

ON KEY 0 to 20 GO TO (XX)

[illegible]

1					
2					
3	ADRESSE	000000 #ADRESSET	22/09/81	1	
4					
5	DIRECTIVE	000010 +SET 1 = 1160	07/04/81	2	
6	DIRECTIVE	000020 +SET 0 = 51	30/03/81	3	
7		000030 ** THIS MACRO IS PLACED AT THE TOP SO THAT IT IS EASY TO FIND	30/03/81	4	
8		000040 ** TO SET THE ADDRESSES FOR THE GRAPHICS ROUTINES?	18/08/81	5	
9		000050 ** ?1 IS THE BASE ADDRESS OF THE GRAPHICS WORK AREA	30/03/81	6	
10		000060 ** ?0 HOLDS THE RELATIVE ADDRESS OF THE GRAPHICS ROUTINES	30/03/81	7	
11		000070 ** JUMP TABLE TO ?1	30/03/81	8	
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1
2
3 BEEP 000000 #BEEP
4
5 000010 ?A
6 DIRECTIVE 000020 +EXIT
7 DIRECTIVE 000030 +IFF??A?EQUAL??
8 000040 PRINT CHR$(14) + CHR$(7)
9 DIRECTIVE 000050 +ELSE
10 000060 Z%=?A:GOSUB #BEEP
11 000070 (
12 000080 P BEEP
13 000090 )
14 DIRECTIVE 000100 +FI
15 DIRECTIVE 000110 +CEXIT
16 000120 (
17 000130 P SUB
18 000140 R BEEP
19 DIRECTIVE 000150 &IF/NO/BEEP/GO TO/BEEPEND
20 000160 BEEP
21 000170 Z$ = CHR$(14) + CHR$(7)
22 000180 FOR Z1% = ZM% TO ?A
23 000190 PRINT Z$
24 000200 NEXT Z1%
25 000210 RETURN
26 LABEL 000220 &&BEEPEND
27 000230 )
```

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27/03/81 9
12/03/81 10
15/06/81 11
18/08/81 12
23/03/81 13
12/03/81 14
03/04/81 15
03/04/81 16
03/04/81 17
03/04/81 18
03/04/81 19
03/04/81 20
03/04/81 21
03/04/81 22
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03/04/81 24
03/04/81 25
17/03/81 26
05/05/81 27
23/03/81 28
17/03/81 29
03/04/81 30
03/04/81 31
03/04/81 32
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SOUND 23,4

SOUND 23,4

SOUND 23, Z%



~~BE?A~~

FOR N% = 1 TO ?A

SOUND 23,4

NEXT N%

1					
2					
3	BREAK	000000 #BREAK	12/03/81	33	
4					
5		000010 ?A	12/03/81	34	
6	DIRECTIVE	000020 +DFT A = OFF	12/03/81	35	
7	DIRECTIVE	000030 +COMPUTE 2 = ?1 + 24	26/03/81	36 X	
8	DIRECTIVE	000040 +IFF??A?EQUAL?ON?	18/08/81	37	
9		000050 POKE ?2,ZM%	11/05/81	38	ON KEY 10 POKE ?2,ZM%
10	DIRECTIVE	000060 +ELSE	08/06/81	39	
11		000070 POKE ?2,ZL%	08/06/81	40	ON KEY 10 GOTO #BREAKOFF
12	DIRECTIVE	000080 +IF??A?NOT?EQUAL?OFF?WARNING?BREAK NOT ON OR OFF = SET TO OFF	18/08/81	41	
13	DIRECTIVE	000090 +FI	12/03/81	42	

BREAKOFF

RESUME NEXT

CALCULAT 000000 #CALCULATOR

26/03/81 43

ON 1 → Break work.
OFF 0

CLEAR23 000000 #CLEAR23

12/03/81

44

000010 ? A

04/06/81

45

000020 Z1% = USR (10 ,5888)

04/06/81

46

PRINT@ (23, 24%) SPC(40);

DIRECTIVE 000030 +IFF/?A/EQUAL//

04/06/81

47

000040 :GOSUB #SNUMBER

04/06/81

48

DIRECTIVE 000050 +FI

04/06/81

49

CLINE 000000 #CLINE

18/05/81 50

000010 ? A

18/05/81 51

DIRECTIVE 000020 +IFF??A?NUMERIC?

18/08/81 52

DIRECTIVE 000030 + COMPUTE A = ?A * 256

18/05/81 53

000040 Z%=USR(10,?A)

18/05/81 54

DIRECTIVE 000050 + IFF??A?EQUAL?23?

18/08/81 55

000060 GOSUB #SNUMBER

03/06/81 56

DIRECTIVE 000070 + FI

03/06/81 57

DIRECTIVE 000080 +ELSE

18/05/81 58

000090 Z%=USR(10,?A*256)

18/05/81 59

000100 IF?A=23THEN GOSUB #SNUMBER*

03/06/81 60

DIRECTIVE 000110 +FI

18/05/81 61

PRINT@(%A,ZL%)SPC(40);



REPORT SX3CMD/2.1

ATU

MACRO FILE: PPOMSY

MACRO: CLS

DATE: 24/09/81

TIME: 10:50

PAGE: 7

1					
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3	CLS	000000 #	CLS	12/03/81	62
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5		000010	CLS	18/05/81	63
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COLOUR	000000 #	COLOUR	12/03/81	64
	000010 ?A B		12/03/81	65
DIRECTIVE	000020 +	DFT B = G	12/03/81	66
DIRECTIVE	000030 +	IFF??B?NOT?EQUAL?G?IF??B?NOT?EQUAL?T?IF??B?NOT?EQUAL?B?	18/08/81	67
DIRECTIVE	000040 +	WARNING?INVALID SCREEN TYPE :?B - SET TO G	18/08/81	68
DIRECTIVE	000050 +	SET B = G	26/03/81	69
DIRECTIVE	000060 +	FI	26/03/81	70
DIRECTIVE	000070 +	IF??A?EQUAL?BLK?SET A = BLACK	18/08/81	71
DIRECTIVE	000080 +	LENGTH Z = ?A	26/03/81	72
DIRECTIVE	000090 +	IFF??Z?EQUAL?1?	18/08/81	73
DIRECTIVE	000100 +	IF??A?EQUAL?W?SET A = WHITE	18/08/81	74
DIRECTIVE	000110 +	IF??A?EQUAL?R?SET A = RED	18/08/81	75
DIRECTIVE	000120 +	IF??A?EQUAL?G?SET A = GREEN	18/08/81	76
DIRECTIVE	000130 +	IF??A?EQUAL?B?SET A = BLUE	18/08/81	77
DIRECTIVE	000140 +	IF??A?EQUAL?Y?SET A = YELLOW	18/08/81	78
DIRECTIVE	000150 +	IF??A?EQUAL?C?SET A = CYAN	18/08/81	79
DIRECTIVE	000160 +	IF??A?EQUAL?M?SET A = MAGENTA	18/08/81	80
DIRECTIVE	000170 +	FI	26/03/81	81
DIRECTIVE	000180 +	UNSET Z	26/03/81	82
DIRECTIVE	000190 +	IFF??B?EQUAL?B?	18/08/81	83
DIRECTIVE	000200 +	IF??A?EQUAL?RED? SET Z = 16	18/08/81	84
DIRECTIVE	000210 +	IF??A?EQUAL?GREEN? SET Z = 32	18/08/81	85
DIRECTIVE	000220 +	IF??A?EQUAL?YELLOW? SET Z = 48	18/08/81	86
DIRECTIVE	000230 +	IF??A?EQUAL?BLUE? SET Z = 64	18/08/81	87
DIRECTIVE	000240 +	IF??A?EQUAL?MAGENTA?SET Z = 80	18/08/81	88
DIRECTIVE	000250 +	IF??A?EQUAL?CYAN? SET Z = 96	18/08/81	89
DIRECTIVE	000260 +	IF??A?EQUAL?WHITE? SET Z = 112	18/08/81	90
DIRECTIVE	000270 +	IF??A?EQUAL?BLACK? SET Z = ZL%	18/08/81	91
DIRECTIVE	000280 +	IF??Z?EQUAL??WARNING?INVALID COLOUR :?A SET TO BLACK?	18/08/81	92
DIRECTIVE	000290 +	DFT Z = 0	26/03/81	93
	000300	Z1% = USR (Z1% ,USR (ZJ%) AND NOT 112 OR ?Z) BACKGROUND Z	05/05/81	94
DIRECTIVE	000310 +	ELSE	26/03/81	95
DIRECTIVE	000320 +	IFF??B?EQUAL?T?	18/08/81	96
DIRECTIVE	000330 +	IF??A?EQUAL?BLUE? SET Z = ZL%	18/08/81	97
DIRECTIVE	000340 +	IF??A?EQUAL?GREEN?SET Z = 512	18/08/81	98
DIRECTIVE	000350 +	IF??A?EQUAL?RED? SET Z = 1024	18/08/81	99
DIRECTIVE	000360 +	IF??A?EQUAL?WHITE?SET Z = 1536	18/08/81	100
DIRECTIVE	000370 +	IF??Z?EQUAL??WARNING?INVALID COLOUR :?A SET TO WHITE?	18/08/81	101
DIRECTIVE	000380 +	DFT Z = 1536	24/03/81	102
	000390	Z1% = USR (Z1% ,USR (ZJ%) AND NOT 1536 OR ?Z)	05/05/81	103
DIRECTIVE	000400 +	ELSE	24/03/81	104
DIRECTIVE	000410 +	IF??A?EQUAL?BLUE? SET Z = ZL%	18/08/81	105
DIRECTIVE	000420 +	IF??A?EQUAL?GREEN?SET Z = ZM%	18/08/81	106
DIRECTIVE	000430 +	IF??A?EQUAL?RED? SET Z = ZN%	18/08/81	107
DIRECTIVE	000440 +	IF??A?EQUAL?WHITE?SET Z = 3	18/08/81	108
DIRECTIVE	000450 +	IF??Z?EQUAL??WARNING?INVALID COLOUR :?A - SET TO WHITE	18/08/81	109
DIRECTIVE	000460 +	DFT Z = 3	24/03/81	110
DIRECTIVE	000470 +	COMPUTE 2 = ?1 + 1	26/03/81	111
	000480	POKE ?2,?Z	26/03/81	112
DIRECTIVE	000490 +	FI	24/03/81	113
DIRECTIVE	000500 +	FI	26/03/81	114

1
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3 CONVERT 000000 # CONVERT

03/06/81 115

4
5 000010 ?A

03/06/81 116

6 000020 Z=PTR(?A):GOSUB #CONVERT

03/06/81 117

7 DIRECTIVE 000030 +CEXIT

09/06/81 118

8 000040 (

03/06/81 119

9 000050 P SUB

03/06/81 120

10 000060 CONVERT

03/06/81 121

11 000070 Z1=DPEEK(Z+2):Z=DPEEK(Z)

03/06/81 122

12 000080 FORZ2=ZTOZ+Z1-1

03/06/81 123

13 000090 Z%=PEEK(Z2)

03/06/81 124

14 000100 IF(Z%AND96)=96THENPOKEZ2,Z%ANDNOT32x

03/06/81 125

15 000110 NEXTZ2

03/06/81 126

16 000120 RETURN

03/06/81 127

17 000130)

03/06/81 128

1					
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3	DISPLAY	000000 # DISPLAY	24/03/81	129	
4					
5		000010 ?A B	18/03/81	130	
6	DIRECTIVE	000020 +UNSET C	06/05/81	131	
7	DIRECTIVE	000030 +IF??A?EQUAL?T1?SET C = ZK%	18/08/81	132	
8	DIRECTIVE	000040 +IF??A?EQUAL?G1?SET C = ZL%	18/08/81	133	
9	DIRECTIVE	000050 +IF??A?EQUAL?T2?SET C = ZM%	18/08/81	134	
10	DIRECTIVE	000060 +IF??A?EQUAL?G2?SET C = ZN%	18/08/81	135	
11	DIRECTIVE	000070 +IFF??C?EQUAL??WARNING?INVALID SCREEN TYPE ?A	18/08/81	136	
12	DIRECTIVE	000080 +EXIT	06/05/81	137	
13	DIRECTIVE	000090 +FI	06/05/81	138	
14		000100 Z1%=?C	06/05/81	139	
15	DIRECTIVE	000110 +DFT B = ON	06/05/81	140	
16	DIRECTIVE	000120 +IFF??B?EQUAL?OFF?	18/08/81	141	
17		000130 Z2%=ZL%	06/05/81	142	
18	DIRECTIVE	000140 +ELSE	06/05/81	143	
19		000150 Z2%=ZM%	06/05/81	144	
20	DIRECTIVE	000160 +FI	06/05/81	145	
21		000170 GOSUB #DISPLAY	07/05/81	146	
22	DIRECTIVE	000180 +CEXIT	06/05/81	147	
23		000190 (	06/05/81	148	
24		000200 P SUB	06/05/81	149	
25		000210 DISPLAY	06/05/81	150	
26		000220 Z3%=USR(ZJ%)	08/05/81	151	
27		000230 IFZ1%=ZM%THENIF(Z3%AND6144)=6144THENRETURN*	08/05/81	152	
28		000240 IFZ1%=ZN%THENIF(Z3%AND4)=4THENRETURN*	08/05/81	153	
29		000250 IFZ1%=ZK%THENZ1%=8ELSEIFZ1%=ZL%THENZ1%=8192*	07/05/81	154	
30		000260 IFZ2%=ZM%THENZ1%=USR(Z1%,Z3%ORZ1%):RETURN*	08/05/81	155	
31		000270 Z1%=USR(Z1%,Z3%ANDNOTZ1%):RETURN	08/05/81	156	
32		000280)	06/05/81	157	
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Line	Code	Text	Date	Page
3	EDITOR	000000 #EDITOR	01/04/81	158
5		000010 ? A B C D E F G H I J	02/06/81	159
6		000020 **VARIABLE USAGE: Z% = CHARACTER RETURNED	27/03/81	160
7		000030 ** ZR% = CURSOR ROW ZC% = CURSOR COLUMN	27/03/81	161
8		000040 ** ZA% = START ROW ZB% = START COLUMN	27/03/81	162
9		000050 ** ZY% = LAST ROW ZZ% = LAST COLUMN	27/03/81	163
10		000060 ** ZD% = BLANK COLS ZE% = CHAR UNDER CURSOR	27/03/81	164
11		000070 ** ZF% = MACRO CALL COUNT	01/04/81	165
12	DIRECTIVE	000080 +DFT A = ZL%	05/05/81	166
13	DIRECTIVE	000090 +DFT B = ZL%	05/05/81	167
14	DIRECTIVE	000100 +DFT C = 22	27/03/81	168
15	DIRECTIVE	000110 +DFT D = 39	27/03/81	169
16	DIRECTIVE	000120 +DFT E = ER	27/03/81	170
17	DIRECTIVE	000130 +DFT F = ZL%	05/05/81	171
18	DIRECTIVE	000140 +DFT H = ZL%	05/05/81	172
19	DIRECTIVE	000150 +IF??A?GREATER?22?SET A = ZL%	18/08/81	173
20	DIRECTIVE	000160 +IF??B?GREATER?79?SET A = ZL%	18/08/81	174
21	DIRECTIVE	000170 +IF??C?GREATER?22?SET C = 22	18/08/81	175
22	DIRECTIVE	000180 +IF??D?GREATER?79?SET D = 79	18/08/81	176
23		000190 ZR%=?A:ZC%=?B:ZA%=?A:ZB%=?B:ZY%=?C:ZZ%=?D:ZD%=?F:ZF%=?#	22/04/81	177
24	DIRECTIVE	000200 +IFF??I?NOT?EQUAL?GET?IF??I?NOT?EQUAL??	18/08/81	178
25	DIRECTIVE	000210 +ELSE	29/04/81	179
26	DIRECTIVE	000220 + IFF??G?NOT?EQUAL??	18/08/81	180
27		000230 FOR Z%=ZA%TOZY%	02/04/81	181
28		000240 PRINT@ (Z%,ZB%)?G(?H+Z%-ZA%);	22/04/81	182
29		000250 NEXT Z%	02/04/81	183
30	DIRECTIVE	000260 + FI	02/04/81	184
31	DIRECTIVE	000270 +FI	02/04/81	185
32		000280 GOSUB #EDITX	22/04/81	186
33		000290 M CLEAR23	27/03/81	187
34		000300 (	27/03/81	188
35		000310 P EDITSUB	27/03/81	189
36	DIRECTIVE	000320 +IFF??#?EQUAL?1?	18/08/81	190
37		000330 [-] #?E	03/04/81	191
38	DIRECTIVE	000340 +ELSE	02/04/81	192
39		000350 [-] ,#?E	03/04/81	193
40	DIRECTIVE	000360 +FI	02/04/81	194
41		000370)	27/03/81	195
42	DIRECTIVE	000380 +IFF??I?NOT?EQUAL?PUT?IF??I?NOT?EQUAL??	18/08/81	196
43	DIRECTIVE	000390 +ELSE	29/04/81	197
44	DIRECTIVE	000400 + IFF??G?NOT?EQUAL??	18/08/81	198
45		000410 Z2%=ZZ% - ZB% + ZM%	05/05/81	199
46		000420 Z\$ = SPC(Z2%)	22/04/81	200
47		000430 Z=DPEEK(PTR(Z\$)):IFZ>ZH%THENZ=Z-ZH%	05/05/81	201
48		000440 FOR Z% = ZA% TO ZY%	27/03/81	202
49		000450 Z1%=USR(8,Z,Z2%,Z%*Z0%+ZB%)	05/05/81	203
50		000460 ?G(?H+Z%-ZA%)=Z\$	23/04/81	204
51		000470 NEXT Z%	27/03/81	205
52		000480 Z\$=""	27/03/81	206
53	DIRECTIVE	000490 + FI	02/04/81	207
54	DIRECTIVE	000500 +FI	27/03/81	208
55	DIRECTIVE	000510 +CEXIT	27/03/81	209
56		000520 (	27/03/81	210
57		000530 P SUB	27/03/81	211
58		000540 EDIT	27/03/81	212
59		000550 ** SET CURRENT CURSOR POSITION	27/03/81	213

For Start row and row

add length Row/col

array name

02/06/81	268
02/06/81	268

001130	M	TEXTGET?Z\$?ZR%?ZC%?Z2%-ZC%	18/08/81	271
001140		PRINT@ (ZR%,ZC%) " ";Z\$;	27/03/81	272
001150		RETURN	27/03/81	273
001160	E2		27/03/81	274
001170	**	CHARACTER DELETE	27/03/81	275
DIRECTIVE	001180	+IFF/?J/EQUAL/COL	02/06/81	276
001190		IFZD%=ZL%THENZ2%=ZZ%ELSEZ2%=INT((ZC%-ZB%)/ZD%+ZM%)*ZD%+ZB%-ZN%*	05/05/81	277
DIRECTIVE	001200	+ELSE	02/06/81	278
001210		Z2%=ZZ%	02/06/81	279
DIRECTIVE	001220	+FI	02/06/81	280
001230	M	TEXTGET?Z\$?ZR%?ZC%+1?Z2%-ZC%	18/08/81	281
001240		PRINT@ (ZR%,ZC%)Z\$;" ";	16/04/81	282
001250		RETURN	27/03/81	283
001260	E3		08/05/81	284
001270	**	CLEAR SCREEN - USES THE CALC KEY	08/05/81	285
001280		Z\$=SPC(ZZ%-ZB%+ZM%)	02/06/81	286
001290		FOR Z%= ZA%TOZY%	08/05/81	287
001300		PRINT@ (Z%,ZB%)Z\$;:NEXTZ%	08/05/81	288
001310		RETURN	08/05/81	289
001320	E6		27/03/81	290
001330	**	HELP - TO BE ADDED LATER	27/03/81	291
001340	R	HELP	08/05/81	292
001350		RETURN	27/03/81	293
001360	E8		27/03/81	294
001370	**	BACKSPACE	27/03/81	295
001380		ZC%=ZC%-ZM%	05/05/81	296
001390		IF ZC% < ZB% THEN ZC%=ZZ%:ZR%=ZR%-ZM%:IFZR%<ZA%THENZR%=ZY%*	05/05/81	297
DIRECTIVE	001400	+IFF/?J/EQUAL/COL/	02/06/81	298
001410		IFZD%=ZL%THENRETURN*	05/05/81	299
001420	**	CHECK THAT COLUMN SHOULD NOT BE BLANK	27/03/81	300
001430		IFINT((ZC%-ZB%+ZM%)/ZD%)*ZD%+ZB%-ZM%<>ZC%THENRETURNELSEGOTO#E8	02/06/81	301
DIRECTIVE	001440	+ELSE	02/06/81	302
001450		RETURN	02/06/81	303
DIRECTIVE	001460	+FI	02/06/81	304
001470	E9		27/03/81	305
001480	**	CURSOR FORWARD	27/03/81	306
001490		ZC%=ZC%+ZM%	05/05/81	307
001500		IF ZC% > ZZ% THEN ZC%=ZB%:ZR%=ZR%+ZM%:IFZR%>ZY%THENZR%=ZA%*	02/06/81	308
DIRECTIVE	001510	+IFF/?J/EQUAL/COL	02/06/81	309
001520		IFZD%=ZL%THENRETURN*	05/05/81	310
001530	**	CHECK THAT COLUMN SHOULD NOT BE BLANK	27/03/81	311
001540		IFINT((ZC%-ZB%+ZM%)/ZD%)*ZD%+ZB%-ZM%<>ZC%THENRETURNELSEGOTO#E9	02/06/81	312
DIRECTIVE	001550	+ELSE	02/06/81	313
001560		RETURN	02/06/81	314
DIRECTIVE	001570	+FI	02/06/81	315
001580	E10		07/04/81	316
001590	**	MOVE CURSOR DOWN	07/04/81	317
001600		ZR%=ZR%+ZM%:IF ZR%>ZY%THENZR%=ZA%*	05/05/81	318
001610		RETURN	07/04/81	319
001620	E11		27/03/81	320
001630	**	MOVE CURSOR UP	27/03/81	321
001640		ZR%=ZR%-ZM%	05/05/81	322
001650		IFZR%<ZA%THEN ZR%=ZY%*	27/03/81	323
001660		RETURN	27/03/81	324
001670	E16		19/05/81	325
001680	**	LINE INSERT	27/03/81	326
001690		Z2%=ZZ%-ZB%+ZM%	05/05/81	327

001700	Z\$=SPC(Z2%)	02/06/81	328
001710	Z=DPEEK(PTR(Z\$)):IFZ>ZH%THENZ=Z-ZH%	05/05/81	329
001720	FORZ%=ZY%-ZM% TO ZR% STEP ZK%	05/05/81	330
001730	Z1%=USR(8,Z,Z2%,Z%*Z0%+ZB%)	05/05/81	331
001740	PRINT@(Z%+ZM%,ZB%)Z\$;	05/05/81	332
001750	NEXT Z%	27/03/81	333
001760	PRINT@(ZR%,ZB%)SPC(Z2%);	27/03/81	334
001770	ZC%=ZB%	27/03/81	335
001780	RETURN	27/03/81	336
001790	E17	27/03/81	337
001800	** LINE DELETE	27/03/81	338
001810	Z2%=ZZ%-ZB%+ZM%	05/05/81	339
001820	Z\$=SPC(Z2%)	02/06/81	340
001830	Z=DPEEK(PTR(Z\$)):IFZ>ZH%THENZ=Z-ZH%	05/05/81	341
001840	FORZ%=ZR% TO ZY%-ZM%	05/05/81	342
001850	Z1%=USR(8,Z,Z2%,(Z%+ZM%)*Z0%+ZB%)	05/05/81	343
001860	PRINT@(Z%,ZB%)Z\$;	22/04/81	344
001870	NEXT Z%	27/03/81	345
001880	PRINT@(ZY%,ZB%)SPC(Z2%);	27/03/81	346
001890	ZC%=ZB%	27/03/81	347
001900	RETURN	27/03/81	348
001910	)	27/03/81	349

EDITORFS	000000 #	EDITORFS	FROM SOURCE FILE	02/12/81	000000	350
	000010	**VARIABLE USAGE: ZX = CHARACTER RETURNED		02/12/81	000010	351
	000020	** ZRX = CURSOR ROW ZCX = CURSOR COLUMN		02/12/81	000020	352
	000030	** ZYX = LAST ROW (22) ZZX = LAST COLUMN (39)		02/12/81	000030	353
	000040	** ZEX = CHAR UNDER CURSOR		02/12/81	000040	354
	000050	ZRX=ZLX:ZCX=ZLX:ZYX=21:ZZX=39:ZX=ZH		02/12/81	000050	355
	000060	EDIT0		02/12/81	000060	356
	000070	IF ZX <> ZH THEN ?@ (ZRX,ZCX) CHR\$(ZX))X		02/12/81	000070	357
	000080	EDIT00		02/12/81	000080	358
REDI - RREF	000090	PRINT@ (ZRX,ZCX))		02/12/81	000090	359
	000100	EDIT1		02/12/81	000100	360
	000110	ZX=ZLX:ZCX=ZLX		02/12/81	000110	361
	000120	** GET CHARACTER THAT IS WAITING		02/12/81	000120	362
	000130	ZX = USR(1)/256		02/12/81	000130	363
	000140	IF ZX > 31 OR ZX = ZLX GOTO #EDIT2X		02/12/81	000140	364
	000150	IF ZX > 18 THEN ZX = ZX - 9X		02/12/81	000150	365
	000160	IF ZX < 12 THEN ON ZX GOSUB #E1,#E2,#E3,#E4,#E5,#E6,		04/12/81	000160	366
	000170	#E7,#E8,#E9,#E10,#E11X		04/12/81	000170	367
	000180	IF ZX > 11 THEN ON ZX = 11 GOSUB #E12,#E13,#E14,#E15,		04/12/81	000180	368
	000190	#E16,#E17,#E18,#E28,#E29,#E30,#E31X		04/12/81	000190	369
	000200	GOTO #EDIT0X		02/12/81	000200	370
	000210	EDIT2		02/12/81	000210	371
	000220	ZX=ZH		02/12/81	000220	372
	000230	R EDITSUB		02/12/81	000230	373
	000240	** LOOP IF INVALID CHARACTER		02/12/81	000240	374
	000250	IF ZX = ZLX GOTO #EDIT1X		02/12/81	000250	375
	000260	** PRINT CHARACTER ON THE SCREEN		02/12/81	000260	376
	000270	PRINT@ (ZRX,ZCX) CHR\$(ZX))		02/12/81	000270	377
	000280	GOSUB #E0		02/12/81	000280	378
	000290	GOTO #EDIT00		02/12/81	000290	379
	000300	E0		02/12/81	000300	380
	000310	ZCX = ZCX + ZMX		02/12/81	000310	381
	000320	IF ZCX > ZZX THEN ZCX = ZLX:ZRX = ZRX + ZMX:IF ZRX > ZYX THEN		02/12/81	000320	382
	000330	ZRX = ZLX		02/12/81	000330	383
	000340	RETURN		02/12/81	000340	384
	000350	E1		02/12/81	000350	385
	000360	** CHARACTER INSERT		02/12/81	000360	386
	000370	ZZX=ZZX-ZCX		02/12/81	000370	387
	000380	GOSUB #ETEXT		02/12/81	000380	388
	000390	PRINT " ";ZS;		02/12/81	000390	389
	000400	RETURN		02/12/81	000400	390
	000410	E2		02/12/81	000410	391
	000420	** CHARACTER DELETE		02/12/81	000420	392
	000430	ZZX=ZZX-ZCX		02/12/81	000430	393
	000440	ZCX=ZCX+ZMX:GOSUB #ETEXT:ZCX=ZCX-ZMX		02/12/81	000440	394
	000450	PRINT@ (ZRX,ZCX)ZS;" "		02/12/81	000450	395
	000460	RETURN		02/12/81	000460	396
	000470	E3		02/12/81	000470	397
	000480	** CLEAR SCREEN		02/12/81	000480	398
	*000490	CLS:PRINTSPC(880))		08/12/81	000490	399
	000500	ZRX=ZLX:ZCX=ZLX:ZX=ZH:RETURN		02/12/81	000500	400
	000510	E4		02/12/81	000510	401
	000520	** CLEAR TO END OF LINE		02/12/81	000520	402
	000530	PRINTSPC(ZZX-ZCX+ZMX)):ZX=ZH:RETURN		02/12/81	000530	403
	000540	E5		02/12/81	000540	404
	000550	** CLEAR TO END OF PAGE		02/12/81	000550	405

000560	PRINTSPC((ZYX-ZRX)*40+ZZX-ZCX+ZMX))ZXX=ZHX;RETURN	02/12/81	000560	406
000570	E6	02/12/81	000570	407
000580	** HELP - TO BE ADDED LATER	02/12/81	000580	408
000590	R HELP	02/12/81	000590	409
000600	RETURN	02/12/81	000600	410
000610	E7	02/12/81	000610	411
000620	** HOME CURSOR	02/12/81	000620	412
000630	ZRX=ZLX;ZCX=ZLX;ZXX=ZHX;RETURN	02/12/81	000630	413
000640	E8	02/12/81	000640	414
000650	** BACKSPACE	02/12/81	000650	415
000660	ZCX=ZCX-ZMX	02/12/81	000660	416
000670	IF ZCX < ZLX THEN ZCX=ZZX;ZRX=ZRX-ZMX;IF ZRX < ZLX THEN ZRX=ZYXX	02/12/81	000670	417
000680	RETURN	02/12/81	000680	418
000690	E9	02/12/81	000690	419
000700	** CURSOR FORWARD	02/12/81	000700	420
000710	GOSUB #E0	02/12/81	000710	421
000720	RETURN	02/12/81	000720	422
000730	E10	02/12/81	000730	423
000740	** MOVE CURSOR DOWN	02/12/81	000740	424
000750	ZRX=ZRX+ZMX;IF ZRX > ZYX THEN ZRX=ZAXX	02/12/81	000750	425
000760	RETURN	02/12/81	000760	426
000770	E11	02/12/81	000770	427
000780	** MOVE CURSOR UP	02/12/81	000780	428
000790	ZRX=ZRX-ZMX	02/12/81	000790	429
000800	IF ZRX < ZLX THEN ZRX=ZYXX	02/12/81	000800	430
000810	RETURN	02/12/81	000810	431
000820	E12	02/12/81	000820	432
000830	** RETURN TO START OF LINE	02/12/81	000830	433
000840	ZCX=ZLX;RETURN	02/12/81	000840	434
000850	E13	02/12/81	000850	435
000860	** NEXT LINE	02/12/81	000860	436
000870	ZCX=ZLX;GOSUB #E10;ZXX=ZHX;RETURN	02/12/81	000870	437
000880	E14	02/12/81	000880	438
000890	** INSERT CHARACTER ON THE PAGE	02/12/81	000890	439
000900	ZZX=879-ZCX-ZRX*40;GOSUB #ETEXT	02/12/81	000900	440
000910	PRINT " ";Z\$;RETURN	02/12/81	000910	441
000920	E15	02/12/81	000920	442
000930	** DELETE A CHARACTER ON THE PAGE	02/12/81	000930	443
000940	ZZX=880-ZCX-ZRX*40	02/12/81	000940	444
000950	GOSUB #ETEXT	02/12/81	000950	445
000960	PRINTRIGHT\$(Z\$,ZZX-1);" ";RETURN	02/12/81	000960	446
000970	E16	02/12/81	000970	447
000980	** LINE INSERT	02/12/81	000980	448
000990	ZZX=(ZYX-ZRX)*40	02/12/81	000990	449
001000	ZCX=ZLX;GOSUB #ETEXT	02/12/81	001000	450
001010	PRINT\$(ZRX,ZCX)SPC(40);Z\$;	02/12/81	001010	451
001020	RETURN	02/12/81	001020	452
001030	E17	02/12/81	001030	453
001040	** LINE DELETE	02/12/81	001040	454
001050	ZZX=(ZYX-ZRX)*40	02/12/81	001050	455
001060	ZCX=ZLX;ZRX=ZRX+ZMX;GOSUB #ETEXT;ZRX=ZRX-ZMX	02/12/81	001060	456
001070	PRINT\$(ZRX,ZLX)Z\$;SPC(40);	02/12/81	001070	457
001080	RETURN	02/12/81	001080	458
001090	E18	02/12/81	001090	459
001100	** REPEAT (CTR R)	02/12/81	001100	460
001110	PRINT\$(ZRX,ZCX);ZXX=USR(15);RETURN	02/12/81	001110	461
001120	E28	02/12/81	001120	462

ZL%

001130 **	UP/LEFT CURSOR	02/12/81	001130	463
001140	GOSUB #E8:GOSUB #E11:RETURN	02/12/81	001140	464
001150 E29		02/12/81	001150	465
001160 **	UP/RIGHT CURSOR	02/12/81	001160	466
001170	GOSUB #E9:GOSUB #E11:RETURN	02/12/81	001170	467
001180 E30		02/12/81	001180	468
001190 **	DOWN/LEFT CURSOR	02/12/81	001190	469
001200	GOSUB #E8:GOSUB #E10:RETURN	02/12/81	001200	470
001210 E31		02/12/81	001210	471
001220 **	DOWN/RIGHT CURSOR	02/12/81	001220	472
001230	GOSUB #E9:GOSUB #E10:RETURN	02/12/81	001230	473
001240 ER		02/12/81	001240	474
001250	RETURN	02/12/81	001250	475
001260 ETEXT		02/12/81	001260	476
001270 **	GETS TEXT FROM THE SCREEN	02/12/81	001270	477
001280	ZX%=ZH%	02/12/81	001280	478
001290	Z\$=SPC(Z2%)	02/12/81	001290	479
001300	IF Z2%<1 THEN RETURN*	02/12/81	001300	480
001310	ZZ=DPEEK(PTR(Z\$)):IF ZZ>ZH% THEN ZZ=ZZ-ZH%	02/12/81	001310	481
001320	Z3%=USR(8,ZZ,Z2%,ZR%*256+ZC%)*	02/12/81	001320	482
001330	RETURN	02/12/81	001330	483

	GCIRCLE	*000000 #	GCIRCLE	FROM SOURCE FILE	22/12/81	000000	485/
1							
2							
3							
4		*000010	? A B C D E		22/12/81	000010	486
5		*000020	** ZP%=Y COORD, ZQ%=X COORD, ZS%=DEVIATION FROM ELLIPSE		22/12/81	000020	487
6	DIRECTIVE	*000030	+ IFF/?D/NOT/EQUAL/OFF/IF/?D/NOT/EQUAL/ON/IF/?D/NOT/EQUAL//		22/12/81	000030	488
7	DIRECTIVE	*000040	+ WARNING/INCORRECT PARAMETER, SET TO ON/		22/12/81	000040	489
8	DIRECTIVE	*000050	+ SET D = ON		22/12/81	000050	490
9	DIRECTIVE	*000060	+ FI		22/12/81	000060	491
10	DIRECTIVE	*000070	+ DFT E = 2.04		22/12/81	000070	492
11		*000080	Z7% = ?A		22/12/81	000080	493
12		*000090	Z8% = ?B		22/12/81	000090	494
13		*000100	Z9% = ?C		22/12/81	000100	495
14		*000110	ZT = 1/?E		22/12/81	000110	496
15		*000120	IF ZT>100 THEN ZT=100!		22/12/81	000120	497
16		*000130	IF ZT<.01 THEN ZT=.01!		22/12/81	000130	498
17	DIRECTIVE	*000140	+ IFF/?D/EQUAL/OFF/		22/12/81	000140	499
18	DIRECTIVE	*000150	+ SET D = 0		22/12/81	000150	500
19	DIRECTIVE	*000160	+ ELSE		22/12/81	000160	501
20	DIRECTIVE	*000170	+ SET D = 1		22/12/81	000170	502
21	DIRECTIVE	*000180	+ FI		22/12/81	000180	503
22		*000190	Z6% = ?D		22/12/81	000190	504
23		*000200	GOSUB #GCIRCLE		22/12/81	000200	505
24	DIRECTIVE	*000210	+CEXIT		22/12/81	000210	506
25		*000220	C		22/12/81	000220	507
26		*000230	P SUB		22/12/81	000230	508
27		*000240	GCIRCLE		22/12/81	000240	509
28		*000250	ZP%=ZL%		22/12/81	000250	510
29		*000260	ZQ%=Z9%		22/12/81	000260	511
30		*000270	ZS%=-Z9%+.25		22/12/81	000270	512
31		*000280	CIRC2		22/12/81	000280	513
32		*000290	IF ZQ%<ZL% THEN RETURN!		22/12/81	000290	514
33		*000300	** CALC AND PLOT POINTS		22/12/81	000300	515
34		*000310	ZU%=Z7%+ZP%		22/12/81	000310	516
35		*000320	ZV%=Z8%+ZQ%		22/12/81	000320	517
36		*000330	ZF%=Z8%+Z8%-ZV%		22/12/81	000330	518
37		*000340	ZG%=Z7%+Z7%-ZU%		22/12/81	000340	519
38		*000350	ZX=ZU%:ZY=ZV%:GOSUB#GCIRCLE4		22/12/81	000350	520
39		*000360	ZX=ZU%:ZY=ZF%:GOSUB#GCIRCLE4		22/12/81	000360	521
40		*000370	ZX=ZG%:ZY=ZV%:GOSUB#GCIRCLE4		22/12/81	000370	522
41		*000380	ZX=ZG%:ZY=ZF%:GOSUB#GCIRCLE4		22/12/81	000380	523
42		*000390	** CALC NEW POINTS ON REFERENCE ELLIPSE		22/12/81	000390	524
43		*000400	IF ZP%*ZT > ZQ% GOTO#CIRC1!		22/12/81	000400	525
44		*000410	ZP%=ZP%+1		22/12/81	000410	526
45		*000420	ZS%=ZS%+ ZP%*ZN%*ZT + ZT		22/12/81	000420	527
46		*000430	IF ZS%>0 THEN ZQ%=ZQ%-1 : ZS%=ZS%-ZQ%*ZN%+ZN%!		22/12/81	000430	528
47		*000440	GOTO#CIRC2		22/12/81	000440	529
48		*000450	CIRC1		22/12/81	000450	530
49		*000460	ZQ%=ZQ%-1 : ZS%=ZS%-ZQ%*ZN%+ZN%		22/12/81	000460	531
50		*000470	IF ZS%<0 THEN ZP%=ZP%+1 : ZS%=ZS%+ ZP%*ZN%*ZT + ZT!		22/12/81	000470	532
51		*000480	GOTO#CIRC2		22/12/81	000480	533
52		*000490	GCIRCLE4		22/12/81	000490	534
53		*000500	** X, Y ARE REVERSED !!!!!!!!!!!!!!!!!!!!!		22/12/81	000500	535
54		*000510	IF ZX>203 OR ZX<0 GOTO#GCIRCLE1 !		22/12/81	000510	536
55		*000520	IF ZY>239 OR ZY<0 GOTO#GCIRCLE1 !		22/12/81	000520	537
56		*000530	IF Z6%<>0 GOTO#GCIRCLE2 !		22/12/81	000530	538
57		*000540	R GCIRCLE-EX1		22/12/81	000540	539
58		*000550	M GRESETZXZY?		22/12/81	000550	540
59							
60							

```
*000560 GCIRCLE2
*000570 IF 76%<>1 GOTO#GCIRCLE1 !
*000580 R GCIRCLE=EX2
*000590 M GSET?ZX?ZY?
*000600 GCIRCLE1
*000610 RETURN
*000620 )
```

```
22/12/81 000560 541
22/12/81 000570 542
22/12/81 000580 543
22/12/81 000590 544
22/12/81 000600 545
22/12/81 000610 546
22/12/81 000620 547
```



GCLS

000000 # GCLS

20/03/81 367



DIRECTIVE

000010 + COMPUTE 2 = ?0 + ?1 +6
000020 Z1%=USR(?2,ZL%)22/04/81 368
05/05/81 369

```
GCONVERT      000000 #      GCONVERT
                000010 ? A B
DIRECTIVE      000020 +      COMPUTE 2 = ?1 + ?0 + 20
                000030      Z=PTR(?A);IFZ>ZH%THENZ=Z-ZH*
                000040      Z1% = USR(?2,Z)
DIRECTIVE      000050 +IF??B?EQUAL??EXIT
DIRECTIVE      000060 +      COMPUTE 2 = ?1 + 2
                000070      ?B=SPC(DPEEK(?2))
DIRECTIVE      000080 +      COMPUTE 2 = ?1 + ?0 + 16
                000090      Z=PTR(?B);IFZ>ZH%THENZ=Z-ZH*
                000100      Z1% = USR(?2,Z)
```

25/03/81 370

25/03/81 371

26/03/81 372

05/05/81 373

30/04/81 374

18/08/81 375

26/03/81 376

02/06/81 377

26/03/81 378

05/05/81 379

13/05/81 380

GETNAME

000000 # GETNAME

23/03/81 381

000010 ?A B

12/03/81 382

000020 GDSUB #GETNAME

03/04/81 383

000030 ?A = Z\$

03/04/81 384

000040 ?B = Z1\$

03/04/81 385

DIRECTIVE

000050 +CEXIT

03/04/81 386

000060 (

03/04/81 387

000070 P SUB

03/04/81 388

000080 GETNAME

03/04/81 389

000090 Z\$=SPC(12)

02/06/81 390

000100 Z=DPEEK(PTR(Z\$)):IFZ>ZH%THENZ=Z-ZH*

05/05/81 391

000110 Z1% = USR (51,ZM%,Z)

05/05/81 392

000120 Z1\$ = Z\$

30/04/81 393

000130 Z1% = USR (51,ZL%,Z)

05/05/81 394

000140 RETURN

03/04/81 395

000150)

03/04/81 396

GFILL	000000 #GFILL	12/03/81	397
	000010 ?A B C D E F G H I J K L M N O P Q R S T U V W X Y	01/05/81	398
DIRECTIVE	000020 +IFF??A?EQUAL?LINE?SET A = Z\$	18/08/81	399
	000030 M GLINE?Z\$??B??C??D??E??F??G??H??I??J??K??L??M??N??O??P??Q	18/08/81	400
	000040 " ??R??S??T??U??V??W??X??Y	18/08/81	401
DIRECTIVE	000050 + UNSET B	01/05/81	402
DIRECTIVE	000060 + UNSET C	01/05/81	403
DIRECTIVE	000070 + SET D = 63	01/05/81	404
DIRECTIVE	000080 + SET E = ZH%	05/05/81	405
DIRECTIVE	000090 +FI	01/05/81	406
DIRECTIVE	000100 +SET F = 0	01/05/81	407
DIRECTIVE	000110 +IF??B?EQUAL??SET F = 1	18/08/81	408
DIRECTIVE	000120 +IF??C?EQUAL??SET F = 1	18/08/81	409
DIRECTIVE	000130 +COMPUTE 2 = ?1 + ?0 + 6	22/04/81	410
DIRECTIVE	000140 +IFF??A?EQUAL??IF??B?EQUAL??IF??C?EQUAL??IF??D?EQUAL??	18/08/81	411
	000150 Z1% = USR(?2,ZL%)	05/05/81	412
DIRECTIVE	000160 +EXIT	23/03/81	413
DIRECTIVE	000170 +FI	18/03/81	414
DIRECTIVE	000180 +COMPUTE 2 = ?1 + ?0 + 10	22/04/81	415
DIRECTIVE	000190 +DFT D = 0	18/03/81	416
DIRECTIVE	000200 +IFF??D?NUMERIC?	18/08/81	417
DIRECTIVE	000210 + IF??D?GREATER?63?SET D = 63	18/08/81	418
DIRECTIVE	000220 + IF??D?EQUAL?0?SET D = ZL%	18/08/81	419
	000230 ZD%=?D	22/04/81	420
DIRECTIVE	000240 +ELSE	01/04/81	421
	000250 ZD%=ABS(?D)	22/04/81	422
DIRECTIVE	000260 +FI	01/04/81	423
DIRECTIVE	000270 +DFT A = 0	22/04/81	424
DIRECTIVE	000280 +IFF??A?EQUAL?LDB?SET A =	18/08/81	425
DIRECTIVE	000290 +ELSE	30/04/81	426
DIRECTIVE	000300 + IFF??A?NOT?EQUAL?0?	18/08/81	427
	000310 Z=PTR(?A):IFZ>ZH%THENZ=Z-ZH%	05/05/81	428
DIRECTIVE	000320 + SET A = Z	30/04/81	429
DIRECTIVE	000330 + FI	30/04/81	430
DIRECTIVE	000340 +FI	12/03/81	431
DIRECTIVE	000350 +IF??A?EQUAL?0?SET A = ZL%	18/08/81	432
	000360 Z1%=ZL%	05/05/81	433
DIRECTIVE	000370 +DFT B = 0	22/04/81	434
DIRECTIVE	000380 +IFF??B?NOT?NUMERIC?	18/08/81	435
	000390 IF (?B) < 0 THEN Z1% = 1x	22/04/81	436
DIRECTIVE	000400 + SET B = ABS(?B)	22/04/81	437
DIRECTIVE	000410 +FI	23/03/81	438
DIRECTIVE	000420 +IF??B?EQUAL?0?SET B = ZL%	18/08/81	439
DIRECTIVE	000430 +DFT C = 0	30/04/81	440
DIRECTIVE	000440 +IFF??C?NOT?NUMERIC?	18/08/81	441
	000450 IF (?C) < ZL% THEN Z1% = Z1% + ZN%*	05/05/81	442
DIRECTIVE	000460 + SET C = ABS(?C)	30/04/81	443
DIRECTIVE	000470 +FI	23/03/81	444
DIRECTIVE	000480 +IF??C?EQUAL?0?SET C = ZL%	18/08/81	445
DIRECTIVE	000490 +SET C = + ?C	04/05/81	446
DIRECTIVE	000500 +DFT E = ZM%	05/05/81	447
DIRECTIVE	000510 +SET C = (?E) * ZP% ?C	05/05/81	448
DIRECTIVE	000520 +IF??F?EQUAL?1?SET C = (?C)ORNOTZH%	18/08/81	449
	000530 Z8% = USR(?2,?A,CVT\$(CHR\$(?B)+CHR\$(ZD%*4+Z1%)),?C)	22/06/81	450

GLINE	000000 #GLINE	13/05/81	451
	000010 ?A B C D E F G H I J K L M N O P Q R S T U V W X Y	13/05/81	452
DIRECTIVE	000020 +DFT A = Z\$	13/05/81	453
DIRECTIVE	000030 +UNSET Z	13/05/81	454
DIRECTIVE	000040 +UNSET 6	13/05/81	455
DIRECTIVE	000050 +IFF??B?NOT?EQUAL??IF??C?NOT?EQUAL??IF??D?NOT?EQUAL??	18/08/81	456
	000060 -IF??E?NOT?EQUAL??	18/08/81	457
DIRECTIVE	000070 +ELSE?WARNING?NO LINE DEFINED	18/08/81	458
DIRECTIVE	000080 + EXIT	13/05/81	459
DIRECTIVE	000090 +FI	13/05/81	460
DIRECTIVE	000100 +IF??B?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	461
DIRECTIVE	000110 +IF??B?GREATER?203?SET B = 203	18/08/81	462
DIRECTIVE	000120 +SET Z = ??B,	13/05/81	463
DIRECTIVE	000130 +IF??C?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	464
DIRECTIVE	000140 +IF??C?GREATER?32767?SET C = 0	18/08/81	465
DIRECTIVE	000150 +SET Z = ??C,	13/05/81	466
DIRECTIVE	000160 +IF??D?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	467
DIRECTIVE	000170 +IF??D?GREATER?203?SET D = 203	18/08/81	468
DIRECTIVE	000180 +SET Z = ??D,	13/05/81	469
DIRECTIVE	000190 +IF??E?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	470
DIRECTIVE	000200 +IF??E?GREATER?32767?SET E = 0	18/08/81	471
DIRECTIVE	000210 +SET Z = ??E,	13/05/81	472
DIRECTIVE	000220 +IF??F?EQUAL??GO TO?FINISH	18/08/81	473
DIRECTIVE	000230 +IF??G?EQUAL??GO TO?FINISH	18/08/81	474
DIRECTIVE	000240 +IF??F?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	475
DIRECTIVE	000250 +IF??F?GREATER?203?SET F = 203	18/08/81	476
DIRECTIVE	000260 +SET Z = ??F,	13/05/81	477
DIRECTIVE	000270 +IF??G?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	478
DIRECTIVE	000280 +IF??G?GREATER?32767?SET G = 0	18/08/81	479
DIRECTIVE	000290 +SET Z = ??G,	13/05/81	480
DIRECTIVE	000300 +IF??H?EQUAL??GO TO?FINISH	18/08/81	481
DIRECTIVE	000310 +IF??I?EQUAL??GO TO?FINISH	18/08/81	482
DIRECTIVE	000320 +IF??H?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	483
DIRECTIVE	000330 +IF??H?GREATER?203?SET H = 203	18/08/81	484
DIRECTIVE	000340 +SET Z = ??H,	13/05/81	485
DIRECTIVE	000350 +IF??I?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	486
DIRECTIVE	000360 +IF??I?GREATER?32767?SET I = 0	18/08/81	487
DIRECTIVE	000370 +SET Z = ??I,	13/05/81	488
DIRECTIVE	000380 +IF??J?EQUAL??GO TO?FINISH	18/08/81	489
DIRECTIVE	000390 +IF??K?EQUAL??GO TO?FINISH	18/08/81	490
DIRECTIVE	000400 +IF??J?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	491
DIRECTIVE	000410 +IF??J?GREATER?203?SET J = 203	18/08/81	492
DIRECTIVE	000420 +SET Z = ??J,	13/05/81	493
DIRECTIVE	000430 +IF??K?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	494
DIRECTIVE	000440 +IF??K?GREATER?32767?SET K = 0	18/08/81	495
DIRECTIVE	000450 +SET Z = ??K,	13/05/81	496
DIRECTIVE	000460 +IF??L?EQUAL??GO TO?FINISH	18/08/81	497
DIRECTIVE	000470 +IF??M?EQUAL??GO TO?FINISH	18/08/81	498
DIRECTIVE	000480 +IF??L?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	499
DIRECTIVE	000490 +IF??L?GREATER?203?SET L = 203	18/08/81	500
DIRECTIVE	000500 +SET Z = ??L,	13/05/81	501
DIRECTIVE	000510 +IF??M?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	502
DIRECTIVE	000520 +IF??M?GREATER?32767?SET M = 0	18/08/81	503
DIRECTIVE	000530 +SET Z = ??M,	13/05/81	504
DIRECTIVE	000540 +IF??N?EQUAL??GO TO?FINISH	18/08/81	505
DIRECTIVE	000550 +IF??D?EQUAL??GO TO?FINISH	18/08/81	506

DIRECTIVE	000560	+IF??N?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	507
DIRECTIVE	000570	+IF??N?GREATER?203?SET N = 203	18/08/81	508
DIRECTIVE	000580	+SET 6 = ?6?N,	13/05/81	509
DIRECTIVE	000590	+IF??O?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	510
DIRECTIVE	000600	+IF??O?GREATER?32767?SET O = 0	18/08/81	511
DIRECTIVE	000610	+SET 6 = ?6?O,	13/05/81	512
DIRECTIVE	000620	+IF??P?EQUAL??GO TO?FINISH	18/08/81	513
DIRECTIVE	000630	+IF??Q?EQUAL??GO TO?FINISH	18/08/81	514
DIRECTIVE	000640	+IF??P?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	515
DIRECTIVE	000650	+IF??P?GREATER?203?SET P = 203	18/08/81	516
DIRECTIVE	000660	+SET 6 = ?6?P,	13/05/81	517
DIRECTIVE	000670	+IF??Q?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	518
DIRECTIVE	000680	+IF??Q?GREATER?32767?SET Q = 0	18/08/81	519
DIRECTIVE	000690	+SET 6 = ?6?Q,	13/05/81	520
DIRECTIVE	000700	+IF??R?EQUAL??GO TO?FINISH	18/08/81	521
DIRECTIVE	000710	+IF??S?EQUAL??GO TO?FINISH	18/08/81	522
DIRECTIVE	000720	+IF??R?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	523
DIRECTIVE	000730	+IF??R?GREATER?203?SET R = 203	18/08/81	524
DIRECTIVE	000740	+SET 6 = ?6?R,	13/05/81	525
DIRECTIVE	000750	+IF??S?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	526
DIRECTIVE	000760	+IF??S?GREATER?32767?SET S = 0	18/08/81	527
DIRECTIVE	000770	+SET 6 = ?6?S,	13/05/81	528
DIRECTIVE	000780	+IF??T?EQUAL??GO TO?FINISH	18/08/81	529
DIRECTIVE	000790	+IF??U?EQUAL??GO TO?FINISH	18/08/81	530
DIRECTIVE	000800	+IF??T?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	531
DIRECTIVE	000810	+IF??T?GREATER?203?SET T = 203	18/08/81	532
DIRECTIVE	000820	+SET 6 = ?6?T,	13/05/81	533
DIRECTIVE	000830	+IF??U?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	534
DIRECTIVE	000840	+IF??U?GREATER?32767?SET U = 0	18/08/81	535
DIRECTIVE	000850	+SET 6 = ?6?U,	13/05/81	536
DIRECTIVE	000860	+IF??V?EQUAL??GO TO?FINISH	18/08/81	537
DIRECTIVE	000870	+IF??W?EQUAL??GO TO?FINISH	18/08/81	538
DIRECTIVE	000880	+IF??V?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	539
DIRECTIVE	000890	+IF??V?GREATER?203?SET V = 203	18/08/81	540
DIRECTIVE	000900	+SET 6 = ?6?V,	13/05/81	541
DIRECTIVE	000910	+IF??W?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	542
DIRECTIVE	000920	+IF??W?GREATER?32767?SET W = 0	18/08/81	543
DIRECTIVE	000930	+SET 6 = ?6?W,	13/05/81	544
DIRECTIVE	000940	+IF??X?EQUAL??GO TO?FINISH	18/08/81	545
DIRECTIVE	000950	+IF??Y?EQUAL??GO TO?FINISH	18/08/81	546
DIRECTIVE	000960	+IF??X?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	547
DIRECTIVE	000970	+IF??X?GREATER?203?SET X = 203	18/08/81	548
DIRECTIVE	000980	+SET 6 = ?6?X,	13/05/81	549
DIRECTIVE	000990	+IF??Y?NOT?NUMERIC?GO TO?NOTNUM	18/08/81	550
DIRECTIVE	001000	+IF??Y?GREATER?32767?SET Y = 0	18/08/81	551
DIRECTIVE	001010	+SET 6 = ?6?Y,	13/05/81	552
DIRECTIVE	001020	++FINISH	13/05/81	553
DIRECTIVE	001030	+DFT 6 =	13/05/81	554
	001040	(	13/05/81	555
	001050	P DATA	13/05/81	556
	001060	GLINE??	13/05/81	557
	001070	DATA??6-1x	13/05/81	558
	001080	)	13/05/81	559
	001090	RESTORE #GLINE?#:GOSUB #UNPACK: ?A=LEFT\$(Z13,Z%)	13/05/81	560
DIRECTIVE	001100	+CEXIT	13/05/81	561
DIRECTIVE	001110	+GO TO?CEXIT	18/08/81	562
DIRECTIVE	001120	++NOTNUM	13/05/81	563

DIRECTIVE

DIRECTIVE

DIRECTIVE

LABEL

```
001130      ?A = CHR$(?B) + CVT$(?C)
001140 -      + CHR$(?D) + CVT$(?E)
001150 -      + CHR$(?F) + CVT$(?G)
001160 -      + CHR$(?H) + CVT$(?I)
001170 +IF??J?EQUAL??CEXIT
001180      ?A = ?A + CHR$(?J) + CVT$(?K)
001190 -      + CHR$(?L) + CVT$(?M)
001200 -      + CHR$(?N) + CVT$(?O)
001210 -      + CHR$(?P) + CVT$(?Q)
001220 +IF??R?EQUAL??CEXIT
001230      ?A = ?A + CHR$(?R) + CVT$(?S)
001240 -      + CHR$(?T) + CVT$(?U)
001250 -      + CHR$(?V) + CVT$(?W)
001260 -      + CHR$(?X) + CVT$(?Y)
001270 +CEXIT
001280 ++CEXIT
001290 (
001300 P SUB
001310 UNPACK
001320 M STRING,Z1$,36
001330      Z%=ZL%:Z=DPEEK(PTR(Z1$))
001340 UNPACK1
001350      READZ1%
001360      IFZ1%=ZK% THEN RETURN*
001370      POKE Z+Z%,Z1%
001380      Z%=Z%+1
001390      READZ1%
001400      DPOKE Z+Z%,Z1%
001410      Z%=Z%+2
001420      GOTO #UNPACK1
001430 )
```

```
13/05/81 564
13/05/81 565
13/05/81 566
13/05/81 567
18/08/81 568
13/05/81 569
13/05/81 570
13/05/81 571
13/05/81 572
18/08/81 573
13/05/81 574
13/05/81 575
13/05/81 576
13/05/81 577
13/05/81 578
13/05/81 579
13/05/81 580
13/05/81 581
13/05/81 582
13/05/81 583
13/05/81 584
13/05/81 585
13/05/81 586
13/05/81 587
13/05/81 588
13/05/81 589
13/05/81 590
13/05/81 591
13/05/81 592
13/05/81 593
13/05/81 594
```

```
GMERGE      000000 #GMERGE
000010 ? A B C
DIRECTIVE 000020 +COMPUTE 2 = ?1 + ?0 + 12
DIRECTIVE 000030 +IF??B?EQUAL??UNSET C
DIRECTIVE 000040 +DFT A = ZL%
DIRECTIVE 000050 +IFF??A?EQUAL?LDB?SET A =
DIRECTIVE 000060 +ELSE
DIRECTIVE 000070 +      IFF??A?NOT?EQUAL??ZL%?
000080      Z=PTR(?A):IFZ>ZH%THENZ=Z-ZH%
DIRECTIVE 000090 +      SET A = Z
DIRECTIVE 000100 +      FI
DIRECTIVE 000110 +FI
000120      Z1%=ZL%
DIRECTIVE 000130 +DFT B = 0
DIRECTIVE 000140 +IFF??B?NOT?NUMERIC?
000150      IF (?B) < ZL% THEN Z1% = ZM%X
DIRECTIVE 000160 +      SET B = ABS(?B)
DIRECTIVE 000170 +FI
DIRECTIVE 000180 +IF??B?EQUAL?0?SET B = ZL%
DIRECTIVE 000190 +IFF??C?NOT?NUMERIC?
000200      IF (?C) < ZL% THEN Z1% = Z1%+ ZM%X
DIRECTIVE 000210 +      IF??C?NOT?EQUAL??SET C = ABS(?C)
DIRECTIVE 000220 +FI
DIRECTIVE 000230 +IF??C?NOT?EQUAL??SET C = ,?C
DIRECTIVE 000240 +DFT C =
000250      Z1% = USR(??,?A,CVT$(CHR$(?B)+CHR$(Z1%))?)C)
```

23/03/81 595

26/03/81 596

22/04/81 597

18/08/81 598

05/05/81 599

18/08/81 600

30/04/81 601

18/08/81 602

05/05/81 603

30/04/81 604

30/04/81 605

26/03/81 606

05/05/81 607

22/04/81 608

18/08/81 609

05/05/81 610

22/04/81 611

26/03/81 612

18/08/81 613

18/08/81 614

05/05/81 615

18/08/81 616

26/03/81 617

18/08/81 618

22/04/81 619

22/04/81 620

GMOVE

000000 # GMOVE

26/03/81 621

000010 ? A B C D E
000020 +COMPUTE 2 = ?1 + ?0 + 8
000030 +IFF??A?NOT?EQUAL??IF??D?NOT?EQUAL??IF??E?NOT?EQUAL??
000040 +ELSE?ERROR?MISSING PARAMETER
000050 +EXIT
000060 +FI
000070 +IF??B?EQUAL??UNSET C
000080 +IFF??A?EQUAL?LDB?SET A =
000090 +ELSE
000100 Z1=PTR(?A):IFZ1>ZH%THENZ1=Z1-ZH×
000110 + SET A = Z1
000120 +FI
000130 +DFT B = 0
000140 Z1%=ZL%
000150 +IFF??B?NOT?NUMERIC?
000160 IF (?B) < ZL% THEN Z1% = ZM%×
000170 + SET B = ABS(?B)
000180 +FI
000190 +IF??B?EQUAL?0?SET B = ZL%
000200 +IFF??C?NOT?NUMERIC?
000210 IF (?C) < ZL% THEN Z1% = Z1%+ ZN%×
000220 + IF??C?NOT?EQUAL??SET C = ABS(?C)
000230 +FI
000240 + DFT C = ZK%
000250 Z2%= ZL%
000260 +IFF??D?NOT?NUMERIC?
000270 IF (?D) < ZL% THEN Z2% = ZM%×
000280 + SET D = ABS(?D)
000290 +FI
000300 +IFF??E?NOT?NUMERIC?
000310 IF (?E) < ZL%THEN Z2% = Z2%+ ZN%×
000320 + SET E = ABS(?E)
000330 +FI
000340 Z\$ = CHR\$(?B) + CHR\$(Z1%) + CVT\$(?C) + CHR\$(?D) + CHR\$(Z2%)
+ CVT\$(?E)
000350 =
000360 Z=PTR(Z\$):IFZ>ZH%THENZ=Z-ZH×
000370 Z1% = USR(?2,?A,Z)

26/03/81 622
26/03/81 623
18/08/81 624
18/08/81 625
22/04/81 626
22/04/81 627
18/08/81 628
18/08/81 629
30/04/81 630
05/05/81 631
30/04/81 632
26/03/81 633
22/04/81 634
05/05/81 635
18/08/81 636
05/05/81 637
22/04/81 638
26/03/81 639
18/08/81 640
18/08/81 641
05/05/81 642
18/08/81 643
26/03/81 644
05/05/81 645
05/05/81 646
18/08/81 647
05/05/81 648
22/04/81 649
26/03/81 650
18/08/81 651
05/05/81 652
22/04/81 653
26/03/81 654
26/03/81 655
26/03/81 656
05/05/81 657
30/04/81 658

GPOINT

000000 # GPOINT

12/03/81 659

DIRECTIVE

000010 ?A B C

12/03/81 660

DIRECTIVE

000020 +DFT A = Z%

30/03/81 661

000030 +COMPUTE 2 = ?1 + ?0 + 4

26/03/81 662

DIRECTIVE

000040 ?A = USR (?2, ?B, ?C)

30/03/81 663

DIRECTIVE

000050 +IFF??B?NOT?EQUAL??IF??C?NOT?EQUAL??

18/08/81 664

000060 +ELSE

09/04/81 665

DIRECTIVE

000070 ?A=ZL%

05/05/81 666

000080 +FI

09/04/81 667

GPRINT	000000 # GPRINT	12/03/81	668
	000010 ?A B C D E F G H I J K L M N O P Q R S T U V W X Y	22/05/81	669
DIRECTIVE	000020 +IFF??A?EQUAL?LINE?	18/08/81	670
DIRECTIVE	000030 + SET A = Z\$	01/04/81	671
	000040 M GLINE?Z\$??B??C??D??E??F??G??H??I??J??K??L??M??N??O??P??Q??R??S	18/08/81	672
	000050 -??T??U??V??W??X??Y?	18/08/81	673
DIRECTIVE	000060 +UNSET D	31/03/81	674
DIRECTIVE	000070 +FI	31/03/81	675
DIRECTIVE	000080 +IFF,?D,NOT,EQUAL,?	05/05/81	676
	000090 M GPRINT1,?A,?B,?C,?D,?E	21/05/81	677
DIRECTIVE	000100 + IFF??A?EQUAL??	18/08/81	678
	000110 IF Z\$ = "" GOTO #GPRINTEND?#X	28/04/81	679
DIRECTIVE	000120 + IF??E?EQUAL?NO?EXIT	18/08/81	680
DIRECTIVE	000130 + ELSE	22/04/81	681
	000140 ?A=""	22/04/81	682
	000150 Z?A=PTR(?A)	30/04/81	683
	000160 Z?A=PTR(Z\$)	30/04/81	684
	000170 DPOKE Z,DPEEK(Z1):DPOKE Z+ZN%,DPEEK(Z1+ZN%)	05/05/81	685
	000180 DPOKE Z,ZL%DPOKE Z+ZN%,ZL%	05/05/81	686
DIRECTIVE	000190 + FI	22/04/81	687
DIRECTIVE	000200 +FI	22/04/81	688
DIRECTIVE	000210 +IF??B?EQUAL??UNSET C	18/08/81	689
DIRECTIVE	000220 +DFT A = ZL%	05/05/81	690
DIRECTIVE	000230 +IFF??A?EQUAL?LDB?SET A = ZK%	18/08/81	691
DIRECTIVE	000240 +ELSE	30/04/81	692
DIRECTIVE	000250 + IFF/?A/NOT?EQUAL/ZL%?	18/08/81	693
DIRECTIVE	000260 + SET A = PTR(?A)	06/05/81	694
DIRECTIVE	000270 + FI	30/04/81	695
DIRECTIVE	000280 +FI	22/04/81	696
DIRECTIVE	000290 +DFT B = ZL%	06/05/81	697
DIRECTIVE	000300 +DFT C = ZH%	06/05/81	698
	000310 Z=?A:Z1%=?B:Z2%=?C	06/05/81	699
DIRECTIVE	000320 +IFF??3?EQUAL?GWIPE?UNSET 3	18/08/81	700
	000330 Z3%=ZM%	06/05/81	701
DIRECTIVE	000340 +ELSE	06/05/81	702
	000350 Z3%=ZL%	06/05/81	703
DIRECTIVE	000360 +FI	06/05/81	704
	000370 GDSUB #GPRINT	06/05/81	705
	000380 GPRINTEND?#	06/05/81	706
DIRECTIVE	000390 +CEXIT	06/05/81	707
	000400 (	06/05/81	708
	000410 P. SUB	06/05/81	709
	000420 GPRINT	06/05/81	710
	000430 Z4%=ZL%:IFZ1%<ZL%THENZ4%=ZM%:Z1%=ABS(Z1%)x	06/05/81	711
	000440 IFZ2%=ZH%THENZ2%=ZK%ELSEIFZ2%<ZL%THENZ4%=Z4%+ZN%	06/05/81	712
	000450 :Z2%=ABS(Z2%)x	06/05/81	713
	000460 IFZ3%=ZM%THENZ4%=(Z4%OR4)x	06/05/81	714
	000470 IFZ>ZH%THENZ=Z-ZHx	06/05/81	715
DIRECTIVE	000480 +COMPUTE 2 = ?1 + ?0 + 6	06/05/81	716
	000490 Z%=USR(?2,Z,CVT\$(CHR\$(Z1%)+CHR\$(Z4%)),Z2%)	19/05/81	717
	000500 RETURN	06/05/81	718
	000510)	06/05/81	719

M PRINT

GPRINT1

000000 # GPRINT1

15/04/81 720

000010 ? A B C D E

21/05/81 721

000020 ** THIS IS CALLED FROM GPRINT FOR READING A FILE

15/04/81 722

000030 ** ?A = STRING: ?B = ROW: ?C = COL: ?D = FILENAME: ?E = NO

21/05/81 723

DIRECTIVE

000040 +DFT B = 999

21/05/81 724

DIRECTIVE

000050 +DFT C = 999

21/05/81 725

DIRECTIVE

000060 +IFF??A?EQUAL??

18/08/81 726

000070 Z8%=0

21/05/81 727

DIRECTIVE

000080 +ELSE

21/05/81 728

000090 Z8%=1

21/05/81 729

DIRECTIVE

000100 +FI

21/05/81 730

DIRECTIVE

000110 +IFF??E?EQUAL?NO?

18/08/81 731

000120 Z7%=1

21/05/81 732

DIRECTIVE

000130 +ELSE

21/05/81 733

000140 Z7%=0

22/05/81 734

DIRECTIVE

000150 +FI

21/05/81 735

000160 Z5%=?B:Z6%=?C:Z7%=?D:GOSUB #GPRINT1

25/05/81 736

DIRECTIVE

000170 +CEXIT

21/05/81 737

000180 (

21/05/81 738

000190 P SUB

21/05/81 739

000200 GPRINT1

21/05/81 740

000210 OPEN OLD ZF\$ AS 12

21/05/81 741

000220 GET #12

21/05/81 742

000230 FIELD #12, 252 AS Z1\$

21/05/81 743

000240 ** PUT TOTAL STRING LENGTH IN ZAX

21/05/81 744

000250 ZAX=CVT\$(LEFT\$(Z1\$,ZNX))

21/05/81 745

000260 ** STRIP THE FIRST 2 CHARS OFF

21/05/81 746

000270 Z\$=MID\$(Z1\$,7)

24/05/81 747

000280 ** CALCULATE NO OF RECS LESS 1 AND PUT IN ZBX

21/05/81 748

000290 ZBX=(ZAX+1)/252

21/05/81 749

000300 ** THROW OUT NON SCREEN DUMPS, AND THOSE TO BE PUT

21/05/81 750

000310 ** IN STRINGS

21/05/81 751

000320 IF ((ASC(MID\$(Z1\$,4,ZM%)))AND24)<>16 OR Z7%=1 OR Z8%=1

24/05/81 752

000330 THEN #GPRINT2*

21/05/81 753

000340 ** PUT THE HEADER IN Z2\$ AND REST IN BACK IN Z\$

21/05/81 754

000350 Z2\$ = MID\$(Z1\$,3,4)

24/05/81 755

000360 ** GET THE BLOCK SIZE IN ZF%

21/05/81 756

000370 ZF% = ASC(RIGHT\$(Z2\$,ZM%))

23/05/81 757

000380 ** GET DEFAULT ROW AND COLUMN

21/05/81 758

000390 IF Z5%=999THENZ5%=ASC(LEFT\$(Z2\$,ZM%))*

21/05/81 759

000400 IF Z6%=999THENZ6%=ASC(MID\$(Z2\$,3,ZM%))ELSEZ6%=INT(Z6%/6)*6*

26/05/81 760

000410 IF ZBX=0 THEN #GPRINT1A*

22/05/81 761

000420 ** PRINT BLOCKS AND GET REST OF THE FILE

21/05/81 762

000430 FOR ZD%=ZM% TO ZBX

21/05/81 763

000440 ** CALC NO OF BLOCKS IN Z\$

21/05/81 764

000450 ZC%=LEN(Z\$)/ZF%

21/05/81 765

000460 ** PUT DISCRETE NO OF BLOCKS IN Z\$ AND REST IN Z3\$

21/05/81 766

000470 ZO%=ZC%*ZF%

21/05/81 767

000480 Z3\$=MID\$(Z\$,ZO%+1)

21/05/81 768

000490 ** ALSO ADD HEADER TO Z\$

21/05/81 769

000500 Z4\$=LEFT\$(Z\$,ZO%)

24/05/81 770

000510 Z\$=Z2\$+Z4\$

24/05/81 771

000520 ** GPRINT Z\$ TO SCREEN

21/05/81 772

000530 M GPRINT,Z\$,Z5%,Z6%

21/05/81 773

000540 ** CALCULATE POSITION OF FIRST LINE OF NEXT BLOCK

21/05/81 774

000550 Z5%=Z5%+ZC%

21/05/81 775


```
000560 GET #12
000570 ** ADD LEFTOVER ONTO NEW RECORD
000580 Z$=Z3$+Z1$
000590 NEXT ZD%
000600 ** PRINT LAST RECORD
000610 GPRINT1A
000620 Z4$=Z$
000630 Z$=Z2$+Z4$
000640 M GPRINT,Z$,Z5%,Z6%
000650 Z$="":Z4$="":CLOSE12:RETURN
000660 GPRINT2
000670 FOR ZD% = ZM% TO ZB%
000680 GET #12
000690 Z$=Z$+Z1$
000700 NEXT ZD%
000710 CLOSE 12
000720 RETURN
000730 )
```

```
21/05/81 776
21/05/81 777
21/05/81 778
21/05/81 779
21/05/81 780
22/05/81 781
24/05/81 782
24/05/81 783
21/05/81 784
24/05/81 785
21/05/81 786
21/05/81 787
21/05/81 788
21/05/81 789
21/05/81 790
22/04/81 791
15/04/81 792
15/04/81 793
```

GRESET

000000 #GRESET

27/03/81 794

DIRECTIVE

000010 ? A B

27/03/81 795

000020 +COMPUTE 2 = ?1 + ?0 + 2

27/03/81 796

000030 Z1% = USR(?2,?A,?B,ZL%)

05/05/81 797

GSADF	000000 #GSAVE	07/09/81	798
	000010 ? A B C D E F	07/09/81	799
DIRECTIVE	000020 +DFT B = 0	07/09/81	800
DIRECTIVE	000030 +DFT C = 0	07/09/81	801
DIRECTIVE	000040 +DFT D = 203	07/09/81	802
DIRECTIVE	000050 +DFT E = 39	07/09/81	803
DIRECTIVE	000060 +IFF ?F\$ EQUAL \$S IFF ?A\$ EQUAL \$S ERROR\$ NO FILE OR STRING	07/09/81	804
DIRECTIVE	000070 +CEXIT	07/09/81	805
DIRECTIVE	000080 +GOTO #CEXIT	07/09/81	806
DIRECTIVE	000090 +FI	07/09/81	807
DIRECTIVE	000100 +IFF ?F\$ EQUAL \$S	07/09/81	808
	000110 Z7% = 1	07/09/81	809
DIRECTIVE	000120 +ELSE UNSET A	07/09/81	810
	000130 Z7% = 0	07/09/81	811
DIRECTIVE	000140 +FI	07/09/81	812
	000150 Z1% = ?B:Z2% = ?C:Z3% = ?D:Z4% = ?E	07/09/81	813
	000160 ZF\$ = ?F	07/09/81	814
	000170 GDSUB #GSAVE	07/09/81	815
DIRECTIVE	000180 +IFF ?A\$ NOT EQUAL \$S	07/09/81	816
	000190 ?A = Z\$:DPOKE Z,0:DPOKE Z+2,0	07/09/81	817
DIRECTIVE	000200 +FI	07/09/81	818
DIRECTIVE	000210 +CEXIT	07/09/81	819
LABEL	000220 ++CEXIT	07/09/81	820
	000230 (	07/09/81	821
	000240 P SUB	07/09/81	822
	000250 GSAVE	07/09/81	823
	000260 Z1 = (Z3% - Z1% + Z4%) * (Z4% - Z2% + Z3%) + 6	07/09/81	824
	000270 IFFRE(0) < Z1+320 THEN PRINT "INSUFFICIENT MEMORY":RETURN	07/09/81	825
	000280 Z\$ = SPC(Z1)	07/09/81	826
	000290 GSAVE1	07/09/81	827
DIRECTIVE	000300 +COMPUTE 2 = ?1 + ?0 + 18	07/09/81	828
	000310 **FOOL GRAPHIC ROUTINE INTO THINKING THAT THE STRING IS ACTUALLY	07/09/81	829
	000320 **2 BYTES FURTHER ON THAN IT REALLY IS	07/09/81	830
	000330 Z = PTR(Z\$):DPOKE Z,DPEEK(Z)+2	07/09/81	831
	000340 **	07/09/81	832
	000350 Z9% = USR(?2,Z,CVT\$(CHR\$(Z1%)+CHR\$(Z2%))	07/09/81	833
	000360 ,CVT\$(CHR\$(Z3%)+CHR\$(Z4%)))	07/09/81	834
	000370 **RESTORE THE STRING POINTER AFTER FIDDLE	07/09/81	835
	000380 DPOKE Z,DPEEK(Z)-2	07/09/81	836
	000390 **ATTACH LENGTH OF STRING AS FIRST 2 BYTES OF THE STRING	07/09/81	837
	000400 DPOKE DPEEK(Z),Z1	07/09/81	838
	000410 **	07/09/81	839
	000420 OPEN NEW ZF\$ AS 12	07/09/81	840
	000430 PRINT #12, Z\$:	07/09/81	841
	000440 CLOSE 12	07/09/81	842
	000450 Z\$ = ""	07/09/81	843
	000460 RETURN	07/09/81	844
	000470)	07/09/81	845

GSECTOR	000000 # GSECTOR	07/09/81	846
	000010 ? A B C D E F	07/09/81	847
	000020 Z1%=?B:Z2%=?C:Z3%=?D:Z=?E:Z1=?F:GOSUB #GSECTOR:ZA=Z\$:Z\$=""	07/09/81	848
DIRECTIVE	000030 +CEXIT	07/09/81	849
	000040 (	07/09/81	850
	000050 P SUB	07/09/81	851
	000060 GSECTOR	07/09/81	852
	000070 Z2 = PI * ZN% : Z3 = 0.4268	07/09/81	853
	000080 Z4% = Z1%	07/09/81	854
	000090 Z1\$ = "L" : Z2\$ = "R"	07/09/81	855
	000100 Z4=Z2*Z1	07/09/81	856
	000110 Z5=Z2*Z	07/09/81	857
	000120 Z4=Z4+Z*Z2	07/09/81	858
	000130 Z6=Z4/Z3%	07/09/81	859
	000140 Z\$=CHR\$(Z1%)+CVT\$(Z2%)	07/09/81	860
	000150 FOR Z7 = Z5 TO Z4 STEP Z6	07/09/81	861
	000160 Z5%=(Z3%*Z3+Z3%)*COS(Z7)+Z1%	07/09/81	862
	000170 Z6%=Z3%*SIN(Z7)+Z2%	07/09/81	863
	000180 GOSUB #GSECTOR1x	07/09/81	864
	000190 NEXT Z7	07/09/81	865
	000200 IF Z1=ZM% THEN Z5%=(Z3%*Z3+Z3%)*COS(Z5)+Z1%:Z6%=Z3%*SIN(Z5)+Z2%:	07/09/81	866
	000210 GOSUB #GSECTOR1x	07/09/81	867
	000220 Z5%=Z1%:Z6%=Z2%:GOSUB #GSECTOR1	07/09/81	868
	000230 RETURN	07/09/81	869
	000240 GSECTOR1	07/09/81	870
	000250 IF Z5%=Z4% THEN #GSECTOR2x	07/09/81	871
	000260 IF Z1\$="R" AND Z5%<Z4% THEN SWAP Z1\$,Z2\$x	07/09/81	872
	000270 IF Z1\$="L" AND Z5%>Z4% THEN SWAP Z1\$,Z2\$x	07/09/81	873
	000280 Z4%=Z5%	07/09/81	874
	000290 IF Z1\$="L" THEN Z6%=Z6%+8192 x	07/09/81	875
	000300 IF Z1\$="R" THEN Z6%=Z6%+16384x	07/09/81	876
	000310 GSECTOR2	07/09/81	877
	000320 Z\$=Z\$+CHR\$(Z5%)+CVT\$(Z6%)	07/09/81	878
	000330 RETURN	07/09/81	879
	000340)	07/09/81	880

GSET

000000 # GSET

DIRECTIVE

000010 ? A B

000020 +COMPUTE 2 = ?1 +?0 +2

000030 Z1% = USR (?2,?A,?B)

12/03/81 881

12/03/81 882

27/03/81 883

30/03/81 884

GSWAP	000000 #	GSWAP	12/03/81	885
	000010	?A B C	12/03/81	886
DIRECTIVE	000020	+IF??B?EQUAL??UNSET C	18/08/81	887
DIRECTIVE	000030	+COMPUTE 2 = ?1 + ?0 + 14	26/03/81	888
DIRECTIVE	000040	+IF??B?EQUAL??UNSET C	18/08/81	889
DIRECTIVE	000050	+DFT A = ZL%	05/05/81	890
DIRECTIVE	000060	+IFF??A?EQUAL?LDB?SET A =	18/08/81	891
DIRECTIVE	000070	+ELSE	30/04/81	892
DIRECTIVE	000080	+ IFF??A?NOT?EQUAL?ZL%?	18/08/81	893
	000090	Z=PTR(?A):IFZ>ZH%THENZ=Z-ZH%	05/05/81	894
DIRECTIVE	000100	+ SET A = Z	30/04/81	895
DIRECTIVE	000110	+ FI	30/04/81	896
DIRECTIVE	000120	+FI	22/04/81	897
	000130	Z1%=ZL%	05/05/81	898
DIRECTIVE	000140	+DFT B = 0	22/04/81	899
DIRECTIVE	000150	+IFF??B?NOT?NUMERIC?	18/08/81	900
	000160	IF (?B) < ZL% THEN Z1% = ZM%*	05/05/81	901
DIRECTIVE	000170	+ SET B = ABS(?B)	22/04/81	902
DIRECTIVE	000180	+FI	22/04/81	903
DIRECTIVE	000190	+IF??B?EQUAL?0?SET B = ZL%	18/08/81	904
DIRECTIVE	000200	+IFF??C?NOT?NUMERIC?	18/08/81	905
	000210	IF (?C) < ZL% THEN Z1% = Z1%+ZN%*	05/05/81	906
DIRECTIVE	000220	+ IF??C?NOT?EQUAL??SET C = ABS(?C)	18/08/81	907
DIRECTIVE	000230	+FI	22/04/81	908
DIRECTIVE	000240	+IF??C?NOT?EQUAL??SET C = ,?C	18/08/81	909
DIRECTIVE	000250	+DFT C =	22/04/81	910
	000260	Z1% = USR(?2,?A,CVT\$(CHR\$(?B)+CHR\$(Z1%))?C)	22/04/81	911

GWIPE

000000 #GWIPE

01/04/81 912

DIRECTIVE

000010 ? A B C D E F G H I J K L M N O P Q R S T U V W X Y

01/04/81 913

000020 +SET 3 = GWIPE

01/04/81 914

000030 M GPRINT??A??B??C??D??E??F??G??H??I??J??K??L??M??N??O??P??Q

18/08/81 915

000040 =??R??S??T??U??V??W??X??Y?

18/08/81 916

INDIGIT	000000 #INDIGIT	08/09/81	917
	000010 ?A B C D E	08/09/81	918
DIRECTIVE	000020 +DFT E = ZL%	08/09/81	919
	000030 Z3%=?C:Z4%=?D:Z6%=?B:Z5%=?E:GOSUB#INPUTD: ?A=Z1\$:Z=VAL(Z1\$)	08/09/81	920
DIRECTIVE	000040 +CEXIT	08/09/81	921
	000050 (	08/09/81	922
	000060 P SUB	08/09/81	923
	000070 INPUTD	08/09/81	924
	000080 Z1\$="":Z=ZL%:Z1%=ZL%	08/09/81	925
	000090 INPUT01	08/09/81	926
	000100 PRINT\$(Z3%,Z4%+Z1%):Z2%=USR(1)/256	08/09/81	927
	000110 IFZ1%>ZL%ANDZ2%=8THENZ1%=Z1%-1:Z1\$=LEFT\$(Z1\$,Z1%)	08/09/81	928
	000120 - :PRINT" ":GOTO#INPUT01	08/09/81	929
	000130 - ELSEIFZ2%=13THENRETURNX	08/09/81	930
	000140 IFZ5%=ZM%THENGOTO#DECIMAL	08/09/81	931
	000150 - ELSEIFZ2%<48ORZ2%>57THEN#INPUT01x	08/09/81	932
	000160 TEST3	08/09/81	933
	000170 Z1\$=Z1\$+CHR\$(Z2%):PRINTCHR\$(Z2%):Z1%=Z1%+ZM%	08/09/81	934
	000180 IFZ1%>Z6%-ZM%THENRETURNELSE#INPUT01x	08/09/81	935
	000190 DECIMAL	08/09/81	936
	000200 IFZ2%<46ORZ2%>57ORZ2%=47THEN#INPUT01	08/09/81	937
	000210 - ELSE#TEST3x	08/09/81	938
	000220)	08/09/81	939

INTEXT	000000 #INTEXT	08/09/81	940
	000010 ?A B C D	08/09/81	941
	000020 Z3%=?C:Z4%=?D:Z6%=?B:GOSUB#INPUTT:ZA=Z1\$	08/09/81	942
DIRECTIVE	000030 +CEXIT	08/09/81	943
	000040 (	08/09/81	944
	000050 P SUB	08/09/81	945
	000060 INPUTT	08/09/81	946
	000070 Z1\$="":Z1%=ZL%	08/09/81	947
	000080 INPUT02	08/09/81	948
	000090 PRINT@(Z3%,Z4%+Z1%):Z2%=USR(1)/256	08/09/81	949
	000100 IFZ1%>0ANDZ2%=8THENZ1%=Z1%-1:Z1\$=LEFT\$(Z1\$,Z1%)	08/09/81	950
	000110 :PRINT" ":GOTO#INPUT02x	08/09/81	951
	000120 IFZ2%=13THENRETURNELSEIFZ2%<32THEN#INPUT02x	08/09/81	952
	000130 Z1\$=Z1\$+CHR\$(Z2%):PRINTCHR\$(Z2%):Z1%=Z1%+ZM%	08/09/81	953
	000140 IFZ1%>Z6%-ZM%THENRETURNELSE#INPUT02x	08/09/81	954
	000150)	08/09/81	955

LINE	000000 #	LINE	FROM SOURCE FILE	12/03/81	000000	973
1						
2						
3		000010 ?A B C D E		12/03/81	000010	974
4	DIRECTIVE	000020 + DFT A = ZL%		05/05/81	000020	975
5	DIRECTIVE	000030 + DFT B = ZL%		05/05/81	000030	976
6	DIRECTIVE	000040 + DFT C = ZL%		05/05/81	000040	977
7	DIRECTIVE	000050 + DFT D = ZL%		05/05/81	000050	978
8	DIRECTIVE	000060 + DFT E = ON		28/09/81	000060	979
9	DIRECTIVE	000070 + IFF/?E/NOT/EQUAL/ON/IF/?E/NOT/EQUAL/OFF/IF/?E/NOT/EQUAL//		28/09/81	000070	980
10	DIRECTIVE	000080 + WARNING/INCORRECT PARAMETER, SET TO ON/		28/09/81	000080	981
11	DIRECTIVE	000090 + SET E = ON		28/09/81	000090	982
12	DIRECTIVE	000100 + FI		28/09/81	000100	983
13		000110 Z1 = ?A		17/03/81	000110	984
14		000120 Z2 = ?B		17/03/81	000120	985
15		000130 Z3 = ?C		17/03/81	000130	986
16		000140 Z4 = ?D		17/03/81	000140	987
17	DIRECTIVE	*000150 + IFF/?E/EQUAL/OFF/		01/10/81	000150	988
18	DIRECTIVE	*000160 + SET E = 0		01/10/81	000160	989
19	DIRECTIVE	*000170 + ELSE		01/10/81	000170	990
20	DIRECTIVE	*000180 + SET E = 1		01/10/81	000180	991
21	DIRECTIVE	*000190 + FI		01/10/81	000190	992
22		*000200 Z5=?E		01/10/81	000200	993
23		000210 GOSUB #LINE		02/04/81	000210	994
24	DIRECTIVE	000220 +CFEXIT		01/04/81	000220	995
25		000230 (		12/03/81	000230	996
26		000240 P SUB		26/03/81	000240	997
27		000250 LINE *		02/04/81	000250	998
28		000260 Z0%=80		22/09/81	000260	999
29		000270 IF(USR(ZJ%) AND 4096) =4096 THEN Z0%=40x		12/05/81	000270	1000
30		000280 IF(USR(ZJ%) AND 6114) =6114 THEN Z0%=160x		12/05/81	000280	1001
31		000290 Z8 = Z1 - Z3		17/03/81	000290	1002
32		000300 Z9 = Z2 - Z4		17/03/81	000300	1003
33		000310 IF Z8 = 0 THEN #LINE#x		02/04/81	000310	1004
34		000320 ZS = Z9 / Z8		17/03/81	000320	1005
35		000330 ZY = Z2		17/03/81	000330	1006
36		000340 IF Z1 > Z3 THEN ZI =ZK% ELSE ZI=ZM%x		05/05/81	000340	1007
37		000350 IF ABS(ZS)>ZM% THEN ZI=ZI/ABS(ZS) ELSE GOTO#ZA1 *		22/09/81	000350	1008
38		000360 IF Z2<Z4 THEN ZS=ZM% ELSE ZS=ZK% *		22/09/81	000360	1009
39		000370 GOTO#ZA2		22/09/81	000370	1010
40		000380 ZA1		22/09/81	000380	1011
41		000390 IF Z1>Z3 THEN ZS=-ZS *		22/09/81	000390	1012
42		000400 ZA2		22/09/81	000400	1013
43		000410 FOR ZX = Z1 TO Z3 STEP ZI		17/03/81	000410	1014
44		000420 IF ZX>68THENZX=68ELSEIFZX<ZL%THENZX=ZL%x		05/05/81	000420	1015
45		000430 IF ZY<ZL%THENZY=ZL%ELSEIFZY>Z0%THENZY=Z0%x		12/05/81	000430	1016
46		000440 IF Z5<>0 GOTO#ZA3 *		28/09/81	000440	1017
47		000450 M RESET?ZX?ZY?		28/09/81	000450	1018
48		000460 ZA3		28/09/81	000460	1019
49		*000470 IF Z5<>1 GOTO#ZA4 *		01/10/81	000470	1020
50		000480 M SET?ZX?ZY?		18/08/81	000480	1021
51		000490 ZA4		28/09/81	000490	1022
52		000500 ZY = ZY + ZS		17/03/81	000500	1023
53		000510 NEXT ZX		17/03/81	000510	1024
54		000520 RETURN		17/03/81	000520	1025
55		000530 LINE1 *		02/04/81	000530	1026
56		000540 IF Z2>Z4 THEN ZS=ZK% ELSE ZS=ZM% *		22/09/81	000540	1027
57		000550 FOR ZY = Z2 TO Z4 STEP ZS		17/03/81	000550	1028

1	000560	IF Z5<>0 GOTO#ZA5 *	28/09/	000560	1029
2	000570 M	RESET?Z1?ZY?	28/09/81	000570	1030
3	000580	ZA5	28/09/81	000580	1031
4	*000590	IF Z5<>1 GOTO#ZA6 *	01/10/81	000590	1032
5	000600 M	SET?Z1?ZY?	18/08/81	000600	1033
6	000610	ZA6	28/09/81	000610	1034
7	000620	NEXT ZY	17/03/81	000620	1035
8	000630	RETURN	17/03/81	000630	1036
9	000640)		12/03/81	000640	1037

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LOGOFF

000000 #

LOGOFF

23/03/81 1000

000010

Z1% = USR(56)

12/03/81 1001

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LPRINT      000000 #    LPRINT
DIRECTIVE   000010 ?A
            000020 +IFF??A?EQUAL?OPEN
            000030      Z$=STR$(ABS(USR(24)))
            000040      Z$=MID$(Z$,2,LEN(Z$)-2)
            000050      Z$="P"+Z$+"?PRT"
            000060      OPEN NEW Z$ AS 11
DIRECTIVE   000070 +ELSE
DIRECTIVE   000080 +    IFF??A?EQUAL?CLOSE?
            000090      CLOSE 11
DIRECTIVE   000100 +    ELSE
            000110      PRINT #11,?A
DIRECTIVE   000120 +    FI
DIRECTIVE   000130 +FI
```

```
12/03/81    1002
12/03/81    1003
18/08/81    1004
04/06/81    1005
04/06/81    1006
18/08/81    1007
18/05/81    1008
18/05/81    1009
18/08/81    1010
18/05/81    1011
18/05/81    1012
18/05/81    1013
18/05/81    1014
18/05/81    1015
```

MIX	000000 #	MIX	12/03/81	1016
	000010 ?A		12/03/81	1017
DIRECTIVE	000020 +DFT A = PRIORITY		12/03/81	1018
DIRECTIVE	000030 +IFF??A?NOT?EQUAL?PRIORITY?IF??A?NOT?EQUAL?MIX?		18/08/81	1019
DIRECTIVE	000040 + WARNING?INVALID VALUE FOR MIX - SET TO PRIORITY		18/08/81	1020
DIRECTIVE	000050 + SET A = PRIORITY		12/03/81	1021
DIRECTIVE	000060 +FI		12/03/81	1022
DIRECTIVE	000070 +IFF??A?EQUAL?PRIORITY		18/08/81	1023
	000080 Z1% = USR (Z1% ,USR(ZJ%) AND NOT 16384)		05/05/81	1024
DIRECTIVE	000090 +ELSE		12/03/81	1025
	000100 Z1% = USR (Z1% ,USR(ZJ%) OR 16384)		05/05/81	1026
DIRECTIVE	000110 +FI		12/03/81	1027

MOVE

000000 # MOVE

000010 ?A B C

000020 Z1% = USR (39, ?A, ?B, ?C)

12/03/81 1028

12/03/81 1029

17/03/81 1030

NEXT	000000 # NEXT	20/03/81	1031
	000010 ?A B C D E F G H I J K L M N O	25/03/81	1032
	000020 ** SETS UP CODE FOR GO BACK & CONTINUE USING CURSOR KEYS	27/03/81	1033
	000030 ** ?A IS THE PROCEDURE NAME TO GO BACK TO? IF NOT SPECIFIED	18/08/81	1034
	000040 ** THEN ONLY THE CONTINUE OPTION IS GIVEN?	18/08/81	1035
DIRECTIVE	000050 +DFT A = NEXT?#	09/04/81	1036
DIRECTIVE	000060 +IFF??A?EQUAL?NEXT?#?	18/08/81	1037
	000070 Z\$ = ZA\$	03/04/81	1038
DIRECTIVE	000080 +ELSE	20/03/81	1039
	000090 Z\$ = ZA\$+ZB\$	03/04/81	1040
DIRECTIVE	000100 +FI	20/03/81	1041
DIRECTIVE	000110 +IFF??B?NOT?EQUAL??	18/08/81	1042
	000120 Z2%=ZN%	18/05/81	1043
DIRECTIVE	000130 +ELSE	18/05/81	1044
DIRECTIVE	000140 + IFF??A?EQUAL?NEXT?#?	18/08/81	1045
	000150 Z2%=ZL%	18/05/81	1046
DIRECTIVE	000160 + ELSE	18/05/81	1047
	000170 Z2%=ZM%	18/05/81	1048
DIRECTIVE	000180 + FI	19/05/81	1049
DIRECTIVE	000190 +FI	18/05/81	1050
	000200 GOSUB #NEXT	01/05/81	1051
DIRECTIVE	000210 +IF??B?EQUAL??IF??A?EQUAL?NEXT?#?GO TO?NEXT3	18/08/81	1052
DIRECTIVE	000220 +IF??B?EQUAL??GO TO?NEXT2	18/08/81	1053
	000230 ?A=NEXT?#	01/05/81	1054
DIRECTIVE	000240 +IFF??B?EQUAL?SUB?	18/08/81	1055
	000250 GOSUB #?C	01/05/81	1056
DIRECTIVE	000260 +FI	01/05/81	1057
	000270 Z%=ASC(INCH\$):IF Z%=ZL% THEN #?A=NEXT?#x	21/05/81	1058
	000280 M CLEAR23	03/06/81	1059
DIRECTIVE	000290 +IFF??A?NOT?EQUAL?NEXT?#?	18/08/81	1060
	000300 IF Z% = 8 THEN #?Ax	01/05/81	1061
DIRECTIVE	000310 +FI	20/03/81	1062
DIRECTIVE	000320 +IFF??B?NOT?EQUAL?SUB?	18/08/81	1063
	000330 IF Z%=?B THEN #?Cx	30/04/81	1064
DIRECTIVE	000340 +FI	01/05/81	1065
DIRECTIVE	000350 +IF??D?EQUAL??GO TO?NEXT1	18/08/81	1066
DIRECTIVE	000360 + DFT E = ?C	25/03/81	1067
	000370 IF Z%=?D THEN #?Ex	30/04/81	1068
DIRECTIVE	000380 +IF??F?EQUAL??GO TO?NEXT1	18/08/81	1069
DIRECTIVE	000390 + DFT G = ?C	25/03/81	1070
	000400 IF Z%=?F THEN #?Gx	30/04/81	1071
DIRECTIVE	000410 +IF??H?EQUAL??GO TO?NEXT1	18/08/81	1072
DIRECTIVE	000420 +DFT I = ?C	25/03/81	1073
	000430 IF Z% = ?H THEN #?Ix	30/04/81	1074
DIRECTIVE	000440 +IF??J?EQUAL??GO TO?NEXT1	18/08/81	1075
DIRECTIVE	000450 +DFT K = ?C	25/03/81	1076
	000460 IF Z% = ?J THEN #?Kx	30/04/81	1077
DIRECTIVE	000470 +IF??L?EQUAL??GO TO?NEXT1	18/08/81	1078
DIRECTIVE	000480 +DFT K = ?C	25/03/81	1079
	000490 IF Z% = ?L THEN #?Mx	30/04/81	1080
DIRECTIVE	000500 +IF??N?EQUAL??GO TO?NEXT1	18/08/81	1081
DIRECTIVE	000510 +DFT O = ?C	25/03/81	1082
	000520 IF Z% = ?N THEN #?Ox	30/04/81	1083
LABEL	000530 ++NEXT1	25/03/81	1084
	000540 IF Z% <> 9 THEN GOSUB #NEXT:GOTO #?A=NEXT?#x	01/05/81	1085
	000550 M CLEAR23	20/03/81	1086

DIRECTIVE 000560 +GO TO?NEXT3
LABEL 000570 ++NEXT2
000580 IF Z%=8 THEN #?AX
LABEL 000590 ++NEXT3
DIRECTIVE 000600 +CEXIT
000610 (
000620 P INITO
000630 ZA\$=CHR\$(3)+" PRESS"+CHR\$(8)+"]"+CHR\$(9)
000640 M REVERSE1/ZA\$
000650 ZB\$ = "??" + CHR\$(8) + "[[" + CHR\$(9)
000660 M REVERSE1/ZB\$
000670 P SUB
000680 NEXT
000690 M CLEAR23
000700 M PRINT23??Z\$
000710 Z2\$=INCH\$
000720 IF Z2%=2 THEN RETURN*
000730 NEXT1
000740 Z%=ASC(INCH\$)
000750 IF Z%=9 OR Z%=8 AND Z2%=1 THEN Z1\$=USR(10,5888)
000760 :GOSUB #SNUMBER:RETURN*
000770 GOTO#NEXT1
000780)

18/08/81	1087
19/05/81	1088
19/05/81	1089
19/05/81	1090
19/05/81	1091
25/03/81	1092
12/05/81	1093
16/06/81	1094
15/06/81	1095
02/06/81	1096
15/06/81	1097
03/04/81	1098
03/04/81	1099
01/05/81	1100
18/08/81	1101
19/06/81	1102
19/05/81	1103
19/05/81	1104
19/05/81	1105
03/06/81	1106
03/06/81	1107
19/05/81	1108
20/03/81	1109

PAUSE

000000 # PAUSE

12/03/81 1110

DIRECTIVE
DIRECTIVE
DIRECTIVE000010 ? A
000020 +DFT A = OFF
000030 +COMPUTE 2 = ?1 + 23
000040 +IFF??A?EQUAL?ON?
000050 POKE ?2,ZM%27/03/81 1111
27/03/81 1112
27/03/81 1113
18/08/81 1114
05/05/81 1115

DIRECTIVE

000060 +ELSE
000070 POKE ?2,ZL%27/03/81 1116
05/05/81 1117DIRECTIVE
DIRECTIVE000080 +IF??A?NOT?EQUAL?OFF?WARNING?PAUSE NOT ON OR OFF - SET TO OFF
000090 +FI18/08/81 1118
27/03/81 1119

POINT

000000 #POINT

000010 ?A B C

000020 M TGRAPHICS?ZL%??B??C?

000030 ?A = ~~Z%~~

Z3%

18/03/81 1120

18/03/81 1121

18/08/81 1122

02/04/81 1123

PRINT23

000000 # PRINT23

12/03/81 1124

000010 ?A

12/03/81 1125

000020

Z1\$ = ?A + ZL\$

19/06/81 1126

000030

Z=DPEEK(PTR(Z1\$)):IFZ>ZH%THENZ=Z-ZH*

05/05/81 1127

000040

Z1% = USR(9,5892,Z):GOSUB #SNUMBER

08/06/81 1128

RANDOM

000000 # RANDOM

12/03/81 1129

000010 ** WHEN THE BUG IN THE RND FUNCTION IS FIXED, THIS MACRO NEED

27/03/81 1130

000020 ** ONLY BE

27/03/81 1131

000030 ** Z1% = RND(-ABS(USR(24)))

27/03/81 1132

000040 GOSUB #RANDOM

27/03/81 1133

DIRECTIVE

000050 +CEXIT

25/03/81 1134

000060 (

12/03/81 1135

000070 P SUB

25/03/81 1136

000080 RANDOM x

12/03/81 1137

000090 Z1% = ABS(USR(24))

23/03/81 1138

000100 FOR Z2% = Z1% TO 15

05/05/81 1139

000110 IF 2 ≤ Z2% = Z1% THEN Z2% = 16 x

11/09/81 1140

000120 NEXT Z2%

23/03/81 1141

000130 Z1% = RND(-Z1%)

17/03/81 1142

000140 RETURN

17/03/81 1143

000150)

12/03/81 1144

READCLOC

000000 # READCLOCK

12/03/81 1145

DIRECTIVE

000010 ?A

12/03/81 1146

000020 + DFT A = Zs

30/03/81 1147

000030 ?A=SPC(8):Z=DPEEK(PTR(?A)):IFZ>ZH%THENZ=Z*ZH*

13/05/81 1148

000040 Z% = USR(21,Z)

08/05/81 1149


```
RESET      000000 #RESET
            000010 ?A B
DIRECTIVE  000020 +IFF??A?EQUAL?INIT?
            000030      GOSUB #RESETINIT
            000040 (
DIRECTIVE  000050 P RESETINIT
            000060 )
DIRECTIVE  000070 +ELSE
            000080 M      TGRAPHICS?ZMZ??A??B?
DIRECTIVE  000090 +FI
DIRECTIVE  000100 +CEXIT
            000110 (
            000120 B RESETINIT
            000130 P SUB
DIRECTIVE  000140 &IF/NO/RESETINIT/GO TO/RESETEND
            000150 RESETINIT
            000160      FOR Z1% =ZL%TO 22
            000170          PRINT@ (Z1%,ZL%) CHR$(32);
            000180      NEXT Z1%
            000190      RETURN
LABEL      000200 &&RESETEND
            000210 )
```

18/03/81 1150

18/03/81 1151

18/08/81 1152

03/04/81 1153

03/04/81 1154

03/04/81 1155

03/04/81 1156

23/03/81 1157

18/08/81 1158

31/03/81 1159

03/04/81 1160

03/04/81 1161

03/04/81 1162

03/04/81 1163

03/04/81 1164

03/04/81 1165

05/05/81 1166

05/05/81 1167

03/04/81 1168

03/04/81 1169

03/04/81 1170

03/04/81 1171

REVERSE 000000 # REVERSE

000010 ?A

DIRECTIVE 000020 +DFT A = OFF

DIRECTIVE 000030 +IFF??A?NOT?EQUAL?ON?IF??A?NOT?EQUAL?OFF

DIRECTIVE 000040 + WARNING?REVERSE NOT SET TO ON OR OFF = SET TO OFF

DIRECTIVE 000050 + SET A = OFF

DIRECTIVE 000060 +FI

DIRECTIVE 000070 +IFF??A?EQUAL?ON

000080 Z1% = USR (11,ZM%):ZQ%=ZM%

DIRECTIVE 000090 +ELSE

000100 Z1% = USR (11,ZL%):ZQ%=ZL%

DIRECTIVE 000110 +FI

DIRECTIVE 000120 + CEXIT

000130 R REVERSE

000140 (

000150 P REVERSE

000160)

24/03/81 1172

24/03/81 1173

27/03/81 1174

18/08/81 1175

18/08/81 1176

27/03/81 1177

24/03/81 1178

18/08/81 1179

22/07/81 1180

24/03/81 1181

22/07/81 1182

12/03/81 1183

22/07/81 1184

22/07/81 1185

22/07/81 1186

22/07/81 1187

22/07/81 1188

REVERSE1 000000 # REVERSE1

15/06/81 1189

DIRECTIVE

```
000010 ? A
000020 Z=PTR(?A):GOSUB #REVERSE1
000030 + CEXIT
000040 (
000050 P SUB
000060 REVERSE1
000070 Z1=DPEEK(Z):Z2=DPEEK(Z+2)+Z1-1
000080 FORZ=Z1TOZ2:POKEZ,PEEK(Z)+128:NEXTZ
000090 RETURN
000100 )
```

```
15/06/81 1190
15/06/81 1191
15/06/81 1192
15/06/81 1193
15/06/81 1194
15/06/81 1195
15/06/81 1196
15/06/81 1197
15/06/81 1198
15/06/81 1199
```

	RGLINE	000000 # RGLINE	22/06/81	1200
		000010 ? A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	22/06/81	1201
		000020 Z\$=?A;GOSUB #RGLINEOPEN	22/06/81	1202
DIRECTIVE		000030 +IFF/?B/NOT/EQUAL/R/	22/06/81	1203
		000040 ?C = "" : Z\$=?B : Z=PTR(?C) : GOSUB #RGLINE	22/06/81	1204
		000050 ?E = "" : Z\$=?D : Z=PTR(?E) : GOSUB #RGLINE	22/06/81	1205
		000060 ?G = "" : Z\$=?F : Z=PTR(?G) : GOSUB #RGLINE	22/06/81	1206
		000070 ?I = "" : Z\$=?H : Z=PTR(?I) : GOSUB #RGLINE	22/06/81	1207
		000080 ?K = "" : Z\$=?J : Z=PTR(?K) : GOSUB #RGLINE	22/06/81	1208
		000090 ?M = "" : Z\$=?L : Z=PTR(?M) : GOSUB #RGLINE	22/06/81	1209
		000100 ?O = "" : Z\$=?N : Z=PTR(?O) : GOSUB #RGLINE	22/06/81	1210
		000110 ?Q = "" : Z\$=?P : Z=PTR(?Q) : GOSUB #RGLINE	22/06/81	1211
		000120 ?S = "" : Z\$=?R : Z=PTR(?S) : GOSUB #RGLINE	22/06/81	1212
		000130 ?U = "" : Z\$=?T : Z=PTR(?U) : GOSUB #RGLINE	22/06/81	1213
		000140 ?W = "" : Z\$=?V : Z=PTR(?W) : GOSUB #RGLINE	22/06/81	1214
		000150 ?Y = "" : Z\$=?X : Z=PTR(?Y) : GOSUB #RGLINE	22/06/81	1215
DIRECTIVE		000160 +ELSE	22/06/81	1216
DIRECTIVE		000170 + DFT F = 0	22/06/81	1217
		000180 Z2\$=?F	22/06/81	1218
		000190 FORZ1\$=?CTO?D : ?E(Z2\$)="" : Z\$=Z1\$: Z=PTR(?E(Z2\$)) : GOSUB #RGLINE	22/06/81	1219
		000200 Z2\$=Z2\$+1 : NEXTZ1\$	22/06/81	1220
DIRECTIVE		000210 + IFF/?H/NOT/EQUAL//	22/06/81	1221
DIRECTIVE		000220 + DFT G = 0	22/06/81	1222
		000230 Z2\$=?J	22/06/81	1223
		000240 FORZ1\$=?GTO?H : ?I(Z2\$)="" : Z\$=Z1\$: Z=PTR(?I(Z2\$)) : GOSUB #RGLINE	22/06/81	1224
		000250 Z2\$=Z2\$+1 : NEXTZ1\$	22/06/81	1225
DIRECTIVE		000260 + FI	22/06/81	1226
DIRECTIVE		000270 + IFF/?L/NOT/EQUAL//	22/06/81	1227
DIRECTIVE		000280 + DFT K = 0	22/06/81	1228
		000290 Z2\$=?N	22/06/81	1229
		000300 FORZ1\$=?KTO?L : ?M(Z2\$)="" : Z\$=Z1\$: Z=PTR(?M(Z2\$)) : GOSUB #RGLINE	22/06/81	1230
		000310 Z2\$=Z2\$+1 : NEXTZ1\$	22/06/81	1231
DIRECTIVE		000320 + FI	22/06/81	1232
DIRECTIVE		000330 + IFF/?P/NOT/EQUAL//	22/06/81	1233
DIRECTIVE		000340 + DFT R = 0	22/06/81	1234
		000350 Z2\$=?R	22/06/81	1235
		000360 FORZ1\$=?OTO?P : ?Q(Z2\$)="" : Z\$=Z1\$: Z=PTR(?Q(Z2\$)) : GOSUB #RGLINE	22/06/81	1236
		000370 Z2\$=Z2\$+1 : NEXTZ1\$	22/06/81	1237
DIRECTIVE		000380 + FI	22/06/81	1238
DIRECTIVE		000390 +FI	22/06/81	1239
		000400 GOSUB #RGLINECLOSE	22/06/81	1240
DIRECTIVE		000410 +CEXIT	22/06/81	1241
		000420 (	22/06/81	1242
		000430 P SUB	22/06/81	1243
		000440 RGLINEOPEN	22/06/81	1244
		000450 OPEN OLD Z\$ AS 9	22/06/81	1245
		000460 FIELD #9,2 AS ZZ\$,250 AS ZY\$	22/06/81	1246
		000470 RETURN	22/06/81	1247
		000480 RGLINE	22/06/81	1248
		000490 GET #9,RECORD Z\$	22/06/81	1249
		000500 Z\$=CVT\$(ZZ\$)	22/06/81	1250
		000510 ZX\$=LEFT\$(ZY\$,Z\$)	22/06/81	1251
		000520 Z1=PTR(ZX\$)	22/06/81	1252
		000530 DPOKE Z,DPEEK(Z1) : DPOKE Z+2,Z\$	22/06/81	1253
		000540 DPOKE Z1,0 : DPOKE Z1+2,0	22/06/81	1254
		000550 RETURN	22/06/81	1255

000560 RGLINECLOSE
000570 CLOSE 9
000580 RETURN
000590)

22/06/81 1256
22/06/81 1257
22/06/81 1258
22/06/81 1259

REPORT SX3CMD/2.1

ATU

MACRO FILE: PPOMSY

MACRO: RUNCLOCK

DATE: 24/09/81

TIME: 10:50

PAGE: 54

RUNCLOCK

000000 #

RUNCLOCK

12/03/81 1260

000010

Z1%=USR(22,ZM%)

05/05/81 1261

13	SCHAR	000000 #SCHAR	25/03/81	1262
14				
15		000010 ? A 8 C	25/03/81	1263
16	DIRECTIVE	000020 +IFF??B?NUMERIC?COMPUTE B = ?B * 10	18/08/81	1264
17	DIRECTIVE	000030 +ELSE?IF??B?NOT?EQUAL??SET B = ?B * 10	18/08/81	1265
18	DIRECTIVE	000040 +FI	02/04/81	1266
19	DIRECTIVE	000050 +IFF??C?NUMERIC?COMPUTE C = ?C * 6	18/08/81	1267
20	DIRECTIVE	000060 +ELSE?IF??C?NOT?EQUAL??SET C = ?C * 6	18/08/81	1268
21	DIRECTIVE	000070 +FI	02/04/81	1269
22		000080 M GPRINT??A??B??C?	18/08/81	1270

SCREEN

000000 #SCREEN

12/03/81 1271

000010 ?A B

12/03/81 1272

DIRECTIVE

000020 +DFT A = T1

12/03/81 1273

DIRECTIVE

000030 +IFF??A?NOT?EQUAL?T1?IF??A?NOT?EQUAL?G1?

18/08/81 1274

DIRECTIVE

000040 + UNSET B

30/03/81 1275

DIRECTIVE

000050 + IFF??A?NOT?EQUAL?T2?IF??A?NOT?EQUAL?G2

18/08/81 1276

DIRECTIVE

000060 + ERROR?INVALID SCREEN TYPE?

18/08/81 1277

DIRECTIVE

000070 + EXIT

30/03/81 1278

DIRECTIVE

000080 + FI

30/03/81 1279

DIRECTIVE

000090 +FI

30/03/81 1280

DIRECTIVE

000100 +IFF??A?EQUAL?T1?

18/08/81 1281

000110 Z1%=USR(46,ZN%)

05/05/81 1282

DIRECTIVE

000120 + UNSET Y

30/03/81 1283

DIRECTIVE

000130 + IFF??B?NOT?EQUAL??

18/08/81 1284

DIRECTIVE

000140 + SET Z = 6144

30/03/81 1285

DIRECTIVE

000150 + IF??B?EQUAL?80?SET Z = 6145

18/08/81 1286

DIRECTIVE

000160 + IF??B?EQUAL?80?SET Y = 6144

18/08/81 1287

DIRECTIVE

000170 + IF??B?EQUAL?40?SET Y = 2048

18/08/81 1288

DIRECTIVE

000180 + IF??B?EQUAL?20?SET Y = 4096

18/08/81 1289

000190 Z1%= USR(Z1%,USR(ZJ%) AND NOT ?Z OR ?Y)

05/05/81 1290

DIRECTIVE

000200 + FI

12/03/81 1291

DIRECTIVE

000210 + EXIT

30/03/81 1292

DIRECTIVE

000220 +FI

30/03/81 1293

DIRECTIVE

000230 +IFF??A?EQUAL?T2?

18/08/81 1294

000240 IF(USR(ZJ%) AND 6144)<> 6144 THEN Z1% = USR(46,ZN%)*

05/05/81 1295

DIRECTIVE

000250 + EXIT

27/04/81 1296

DIRECTIVE

000260 +FI

27/04/81 1297

DIRECTIVE

000270 +IFF??B?EQUAL?480?

18/08/81 1298

DIRECTIVE

000280 + COMPUTE 2 = ?1 + 4

30/03/81 1299

000290 IF PEEK(?2)<>ZL%THENZ1%=USR(Z1%,USR(ZJ%)ANDNOTZN%OR4)

05/05/81 1300

000300 POKE?1,ZN%*

08/05/81 1301

DIRECTIVE

000310 + EXIT

30/03/81 1302

DIRECTIVE

000320 +FI

12/03/81 1303

DIRECTIVE

000330 +IFF??B?EQUAL?240?

18/08/81 1304

000340 Z1%=USR(Z1%,USR(ZJ%)AND NOT 4)

05/05/81 1305

DIRECTIVE

000350 +FI

05/05/81 1306

DIRECTIVE

000360 +IFF??A?EQUAL?G1?

18/08/81 1307

000370 POKE ?1,ZL%

05/05/81 1308

DIRECTIVE

000380 + EXIT

05/05/81 1309

DIRECTIVE

000390 +FI

05/05/81 1310

DIRECTIVE

000400 +IFF??A?EQUAL?G2?

18/08/81 1311

DIRECTIVE

000410 +COMPUTE 2 = ?1 + 4

30/03/81 1312

000420 IF PEEK(?2) > ZL% THEN POKE ?1,ZN%*

05/05/81 1313

DIRECTIVE

000430 +FI

05/05/81 1314

	SELECTOR	000000 #	SELECTOR	30/03/81	1315
		000010	? A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	30/03/81	1316
	DIRECTIVE	000020	+IFF??A?EQUAL?REENTER?	18/08/81	1317
		000030	GOSUB #SELECTOR3	04/05/81	1318
	DIRECTIVE	000040	+CEXIT	13/05/81	1319
	DIRECTIVE	000050	+GO TO?CEXIT	18/08/81	1320
	DIRECTIVE	000060	+FI	04/05/81	1321
	DIRECTIVE	000070	+DFT A = WHITE	30/03/81	1322
	DIRECTIVE	000080	+DFT B = WHITE	30/03/81	1323
		000090	Z1\$="A":Z2\$="B":GOSUB#SELECTOR	16/04/81	1324
	DIRECTIVE	000100	+IF??C?EQUAL??GO TO?SELECTOR1?	18/08/81	1325
		000110	Z1\$=?C:Z3\$=?D:GOSUB#SELECTOR2	01/05/81	1326
	DIRECTIVE	000120	+IF??E?EQUAL??GO TO?SELECTOR1?	18/08/81	1327
		000130	Z1\$=?E:Z3\$=?F:GOSUB#SELECTOR2	01/05/81	1328
	DIRECTIVE	000140	+IF??G?EQUAL??GO TO?SELECTOR1?	18/08/81	1329
		000150	Z1\$=?G:Z3\$=?H:GOSUB#SELECTOR2	01/05/81	1330
	DIRECTIVE	000160	+IF??I?EQUAL??GO TO?SELECTOR1?	18/08/81	1331
		000170	Z1\$=?I:Z3\$=?J:GOSUB#SELECTOR2	01/05/81	1332
	DIRECTIVE	000180	+IF??K?EQUAL??GO TO?SELECTOR1?	18/08/81	1333
		000190	Z1\$=?K:Z3\$=?L:GOSUB#SELECTOR2	01/05/81	1334
	DIRECTIVE	000200	+IF??M?EQUAL??GO TO?SELECTOR1?	18/08/81	1335
		000210	Z1\$=?M:Z3\$=?N:GOSUB#SELECTOR2	01/05/81	1336
	DIRECTIVE	000220	+IF??O?EQUAL??GO TO?SELECTOR1?	18/08/81	1337
		000230	Z1\$=?O:Z3\$=?P:GOSUB#SELECTOR2	01/05/81	1338
	DIRECTIVE	000240	+IF??Q?EQUAL??GO TO?SELECTOR1?	18/08/81	1339
		000250	Z1\$=?Q:Z3\$=?R:GOSUB#SELECTOR2	01/05/81	1340
	DIRECTIVE	000260	+IF??S?EQUAL??GO TO?SELECTOR1?	18/08/81	1341
		000270	Z1\$=?S:Z3\$=?T:GOSUB#SELECTOR2	01/05/81	1342
	DIRECTIVE	000280	+IF??U?EQUAL??GO TO?SELECTOR1?	18/08/81	1343
		000290	Z1\$=?U:Z3\$=?V:GOSUB#SELECTOR2	01/05/81	1344
	DIRECTIVE	000300	+IF??W?EQUAL??GO TO?SELECTOR1?	18/08/81	1345
		000310	Z1\$=?W:Z3\$=?X:GOSUB#SELECTOR2	01/05/81	1346
	DIRECTIVE	000320	+IF??Q?EQUAL??GO TO?SELECTOR1?	18/08/81	1347
		000330	Z1\$=?Y:Z3\$=?Z:GOSUB#SELECTOR2	01/05/81	1348
	LABEL	000340	++SELECTOR1	30/03/81	1349
		000350	GOSUB#SELECTOR3	30/03/81	1350
	DIRECTIVE	000360	+CEXIT SEL-QUIT (Procedure Name KSL)	30/03/81	1351
	LABEL	000370	++CEXIT	13/05/81	1352
		000380	(	30/03/81	1353
		000390	P INITO	12/05/81	1354
		000400	DIM Z1\$(4), Z1%(11), Z2%(11)	08/05/81	1355
		000410	Z1\$(ZL%)="<,"?":Z1\$(ZM%)="5"+CHR\$(127)+"?":Z1\$(ZN%)="",."	18/08/81	1356
		000420	Z1\$(3)=" "+CHR\$(31):Z1\$(4)="RGBMC"	08/05/81	1357
		000430	P SUB	30/03/81	1358
		000440	SELECTOR	30/03/81	1359
		000450	** Z1%=TEXT COLOUR: Z2%=BOX COLOUR: Z8%=NO OF BOXES: Z\$=WORK	30/03/81	1360
		000460	** Z1%=TEXT COLOUR: Z2%=BOX COLOUR: Z\$=WORK	30/03/81	1361
		000470	Z\$=Z1\$:GOSUB #SELECTOR1:Z1\$=CHR\$(Z%)	30/03/81	1362
		000480	Z\$=Z2\$:GOSUB #SELECTOR1:Z2\$=CHR\$(Z%+16)	16/04/81	1363
		000490	FOR Z%=ZL% TO 11: Z1%(Z%)=ZP%:Z2%(Z%)=ZP%:NEXT Z%:Z8%=ZK%	05/05/81	1364
		000500	RETURN	30/03/81	1365
		000510	SELECTOR1	30/03/81	1366
		000520	Z%=INSTR(ZM%,Z1\$(4),LEFT\$(Z\$,ZM%))	08/05/81	1367
		000530	IF Z%=0 THEN Z%=7*	08/05/81	1368
		000540	RETURN	08/05/81	1369
		000550	SELECTOR2	30/03/81	1370

```
000560 **Z1%=ROW: Z2%=COLUMN:Z3%=NO OF TEXT LINES - 1:Z4%=LENGTH OF LINES 16/04/81 1371
000570 ** Z8%=NO OF BOXES 30/03/81 1372
000580 IF Z1%>55ORZ3%=""THENRETURNX 04/05/81 1373
000590 Z3%=Z1%/8:Z2%=(Z1%-Z3%*8)*5:Z1%=Z3%*3 04/05/81 1374
000600 Z5%=ASC(Z3%):Z4%=LEN(Z3%) 04/05/81 1375
000610 IF Z5%>31 THEN Z3%=ZL% 05/05/81 1376
000620 ELSE Z3%= MID$(Z3%,ZN%) 05/05/81 1377
000630 :Z% = Z5% 04/05/81 1378
000640 :Z3% = (Z4%-ZM%)/Z5% 05/05/81 1379
000650 :Z4% = Z%:Z5%=ASC(Z3%)* 04/05/81 1380
000660 Z8%=Z8%+ZM% 05/05/81 1381
000670 Z1%(Z8%)= Z1%+ZM% 05/05/81 1382
000680 Z2%(Z8%)= Z2%+ZN% 05/05/81 1383
000690 FOR Z% = ZL% TO ZN% 05/05/81 1384
000700 PRINT@(Z1%+Z%,Z2%) Z2$:Z1$(Z%) 01/05/81 1385
000710 NEXT Z% 16/04/81 1386
000720 IF Z4%=ZM% AND Z3%=ZL% AND Z5% > 63 AND Z5% < 96 05/05/81 1387
000730 THEN PRINT@(Z1%+ZM%,Z2%+ZN%) Z3$:RETURNX 05/05/81 1388
000740 Z2% = Z2% - Z4% - ZM%:IF Z2% < ZL% THEN Z2% = ZL%* 05/05/81 1389
000750 IF Z3%=ZL% THEN PRINT@(Z1%+ZM%,Z2%)Z1$:Z3$:RETURNX 05/05/81 1390
000760 FOR Z% = ZL% TO Z3% 05/05/81 1391
000770 PRINT@(Z1%+Z%,Z2%)Z1$:MID$(Z3%,Z4%-Z%+ZM%,Z4%) 05/05/81 1392
000780 NEXT Z% 16/04/81 1393
000790 RETURN 30/03/81 1394
000800 SELECTOR3 31/03/81 1395
000810 ** Z1% = CURRENT ROW: Z2%=CURRENT COL:Z3%=CURRENT OCCURANCE 31/03/81 1396
000820 ** Z8%= NO OF BOXES 31/03/81 1397
000830 M CLEAR23 31/03/81 1398
000840 Z$=CHR$(3)+"PRESS"+CHR$(8)+"ENTER"+CHR$(9)+"TO SELECT" 15/06/81 1399
000850 M REVERSE1/Z$ 15/06/81 1400
000860 M PRINT23/Z$ 15/06/81 1401
000870 Z3%=ZL%:IF Z8%<ZL%THENZ%=ZK%:RETURNX 05/05/81 1402
000880 SELECTOR4 31/03/81 1403
000890 Z1%=Z1%(Z3%) 01/05/81 1404
000900 Z2%=Z2%(Z3%):PRINT@(Z1%,Z2%)":":ZC%=USR(15) 01/05/81 1405
000910 IF ZC%<128THEN 05/05/81 1406
000920 Z1$=CHR$(ZC%+128)ELSEZ1$=CHR$(ZC%-128)* 05/05/81 1407
000930 Z2$=CHR$(ZC%):Z$=Z1$ 05/05/81 1408
000940 SELECTOR5 31/03/81 1409
000950 PRINT@(Z1%,Z2%)Z$:ZC%=ZL% 05/05/81 1410
000960 SELECTOR6 01/05/81 1411
000970 ZZ$=INCH$:IFZZ$<>ZL$THEN#SELECTOR7* 19/05/81 1412
000980 ZC%=ZC%+ZM%:IFZC%<35 THEN #SELECTOR6* 05/05/81 1413
000990 IFZ$=Z1$THENZ$=Z2$ELSEZ$=Z1$* 01/05/81 1414
001000 GOTO #SELECTOR5 01/05/81 1415
001010 SELECTOR7 01/05/81 1416
001020 Z%=ASC(ZZ$) 19/05/81 1417
001030 PRINT@(Z1%,Z2%)Z2$ 04/05/81 1418
001040 R SELECTOR 04/05/81 1419
001050 IFZ%<8ORZ%>13ORZ%=12GOTO#SELECTOR5* 04/05/81 1420
001060 IF Z%=13 THEN Z%=USR(10,5888):PRINT@(Z1%,Z2%)Z1$:Z%=Z3%+ZM% 05/05/81 1421
001070 :GOSUB #SNUMBER 03/06/81 1422
001080 :RETURNX 04/05/81 1423
001090 Z0%=Z3%:Z9%=Z3% 02/06/81 1424
001100 ONZ%-7GOTO#SELECTOR8, #SELECTOR9, #SELECTOR10, #SELECTOR11* 12/05/81 1425
001110 SELECTOR8 01/05/81 1426
001120 Z4%=ZK%:Z5%=Z2% 02/06/81 1427
```


001130	FORZ7%=0T0Z8%	01/05/81	1428
001140	IFZ7%=Z3%ORZ1%(Z7%)<>Z1%THEN #SELECTOR8A×	01/05/81	1429
001150	Z6%=Z2%(Z7%)	01/05/81	1430
001160	IFZ6%<Z2%ANDZ6%>Z4%THENZ4%=Z6%:Z9%=Z7%×	01/05/81	1431
001170	IFZ6%>Z5%THENZ5%=Z6%:Z0%=Z7%×	12/05/81	1432
001180	SELECTOR8A	01/05/81	1433
001190	NEXTZ7%	01/05/81	1434
001200	IFZ4%=ZK%THENZ3%=Z0% ELSE Z3%=Z9%×	05/05/81	1435
001210	GOTO#SELECTOR4	01/05/81	1436
001220	SELECTOR9	01/05/81	1437
001230	Z4%=ZP%:Z5%=Z2%	02/06/81	1438
001240	FORZ7%=ZL%T0Z8%	05/05/81	1439
001250	IFZ7%=Z3% OR Z1%(Z7%)<>Z1%THEN #SELECTOR9A×	01/05/81	1440
001260	Z6%=Z2%(Z7%)	01/05/81	1441
001270	IFZ6%>Z2%ANDZ6%<Z4%THENZ4%=Z6%:Z9%=Z7%×	01/05/81	1442
001280	IFZ6%<Z5%THENZ5%=Z6%:Z0%=Z7%×	12/05/81	1443
001290	SELECTOR9A	01/05/81	1444
001300	NEXTZ7%	01/05/81	1445
001310	IFZ4%=ZP%THENZ3%=Z0%ELSEZ3%=Z9%×	05/05/81	1446
001320	GOTO#SELECTOR4	01/05/81	1447
001330	SELECTOR10	01/05/81	1448
001340	Z4%=ZP%:Z5%=Z1%	02/06/81	1449
001350	FORZ7%=ZL%T0Z8%	05/05/81	1450
001360	IFZ7%=Z3%ORZ2%(Z7%)<>Z2%THEN #SELECTOR10A×	04/05/81	1451
001370	Z6%=Z1%(Z7%)	01/05/81	1452
001380	IFZ6%>Z1%ANDZ6%<Z4%THENZ4%=Z6%:Z9%=Z7%×	01/05/81	1453
001390	IFZ6%<Z5%THENZ5%=Z6%:Z0%=Z7%×	12/05/81	1454
001400	SELECTOR10A	01/05/81	1455
001410	NEXTZ7%	01/05/81	1456
001420	IFZ4%=ZP%THENZ3%=Z0% ELSE Z3%=Z9%×	05/05/81	1457
001430	GOTO#SELECTOR4	01/05/81	1458
001440	SELECTOR11	01/05/81	1459
001450	Z4%=ZK%:Z5%=Z1%	02/06/81	1460
001460	FORZ7%=ZL%T0Z8%	05/05/81	1461
001470	IFZ7%=Z3% OR Z2%(Z7%)<>Z2%THEN #SELECTOR11A×	01/05/81	1462
001480	Z6%=Z1%(Z7%)	01/05/81	1463
001490	IFZ6%<Z1%ANDZ6%>Z4%THENZ4%=Z6%:Z9%=Z7%×	01/05/81	1464
001500	IFZ6%>Z5%THENZ5%=Z6%:Z0%=Z7%×	12/05/81	1465
001510	SELECTOR11A	01/05/81	1466
001520	NEXTZ7%	01/05/81	1467
001530	IFZ4%=ZK%THENZ3%=Z0%ELSEZ3%=Z9%×	05/05/81	1468
001540	GOTO#SELECTOR4	01/05/81	1469
001550	)	02/04/81	1470

SELECTVA

000000 #SELECTVAL

000010 ? A B C D E F G H

000020 (

000030 P SELECTOR

000040 IF Z% = ?A

000050 OR Z% = ?B

000060 OR Z% = ?C

000070 OR Z% = ?D

000080 OR Z% = ?E

000090 OR Z% = ?F

000100 OR Z% = ?G

000110 OR Z% = ?H

000120 THEN RETURNx

000130)

04/05/81 1471

04/05/81 1472

04/05/81 1473

04/05/81 1474

04/05/81 1475

04/05/81 1476

04/05/81 1477

04/05/81 1478

04/05/81 1479

04/05/81 1480

04/05/81 1481

09/06/81 1482

04/05/81 1483

04/05/81 1484

SET 000000 # SET

DIRECTIVE 000010 ? A B
000020 +IFF??A?EQUAL?INIT?
000030 GOSUB #SETINIT
000040 (
000050 P SETINIT
000060)

DIRECTIVE 000070 +ELSE
000080 M TGRAPHICS?ZM%??A??B?

DIRECTIVE 000090 +FI
DIRECTIVE 000100 +CEXIT.
000110 (
000120 P SUB
000130 R SETINIT

DIRECTIVE 000140 &IF/NO/SETINIT/GO TO/SETEND
000150 SETINIT
000160 FOR Z1% = ZL% TO 22
000170 PRINT@ (Z1%,ZL%) CHR\$(30);
000180 NEXT Z1%
000190 RETURN

LABEL 000200 &&SETEND
000210)

30/03/81 1485
30/03/81 1486
18/08/81 1487
03/04/81 1488
03/04/81 1489
03/04/81 1490
03/04/81 1491
23/03/81 1492
18/08/81 1493
23/03/81 1494
03/04/81 1495
03/04/81 1496
03/04/81 1497
03/04/81 1498
03/04/81 1499
03/04/81 1500
05/05/81 1501
05/05/81 1502
03/04/81 1503
03/04/81 1504
03/04/81 1505
03/04/81 1506

SETCLOCK

000000 #SETCLOCK

000010 ?A

000020

Z\$ = ?A

000030

Z=DPLEK(PTR(Z\$)):IFZ>ZH%THENZ=Z-ZHx

000040

Z1% = USR(20,Z)

12/03/81 1507

12/03/81 1508

02/04/81 1509

05/05/81 1510

30/04/81 1511

SHOWCLOC 000000 # SHOWCLOCK

12/03/81 1512

DIRECTIVE 000010 ?A B
DIRECTIVE 000020 +IF??A?EQUAL??IF??B?EQUAL??GO?ENDIT?
DIRECTIVE 000030 +IFF??A?EQUAL?OFF?

12/03/81 1513

18/08/81 1514

18/08/81 1515

000040 M STOPCLOCK
000050 M RUNCLOCK

12/03/81 1516

12/03/81 1517

DIRECTIVE 000060 +ELSE

12/03/81 1518

DIRECTIVE 000070 + DFT A = 23

25/03/81 1519

DIRECTIVE 000080 + DFT B = 32

25/03/81 1520

DIRECTIVE 000090 + COMPUTE A = ?A * 256 + ?B

22/05/81 1521

000100 Z1% = USR (23, ?A)

17/03/81 1522

DIRECTIVE 000110 +FI

30/03/81 1523

LABEL 000120 ++ENDIT

12/03/81 1524

000130 Z1% = USR(22)

17/03/81 1525

SKEL

000000 #SKEL

12/03/81 1526

000010 ?A B C D E F G H I J K L M N O P

01/04/81 1527

000020 M ADDRESSET

30/03/81 1528

DIRECTIVE

000030 +DFT E =

19/05/81 1529

DIRECTIVE

000040 +DFT F = "MENU"

10/04/81 1530

DIRECTIVE

000050 +IFF/?F/EQUAL/"MENU"/SET K = MENU LOADING

15/06/81 1531

DIRECTIVE

000060 +ELSE/SET K = LOADING

15/06/81 1532

DIRECTIVE

000070 +FI

15/06/81 1533

DIRECTIVE

000080 +DFT J = 0

12/05/81 1534

DIRECTIVE

000090 +SET D = T1

01/05/81 1535

DIRECTIVE

000100 +DATE S

19/05/81 1536

DIRECTIVE

000110 +TIME T

19/05/81 1537

000120 REM??A?PROGRAMMED?BY?PROGENI?FOR?POLYCORP?NZ??S??T

18/08/81 1538

000130 START

12/03/81 1539

DIRECTIVE

000140 +COMPUTE 2 = ?1 + ?0

27/03/81 1540

000150 Z1% = USR(?2,?J)

27/03/81 1541

000160 ON ERROR GOTO #ERRORSx

03/04/81 1542

000170 ZK%=-1:ZL%=0:ZM%=1:ZN%=2:ZH%=32767:ZH=65536:ZO%=256:ZP%=512

07/05/81 1543

000180 ZI%=18:ZJ%=19:ZL%=CHR\$(0):POKE1184,1:ZS%="00"

02/06/81 1544

DIRECTIVE

000190 +COMPUTE 2 = ?1 + ?2

05/05/81 1545

000200 POKE ?2,ZM%

05/05/81 1546

000210 GOSUB #RESET

29/04/81 1547

000220 GOTO #INIT

27/03/81 1548

000230 R SUB

27/03/81 1549

000240 RESET

29/04/81 1550

000250 Z1%=USR(ZI%,1544):Z1%=USR(46,ZM%)

03/06/81 1551

000260 DPOKE?1,3:Z1%=USR(11,ZL%):Z1%=USR(47):Z1%=USR(22,1)

02/06/81 1552

000270 Z1%=USR(10,5888)

02/06/81 1553

000280 RETURN

29/04/81 1554

000290 SNUMBER

02/06/81 1555

000300 IF ZS%="00" THEN RETURNx

08/06/81 1556

000310 Z1%=CHR\$(ZN%)+">#"+ZS%+ZL%:Z=DPEEK(PTR(Z1%)):IF Z>ZH% THEN Z=Z-ZH%

19/06/81 1557

000320 Z1%=USR(9,5888,Z):RETURN

08/06/81 1558

000330 INIT

27/03/81 1559

000340 R INITO

12/05/81 1560

000350 R OPEN

27/03/81 1561

000360 M TEXTGET/Z\$/0/29/4/

15/06/81 1562

000370 IF Z\$="POLY" THEN #INIT1x

15/06/81 1563

000380 CLS

19/05/81 1564

000390 PRINT@ (ZL%,ZM%)CHR\$(3);"?A";

15/06/81 1565

000400 PRINT@ (ZL%,29)"POLY SYSTEM";

15/06/81 1566

000410 Z%=USR(11,ZM%)

15/06/81 1567

000420 PRINT@ (ZM%,ZL%)CHR\$(13);SPC(39)

16/06/81 1568

DIRECTIVE

000430 +IFF+?B+EQUAL++IF+?C+NOT+EQUAL++SET B = ?C

24/06/81 1569

DIRECTIVE

000440 + UNSET C

16/06/81 1570

DIRECTIVE

000450 +FI

16/06/81 1571

DIRECTIVE

000460 +LENGTH P = ?B

16/06/81 1572

DIRECTIVE

000470 +COMPUTE Q = 38 - ?P / 2

16/06/81 1573

DIRECTIVE

000480 +COMPUTE R = 38 - ?Q - ?P

16/06/81 1574

000490 PRINT@ (3,ZL%)CHR\$(3);CHR\$(13);SPC(?Q);

15/06/81 1575

000500 - "?B";

15/06/81 1576

000510 - SPC(?R);

16/06/81 1577

DIRECTIVE

000520 +LENGTH P = ?C

16/06/81 1578

DIRECTIVE

000530 +COMPUTE Q = 38 - ?P / 2

16/06/81 1579

DIRECTIVE

000540 +COMPUTE R = 38 - ?Q - ?P

16/06/81 1580

000550 PRINT@ (5,ZL%)CHR\$(3);CHR\$(13);SPC(?Q);

15/06/81 1581

	000560 -	"?C";	15/06/81	1582
	000570 -	SPC(?R);	16/06/81	1583
	000580	Z%=USR(11,ZL%)	15/06/81	1584
DIRECTIVE	000590	+LENGTH Q = ?G	11/05/81	1585
DIRECTIVE	000600	+COMPUTE Q = 40 - ?Q / 2 - 1	12/05/81	1586
	000610	PRINT@ (11,?Q)CHR\$(ZN%);"?G";	15/06/81	1587
DIRECTIVE	000620	+LENGTH Q = ?H	11/05/81	1588
DIRECTIVE	000630	+COMPUTE Q = 40 - ?Q / 2 - 1	12/05/81	1589
	000640	PRINT@ (13,?Q)CHR\$(ZN%);"?H";	15/06/81	1590
DIRECTIVE	000650	+LENGTH Q = ?I	11/05/81	1591
DIRECTIVE	000660	+COMPUTE Q = 40 - ?Q / 2 - 1	12/05/81	1592
	000670	PRINT@ (15,?Q)CHR\$(ZN%);"?I";	15/06/81	1593
	000680	INITI	15/06/81	1594
	000690	R INIT	02/04/81	1595
	000700	Z%=INCH\$;IF Z\$=CHR\$(6)THENGOTO #ERRORS*	18/06/81	1596
	000710	PRINT@ (21,ZL%)SPC(10);	17/06/81	1597
	000720	M NEXT	27/03/81	1598
	000730	CLS	15/06/81	1599
	000740	RINITI	12/03/81	1600
	000750	MAIN	12/03/81	1601
	000760	RMAIN	12/03/81	1602
	000770	FINISH	12/03/81	1603
	000780	RCLOSE	12/03/81	1604
	000790	RFINISH	01/04/81	1605
	000800	NEXTPROGRAM	27/03/81	1606
	000810	GOSUB #RESET	19/05/81	1607
	000820	POKE 1184,0:POKE 1182,0	15/06/81	1608
DIRECTIVE	000830	+IFF,?F,NOT,EQUAL, ,	15/06/81	1609
	000840	PRINT@ (22,23)CVT\$(525);CHR\$(8);"?K";	15/06/81	1610
	000850	CHAIN ?F	10/04/81	1611
DIRECTIVE	000860	+ FI	27/03/81	1612
	000870	END	27/03/81	1613
	000880	ERRORS	27/03/81	1614
	000890	IF ERR=30THENRESUME*	30/04/81	1615
	000900	R ERRORS	19/05/81	1616
	000910	GOSUB #RESET	29/04/81	1617
	000920	CLS	19/05/81	1618
	000930	IF ERR=34THENRESUME #NEXTPROGRAM*	11/05/81	1619
	000940	POKE 1184,0	19/05/81	1620
	000950	M COLOUR?CYAN?B?	18/08/81	1621
	000960	PRINT@ (4,9)CHR\$(13);"A? ERROR ??? ??????????"	19/05/81	1622
	000970	PRINT@ (8,ZL%)"A?? ???? ??????? ?? ??????? ?? ??? LOG"	05/05/81	1623
	000980	PRINT@ (10,8)"P?????? ?A";	15/06/81	1624
	000990	PRINT@ (11,10)"?S ?T";	15/06/81	1625
	001000	PRINT@ (12,8)"E???? ?;ERL;"/";ERR	15/06/81	1626
	001010	PRINT@ (13,8)"S?????? ??????? ?;ZS\$;	15/06/81	1627
	001020	PRINT@ (14,8)"D??? ?;DATES	15/06/81	1628
	001030	M NEXT	27/03/81	1629
	001040	RESUME #NEXTPROGRAM	27/03/81	1630
	001050	R DATA	12/05/81	1631

SNUMBER

000000 #

SNUMBER

02/06/81 1632

000010 ?

A

02/06/81 1633

000020

ZSS="?A"

03/06/81 1634

000030

GDSUB #SNUMBER

02/06/81 1635

STOPCLOC

000000 #

STOPCLOCK

12/03/81 1636

000010

Z1% = USR(22,ZL%)

05/05/81 1637

STRING

000000 #STRING

04/05/81 1638

DIRECTIVE

000010 ?A B C

04/05/81 1639

DIRECTIVE

000020 +IFF??A?EQUAL??ERROR?NO STRING SPECIFIED

18/08/81 1640

DIRECTIVE

000030 +EXIT

04/05/81 1641

DIRECTIVE

000040 +FI

04/05/81 1642

DIRECTIVE

000050 +IFF??C?EQUAL??SET C =

18/08/81 1643

DIRECTIVE

000060 +ELSE?SET C = ,?C

18/08/81 1644

DIRECTIVE

000070 +FI

19/05/81 1645

000080 ?A=SPC(?B?C)

19/05/81 1646

TEXTGET

000000 #TEXTGET

04/05/81 1647

000010 ? A B C D

30/03/81 1648

000020 ?A=SPC(?D)

07/04/81 1649

000030 Z=OPEEK(PTR(?A)):IFZ>ZH%THENZ=Z-ZHx

05/05/81 1650

DIRECTIVE

000040 +IFF??D?NUMERIC?

18/08/81 1651

DIRECTIVE

000050 + IFF??D?GREATER?0?

18/08/81 1652

000060 Z3%=USR(8,Z,?D,CVT\$(CHR\$(?B)+CHR\$(?C)))

24/06/81 1653

DIRECTIVE

000070 + ELSE

24/06/81 1654

000080 Z\$=""

24/06/81 1655

DIRECTIVE

000090 + FI

24/06/81 1656

DIRECTIVE

000100 +ELSE

24/06/81 1657

000110 IF ?D>0 THEN

24/06/81 1658

000120 Z3%=USR(8,Z,?D,CVT\$(CHR\$(?B)+CHR\$(?C)))

24/06/81 1659

000130 ELSEZ\$=""x

22/06/81 1660

DIRECTIVE

000140 +FI

24/06/81 1661

TGRAPHIC

000000 # TGRAPHICS

12/05/81 1662

DIRECTIVE

000010 ? A B C

31/03/81 1663

DIRECTIVE

000020 +IFF??B?NOT?EQUAL??IF??C?NOT?EQUAL??

18/08/81 1664

DIRECTIVE

000030 Z%=?A:Z1%=?B:Z2%=?C:GOSUB#TGRAPHICS

31/03/81 1665

DIRECTIVE

000040 +ELSE?ERROR?INVALID ROW OR COLUMN

18/08/81 1666

000050 +FI

02/04/81 1667

000060 +CEXIT

31/03/81 1668

000070 (

31/03/81 1669

000080 P SUB

31/03/81 1670

000090 TGRAPHICS

31/03/81 1671

000100 Z4%=Z1%/3:Z5%=Z2%/ZN%

05/05/81 1672

000110 Z3%=USR(12,Z4%*Z0%+Z5%):Z3%=USR(15)

05/05/81 1673

000120 IF(Z3%AND32)<>32THENZ3%=(Z3%AND128OR32)*

13/04/81 1674

000130 Z4%=ZN%*(ZN%*(Z1%-Z4%*3-Z5%)+Z2%)

05/05/81 1675

000140 IFZ4%=32THENZ4%=64 *

17/09/81 1676

000150 IFZ%=ZL%THENZ3%=SGN(Z3%ANDZ4%):RETURN*

05/05/81 1677

000160 IFZ%=ZM%THENZ3%=(Z3%ORZ4%)ELSEZ3%=(Z3%ANDNOTZ4%)*

05/05/81 1678

000170 Z1%=USR(5,Z3%*Z0%):RETURN

05/05/81 1679

000180)

31/03/81 1680

TIME

000000 #TIME

30/03/81 1681

000010 ? A

30/03/81 1682

000020 ?A = USR(24)

30/03/81 1683

WAIT

000000 # WAIT

12/03/81 1684

000010 ?A

12/03/81 1685

000020 ** FOR Z0 = 0 TO ?A*820:NEXT Z0

18/08/81 1686

000030 Z1%=USR(25,?A)

15/06/81 1687

BACKUP FILE: 001223 BACKUP/SX3CMD

CREATED ON: 09/24/81 (THURSDAY)

BY: PPOMSY/SX3CMD

CHARGE NUMBER: 222510

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1 00000000 00 00 000000 00000 00000 00000 00000 00000
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3 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
4 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
5 000000 00 00000 00 00 00 00 00 00 00 00 00 00 00
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7 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
8 00000000 00 00 00000 00000 00000 00000 00000 00000
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