

# THE NEW SHARP MZ-700

## by Graham Knight

### SPECIFICATION

The MZ-700 has 64K user RAM, 4K VIDEO RAM, 4K CHARACTER GENERATOR ROM, and 4K MONITOR ROM — a total memory of 76K. The keyboard has 69 proper full stroke keys in a QWERTY layout. 5 special keys allow the user to define 10 functions. Four cursor arrow keys are on a separate pad allowing quick editing and skilful game control.

The Z-80A CPU runs at 3.6MHz giving very fast processing times (Benchmark 4 takes just 8.6 seconds). Optional extras are a 4 colour plotter-printer and a neat 1200 bps cassette. An interface for a larger Sharp printer is built in. A 50 way connector is incorporated for other peripherals. Sockets are also provided for connecting joysticks and using a separate cassette. The eight colour display can be viewed on any TV set. Composite video and R.G.B. connectors are provided for those wishing to use a monitor.

### KNIGHTS DESIGN

We have been to Sharp at Osaka, Japan, three times in the last 18 months and have been closely involved in the European release of this model. Sharp originally intended to export the MZ-700 with 256 characters similar to those on the MZ-80K. We persuaded Sharp to incorporate our character generator which gives 512 characters.

Many computers have a very limited number of characters, often just 128 and sometimes with no small letters. Some micros get around this limitation by allowing the user to define shapes but this involves complex programming. Our easily programmed 512 characters include all the original Sharp shapes with the addition of "outline" letters and numbers, space invaders, rockets, planes, tanks, cars, snakes, bullets, guns, faces, gremlins, fruit, ghosts, flying saucers, chess pieces, a TV set and the MZ-700 itself. For more serious applications we added a mass of electrical symbols including transistors, diodes, capacitors, gates, etc, plus scientific, Greek and other language characters.

All of us at Knights were involved in designing this section of the MZ-700 and we would like to publicly thank the staff at Sharp for their help and enthusiasm. It is a great honour for our British design to be incorporated in Sharp's MZ-700 export production.

### EIGHT COLOURS

Many colour computers give very poor colour indeed and many micros limit the number of colours displayed at any one time. On the Sharp each of the 1,000 characters on the screen can be individually programmed for foreground and background colour. With a choice of eight colours, 512 characters, and 1,000 positions you have a fantastic possibility of 28,000,000 different colour displays. The Sharp MZ-700 colour is excellent. We have even been able to program a colour TV test card — we have never seen any other computer come close to the Sharp for colour saturation and definition.

### EXTENDED BASIC

Each MZ-700 is supplied with an extended BASIC which includes commands to control the plotter-printer and peripherals. Commands include: AUTO, AXIS, CIRCLE, CLOSE, COLOUR, CURSOR, DEF FN, DEF KEY, DELETE BLOCK, GET, GPRINT, HSET, IF — ERN, IF — ERN, INP PORT, KEY LIST, LEFT\$, LINE, MERGE, MID\$, MODE

GR, MOVE, MUSIC, ON ERROR — GOTO, ON — GOSUB, ON — GOTO, OUT PORT, PAGE, PAI, PCOLOUR, PEEK, PHOME, PLOT ON, PRINT USING, RAD, RENUMBER, RIGHT\$, RLINE, RMOVE, SET, SGN, SIZE, SKIP, STR\$, TEMPO, TEST, TIME\$, TRACE, and WOPEN.

### REVOLVING VIDEO MEMORY

The MZ-700 features a most unusual 4K video memory which stores 50 lines of characters. The screen shows a 25 line section which can be moved to show any part of the VRAM. A 50 line program listing can be scrolled round and round giving a revolving cylinder effect and this can give truly amazing screen displays in programs.

### PLOTTER-PRINTER

The 4 colour plotter-printer has a horizontal resolution of 480 points. It feeds the paper up and down so the vertical resolution is only limited by the length of paper. Characters can be printed in 64 different sizes from 1mm to 10cms high. Programs can be printed in 20, 40, or 80 character per line format. Characters can be orientated in four directions — the right way up, upside down and sideways. The BASIC has many new commands for use with the plotter-printer allowing very complex patterns, drawings or graphs to be created easily.

### CLEAN COMPUTER

Some micros have small memories and are stuck in a single language. Sharp micros are designed as "clean computers" — that means there is a maximum of RAM memory and a minimum of ROM. Languages are loaded from tape and this means that if our MACHINE CODE LANGUAGE is used the whole 64K of memory is available. Many customers progress from BASIC to FORTH, MACHINE CODE, ASSEMBLER, or PASCAL. The ability to load different languages on tape is a most important feature.

### FREE PROGRAMS

Each MZ-700 from KNIGHTS will be supplied with four languages and 40 programs. The prices in brackets are what you will pay if you buy your MZ-700 elsewhere!

TEN of JAPAN'S best games — SNAKE, SPACE BEE, SEND ONE, PAINFUL MAN, LAND ESCAPE, CIRCUS STAR, SEARCHER, BATTLE, ROUND STREET, and SUPER PUCKMAN.

TEN KNIGHTS PROGRAMS (£34) — CRIBBAGE, SUICIDE RUN, TEACH MULTIPLICATION, TEACH DIVISION, VICIOUS VIPER, MOTORING COSTS, STATISTICS, HOME ACCOUNTS, CRASHER, AMERICAN BOWLING.

PASCAL LANGUAGE + 12 Pascal programs ..... (£25)

MACHINE CODE LANGUAGE ..... (£12)

FORTH LANGUAGE + 5 programs ..... (£25)

### MZ-700 PRICES

The MZ-711 desktop micro is known as the Jack in Japan — it costs £215. The MZ-721 is known as the Queen and is the model with the built in cassette — it costs £248. The MZ-731 is known appropriately as the KNIGHT and has the cassette and plotter-printer built in — it costs £359. Customers outside the UK add £10 for air freight. UK customers get free Securicor delivery but remember to add Maggie's VAT.

PS We have sold thousands of Sharp products all over the World during the last nine years and have never had to charge for a single repair. I wish we could find someone to supply cars on the same basis! Ring or write for our latest newsletters and price lists.

## Knights Computers

108 Rosemount Place, Aberdeen Tel: 0224 630526