

WORD PROCESSOR

by Glenn Counsell

There must be many computer owners like myself who, whilst very interested in the idea of a wordprocessor, have never felt like forking out the £20+ needed to buy a decent one.

This program for the Amstrad 464 with/without DD1, Amstrad 664 and Amstrad 6128 to be published over the next few weeks, is a fully fledged 'what

you see is what you get' wordprocessor that compares favourably with many on the market.

Despite being written in Basic, it has many of the complicated features (search-and-replace, block transfer...) found only in the best commercially available ones and should give the user a valid first entry into the field.

More listing and the beginning of

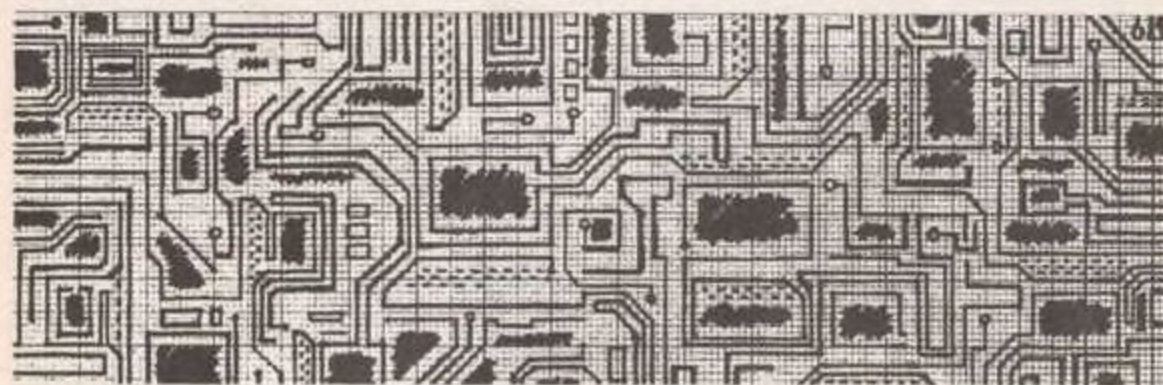
the functions description next week, but if your fingers can't stand so much button pushing so early in the year then copies of the program can be obtained from G. Counsell, 216a Banbury Rd, Oxford for £7.00 (disc) or £3.00 (tape).

Please state also whether you require the version of the program to work on disc or tape.

```
10 ON BREAK GOSUB 5600
20 MODE 2
30 BORDER 0:INK 1,26:INK 0,0:PEN 1:PAPER 0:PEN #3,
0:PAPER #3,1
40 cplr=1:tlb=1:prfg=0:pjfg=0:dlfg=0:btfg=0:infq=0
50 DIM keyy$(255,2)
60 WINDOW #4,8,13,1,1:WINDOW #5,27,32,1,1
70 WINDOW #6,40,60,1,1:WINDOW #7,1,30,2,2
80 DATA 06,01,11,70,66,21,60,66,cd,77,6c,32,60,66,
c9
90 MEMORY &A640
100 FOR i=&A651 TO &A65F:READ a$:POKE i,VAL("&"&a$)
:NEXT i
110 PRINT "text width or file name ? "
120 safg=0:GOSUB 5460:safg=1
130 q=VAL(q$)
140 IF STR$(q)=""&q$ THEN 190
150 LOCATE 1,1:GOSUB 5430
160 IF PEEK(&A660)=22 THEN 180
170 LOCATE 27,1:PRINT CHR$(12):GOTO 120
180 GOSUB 2590:GOTO 230
190 IF q<3 AND q<79 THEN 210
200 CLS:GOTO 110
210 zdia=INT(24000/q)
220 DIM z$(zdia)
230 i=INT((80-q)/2):r=60-1:WINDOW #2,1,r,3,25
240 FOR i=1 TO 31:KEYY$(i,0)=1:NEXT i
250 FOR i=32 TO 255:KEYY$(i,0)=3:NEXT i
260 CLS:PEN #2,0:PAPER #2,1:CLS #2
270 IF STR$(VAL(q$))=""&q$ THEN 310
280 pl=tlb
290 IF tlb>23 THEN pl=23
300 FOR h=1 TO pl:PRINT#2,z$(h):NEXT h
310 DATA 240,241,242,243,13,127,19,16,12,6,10,4,20,
3,5,9,16,246,247,244,245,248,249,14
320 FOR i=1 TO 24:READ arkeyy$(a,0)=2:KEYY$(a,i)=i
:NEXT i
330 cpud=1:tl=1
340 PRINT "line # text length"
350 CLS #4:PRINT #4,tl:CLS #5:PRINT #5,tlb
360 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
370 a$=INKEY$
380 IF a$="" THEN 370
390 ON KEYY$(ASC(a$),0) GOTO 370,400,430
400 tlb=infq+(attl-attlb)
410 ON KEYY$(ASC(a$),1) GOSUB 850,1150,1470,1630,1
740,1910,2080,2210,2340,2700,3150,3660,3960,4
460,4500,2700,1470,1630,850,1150,4880,5110,5350
420 GOTO 370
430 tlb=infq+(attl-attlb)
440 GOSUB 460
450 GOTO 370
460 IF LEN(z$(tl))+1=r THEN 530
470 IF cplr<>(LEN(z$(tl))+1) THEN 770
480 LOCATE #2,cplr,cpud:PRINT#2,a$:
490 z$(tl)=z$(tl)+a$
500 cplr=cplr+1
510 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
520 RETURN
530 IF tl=tlb AND cplr=(LEN(z$(tl))+1) THEN 550
540 SOUND 1,60,3,12:SOUND 1,60,1,0:RETURN
550 IF tlb=zdiam THEN 540
560 z$(tl)=z$(tl)+a$
570 FOR i=LEN(z$(tl)) TO 2 STEP -1:IF MID$(z$(tl),
i,1)="" THEN 610
580 NEXT i
590 z$(tl)=LEFT$(z$(tl),(LEN(z$(tl))-1))
600 RETURN
610 cplr=i+1
620 LOCATE #2,cplr,cpud
630 WINDOW #3,cplr,r,cpud+2,cpud+2:CLS #3
640 IF cpud>23 THEN 670
650 LOCATE #2,r,25:PRINT#2
```

```
660 GOTO 680
670 cpud=cpud+1
680 cplr=1:tl=1:tlb=tlb+1
690 LOCATE #2,cplr,cpud
700 p$=RIGHT$(z$(tl-1),(LEN(z$(tl-1))-1))
710 PRINT#2,p$
720 cplr=LEN(p$)+1
730 z$(tl)=p$:z$(tl-1)=LEFT$(z$(tl-1),(i-1))
740 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
750 CLS #4:PRINT#4,tl+1:CLS #5:PRINT#5,tlb
760 RETURN
770 LOCATE #2,cplr,cpud
780 p$=RIGHT$(z$(tl),(LEN(z$(tl))-cplr+1))
790 PRINT#2,a$:p$
800 z$(tl)=LEFT$(z$(tl),(cplr-1)+a$:p$
810 cplr=cplr+1
820 LOCATE #2,cplr,cpud:PEN #2,1:PAPER #2,0
830 PRINT#2,LEFT$(p$,1):PEN #2,0:PAPER #2,1
840 RETURN
850 ufg=0
860 IF ASC(a$)=244 THEN ufg=40
870 IF cpud=1 AND tl<(tl+ufg+infq*(n-2)) THEN 1030
880 IF tl=infq*(n-2) THEN 1040
890 IF cpud=1 THEN 1070
900 IF cplr=(LEN(z$(tl))+1) THEN 930
910 LOCATE #2,cplr,cpud:PRINT#2,MID$(z$(tl),cplr,1)
920 GOTO 940
930 LOCATE #2,cplr,cpud:PRINT#2," ";
940 IF ASC(a$)<>244 THEN 980
950 tlt=tl:tl=tl+cpud+1
960 IF tl<(tl+infq*(n-2)) THEN tl=tl+infq*(n-2)
970 cpud=cpud-tlt+tl:GOTO 990
980 cpud=cpud-1:tl=tl-1
990 cplr=LEN(z$(tl))+1
1000 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
1010 CLS #4:PRINT#4,tl+1:CLS #5:PRINT#5,tlb
1020 RETURN
1030 IF tl=tl+infq*(n-2) THEN 1050
1040 SOUND 1,60,3,12:SOUND 1,60,1,0:RETURN
1050 tl=tl+infq*(n-2)
1060 GOTO 1080
1070 tl=tl-10-ufg
1080 LOCATE #2,1,1
1090 FOR i=tl TO tl+2:PRINT#2,z$(i):CHR$(18):NEXT
i
1100 PRINT#2,z$(tl+22):CHR$(18);
1110 cplr=LEN(z$(tl))+1
1120 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
1130 CLS #4:PRINT#4,tl+1:CLS #5:PRINT#5,tlb
1140 RETURN
1150 lfg=0
1160 IF ASC(a$)=245 THEN lfg=40
1170 IF cpud=23 AND tl=tlb-1-lfg THEN 1340
1180 IF cpud=23 THEN 1380
1190 IF tl<>tlb THEN 1210
1200 SOUND 1,60,3,12:SOUND 1,60,1,0:RETURN
1210 IF cplr=(LEN(z$(tl))+1) THEN 1240
1220 LOCATE #2,cplr,cpud:PRINT#2,MID$(z$(tl),cplr,1)
1230 GOTO 1290
1240 LOCATE #2,cplr,cpud:PRINT#2," ";
1250 IF ASC(a$)<>245 THEN 1290
1260 tlt=tl:tl=tl+cpud+23
1270 IF tl>tlb THEN tl=tlb
1280 cpud=cpud+tlt-tlb:GOTO 1300
1290 cpud=cpud+1:tl=tl+1
1300 cplr=LEN(z$(tl))+1
1310 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
1320 CLS #4:PRINT#4,tl+1:CLS #5:PRINT#5,tlb
1330 RETURN
1340 IF tl=tlb THEN 1360
1350 SOUND 1,60,3,12:SOUND 1,60,1,0:RETURN
```

```
1360 tl=tlb-22
1370 GOTO 1390
1380 tl=tl-12+lfg
1390 LOCATE #2,1,1
1400 FOR i=tl TO tl+2:PRINT#2,z$(i):CHR$(18):NEXT
i
1410 PRINT#2,z$(tl+22):CHR$(18);
1420 tl=tl+22:cpud=23
1430 cplr=LEN(z$(tl))+1
1440 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
1450 CLS #4:PRINT#4,tl+1:CLS #5:PRINT#5,tlb
1460 RETURN
1470 IF cplr<>1 THEN 1490
1480 SOUND 1,60,3,12:SOUND 1,60,1,0:RETURN
1490 IF cplr<>(LEN(z$(tl))+1) THEN 1570
1500 LOCATE #2,cplr,cpud:PRINT#2," ";
1510 IF ASC(a$)<>246 THEN 1530
1520 cplr=1:GOTO 1540
1530 cplr=cplr-1
1540 PEN #2,1:PAPER #2,0:LOCATE #2,cplr,cpud
1550 PRINT#2,MID$(z$(tl),cplr,1):PEN #2,0:PAPER #
2,1
1560 RETURN
1570 LOCATE #2,cplr,cpud:PRINT#2,MID$(z$(tl),cplr,1)
:PEN #2,1:PAPER #2,0
1580 IF ASC(a$)<>246 THEN 1600
1590 cplr=1:GOTO 1610
1600 cplr=cplr-1
1610 LOCATE #2,cplr,cpud:PRINT#2,MID$(z$(tl),cplr,1)
:PEN #2,0:PAPER #2,1
1620 RETURN
1630 IF cplr<>(LEN(z$(tl))+1) THEN 1650
1640 SOUND 1,60,3,12:SOUND 1,60,1,0:RETURN
1650 IF cplr<>(LEN(z$(tl))+1) THEN 1700
1660 LOCATE #2,cplr,cpud:PRINT#2,MID$(z$(tl),cplr,1)
1670 cplr=cplr+1
1680 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
1690 RETURN
1700 LOCATE #2,cplr,cpud:PRINT#2,MID$(z$(tl),cplr,1)
:PEN #2,1:PAPER #2,0
1710 IF ASC(a$)<>247 THEN 1730
1720 cplr=LEN(z$(tl))+1:PEN #2,0:PAPER #2,1:GOTO 1
680
1730 cplr=cplr+1
1740 LOCATE #2,cplr,cpud:PRINT#2,MID$(z$(tl),cplr,1)
:PEN #2,0:PAPER #2,1
1750 RETURN
1760 IF tl=tlb THEN 1780
1770 SOUND 1,60,3,12:SOUND 1,60,1,0:RETURN
1780 IF tlb=zdiam THEN 1770
1790 IF cplr=(LEN(z$(tl))+1) THEN 1820
1800 LOCATE #2,cplr,cpud:PRINT#2,MID$(z$(tl),cplr,1)
1810 GOTO 1830
1820 LOCATE #2,cplr,cpud:PRINT#2," ";
1830 IF cpud>23 THEN 1860
1840 LOCATE #2,r,25:PRINT#2
1850 GOTO 1870
1860 cpud=cpud+1
1870 cplr=1:tl=1:tlb=tlb+1
1880 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
1890 CLS #4:PRINT#4,tl+1:CLS #5:PRINT#5,tlb
1900 RETURN
1910 IF cplr<>1 THEN 1930
1920 SOUND 1,60,3,12:SOUND 1,60,1,0:RETURN
1930 IF cplr<>(LEN(z$(tl))+1) THEN 1990
1940 z$(tl)=LEFT$(z$(tl),(LEN(z$(tl))-1))
1950 LOCATE #2,cplr,cpud:PRINT#2," ";
1960 cplr=cplr-1
1970 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
1980 RETURN
```

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This week more listing for the Amstrad 464/664/6128 wordprocessor and a description of some of the facilities available.

Cursor Up/Down - Moves the cursor up/down by one line unless it is at the top/bottom of the screen in which case the text scrolls by 10 lines.

Shift + Cursor U/D - Moves the cursor to the top/bottom of the screen directly unless it is already there in which case the text scrolls by 50 lines.

CTRL + Cursor U/D - Moves the cursor to the top/bottom of the text.

Cursor Left/Right - Moves the cursor one character left/right on the current text line inverting the character under it.

Shift + Cursor L/R - Moves the cursor directly to the left/right of the current text line.

ENTER - Moves to a new text line if the cursor is at the end of the text.

DEL - Deletes the character immediately to the left of the cursor.

CTRL + S - Saves the current text file under a given filename.

CTRL + L - Either loads a given file or, if given a numeric text width (4-78 columns), it will set up a new blank file.

CTRL + N - Displays the number of lines left for text.

CTRL + F - Searches for the given character set from the current line down. If found it repositions the text with the

first incidence of the set at the top of the screen.

CTRL + R - Replaces every incidence of the first given character set with the second from the current text line down. If the second character set is too long that replacement is not carried out.

Next week more listing and instructions relating to the block manipulation functions. Meanwhile if you feel like a rest from typing, copies of the program can be obtained from G Counsell, 216a Banbury Rd., Oxford for £7 (disc) or £3 (tape). Please state also whether you require the version of the program to work on disc or tape.

```

1990 LOCATE #2,LEN(z$),cpud:PRINT#2," ";
2000 cplr=cplr-1
2010 LOCATE #2,cplr,cpud
2020 p=RIGHT$(z$,1),LEN(z$)-cplr
2030 PRINT#2,p;
2040 z$=LEFT$(z$,cplr-1)+p;
2050 PEN #2,1:PAPER #2,0:LOCATE #2,cplr,cpud
2060 PRINT#2,MID$(z$,1),cplr,1;PEN #2,0:PAPER #
2,1
2070 RETURN
2080 GOSUB 4850
2090 PRINT#6,"file name ? ";
2100 GOSUB 5460
2110 fns=q$
2120 IF fns="" THEN 2150
2130 CLS #6
2140 RETURN
2150 OPENOUT fns
2160 PRINT#f,tl;PRINT#f,q
2170 FOR h=1 TO tlb:PRINT#f,z$(h);NEXT h
2180 CLOSEOUT
2190 CLS #6
2200 RETURN
2210 IF prfg=1 THEN 2260
2220 GOSUB 4850
2230 PRINT#6,"print from 't1+tik' to ";
2240 pfl=tl;prfg=1
2250 RETURN
2260 PRINT#6,tl+tik
2270 IF tl>tpf THEN 2300
2280 tpf=tpf+1:tl=tl+tpf
2290 CLS #6:PRINT#6,"print from 'pfl+tik' to 't
1+tik
2300 FOR h=pfl TO tlb:PRINT#6,z$(h);NEXT h
2310 prfg=0
2320 CLS #6
2330 RETURN
2340 GOSUB 4850
2350 WINDOW 40,80,1,25
2360 PRINT#6,"file name ? ";
2370 GOSUB 5460
2380 IF q$="" THEN 2410
2390 WINDOW 1,80,1,25:CLS #6
2400 RETURN
2410 IF STR$(q$)<>"*q$ THEN 2430
2420 q=VAL(q$):WINDOW 1,80,1,25:ERASE z$:RESTORE 3
10:cplr=1:tl=1:GOTO 190
2430 LOCATE 1,1:GOSUB 5430
2440 IF PEEK(16640)<22 THEN 2460
2450 WINDOW 1,80,1,25:GOTO 2470
2460 LOCATE #6,13,1:PRINT #6,CHR$(12);:GOTO 2370
2470 infg=0:ERASE z$
2480 PAPER #2,0:CLS #2:PAPER #2,1:CLS #4:CLS #5:CL
S #7
2490 GOSUB 2590
2500 cpud=1:tl=1
2510 l=INT((80-q)/2):r=80-l:WINDOW #2,1,r,3,25:CLS
#2
2520 pl=tlb
2530 IF tlb>23 THEN pl=23
2540 FOR h=1 TO pl:PRINT#2,z$(h);NEXT h
2550 CLS #4:PRINT #4,tl+tik:CLS #5:PRINT #5,tlb
2560 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);

```

```

2570 CLS #6
2580 RETURN
2590 OPENIN q$
2600 INPUT #9,tlb:INPUT #9,q
2610 xdim=INT(24000/q)
2620 DIM z$(xdim)
2630 FOR h=1 TO tlb:LINE INPUT #9,z$(h);NEXT h
2640 CLOSEIN
2650 OPENOUT "dummy"
2660 MEMORY HIMEM-1
2670 CLOSEOUT
2680 cplr=LEN(z$)+1
2690 RETURN
2700 GOSUB 4850
2710 PRINT#6,"search for ? ";
2720 GOSUB 5460
2730 sfs=q$
2740 IF sfs="" THEN 2770
2750 CLS #6
2760 RETURN
2770 sffg=0
2780 IF ASC(sfs)>6 THEN 2850
2790 PRINT#6,"replace by ? ";
2800 GOSUB 5460
2810 sfls=q$
2820 IF sfls="" THEN 2850
2830 CLS #6
2840 RETURN
2850 sfs=UPPER$(sfs)
2860 FOR i=tl TO tlb
2870 js=i
2880 FOR j=js TO (LEN(z$)-LEN(sfs)+1)
2890 IF UPPER$(MID$(z$(i),j,LEN(sfs)))=sfs THEN 29
80
2900 NEXT j
2910 NEXT i
2920 IF sffg<0 AND sffg<tl-cpud+22 THEN 2950
2930 CLS #6
2940 RETURN
2950 i=tl-cpud+1
2960 IF i<1+infg*(n-2) THEN i=1+infg*(n-2)
2970 GOTO 3050
2980 IF sffg=0 THEN sffg=1
2990 IF ASC(sfs)>6 THEN 3050
3000 IF (LEN(z$(i))+LEN(sfls)-LEN(sfs))<q THEN 30
30
3010 IF i=sffg THEN sffg=0
3020 GOTO 2910
3030 z$(i)=LEFT$(z$(i),(j-1))+sfls+RIGHT$(z$(i),(L
EN(z$(i))-j-LEN(sfls)+1))
3040 js=j+LEN(sfls):GOTO 2880
3050 pl=i+22
3060 IF pl>tlb THEN pl=tlb
3070 LOCATE #2,1,1
3080 FOR j=1 TO pl:PRINT#2,z$(j);CHR$(10);NEXT j
3090 IF pl<22 THEN PRINT#2,CHR$(20)
3100 tl=cpud+1
3110 cplr=LEN(z$)+1
3120 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
3130 CLS #6:CLS #4:PRINT#4,tl+tik
3140 RETURN
3150 IF plfg<0 THEN 3200
3160 GOSUB 4850

```

```

3170 PRINT#6,"justify from 't1+tik' to ";
3180 pjl=tl:ul=tl-cpud+1:prfg=1
3190 RETURN
3200 IF tl>tpf THEN 3230
3210 tpf=tpf+1:tl=tl+tpf
3220 CLS #6:PRINT#6,"justify from 'pjl+tik' to "
1
3230 PRINT#6,tl+tik
3240 FOR i=pjl TO tl
3250 r$=""
3260 FOR j=1 TO LEN(z$(i))
3270 nr$=MID$(z$(i),j,1)
3280 IF (nr$+RIGHT$(r$,1))="" THEN 3300
3290 r$=nr$+r$
3300 NEXT j
3310 z$(i)=RIGHT$(r$,LEN(r$)-1)
3320 IF RIGHT$(z$(i),1)="" THEN z$(i)=LEFT$(z$(i
),(LEN(z$(i))-1))
3330 NEXT i
3340 i=pjl
3350 FOR j=(pjl+1) TO tl
3360 IF z$(j)="" THEN 3480
3370 IF LEN(z$(j))>(q-LEN(z$(i))-1) THEN 3390
3380 z$(i)=z$(i)+""+z$(j):z$(j)="" :GOTO 3480
3390 FOR k=(q-LEN(z$(i))) TO 2 STEP -1
3400 IF MID$(z$(j),k,1)="" THEN 3430
3410 NEXT k
3420 GOTO 3450
3430 z$(i)=z$(i)+""+LEFT$(z$(j),(k-1))
3440 z$(j)=RIGHT$(z$(j),(LEN(z$(j))-k))
3450 i=i+1
3460 IF i=tl THEN 3510
3470 z$(i)=z$(j)
3480 NEXT j
3490 dli=i+1
3500 GOSUB 3760
3510 LOCATE #2,1,1
3520 plu=tl-cpud+1
3530 plutt=pjl+10
3540 IF plutt<1+infg*(n-2) THEN plutt=1+infg*(n-2)
3550 IF plu<1+infg*(n-2) OR plu>plutt THEN plu=plu
tt
3560 plb=plu+22
3570 IF plb>tlb THEN plb=tlb
3580 FOR h=plu TO plb:PRINT#2,z$(h);CHR$(10);NEXT
h
3590 IF plu>22:tlb THEN PRINT#2,CHR$(20)
3600 cpud=1:tl=plu
3610 cplr=LEN(z$)+1
3620 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
3630 CLS #4:PRINT#4,tl+tik:CLS #5:PRINT#5,tlb:CL
S #6
3640 pifg=0
3650 RETURN
3660 IF dlfq<0 THEN 3710
3670 GOSUB 4850
3680 PRINT#6,"delete from 't1+tik' to ";
3690 dli=tl:dlfq=1
3700 RETURN
3710 IF tl>dli THEN 3750
3720 ddi=tl:tdli=dli:dli=ddi

```


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This week sees the final part of the listing for a fully fledged wordprocessor for the Amstrad 464/664/6128 together with instructions for the use of its block manipulation functions.

CTRL + A - Deletes the block of text specified by the cursor position at the time of the first and second presses.

CTRL+I - The first press clears the screen below the cursor to allow text insertion at that point. Whilst in the insert mode this text is treated as a new text file allowing the use of all block functions.

CTRL + J - Left re-justifies a block of text defined by the cursor position at the time of the first and second presses. It places one space between each word and em-

plays wordwrapping.

CTRL + P - Prints a block of text defined by the cursor position at the time of the first and second presses.

CTRL + C/CTRL + T - The cursor position at the time of the first and second presses defines a block of text. This block is then either copied (CTRL + C) or transferred (CTRL + T) to below the cursor position at the time of the third pressing.

CTRL + E - Allows exit from the block manipulation functions at any given time before the final instruction is given.

Program notes

Wordwrapping and left justification are compulsory.

The number of text lines available depends on the text width.

Amstrad's garbage collection may occasionally suspend screen output for a short time. This is no problem, just keep on typing.

If using the wordprocessor with a tape based system carry out the following alterations:
Delete lines 80, 90, 100, 160, 170, 2440, 2460, 2650, 2660, 2670, 5440, 5450

Change the following lines to:

2150 openout "!" + fin\$

2590 openout "!" + q\$

If your finger are worn out by now then don't worry, as copies of the program can be obtained from G. Counsell, 216a Banbury Rd, Oxford for £7 (disc) or £3 (tape). Please state also whether you require the version of the program to work on disc or tape.

```

3730 PRINT#6,CHR$(13);"delete from "jtl+tlk" to
"jtl+tlk
3740 GOTO 3760
3750 PRINT#6,tl+tlk
3760 IF tl+tl+tlb THEN 3780
3770 FOR i=(tl+1) TO tlb:z#(i-tl+1+d11)=z(i):NEXT
i
3780 FOR i=(tlb-tl-d11) TO tlb:z#(i)=z(i):NEXT i
3790 tlb=(tlb-tl+d11-1)
3800 IF z#(i)>0 OR bt#(i)>0 THEN RETURN
3810 LOCATE #2,1,1
3820 plu=tl+cpud+1
3830 plutt=d11-10
3840 IF plutt<1+inf#(n-2) THEN plutt=1+inf#(n-2)
3850 IF plu<1+inf#(n-2) OR plu>plutt THEN plu=plu
tt
3860 plb=plu+22
3870 IF plb>tlb THEN plb=tlb
3880 FOR h=plu TO plb:PRINT#2,z#(h);CHR$(18):NEXT
h
3890 IF plu>22>tlb THEN PRINT#2,CHR$(20)
3900 cpud=mti+plu
3910 cplr=LEN(z#(tl)))+1
3920 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
3930 CLS #4:PRINT#6,tl+tlk:CLS #5:PRINT#5,tlb:CLS
#6
3940 dif#0
3950 RETURN
3960 ON (bt#(i)+1) GOTO 3970,4040,4160
3970 GOSUB 4850
3980 IF ASC(z#(i))=3 THEN 4010
3990 PRINT#6,"transfer from "jtl+tlk" to";
4000 GOTO 4020
4010 PRINT#6,"copy from "jtl+tlk" to";
4020 btl=tl+bt#(i)
4030 RETURN
4040 IF tl=btl THEN 4120
4050 CLS #6
4060 IF ASC(z#(i))=3 THEN 4090
4070 PRINT#6,"transfer from "jtl+tlk" to "jbtll+tlk";
to ";
4080 GOTO 4100
4090 PRINT#6,"copy from "jtl+tlk" to "jbtll+tlk";
to ";
4100 btl=btl+btll+btll-tl
4110 GOTO 4140
4120 btl=tl
4130 PRINT#6,tl+tlk" to ";
4140 bt#(i)=2
4150 RETURN
4160 PRINT#6,tl+tlk
4170 IF tl=btl OR tl<btl THEN 4210
4180 bt#(i)=0
4190 CLS #6
4200 RETURN
4210 FOR i=tlb TO tl+1 STEP -1:z#(i-btl+btll-1)=z
#(i):NEXT i
4220 btl=btl+bt2+btbl
4230 IF tl+1>btl THEN 4250
4240 btl=btl+1+bt2+btbl+btbl-btl+1
4250 FOR i=btl TO bt2:z#(i-btl+tl+1)=z#(i):NEXT i
4260 tlb=tlb+btbl-btl+1
4270 IF ASC(z#(i))=3 THEN 4310
4280 tlb=tlb+d11-btl+tl+bt2
4290 GOSUB 3760
4300 tl=tlb
4310 plu=tl+cpud+1
4320 plutt=tl-btl+btll-10
4330 IF plutt<1+inf#(n-2) THEN plutt=1+inf#(n-2)
4340 IF plu<1+inf#(n-2) OR plu>plutt THEN plu=plu
tt

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4350 plb=plu+22
4360 IF plb>t1b THEN plb=t1b
4370 LOCATE #2,1,1
4380 FOR h=plu TO plb:PRINT#2,z#(h);CHR$(10);NEXT
h
4390 IF plu+22>t1b THEN PRINT#2,CHR$(20)
4400 cpud=ltl+plu
4410 cplr=LEN(z#(t1))+1
4420 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
4430 CLS #4:PRINT#4,t1+t1b:CLS #5:PRINT#5,t1b:CLS
#6
4440 b1fg=0
4450 RETURN
4460 p1fg=0:p1fg=0:d1fg=0:b1fg=0
4470 CLS #6
4480 IF infg(>0) THEN 4670
4490 RETURN
4500 IF infg(>0) THEN 4670
4510 GOSUB 4850
4520 IF t1b<256 THEN 4540
4530 SOUND 1,60,3,12:SOUND 1,60,1,0 :RETURN
4540 att1=t1:att1b=t1b:t1=t1b+1:t1b=t1b+1:att1=att1+1
4550 infg=1
4560 PRINT#7,"insert mode"
4570 CLS #4:PRINT#4,t1-(att1-att1b):CLS #5:PRINT#5,
t1b
4580 IF cplr=(LEN(z#(att1))+1) THEN 4610
4590 LOCATE #2,cplr,cpud:PRINT#2,MID$(z#(t1),cplr,
1);
4600 GOTO 4620
4610 LOCATE #2,cplr,cpud:PRINT#2," ";
4620 cpud=cpud+1
4630 cplr=1
4640 LOCATE #2,1,cpud:PRINT#2,CHR$(20)
4650 LOCATE #2,1,cpud:PRINT#2,CHR$(95);
4660 RETURN
4670 FOR i=t1b TO (att1+1) STEP -1:z#(i+t1b-att1b)=
z#(i):NEXT i
4680 FOR i=(t1b+1) TO (t1b+t1b-att1b)
4690 z#(i-t1b+att1b)=z#(i):z#(i)=""
4700 NEXT i
4710 plu=t1+t1b-cpud+1
4720 plutt=att1-10
4730 IF plutt<i THEN plutt=i
4740 IF plu<i OR plu>plutt THEN plu=plutt
4750 plb=plu+22
4760 IF plb>t1b THEN plb=t1b
4770 LOCATE #2,1,1
4780 FOR i=plu TO plb:PRINT#2,z#(i);CHR$(10);NEXT
i
4790 IF (plu+22)>t1b THEN PRINT#2,CHR$(20)
4800 t1=plu:infg=0:cpud=1
4810 cplr=LEN(z#(t1))+1
4820 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
4830 CLS #4:PRINT#4,t1:CLS #7
4840 RETURN
4850 b1fg=0:p1fg=0:d1fg=0:p1fg=0
4860 CLS #6
4870 RETURN
4880 IF t1<1+infg*(n-2) THEN 4900
4890 SOUND 1,60,2,12:SOUND 1,60,1,0 :RETURN
4900 IF cpud>t1-1-infg*(n-2) THEN 5020
4910 plu=1+infg*(n-2):plb=plu+22
4920 plb=plu+22
4930 IF plb>t1b THEN plb=t1b
4940 LOCATE #2,1,1
4950 FOR h=plu TO plb:PRINT#2,z#(h);CHR$(10);NEXT
h
4960 IF plu+22>t1b THEN PRINT#2,CHR$(20)
4970 cpud=ltl+plu
4980 cplr=LEN(z#(t1))+1

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4990 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
5000 CLS #4:PRINT#4,t1+tik
5010 RETURN
5020 IF cpir=(LEN(z$tl)+1) THEN 5050
5030 LOCATE #2,cplr,cpud:PRINT#2,MID$(z$tl),cpir,
1;
5040 GOTO 5060
5050 LOCATE #2,cplr,cpud:PRINT#2," ";
5060 cpud=cpud-t1+infg*(n-2)
5070 t1=t1+infg*(n-2):cpir=LEN(z$tl)+1
5080 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
5090 CLS #4:PRINT#4,t1+tik
5100 RETURN
5110 IF t1<t1b THEN 5130
5120 SOUND 1,60,3,12:SOUND 1,60,1,0 :RETURN
5130 IF cpud(t1-t1b+24) THEN 5260
5140 plu=t1b-22
5150 IF plu<infg*(n-2) THEN plu=infg*(n-2)
5160 plb=plu+22
5170 IF plb>t1b THEN plb=t1b
5180 LOCATE #2,1,1
5190 FOR h=plu TO plb:PRINT#2,z$(h);CHR$(10);NEXT
h
5200 IF plu+22>t1b THEN PRINT#2,CHR$(20)
5210 cpud=1+plb-plu
5220 t1=plb:cpir=LEN(z$tl)+1
5230 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
5240 CLS #4:PRINT#4,t1+tik
5250 RETURN
5260 IF cpir=(LEN(z$tl)+1) THEN 5290
5270 LOCATE #2,cplr,cpud:PRINT#2,MID$(z$tl),cpir,
1;
5280 GOTO 5300
5290 LOCATE #2,cplr,cpud:PRINT#2," ";
5300 cpud=cpud-t1:t1b
5310 t1=t1b:cpir=LEN(z$tl)+1
5320 LOCATE #2,cplr,cpud:PRINT#2,CHR$(95);
5330 CLS #4:PRINT#4,t1+tik
5340 RETURN
5350 CLS #7
5360 PRINT#7,(t1b-t1b);" lines left"
5370 tin=TIME
5380 WHILE (TIME-tin)<400:WEND
5390 CLS #7
5400 IF infg=0 THEN 5420
5410 PRINT#7,"insert node"
5420 RETURN
5430 FOR h=0 TO (LEN(q$)-1):POKE (h+&A660),ASC(UPPER
MID$(q$(h+1),1,1)):NEXT h
5440 PEN 0:POKE &A652,LEN(q$):CALL &A651:PEN 1:CLS
SEIN
5450 RETURN
5460 q$=""
5470 $$$=INKEY$:IF $$$="" THEN 5470
5480 IF ASC($$$)=13 THEN 5580
5490 IF ASC($$$)<127 THEN 5550
5500 IF LEN(q$)>0 THEN 5520
5510 SOUND 1,60,3,12:SOUND 1,60,1,0:GOTO 5470
5520 q$=LEFT$(q$,LEN(q$)-1)
5530 IF $$$<0 THEN PRINT#6,CHR$(8);CHR$(10);
LEE PRINT CHR$(8);CHR$(10);
5540 GOTO 5470
5550 q$=q$+$$$
5560 IF $$$<0 THEN PRINT#6,$$$$ ELSE PRINT $$$
;
5570 GOTO 5470
5580 IF $$$<0 THEN PRINT#6 ELSE PRINT
5590 RETURN
5600 a$="" :$$$="" :RETURN

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