# pride\_utilities

# SYSTEM X

For the AMSTRAD CPC 464/664



© 1985 PRIDE UTILITIES LTD 7 Chalton Heights, Chalton, Luton, Beds. LU4 9UF The instructions for IFLUSH on page 5 are for IFRAME. The instructions for IFLUSH are as follows:

FLUSH

No Parameters

This is used to clear the input buffer to prevent a build up of Characters.

18 CLS:PRINT 'PRESS LOTS OF KEYS' 28 FOR X=1 TO S888:NEXT

3# IFLUSH

Try this with and without line 38 and note the difference.

# SYSTEM X

# INTRODUCTION

SYSTEM X is a resident system extention ( RSX ) program which adds over 30 extra commands to your AMSTRAD CPC 464 or CPC 664. Due to the compact nature of the code this will take only approximately 3k bytes of RAM still leaving a generous amount of program area.

# LOADING

Load the program from cassette with RUN" ( CTRL and small ENTER ) or from disc with RUN"SYSTEMX". When the program has loaded and installed the commands, the normal READY prompt will appear. All other functions of the computer will behave as normal plus you will now have an extra 30+ commands which you can use within your programs.

### GENERAL

SYSTEM X uses external commands which are identified by the I (vertical bar) which precedes the name. This is achieved by pressing SHIFT and the @ key. The name can be in lower or upper case and is converted to upper case within a BASIC listing. The syntax is slightly different to BASIC commands in as much as all parameters passed to the RSX must be preceded by a comma. Commands which return values into a variable or string should have the variable or string assigned to a value before using the command. The variable or string should be preceded by an @ character when used as a parameter.

#### COMMANDS

# ICAPOFF

# No Parameters

This will turn off the CAPS LOCK within a program. All character read from the keyboard will be in lower case.

# ICAPON

#### No Parameters

This will turn on the CAPS LOCK within a program. All characters read from the keyboard will be in upper case.

# ICIRCLE

#### One or two parameters

This will draw a circle with the centre of the circle at the current position of the graphics cursor. The command is followed by the radius of the circle and is drawn using the current graphics pen.

# 10 MOVE 320,200: (CIRCLE,100

This will draw a circle of radius 100 in the centre of the screen.

Ovals can also be drawn with this command by adding a second parameter. In this case the first parameter refers to the horizontal radius and the second parameter refers to the vertical radius.

# 10 MOVE 320,200: | CIRCLE,100,50

This will draw an oval of horizontal radius 100 and vertical radius 50 in the centre of the screen.

The maximum size for any parameter is 255.

CUROFF

No Parameters

This will turn the text cursor off. See ICURON

**ECURON** 

No Parameters

This will allow the text cursor to be displayed on the screen.

10 K\$=" "

20 PRINT "PRESS ANY KEY ";

30 ICURON: IGETKEY, @K\$: (CUROFF

40 PRINT KS

see | GETKEY

IDEPEN

No Parameters

BASIC programs saved with the P option cannot be listed. With this command you can turn off the protection from within the program. Can be used at the start of your program as follows:

10 CLS: INPUT "ENTER PASSWORD ".PW\$

20 IF PW\$="(password)" THEN IDEPRO:LIST

30 REM Your program starts here

When this is saved using the P option then you will only be able to list the program if you know the password. See also IPROTEC

IDPEEK

Two Parameters

This is a double peek. It will return the result of the contents of two consecutive memory locations IN RAM, into an already assigned integer variable. The result will be in signed 16 bit format and follows normal Z80 convention ie low byte first.

1Ø A%=Ø

20 IDPOKE, &2000, &BB5A

30 | DPEEK, &2000, @A%: PRINT HEX# (A%)

See IDPOKE

Gives BB54

LDPOKE

Two Parameters

This is a double poke. It will put a signed 16 bit number into two consecutive memory locations in RAM in normal Z80 convention ie. low byte first. See IDPECK for example.

IDSCREEN

No Parameters

The whole screen will be moved down one line using this command. Lines moved off the screen are lost.

#### IFILL

#### One Parameter

This will fill any shape area with the specified pen colour. It will fill an area up to a line which is drawn in the current graphics pen or to a line drawn in the pen being used to fill. Filling starts from the current position of the graphics cursor and is limited by the size of the window.

1Ø IGPEN.3

See IGPEN

2Ø MOVE 32Ø,2ØØ: | CIRCLE, 1ØØ,5Ø

3Ø IFILL.2

This will draw an oval in the middle of the screen using pen 3 and then fill it using pen 2.

LEI HSH

#### No Parameters

Smooth movement of characters on the screen can be acheived by using the command. It will wait for a frame flyback pulse before continuing.

10 MODE 1:LOCATE 1.10

20 FOR X%=1 TO 39:PRINT " ";

3Ø IFRAME

40 PRINT CHR\$ (250) CHR\$ (8): NEXT: RUN

Try this example with and without line 30 and note the difference.

# IGETCHAR

# One Parameter

This will read from the screen at the current text cursor position and place the result in a string. If the character is unreadable the string is not changed.

IØ CLS:PRINT "SYSTEM X"

20 FOR X=1 TO 40:LOCATE X,1

3Ø C\$=" ": |GETCHAR.@C\$

4Ø LOCATE X, 13: PRINT C\$: NEXT

This will copy a line from the top of the screen to the middle.

# IGETKEY

# One Parameter

This will stop the program and wait for a key press. The character assigned to that key will be returned in a string. If the key has an expansion string assigned to it then the first character only is returned. See ICURON for example.

LGPEN

One Parameter

This will change the graphics pen. See (FILL for example

IGNVER

One Parameter

This will turn on or off the graphics XOR mode to enable you to rub out lines etc. A parameter of 1 will turn it on and a parameter of  $\varnothing$  will turn it off.

10 MOVE 320.200

20 IGOVER.0: ICIRCLE.50

30 IGOVER.1: LCIRCLE, 50

40 GOTO 20

HELP

No Parameters

This will print all the new commands available from SYSTEM X.

INVIS

No Parameters

This will make the screen invisible. The :VIS command will make it visible again. This is used to give the impression of instant printing.

10 LINVIS

20 CLS:PEN 2: IHELP:PEN 1

20 CLS:PEN 2: IMELP:PEN .

See | HELP

IINVERSE

No Parameters

Pen and paper colours are swapped with this command.

10 CLS

20 IINVERSE: PRINT "SYSTEM X": IINVERSE

ILSCREEN

No Parameters

This will move the whole screen left by 1 character in MODE 1, 2 characters in MODE 2 or half a character in MODE 0. Characters moved off the screen are lost.

MOTOR

One Parameter

This will operate or release the relay which controls the cassette motor. A parameter of I will turn it on and a parameter of 0 will turn it off. It is more useful on the CPC 664 to allow the use of rewind or fast forward. It could be used to control peripheral devices via the remote plug on the CPC 664.

IPROFF

No Parameters

This will turn off the printer function. See IPRON

#### No Parameters

#### IPRON

Issuing this command will cause all character printing to the screen to be echoed onto the printer. [PROFF will turm this off.

10 IPRON 20 IHELP 30 IPROFF

# PROTEC

### No Parameters

With this command it is possible to protect a BASIC program from within that program so that it will destroy itself upon return to the direct command mode. Protection can be removed with IDEPRO. See IDEPRO.

# IRPEK

# Three Parameters

This command allows you to peek into any ROM. The result of the peek is returned into an integer variable. The parameters are: address, ROM number,@ int var. The ROM number can be Ø for the BASIC ROM or 7 for the disc drive ROM. For peeking into the lower ROM the number can be anything.

10 A%=0 20 IRPEEK,&C002,0,@A% 30 PRINT "BASIC VERSION"A%

#### IR IRESET

# No Parameters

This will reset the screen to the default mode, inks, border, pen and paper. ¡R is a shorthand version of RESET which is easier to use if you cannot see what you are typing.

# IRSCREEN

#### No Parameters

This will move the whole screen right by 1 character in MODE 1, 2 characters in MODE 2 or half a character in MODE 9. Characters moved off the screen are lost.

# SHIFT

#### Three Parameters

A Block of memory can be moved with this command. It is particularly usefull for saving the current screen in memory. The parameters are: From address, To address

10 MODE 0: MOVE 320, 200

20 ICIRCLE,100:|FILL,15 30 |SHIFT,&C000,&4000,&4000: REM save screen at addr. &4000

40 MODE 1: INPUT" PRESS ENTER TO RETURN SCREEN ", AS: MODE 0

50 |SHIFT, &4000, &0000, &4000: REM move the screen back

#### LUSCREEN

# No Parameters

The whole screen will be moved up one line using this command. Lines moved off the screen are lost.

IVIS

No Parameters

This will make the screen visible after using the <code>:INVIS</code> command. See <code>:INVIS</code>.

IZIP

One parameter

This is similar to SPEED WRITE except that it offers seven speeds instead of two. These are:

IZIP,Ø	1 <i>000</i> baud	IŽIP, 1	1500 baud
ZIP,2	2000 baud	IZIP,3	2500 baud
[ZIP,4	3000 baud	IZIP.5	3500 baud
IZIP.6	4000 baud	•	

The higher the baud rate the less reliable the recording.

# **ERROR REPORTS**

SYSTEM X will only issue one error report, PARAMETER ERROR, this is issued if you have entered the wrong number of parameters or a parameter is out of range. Other error reports are issued from BASIC. The common ones are:

SYNTAX ERROR ... This is normally caused by omitting the first comma for a parameter after the command

UNKNOWN COMMAND ... This is caused by the wrong spelling of a command or using full stops instead of commas. It can also be caused by SYSTEM X being corrupted in some way.

IMPROPER AUGUMENT ... This is issued if you have not initiated a variable or string before preceding it by the @ character. See General