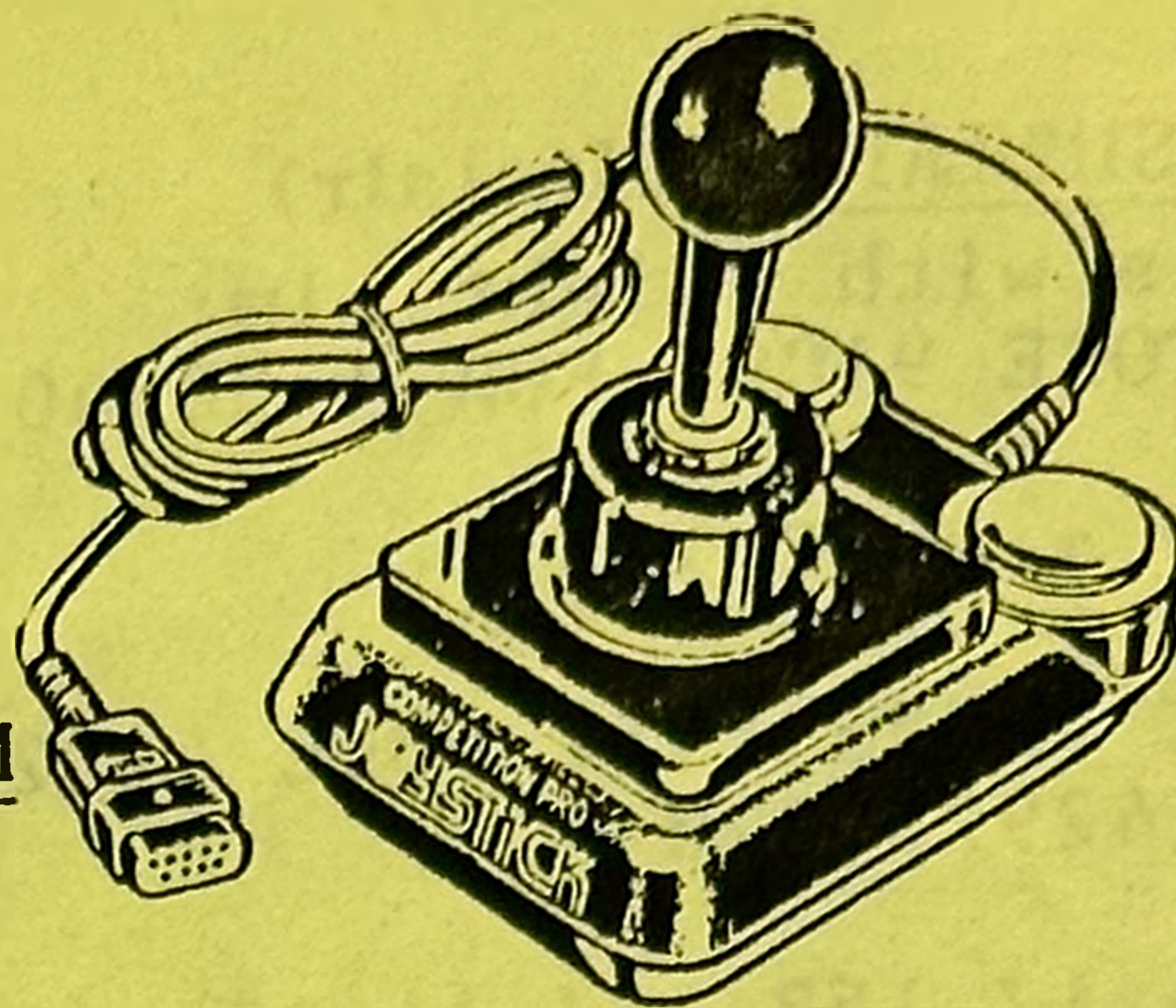


KEMPSTON

MICRO ELECTRONICS



COMPETITION-PRO JOYSTICK FOR ZX SPECTRUM

Instructions

(Important: Ensure that the power supply is disconnected before attempting to plug in the interface or removing it)

The interface fits onto the Spectrums edge connector at the rear of the computer. The interface has a 23 way connector so it can be used behind the ZX printer if required. Make sure that the small key on the interface lines up with the slot on the Spectrum edge connector.

DO NOT ATTEMPT TO PLUG IN THE INTERFACE IF THE KEY IS MISSING, OTHERWISE PERMANENT DAMAGE MAY OCCUR.

The joystick itself plugs into the 9 way D connector on the interface which can only fit one way round.

The joystick is port mapped to address 31 and information can be read and passed into a BASIC program by using the instruction IN 31. The function of the joystick can be tested by the following BASIC program.

```
10 PRINT IN 31;:GO TO 10
```

Running the above program with the joystick in the central position should result in 0's appearing on the screen. There are a total of eight possible positions that the joystick can be in and these should give the following numbers.

		UP		
	10	8	9	
LEFT	2	0	1	RIGHT
	6	4	5	
		DOWN		

Pressing either fire button adds 16 to these numbers.

Any BASIC program that uses the cursor keys for movement can be modified to work with the joystick providing the relevant part of the keyboard reading routine can be located. The examples below should help you to do this.

CURSOR INSTRUCTION

```
IF INKEY$ = "5"      (left)
IF INKEY$ = "6"      (down)
IF INKEY$ = "7"      (up)
IF INKEY$ = "8"      (right)
```

JOYSTICK INSTRUCTION

```
IF IN 31 = 2
IF IN 31 = 4
IF IN 31 = 8
IF IN 31 = 1
```

If the program contains a line to detect a fire button, eg IF INKEY\$ = "0" replace this by IF IN 31 = 16

Two conversion tapes are available which allow leading games to be used with the joystick and are priced at 4.95 each.

1 FLIGHT SIMULATOR (Sinclair)

```
MERGE this with flight sim:
9010 RESTORE 9100: FOR i=58540 T
0 58592
9020 READ a:POKE i,a
9030 NEXT i
9040 POKE 42923,195: POKE 42924,
172:POKE 42925,228
9050 RUN
9100 DATA 17,158,167,14,254,33,1
64,167
9110 DATA 126,35,183,40,7,71,237
,120,18
9120 DATA 19,24,244,1,31,255,237
,120
9130 DATA 33,161,167,203,71,40,2
,203,150
9140 DATA 203,95,40,2,203,158,20
3,87,40,2
9150 DATA 203,166,203,79,200,43,
203,166,201
```

Enter the opposite programme, and SAVE
"Flight+"

In Use

Load Flight Simulator in normal way. When it has all finished, BREAK when 1-2-3? prompt appears. Then MERGE "Flight+" and PLAY above tape. Then RUN 9010. The Keyboard will still work but additionally so will the Joystick.

2 GULPMAN (Campbell Systems)

Load GULPMAN and use the menu S option and BREAK into the SAVE, then without using line numbers make these commands.....

```
FOR A=30572 TO 30622: INPUT N: POKE A,N: NEXT A (press ENTER)
```

Now give the following 51 numbers Press ENTER after each one.....

```
202 244 107 71 219 31 254 255 56 4 120 195 85 105 6 1 203
71 32 4 6 255 203 79 32 4 6 32 203 87 32 4 6 224 203 95 32
2 6 0 221 112 29 203 103 194 107 105 195 110 105
```

```
Then, POKE 26962,195: POKE 26963,108: POKE 26964,119:
GOTO 40 (ENTER)
```

This takes you back to the game instructions, from where you can reach the menu and use S to save the amended program onto a fresh tape. Note that the amended program is not playable on some later versions of Spectrum unless the Joystick is connected!

3 MAZEMAN (Abersoft)

Load MAZEMAN and then break into the program during the first part of the demonstration program.

Type in the following POKES:-

```
POKE 29946,1
" 29947,31
" 29948,0
" 29949,237
" 29950,120
" 29957,0
" 29959,2
" 29963,4
" 29967,8
" 29971,1
```

The modified game can now be saved by typing:- RUN 9999
MAZEMAN will now work with the Kempston Joystick.