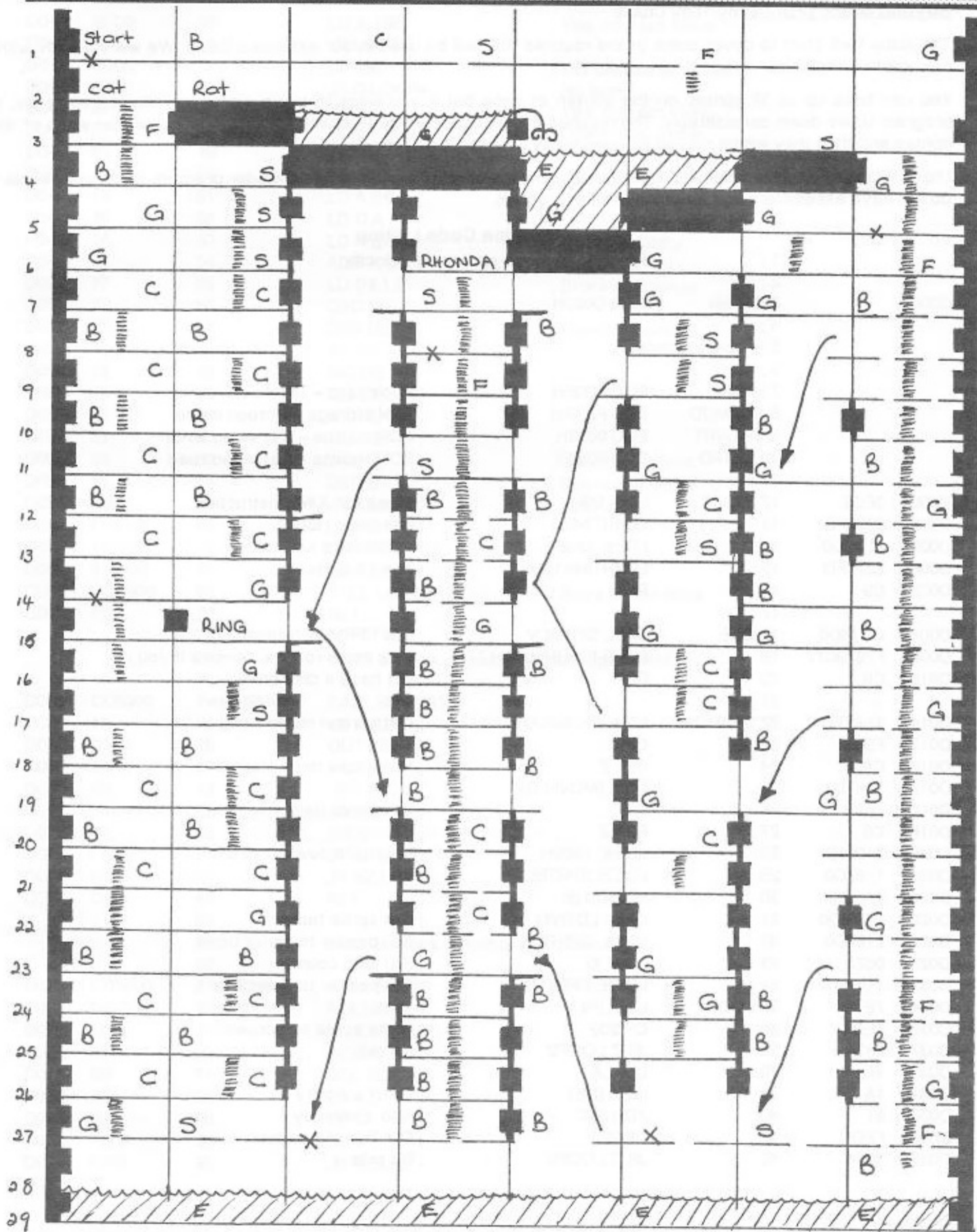
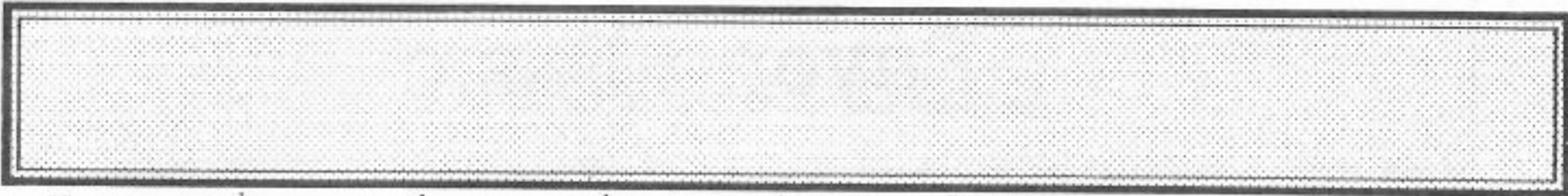
Remember to be careful when you use these locations, as they can effect any program that you have in memory.

Pitfall II the Map!

Here is complete map of Pitfall II for MSX machines. Hopefully it will help you achieve the perfect score. (I have not seen anyone do this yet!)

The following symbols are used

- B = Bat sometimes Balloon
- C = Condor
- S = Scorpion
- E = Eel
- X = Cross
- G = Gold



Beyond Basic

Beyond Basic (Part 4) by Tony Cruise

This issue I will start to cover some of the routines that will be used in our extended Basic. We will start off with the new sprite commands.

You can have up to 32 sprites on the screen at once but if you want to move more than about five or six, your program slows down considerably. The routines this issue allow you to specify X and Y velocities for each of the 32 sprites and then they will be moved independently of your Basic program.

I have included an assembler listing explaining how it works as well as a basic loader program for those people who do not have assemblers and a demonstration program.

Machine Code Listing

```

1 ;          Program to move sprites by velocity
2 ;
D000 3 ; ORIGIN      ORG D000H
4 ;
5 ; Label settings
6 ;
7 HTIMI:    EQU FD9FH          ; Hook jump - Timer
8 SCRMOD    EQU FCAFH         ; RAM storage - Screen mode
9 SETWRT    EQU 0053H         ; ROM routine - Set video write
10 SETRD    EQU 0050H         ; ROM routine - Set video read
11 ;
D000 3EC3    12 START    LD A,C3H          ; Value for JUMP instruction
D002 329FFD  13          LD (HTIMI),A       ; Load into Hook
D005 210CD0  14          LD HL,QUE         ; Address to jump to
D008 22A0FD  15          LD (HTIMI+1),HL     ; Load into Hook
D00B C9      16          RET                ;
17 ;
D00C CD14D0  18 QUE      CALL SPRMOV       ; Call SPRMOV routine
D00F F7879C77 19          DEFB F7H,87H,9CH,77H     ; Disk delay routine, remove if you do
D013 C9      20          RET                ; not have a disk drive
21 ;
D014 3AAFFC  22 SPRMOV   LD A,(SCRMOD)       ; Get screen mode
D017 FE00    23          CP 0                    ;
D019 C8      24          RET Z              ; Make sure not screen 0
D01A 3A47D1  25          LD A,(MOVFLG)            ;
D01D FE00    26          CP 0                    ; Get move flag
D01F C8      27          RET Z              ;
D020 21001B  28          LD HL,1B00H             ; Return if move set to off
D023 1187D0  29          LD DE,SPRTBL           ;
D026 018000  30          LD BC,128                ;
D029 CD78D0  31          CALL LDIRVM             ; Get sprite table
D02C 2187D0  32          LD HL,SPRTBL           ; Set pointer to sprite table
D02F 0620    33          LD B,32                ; Set loop counter
D031 1107D1  34          LD DE,SPRVEL           ; Set pointer to velocities
D034 7E      35 LOOP1   LD A,(HL)                ;
D035 FED1    36          CP 209                  ; Is the sprite on screen?
D037 281A    37          JR Z,LOOP2             ; No skip
D039 4F      38          LD C,A                ;
D03A 1A      39          LD A,(DE)             ; Get Y velocity
D03B 81      40          ADD A,C              ; Add Y velocity
D03C FEDC    41          CP 220                  ; Off Top of screen
D03E 3804    42          JR C,LOOP3             ; No skip

```

Beyond Basic

```

D040 3EC0      43      LD A,192      ; Yes, correct value
D042 1805      44      JR LOOP4      ;
D044 FEC0      45 LOOP3     CP 192        ; Off bottom of screen?
D046 3801      46      JR C,LOOP4    ; No skip
D048 AF        47      XOR A         ; Yes, correct value
D049 77        48 LOOP4     LD (HL),A    ; Store new value
D04A 23        49      INC HL       ;
D04B 13        50      INC DE       ; Increment pointers
D04C 7E        51      LD A,(HL)    ;
D04D 4F        52      LD C,A       ;
D04E 1A        53      LD A,(DE)    ; Get X velocity
D04F 81        54      ADD A,C      ; Add X velocity
D050 77        55      LD (HL),A    ; Store new value
D051 2B        56      DEC HL       ;
D052 1B        57      DEC DE       ; Restore pointers
D053 13        58 LOOP2     INC DE       ;
D054 13        59      INC DE       ;
D055 23        60      INC HL       ;
D056 23        61      INC HL       ;
D057 23        62      INC HL       ;
D058 23        63      INC HL       ; Update pointers
D059 05        64      DEC B        ; Decrease loop counter
D05A 20D8      65      JR NZ,LOOP1  ; Next loop
D05C 21001B    66      LD HL,1B00H ;
D05F 1187D0    67      LD DE,SPRTBL ;
D062 018000    68      LD BC,128   ;
D065 CD69D0    69      CALL LDIRMV ; Save sprite table
D068 C9        70      RET        ;
71 ;
72 ;      Move a block of memory from video RAM
73 ;
D069 CD5300    74 LDIRMV    CALL SETWRT
D06C 1A        75 LP1      LD A,(DE)
D06D D398      76      OUT (98H),A
D06F 13        77      INC DE
D070 0B        78      DEC BC
D071 78        79      LD A,B
D072 B1        80      OR C
D073 FE00      81      CP 0
D075 20F5      82      JR NZ,LP1
D077 C9        83      RET
84 ;
85 ;      Move a block a memory to video RAM
86 ;
D078 CD5000    87 LDIRVM    CALL SETRD
D07B DB98      88 LP2      IN A,(98H)
D07D 12        89      LD (DE),A
D07E 13        90      INC DE
D07F 0B        91      DEC BC
D080 78        92      LD A,B
D081 B1        98      OR C
D082 FE00      94      CP 0
D084 20F5      95      JR NZ,LP2

```

Beyond Basic

```
D086 C9          96          RET
          97 ;
          98 ;          Data storage
          99 ;
D087          100 SPRTBL  DEFS 128
D107          101 SPRVEL  DEFS 64
D147 00        102 MOVFLG  DEFB 0
          103 END
```

Basic Loader

```
10 CLS: CLEAR 200, &HCFFF: DEFINT A-Z: A=&HD000
20 READ A$: IF A$ <> "@" THEN POKE A, VAL("&H"+A$): A=A+1: GOTO 20
30 POKE &HD147, 0
40 PRINT "INSERT DISK/TAPE TO SAVE PROGRAM"
50 PRINT "AND PRESS ANY KEY"
60 A$=INPUT$(1): PRINT: PRINT "SAVING ...."
70 BSAVE "SPRITE.OBJ", &HD000, &HD147
80 END
100 DATA 3E, C3, 32, 9F, FD, 21, 0C, D0, 22, A0, FD, C9, CD, 14, D0
110 DATA F7, 87, 9C, 77 (or DATA 00, 00, 00, 00 if you do not have a disk drive)
120 DATA C9, 3A, AF, FC, FE, 00, C8, 3A, 47, D1, FE, 00, C8, 21, 00
130 DATA 1B, 11, 87, D0, 01, 80, 00, CD, 78, D0, 21, 87, D0, 06, 20
140 DATA 11, 07, D1, 7E, FE, D1, 28, 1A, 4F, 1A, 81, FE, DC, 38, 04
150 DATA 3E, C0, 18, 05, FE, C0, 38, 01, AF, 77, 23, 13, 7E, 4F, 1A
160 DATA 81, 77, 2B, 1B, 13, 13, 23, 23, 23, 23, 05, 20, D8, 21, 00
170 DATA 1B, 11, 87, D0, 01, 80, 00, CD, 69, D0, C9, CD, 53, 00, 1A
180 DATA D3, 98, 13, 0B, 78, B1, FE, 00, 20, F5, C9, CD, 50, 00, DB
190 DATA 98, 12, 13, 0B, 78, B1, FE, 00, 20, F5, C9
```

Basic Program Example

```
10 COLOR 15, 1, 9: SCREEN 2, 2: SPRITE$(0) = STRING$(32, 255): DEF FNA(X) = INT(RND(1)*X)+1: A = RND(-TIME)
20 STOP ON: ON STOP GOSUB 110
30 POKE &HD147, 1: FOR A=0 TO 31
40 PUT SPRITE A, (128, 96), FNA(15), 0
50 XV=FNA(5)-3: IF XV<0 THEN XV=XV+256
60 YV=FNA(5)-3: IF YV<0 THEN YV=YV+256
70 IF XV+YV=0 THEN 50
80 POKE &HD107+A*2, YV: POKE &HD108+A*2, XV: NEXT
90 IF NOT(STRIG(0)) THEN 90 ELSE POKE &HD147, 0
100 IF NOT(STRIG(0)) THEN 100 ELSE POKE &HD147, 1: GOTO 80
110 POKE &HD147, 0: END
```

Type in the machine code loader first and save it to disk or tape. Now type in the Basic example program and save it to tape or disk. Then use BLOAD "SPRITE.OBJ", R to run the machine code program and then RUN the example Basic program.

Next month I will cover the collision testing routines. Bye for now!

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SOFTWARE

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

Lunar Lander - You are in command of a lunar landing module trying to make a safe landing on the moon, but boy are some of those landing pads in strange places.

Galactic Assault - The alien invaders are coming to attack Earth, try and destroy them as they break formation and attack. For 1 or 2 players.

Road Racer - Try and survive on the road as long as possible without crashing into the other cars.

Sprite Definer - Design sprites to use in your own programs, with this useful utility. It caters for both sprite sizes and can rotate your shapes for you.

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

Hopper - Help the frogs find their way home past a busy highway, a croc infested river and deadly snakes.

Space War - Two players fight it out in the space arena, the first player to hit the other ten times wins the game.

Othello Challenger - Play the computer or another player in this classic mind game where you must out flank your opponent to capture his pieces.

Painter - Explore the flexibility of your computers colours with this on screen paint brush.

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

Dungeon Adventure - Are you brave enough to explore the deep and dangerous dungeon, where many monsters lurk, but the gains are great. Dungeons and Dragons style game, where you have to build up your character to succeed and capture the Great Orb on the fourth level.

Bomb Scare - Quick! you have to defuse the five bombs in a factory before they explode. Unfortunately some of the machinery has been left on, making your job very dangerous indeed!

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

Explorer - Watch out for the Pitfalls of this game as you search through the fifty screens for the gold bars, dodging crocs, scorpions, rolling logs and quick sand.

Parachute - Catch the paratroopers in your boat as they jump from a helicopter into a shark-infested lagoon. The more you catch, the faster they jump.

Android Alert - Move around the rooms collecting treasures and finding the key to the next level, but watch out for the killer androids.

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

Space Invaders - Shoot the aliens before they invade your planet. Move your ship left and shoot missiles at the aliens. Shoot the mothership which passes over head for bonus points.

Sub Hunt - Drop depth charges on the attacking subs, while avoiding their missiles. The deeper the sub you hit, the more points you score

Chicken - Dodge the peak hour traffic with your chicken in this hectic game.

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

Demon Attack - Shoot the demon attackers as they swoop in to attack you, but look out for their rain of fire. What's this! they seem to be invincible until fully formed.

Sea Diver - Dive to the bottom of the river to collect the sunken treasure as scores of under water creatures try and attack you.

Death City - Battle it out in a maze of death against the computer in this fast paced game.

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

Lunar Rescue - Rescue the astronauts stranded on the surface of the moon in an asteroid shower. Drop defenseless to the surface, dodge the asteroids and pick up each man. You can now blast your way through as you slowly climb back to the rescue ship.

Sky Base - Shoot the kamakasi aliens as they swirl around the sky. Wipe out two waves, dock your ship and with your added fire power move on to attack the giant mothership.

Quasimodo - Jump and dodge the guards and traps as you try to ring the bell at the right of each screen. Great fun with six different screens and multiple levels.

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

Munch Man - Race Munch Man around the maze dodging the ghosts and eating the dots. Grab a power pill and revenge yourself in short time.

Escape from Planet Beta - Can you escape from the Planet Beta before the planet explodes. Puzzle your way through this text adventure where you instruct the computer with two word commands like SHOOT GUN, GO NORTH.

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

Artillery Fire - Two players take turns at firing their artillery pieces at each other over a mountain range. The first one to hit the other ten times wins.

Tennis - This is a version of the classic Pong tennis game.

Number Puzzle - Slide the puzzle pieces around to get them in order in the least number of moves.

Towers of Hanoi - Try and move the different size disks from one of three towers to the other in the least number of moves. A challenging puzzle.

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

Gold Rush - Collect all the gold nuggets scattered all over the screen but to get to each one you have to get past dissolving platforms, radioactive plants and bouncing balls.

Pyramid - Find the fabled gem hidden in a pyramid lost deep in the desert. Another challenging text adventure game where you communicate with the computer with two word commands like DRINK WATER, THE STICK.

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

Missile Command - Stop the missiles from hitting your cities with your anti missiles. Be careful how many you use as you only have a limited supply.

Master Mind - Try and guess the hidden colour code the computer has chosen with clues the computer gives you.

Leaky Roof - Quick! Catch the rain drops in your bucket before the room is filled to overflowing with water, but make sure you empty your bucket out of the windows.

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

Mini Golf - Play alone or with a friend on this mini golf course where you have to putt the ball around obstacles and into the hole.

BlackJack - Build up your money total as you pit your skills and luck against the computer banker

Break Out - Bust down the brick wall with your bat and ball, but look out it's harder than you think.

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

Space Fighter - Shoot the alien attackers as they race attack you in formation.

3D-Maze - See if you can find your way out of this maze which is displayed on the screen in 3D.

Surround - Play against an opponent trying to surround them with your moving wall.

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

Crazy Kong - Jump the barrels as you make your way up the screen to rescue the girl. Next dodge moving platforms and girders and then finally collect all the bolts holding the Crazy Kong in place at the top of the screen.

Star Base I - Be amazed at the number of aliens and bullets that move about the screen in this very difficult space game.

Lunar Lander II - A brilliant sequel to the original Lunar Landing game which allows you to design your own landscapes to try and land your craft on.

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

Twister - Like a two dimensional Rubiks cube, this game displays nine different coloured squares each containing four smaller squares. These 36 squares are then jumbled around on the screen and you must rebuild the original display. Its very simple and very addictive.

Reverse - Your task is to arrange the ten jumbled numbers into ascending order by reversing some or all of them. Check it out - its not easy!

Fox and Geese - Can you as the Fox penetrate the line of advancing geese and get to the other side of the board before they corner you.

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

Grand Prix - You are in the drivers seat in a race to the chequered flag while avoiding slower cars. Hitting another car or two wheels off the track will slow you down and lose points.

Substrike - Drop depth charges on the enemy below. The deeper or faster the target the more points you will score.

Snake - Move the snake around to eat the diamonds, but mind you do not cross your own tail.

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

City Bomber - You must destroy the towering buildings of the city before you can land safely.

Spectra Derby - Place your bets and have a day at the races. Even if you lose its painless.

Bug Catcher - Two players move around the garden and the one with the most bugs caught - wins. Great for younger children.

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

Spectra Kong - Win the lady's heart by getting to the top of the screen - but watch out for the falling barrels

Tennis - A colour version of the original black and white TV game.

Musical Keyboard - This program turns your computer keyboard into a musical keyboard and allows you to select note length and octave.

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

Bombs Away - Destroy targets in the ravine below. Be warned - it gets harder the more targets you hit.

Mirkwood Forest - Graphics adventure where you must escape from the forest by finding four keys, eating food to maintain energy, while avoiding spiders. This one will really test your adventure gaming ability.

Chopper Pilot - The fourteen levels of this game make it very compelling. Keeping clear of canyon walls, fly your helicopter to do battle with the enemy fighters, bombers, missiles and UFO's. Great skills required

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

Jumping Cowboy - A 'platform' game of nine screens where you must collect all the opals to get to the next screen

Super Smasher - Move the bat to smash the ball through the two brick walls. Has three levels of difficulty.

Fruit Catcher - Catch falling fruit in your cart. As you catch more, the types of fruit will change and fall at a faster rate.

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

Pro Golf - Play a round of golf on this eighteen hole golf course with a selection of clubs.

Astro Fighter - Zap those alien invaders as they try and take over the Earth.

Asteroid Shower - Dodge the asteroids as they hurtle towards you down the screen.

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

Copy Cat - How long can you survive as you try and repeat the coloured sequences back that the computer plays to you.

Memory - Based on the card game memory, you have to try and collect more pairs than the computer can.

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

Monkey Maths - Help the monkey climb the tree and get the coconut by answering the maths sums correctly. Fifteen levels of play are available.

Missing Letters - Fill in the missing letters in the words the computer gives you. Over 300 stored words and the ability for you to enter more make this an excellent program

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

Table Invaders - Shoot the invaders as they try and attack the Earth, but what's this! Your gun only seems to fire when you answer a tables problem correctly

Hangman - Try and guess the word before the man is fully hanged. Great version of a classic game

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

OZMap - You must drive the car around Australia finding the places required as quickly as you can.

OZQuiz - Answer general knowledge questions about Australia and her people.

Math Duel - Makes practising maths fun! Has 4 levels of addition and subtraction maths.

U.F.O (MSX Tape Only \$10.00)

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 16k 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.

Pydis (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)

You have been shipwrecked on a deserted island and have to find a way to 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 \$60.00)

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 \$60.00)

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 \$60.00)

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 patch and allows you to use double sided 3 1/2" disk drives external internally. Comes complete with full installation instructions

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

Add on Double Sided 3 1/2" Disk Drive (\$299.00) - Connects to your X'press computer letting you store an extra 720k of data. Or insert the drive inside your computer and use the cable to use the single sided drive already in the machine. Please note you require ROM version 1.2 to use these drives.

Internal Double Sided 3 1/2" Disk Drive (\$240.00) - Bare drive replaces the single sided drive currently in the machine letting you store 720k on each disk instead of 360k. Please note you require ROM version 1.2 to use these drives.

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)

CPM Software (All \$10.00)

FORMATS 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, NSV, CLS

Utilities Disk 2- Includes ADM3, ADM3A, NULU12, CPMACALC, CPMPOWER, MEM24, MEM32, MEM6, MEM8, SORT, SS/DR-B, SUPERZAP, SURVEY, WASH, XDIR5 (Supplied by J. Rudzinski)

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

Advent80 - The original 128k adventure game

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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 '0' 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

LISTINGS

Mini - Advent (MSX and SVI-318/328)

Written by Tony Cruise for an introduction into writing adventures and previously published in the local users group newsletter in Hobart for the SVI-318/328 machines. Being a text adventure the conversions between the machines are minor. Using the program as a shell more commands and locations can be easily added to make your own adventure games.

MSX LISTING

```

HM 10 COLOR15,4,5:SCREEN0:WIDTH39:KEYOFF:DEFINT A-Z:DEFN A(X)=INT
    (RND(1)*X)+1:DIRD$(10),R(10,4),OB$(13),OB(13,2),C$(18)
AB 20 LOCATE12,8:PRINT"MINI-ADVENT":LOCATE0,22:PRINT"Press any k
    ey to start the adventure":A$=INPUT$(1)
KN 30 CLS:LOCATE12,8:PRINT"PLEASE WAIT":FORA=1TO10:READR$(A):FO
    RB=1TO4:READR(A,B):NEXTB,A:FORA=1TO13:READOB$(A),OB(A,1),O
    B(A,2):NEXT:R=1:FORA=1TO5:OH(A)=0:E(A)=0:NEXT:FORA=1TO18:R
    EADC$(A):NEXT
AM 40 CLS:PRINT"Your task is to find the gold crown which has
    been stolen. The gold crown is hidden somewhere close by
    . GOODLUCK!":PRINT:PRINT:PRINT:PRINT
ML 50 PRINT:PRINT"You are ":PRINTR$(R):IFR=2ANDE(1)=0THENPRINT
    "There is a magician here with a spell for sale"ELSEIFR=3
    ANDE(2)=0THENPRINT"He seems to be shivering"
KI 60 IFR=4ANDE(3)=0THENPRINT"There is a large tree overhanging
    the ravine"ELSEIFR=4ANDE(3)=1THENPRINT"There is a recentl
    y felled tree across the ravine"ELSEIFR=5ANDE(4)=0THENPRIN
    T"There is a giant here guarding a chest"
BM 70 IFR=5ANDE(4)=1THENPRINT"There is a sleeping giant here"ELS
    EIFR=10ANDE(5)=0THENPRINT"A huge red dragon blocks the way
    "ELSEIFR=10ANDE(5)=1THENPRINT"A huge red dragon lies aslee
    p here"
OM 80 A$="":PRINT:PRINT"Possible Exits: ";:IFR(R,1)>0THENA$="No
    rth"
DP 90 IFR(R,2)>0THENIFLEN(A$)=0THENA$="South"ELSEA$=A$+", South"
HK 100 IFR(R,3)>0THENIFLEN(A$)=0THENA$="East"ELSEA$=A$+", East"
HM 110 IFR(R,4)>0THENIFLEN(A$)=0THENA$="West"ELSEA$=A$+", West"
JO 120 PRINTA$:F=0:PRINT:PRINT"You see:"
BB 130 FORA=1TO13:IFOB(A,1)=0THENF=1:PRINTTAB(6);OB$(A)
AD 140 NEXT:IFF=0THENPRINTTAB(6)"Nothing"
FN 150 PRINT:LINEINPUT". ";C$:IFC$=""THENPRINT"Beg your pardon!":
    GOTO150
DO 160 FORA=1TOLEN(C$):IFMID$(C$,A,1)="A"ANDMID$(C$,A,1)<="Z"THE
    NMID$(C$,A,1)=CHR$(ASC(MID$(C$,A,1))+32)
BN 170 NEXT
EK 180 FORA=1TOLEN(C$):IFMID$(C$,A,1)=" "THENC$=LEFT$(C$,A-1):C$
    =RIGHT$(C$,LEN(C$)-A)ELSENEXT:CC$=C$:C$=""
MH 190 FORA=1TO18:IFCC$=LEFT$(C$(A),LEN(CC$))THEN200ELSENEXT:A$=C
    $:GOSUB560:PRINT"You must supply a verb!":GOTO150
BM 200 ONAGOTO210,210,210,210,230,240,50,260,300,300,300,340,360,
    380,410,460,490,520
BO 210 IFR(R,A)=0THENPRINT"You cannot go that way":GOTO150ELSEIFR
    (R,A)=-1THENPRINT>Your way is blocked":GOTO150
IF 220 R=R(R,A):GOTO50

```

```

GH 230 FORA=1TO4:IFC$=LEFT$(C$(A),LEN(C$))THEN200ELSENEXT:PRINT"
    orry I do not understand you":GOTO150
IM 240 F=0:PRINT>You are carrying:":FORA=1TO5:IFOH(A)>0THENPRINT
    AB(6);OB$(OH(A)):F=1
HL 250 NEXT:IFF=0THENPRINT"Nothing":GOTO150ELSE150
PI 260 A$=C$:GOSUB560:IFOB(A,1)<>0THENPRINT"I do not see the ";OB
    $(A);" here":GOTO150
BA 270 IFA=11ANDOB(11,2)=6THENPRINT"It looks as though it can be
    unscrewed":GOTO150ELSEIFA=6ANDE(2)=0THENPRINT"The Dwarf is
    very cold":GOTO150ELSEIFA=13THENPRINT"It looks dry enough
    for fire wood":GOTO150
KP 280 IFA=11THENPRINT"The barrel has had its lid screwed off":GO
    TO150
PG 290 PRINT"I see nothing special about the":PRINTTAB(15);OB$(A)
    :GOTO150
LP 300 A$=C$:GOSUB560:IFOB(A,2)=-1THENPRINT>You cannot get that":
    GOTO150ELSEIFOB(A,2)=-2THENPRINT"The "OB$(A)" gets angry a
    nd kills you":GOTO570ELSEIFOB(A,2)>5THENPRINT"The "OB$(A)"
    is too heavy to carry":GOTO150
HO 310 F=0:FORB=1TO5:IFOH(B)>0THENF=F+OB(OH(B),2)
EB 320 NEXT:IFF+OB(A,2)>5THENPRINT>Your load is too heavy!":GOTO1
    50ELSEFORB=1TO5:IFOH(B)=0THENOH(B)=A:OB(A,1)=0:GOTO150
BC 330 NEXT:GOTO150
LB 340 A$=C$:GOSUB560:FORB=1TO5:IFOH(B)=0THEN350ELSENEXT:PRINT"Y
    ou are not carrying the "OB$(A):GOTO150
NG 350 PRINT"O.k you drop the "OB$(A):OH(B)=0:OB(A,1)=R:GOTO150
OC 360 IFC$<>"barrel"THENPRINT>You cannot unscrew that":GOTO150EL
    SEIFOB(11,2)=7THENPRINT"The barrel is already open":GOTO150
    0
IN 370 PRINT>You unscrew the barrel and find a gold key inside!!"
    :OB(11,2)=7:OB(3,1)=R:GOTO50
JK 380 A$=C$:GOSUB560:IFA<>7ANDA<>13THENPRINT>You cannot chop tha
    t!":GOTO150ELSEFORB=1TO5:IFOH(B)=2THEN390ELSENEXT:PRINT"Y
    ou do not have the axe!":GOTO150
JK 390 IFOH(A,1)<>0THENPRINT"I do not see a "OB$(A)" here":GOTO150
    0:IFA=13ANDOB$(A)="kindling"THENPRINT>You have already cho
    pped the log":GOTO150ELSEIFA=7ANDE(3)=1THENPRINT>You have
    already felled the tree":GOTO150
AO 400 IFA=13THENPRINT>You chop up the log into kindling":OB(13,2)
    =2:OB$(13)="kindling":GOTO50ELSEPRINT>You chop down the t
    ree":E(3)=1:R(4,4)=5:GOTO50
HL 410 FORA=1TO5:IFOH(A)=1THEN420ELSE:NEXT:PRINT>You do not have
    the matches":GOTO150
DF 420 IFC$="match"THENPRINT"A match flares and then goes out":GO
    TO150ELSEIFC$<>"kindling"THENPRINT>You cannot light that":
    GOTO150
AP 430 FORA=1TO5:IFOH(A)=13THEN440ELSENEXT:PRINT>You do not have
    the kindling":GOTO150
AA 440 PRINT>You light the kindling and a fire starts to bur
    n":OB$(13)="blazing fire":OB(13,1)=R:OB(13,2)=-1:IFR=3THEN
    E(2)=1:PRINT"The Dwarf seems pleased":OB(4,1)=R
FN 450 OH(A)=0:GOTO50
GB 460 IFC$<>"spell"THENPRINT>You cannot buy that":GOTO150ELSEIFR

```

LISTINGS

```
<>20RE(1)=1THENPRINT"I see no one to buy the spell off":GOTO15#
```

```
KL 47# FORA=1TO5:IFOH(A)=4THEN48#ELSENEXT:PRINT"You do not have a
ny money to pay for the spell":GOTO15#
EJ 48# PRINT"The magician sells you a sleeping spell";OB$(4)="sl
eep spell":E(1)=1:PRINT"and disappears in a blinding flash
of light laughing":OB(5,1)=0:GOTO5#
PM 49# IFC$<>"spell"THENPRINT"You cannot cast that":GOTO15#ELSEFO
RA=1TO5:IFOH(A)=4THEN5#ELSENEXT:PRINT"You do not have the
spell":GOTO15#
EG 50# OH(A)=0:PRINT"You cast the spell and there is a blinding
flash of light":IFR<>5ANDR<>1#THENPRINT"but nothing se
ems to happen":GOTO15#
KL 51# IFR=5THENPRINT"The giant falls down asleep":E(4)=1:GOTO5#E
LSEPRINT"The dragon falls down asleep allowing you to pas
s":R(1#)=3:E(5)=1:GOTO5#
ED 52# A$=C$:GOSUB56#:IFOB(A,1)<>RTHENPRINT"I do not see it here!
":GOTO15#ELSEIFA=8THENPRINT"The box is nailed shut and can
not be opened":GOTO15#ELSEIFA<>9THENPRINT"You cannot ope
n that":GOTO15#
KJ 53# FORB=1TO5:IFOH(B)=3THEN54#ELSENEXT:PRINT"You do not have t
he key":GOTO15#
DO 54# IFE(4)=0THENPRINT"The giant does not like you trying to o
pen his chest and kills you":GOTO57#
BM 55# PRINT"You open the chest and find the gold crown inside.
...":PRINT:PRINT:PRINTTAB(8)"YOU HAVE WON":PRINT:PRINT:PR
INT:PRINT:GOTO58#
CH 56# FORA=1TO13:IFINSTR(OB$(A),A$)>0THENRETURNELSENEXT:PRINT"I
do not understand the word A$:RETURN15#
FG 57# PRINT:PRINT:PRINT"You seem to have gotten me killed!":PRI
NT:PRINT:PRINT
KM 58# PRINT"Do you want to play again [Y/N].":A$=INPUT$(1):IFA$
="y"ORA$="Y"THENRUNELSEEND
EH 59# DATA "in a dense wood. There is a cave to the North",6,2,0,
4,"in a clearing. There is a hut to the East",1,0,3,0,"i
nside a small hut. A Dwarf sits in the corner",0,0,0,2
IL 60# DATA "on the edge of a deep ravine",0,0,1,-1,"in a field o
f grass near a ravine",0,0,4,0,"in a cave. There is an ope
ning in the East wall",0,1,7,0,"at the entrance to a tunn
el",0,0,8,6
DD 61# DATA "in a dark tunnel",10,0,9,7,"at a dead end",0,0,0,8,"
in a light airy cavern",-1,8,0,0
FA 62# DATA "matches",3,1,"small axe",9,1,"gold key",0,1,"silver
coins",0,1,"old magician",2,-2,"black dwarf",3,-2,"large t
ree",4,-1,"large box",5,6,"chest",5,6,"fearsome giant",5,-
2,"wine barrel",7,6,"huge red dragon",10,-2,"dry log",1,6
KN 63# DATA north,south,east,west,go,inventory,look,examine,get,t
ake,pickup,drop,unscrew,chop,light,buy,cast,open
```

SVI-318/328 Conversions

```
EI 1# COLOR15,4,5:SCREEN#,0:WIDTH39:DEFINTA-Z:DEFBNA(X)=INT(RND(
1)*X)+1:DIMRD$(1#),R(1#,4),OB$(13),OB(13,2),C$(18)
```

Cavern Rescue (MSX Only)

Original program by Cliff Walters, published in MSX Computing October/November 1986. Typed in and corrected by Brian Leonard.

Guide foolhardy potholers to the waiting ambulances as the cave network floods. But watch out for falling debris. Left and right cursor keys control the action.

This game makes good use of MSX screen mode 1 and its programmable character set, unfortunately this limits its use to MSX owners.

MSX LISTING

```
CN 1# SCREEN1,2:WIDTH32:KEYOFF
AF 2# ON STOP GOSUB 135#:STOP ON
GH 3# DEFINT A-Z
HG 4# DEFUSR#=&H156:DEFUSRI=&H9#
CH 5# N=RND(-TIME)
EH 6# COLOR 15,1,6:X=176*8:GOSUB 86#
GA 7# VPOKE 8192+12,&H88
FI 8# VPOKE 8192+13,&HCI
GJ 9# VPOKE 8192+11,&H5I
CO 10# VPOKE 8192+23,&H5I
CO 11# VPOKE 8192+24,&H5I
AN 12# ML=0:MS=0:MT=1#
GA 13# LOCATE 3,0:PRINT"MEN TO SAVE"MT:LOCATE 22,0:PRINT"SPEED"SP
LM 14# LOCATE 3,23:PRINT"MEN SAVED"MS;:LOCATE 19,23:PRINT"MEN LOS
T"ML;
BO 15# FOR I=1 TO 21:LOCATE #,I:PRINTSTRING$(32,175+I):NEXT I
LD 16# FOR I=0 TO 12:VPOKE 6208+I,104:VPOKE 6227+I,104:NEXT I
AJ 17# FOR I=0 TO 31:VPOKE 6848+I,97:NEXT I
BK 18# K=192:FOR I=1 TO 4
FL 19# G=INT(RND(1)*3)+5
CI 20# L=INT(RND(1)*23)+1
EM 21# FOR J=0 TO 31:IF J>L AND J<L+G THEN 23#
DA 22# VPOKE 6144+K+J,96
GP 23# NEXT J:K=K+128:NEXT I
BJ 24# PUTSPRITE 2,(2,0),15,13
BG 25# F=0:M=12#N=167:GOSUB 68#
FP 26# PUTSPRITE 1,(M+6,N),14,0
DE 27# FOR D=1 TO 75#:NEXT D
BO 28# REM START FLOODING AND MAIN LOOP
CB 29# FOR X=197*8 TO 197*8-4 STEP-1
FG 30# FOR D=1 TO 25*SP:NEXT D:VPOKE X,255:NEXT X
AN 31# FOR X=197*8-4 TO 178*8 STEP-1
KI 32# VPOKE X,255:VPOKE6916,N:N=N-1
DH 33# FOR Y=1 TO SP:S=STICK(0)
BB 34# VPOKE 6918,(X MOD 2)*4
CJ 35# M=M-4*(S=3 AND M<24#)+4*(S=7 AND M>8):VPOKE 6917,M+6
DP 36# IF VPBEEK(32*(N\8)+M\8+6145)<176 THEN 58#
BM 37# IF F=1 THEN 39#
EN 38# IF RND(1)>.95 THEN INTERVAL ON:PUTSPRITE #,15:F=1
```

LISTINGS

```

GI 390 NEXT Y,X
DG 400 SPRITE OFF
BN 410 FOR W=X TO X-5 STEP-5
GN 420 PUTSPRITE 1,(M+6,N),,W MOD 2
GI 430 VPOKE W,255:N=N-1
EM 440 FOR D=1 TO 25*SP:NEXT D,W
AO 450 FOR W=N+6 TO 102 STEP-3
HG 460 PUTSPRITE 1,(W,N+1),,W MOD 2
FG 470 FOR D=1 TO 40*SP:NEXT D,W
EB 480 FOR W=102 TO 15 STEP-3
IC 490 PUTSPRITE 1,(W,N-5),,W MOD 2+2
EP 500 FOR D=1 TO 50*SP:NEXT D,W
CG 510 FOR D=1 TO 250:NEXT D
BP 520 PUTSPRITE1,(-16,0)
BB 530 MS=MS+1:LOCATE 12,23:PRINT MS;
AC 540 MT=MT-1:LOCATE 14,0:PRINT MT;
DA 550 FOR D=1 TO 1000:NEXT D
AA 560 PUTSPRITE2,(-16,0):IF MS+ML=10 THEN 770
AJ 570 CLS:GOSUB 750:GOTO 130
EN 580 INTERVAL OFF:SPRITE OFF
BK 590 PLAY"12401e":PUTSPRITE0,(-16,0)
DF 600 FOR D=1 TO 75:NEXT D
GA 610 FOR I=1 TO 20:CO=RND(1)*2+14:N=N+1
FA 620 PUTSPRITE1,(M+6,N),CO,RND(1)*2
AE 630 SOUND0,I*10:SOUND1,IMOD3:SOUND7,0:SOUND8,10
EM 640 FOR D=1 TO 40:NEXT D,I
BN 650 PUTSPRITE1,(-16,0)
BK 660 ML=ML+1:LOCATE 27,23:PRINT ML;
CB 670 U=USR1(0):GOTO 540
CD 680 ON INTERVAL=2 GOSUB 730
BI 690 ON SPRITE GOSUB 580:SPRITE ON
AI 700 A=0:B=M+6:F=0:P=RND(1)*9+4
CI 710 PUTSPRITE 0,(B,A),0,P
CF 720 RETURN
DC 730 VPOKE 6912,A:A=A+4:IF A>176 THEN INTERVAL OFF:GOSUB 700
CD 740 RETURN
AO 750 FOR A=X-8 TO 197*8
BB 760 VPOKE A,0:NEXT A:RETURN
DA 770 FOR D=1 TO 1000:NEXT D
CN 780 CLS:LOCATE 12,6:PRINT"GAME_OVER"
DP 790 LOCATE 12,7:PRINT"*****"
CD 800 LOCATE 11,10:PRINT"MEN_LOST_"ML
GK 810 LOCATE 11,12:PRINT"MEN_SAVED"MS
BI 820 GOSUB 750:BEEP
MD 830 LOCATE 2,20:PRINT"PRESS_SPACE_BAR_TO_PLAY_AGAIN"
ED 840 IF NOT STRIG(0) THEN 840
AC 850 CLS:GOSUB 1050:GOTO 110
AC 860 GOSUB 1290
BP 870 PRINT:PRINTTAB(9)"CAVERN_REScue",TAB(9)"*****"
AO 880 PRINT"___YOUR_JOB_IS_TO_RESCUE_TEN"
FP 890 PRINT:PRINT"___POTHOLERS_WHO_HAVE_GOT_STUCK"
GG 900 PRINT:PRINT"___IN_TEN_DIFFERENT_CAVENS"
BA 910 PRINT:PRINT"__UNFORTUNATELY,_EACH_CAVERN_IS"

```

```

DA 920 PRINT:PRINT"___ABOUT_TO_START_FLOODING_AND"
BL 930 PRINT:PRINT"___LOOSE_BITS_ARE_FALLING_DOWN"
EK 940 PRINT:PRINT"___USE_THE_CURSOR_KEYS_TO_GUIDE"
AF 950 PRINT:PRINT"___EACH_POTHOLER_TO_SAFETY"
CC 960 FOR I=1 TO 3:READ A
DG 970 READ A$:FOR B=1 TO LEN(A$)STEP2
CN 980 VPOKE A*8+B\2,VAL("&H"+MID$(A$,B,2))
DM 990 NEXT B,I
AH 1000 GOSUB 750
AF 1010 FOR A=0 TO 13:S$="":READ A$
GI 1020 FOR B=1 TO LEN(A$)STEP 2
AD 1030 S$=S$+CHR$(VAL("&H"+MID$(A$,B,2)))
GL 1040 NEXT B:SPRITE$(A)=S$:NEXT A
AC 1050 LOCATE 4,20:PRINT"SPEED_OF_FLOODING_(1-4)"
AF 1060 LOCATE 4,22:PRINT"1..FASTER_____4..SLOWER.";
BH 1070 BEEP:U=USR(0)
KG 1080 I$=INPUT$(1):SP=VAL(I$)
DA 1090 IF SP<1 OR SP>4 THEN 1070
GI 1100 PRINT CHR$(8);SP:FOR D=1 TO 750:NEXT D
CB 1110 CLS:RETURN
EH 1120 DATA 96.ABFFFAFFAFAFFFAFF
EH 1130 DATA 97.AAAAAAAAAAAAAAAAAA
CM 1140 DATA 104.73FA55FFFFFFFF
AF 1150 DATA 3838127C90282422
AE 1160 DATA 3838907C12284888
BO 1170 DATA 1818483C1A182642
BN 1180 DATA 1818483C1A186404
BL 1190 DATA 3C4299A5A599423C
BO 1200 DATA 3C6EBBFBD75E3C
AK 1210 DATA 3C7EE7FFBDC37E3C
CP 1220 DATA 187E7EFFFF7E7E18
CD 1230 DATA 18347EED9F761C08
BO 1240 DATA 2184104208224010
AM 1250 DATA 3A429DA1A19D423A
AF 1260 DATA 3C7E7E7E7E7E7E3C
BH 1270 DATA 3C6EBBFBD75E3C
AJ 1280 DATA 000000003040816163FF19391FFD6443800000000FEFEFEFE82EEEEE
EFFFF6B221C
FH 1290 FOR I=48*8 TO 90*8
FM 1300 VPOKE I,VPEEK(I)OR VPEEK(I)/2
FF 1310 NEXT I
FL 1320 FOR I=48*8 TO 58*8
JE 1330 VPOKE I,VPEEK(I)OR VPEEK(I)/2 AND 15
CO 1340 NEXT I:RETURN
HK 1350 I=USR1(0):SCREEN0:COLOR 15,4,4

```


LISTINGS

SVI-318/328 Conversions

```

EC 10 COLOR15,1:SCREEN1,2:A=RND(-TIME):DEFINTA-Y:DEFSNGL,Z:ZH=10
    00:DIMPX(3),PY(3),T(3)
HN 40 CLS:LINE(0,185)-(256,192),14,BF:DRAWA1$:PAINT(10,184),14:L
    OCATE80,70:PRINT"PRESS_THE_TRIGGER"
BO 50 LOCATE80,20:PRINT"HI_SCORE="HI:PUTSPRITE1,(60,50),11,1:PUT
    SPRITE2,(76,50),11,2
AA 440 SOUND8,0:SOUND9,0:SOUND10,0:FORA=1TO1000:NEXT:LOCATE100,80
    :PRINT"GAME_OVER"
CN 450 LOCATE100,100:PRINT"SCORE="SC
  
```

Program Input (MSX Listing)

```

10 CLEAR000:DEFINTA-Z:COLOR15,4.5:SCREEN0:WIDTH39:DIML$(100)
   :H$="A":ALPHA$="ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz-/_."
20 CLS:LOCATE5,2:PRINT"PROGRAM_INPUT":LOCATE2,4:PRINT"LOAD_WO
   RK_FILE_(Y/N).?":
30 A$=INPUT$(1):A=INSTR("YyNn",A$):IFA=0THEN30ELSEPRINTA$:IFA
   >2THENL=1:GOTO110
40 LOCATE2,6:PRINT"LOAD_FROM_-":PRINT"....[1]_DISK":PRINT"....
   [2]_TAPE":PRINT"YOUR_CHOICE_[1_or_2].?":
50 A$=INPUT$(1):IFAS<"1"ORAS>"2"THEN50ELSEPRINTA$:IFAS="1"TH
   ENL$=H$ELSEL$="CAS:"
60 LOCATE2,10:PRINT"FILE_NAME_":P=0:N$=STRING$(8,32)
70 LOCATE12,10:PRINTN$:LOCATE12+P,10:A$=INPUT$(1):IFAS=CHR$(8
   )THENIFP=0THENBEEP:GOTO70ELSEMID$(N$,P,1)="_":P=P-1:GOTO70
80 IFAS<CHR$(13)THENIFINSTR(ALPHA$,A$)=0THENBEEP:GOTO70ELSEI
   FP=8THENBEEP:GOTO70ELSEP=P+1:MID$(N$,P,1)=A$:GOTO70
90 LOCATE2,12:PRINT"LOADING..":F$=F$+N$:OPENF$FORINPUTAS#1:L=
   1
100 LINEINPUT#1,L$(L):IFNOTEOF(1)THENLOCATE10,12:PRINTUSING"##
   #":L=L+1:GOTO100ELSECLOSE:L=L+1:FORA=1TO1-1:IFLEN(L$(A))
   <245THENL$(A)=L$(A)+STRING$(245-LEN(L$(A)),32):NEXTLSENE
   X
110 CLS:IFL$(1)="_":THENL$(1)=STRING$(245,32)
120 PX=0:PY=0:F=0:LOCATE11,0:PRINTUSING"FREE_###K":FRE(""):LO
   CATE25,0:PRINT"INSERT_OFF":LOCATE1,1:PRINTUSING"LINE_##":L
130 FORA=0TO6:LOCATE1,A+2:PRINTMID$(L$(L),A*35+1,35):NEXT
140 LOCATE1,0:PRINTUSING"X:##_Y:##":PX,PY:LOCATE1,2+PY:PRINTMI
   D$(L$(L),PY*35+1,35):LOCATE1+PX,2+PY:A$=INPUT$(1):IFAS=CHR
   $(6)THENPX=PX-1:GOSUB1000:MID$(L$(L),PY*35+PX+1,1)="_":GOT
   O140
150 IFAS=CHR$(28)THENPX=PX+1:GOSUB1000:GOTO140
160 IFAS=CHR$(29)THENPX=PX-1:GOSUB1000:GOTO140
170 IFAS=CHR$(30)THENPY=PY-1:GOSUB1000:GOTO140
180 IFAS=CHR$(31)THENPY=PY+1:GOSUB1000:GOTO140
190 IFAS=CHR$(127)THENIFPX=35ANDPY=6THENBEEP:GOTO140ELSEIFPX=0
   ANDPY=0THENL$(L)=RIGHT$(L$(L),244)+"_":GOTO130ELSEL$(L)=LE
   FT$(L$(L),PX+PY*35)+RIGHT$(L$(L),244-(PX+PY*35))+"_":GOTO1
  
```

```

195 IFA$=CHR$(18)THENIFF=0THENF=1:LOCATE32,0:PRINT"ON_":GOTO14
   0ELSEF=0:LOCATE32,0:PRINT"OFF":GOTO140
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*35)+A$+MID$(L$(L)
   ),PX+PY*35+1,244-(PX+PY*35)):PX=PX+1:GOSUB1000:GOTO130
210 C1$=LEFT$(L$(L),1):C2$=MID$(L$(L),2,1):IFINSTR(LEFT$(ALPHA
   $,54),C1$)=0ORINSTR(LEFT$(ALPHA$,54),C2$)=0THENLOCATE1,10:
   PRINT"CHECK_CODE_INCORRECT_-PRESS_ANY_KEY":A$=INPUT$(1):G
   OTO110
220 LOCATE1,8:PRINT"WAIT...":F=0:I1=1:F1=0:FORI=3TOLEN(L$(L)):
   C=ASC(MID$(L$(L),I,1)):IFC=34THENIFF1=0THENF1=1ELSEF1=0
230 IFC=32ANDF1=0THEN250ELSEIFI1/2=I1\2THENF=F+CBELSEF=F-C
240 I1=I1+1
250 NEXTI:F=ABS(F)MOD256:F1=F\16+65:F2=FMOD16+65:IFC1$<CHR$(F
   1)ORC2$<CHR$(F2)THENLOCATE1,10:PRINT"LINE_INCORRECT_-PRES
   S_ANY_KEY":A$=INPUT$(1):GOTO110
260 LOCATE1,10:PRINT"LINE_CORRECT":LOCATE2,12:PRINT"[1]_GOTO_N
   EXT_LINE":LOCATE2,13:PRINT"[2]_GOTO_PREVIOUS_LINE":LOCATE2
   ,14:PRINT"[3]_EXIT_AND_SAVE":LOCATE2,15:PRINT"YOUR_CHOICE_
   [1-3]_..?":
270 A$=INPUT$(1):IFAS<"1"ORAS>"3"THEN270ELSEPRINTA$:IFAS="1"TH
   ENL=L+1:GOTO110ELSEIFAS="2"THENIFL=1THENBEEP:GOTO270ELSEL=
   L-1:GOTO110
280 CLS:LOCATE2,6:PRINT"LOAD_FROM_-":PRINT"....[1]_DISK":PRINT
   "....[2]_TAPE":PRINT"YOUR_CHOICE_[1_or_2].?":
290 A$=INPUT$(1):IFAS<"1"ORAS>"2"THEN290ELSEPRINTA$:IFAS="1"TH
   ENF$=H$ELSEF$="CAS:"
300 LOCATE2,10:PRINT"FILE_NAME_":P=0:N$=STRING$(8,32)
310 LOCATE12,10:PRINTN$:LOCATE12+P,10:A$=INPUT$(1):IFAS=CHR$(8
   )THENIFF=0THENBEEP:GOTO310ELSEMID$(N$,P,1)="_":P=P-1:GOTO3
   10
320 IFA$<CHR$(13)THENIFINSTR(ALPHA$,A$)=0THENBEEP:GOTO310ELSE
   IFP=8THENBEEP:GOTO310ELSEP=P+1:MID$(N$,P,1)=A$:GOTO310
330 LOCATE2,12:PRINT"CONDENSING..":FORA=1TO500:IFL$(A)<"_":THEN
   FORB=245TO1STEP-1:IFMID$(L$(A),B,1)="_"THENNEXTB:L$(A)="B
   LSEL$(A)=MID$(L$(A),3,B-2):NEXTA
340 LOCATE2,12:PRINT"SAVING.....":F$=F$+N$:OPENF$FOROUTPUTAS#
   1:FORA=1TO500:IFL$(A)="_":THENCLOSE:END
350 PRINT1,RIGHT$(L$(A),241):LOCATE10,12:PRINTUSING"$$$":A:NE
   XT:CLOSE:END
1000 IFPX<0THENPX=35:PY=PY-1ELSEIFPX>35THENPX=0:PY=PY+1
1010 IFPY<0THENPY=6ELSEIFPY>6THENPY=0
1020 RETURN
  
```

Program Input (SVI Conversions)

```

10 CLEAR000:DEFINTA-Z:COLOR15,4.5:SCREEN0:WIDTH39:DIML$(100)
   :H$="1":ALPHA$="ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz-/_."
  
```

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 Where else can you buy a beautiful computer with colour monitor two double sided disk drives and two telephone modems (Today these modems cost \$350-00 each) etc, etc, etc
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 Hank ZUYDAM, 241 Hamilton Road
 P.O Box 285, FAIRFIELD NSW 2165

FOR SALE

Sony HB-F700D MSX 2 computer with
 - 256k RAM, 128k Video RAM
 - Double Sided 3 1/2" Disk Drive
 - Separate plug in keyboard
 - Mouse Controller
 - Sony High Resolution colour monitor (Model KX-14CPI)
 - Toshiba HP 550 MSX Printer
 - Software with the machine includes the Konami game "Salamander", plus "Wordstar", "DBase" and the HiBrid integrated software that came with the MSX2 unit. HiBrid includes a word processor, database, graphics program and spreadsheet. Other programs include "Print Express" - a desk top publishing program for MSX and "Devpac 80" - the Z80 assembler, monitor and text editor for MSX.
 - Manuals for all the above software plus extra "how to" books on DBase and Wordstar.
 - A complete set of "Computer Forum" and "Micro's Gazette" magazines
 - 27 Separate titles on MSX programming including machine code as well as Basic programming. The price for all the above is **\$2000** excluding postage

For W.A enquiries also included is a desk with separate shelves and an ergonomic chair. (Unfortunately it would cost too much to post these items over to the Eastern States)

Please direct your enquiries to:- Bryan Connell
 53 Westview Street
 SCARBOROUGH W.A 6019
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FOR SALE

Ritron Green Screen Monitor
 80 Column Card (For 601 Expander)
\$170-00
 RS232 Interface
 Cicada 300 Baud Modem
\$120-00

Spectravideo SV-328 with SV601 Expander and Disk Drive Controller Card. This controller has been modified to take up to Four Disk Drives Mitsubishi Standard interface for 80 Track or 40 Track. This will not take Spectravideo Drives. A utility on the disk allows selection of drives as 80 or 40 track double sided or 40 track single sided formats. The single sided

format is transferable between Spectravideo machines. I will add the CPM Operating system disks, and all the original Spectravideo manuals.

\$500-00

Twin disk drive case and power supply fitted with an 80 track Mitsubishi 4853 Floppy drive and a 40 Track Mitsubishi Floppy disk drive.

\$350-00

Books:

CPM and the Personal Computer by Dwyer and Critchfield. The best book for the beginner on CPM I have ever found **\$20-00**

Inside CPM by David Cortesi. A must for the technically minded, CPM programmers Bible **\$30-00**

DBASEII Manual **\$10-00**

Introduction to Wordstar by Arthur Naiman. An introduction as well as many tips and traps who needs a manual? **\$15-00**

Spectravideo Technical Manual. Contains all the circuits for the SV318 and 328 **\$10-00**

Spectravideo Basic. Produced by the old Tasmanian Users Group, a good reference for Spectravideo Basic **\$10-00**

Basic Reference Manual. Spectravideo Publication **\$10-00**

or **\$1200-00** the lot

Phone Chris Smith after hours on (049) 831205 (Newcastle NSW)

FOR SALE

Spectravideo 328 Computer
 601 Expander with one disk drive and printer interface.
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 - MSX Emulator
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 - Lots of Games (Including educational titles)
 All for only **\$400.00**
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