## Commands

## Iconcommands

If E.A.S.E. has been loaded and if you have affirmed the startup message, you will find yourself with an empty screen with a bordered line on the top, the so called 'pulldown-menu', and some funny- looking symbols at the right border. These symbols or 'icons' are described in the following section. We will go from the uppermost symbol downwards. The functions expressed by the symbols always refer to the last chosen window.

1st symbol:

The first symbol is a small box with arrows pointing into all directions. This symbol is used to move a window over the screen. Supposing, you have a window on the screen and select this icon, a small box will appear which can be moved by using the mouse. After fixing the box to a new position, using the button, the window will change its position to the new one immediately, the contents remaining the same. If you have more than one open window, you can select the one you want to move by simply pointing at it and pushing the button. If another window overlays this one, the selected window will change its position to the foreground.

2nd symbol:

This symbol represents a small box, which becomes larger in the lower right corner. This option allows the user to change the format of the selected window. If this option is activated, a small box will appear, which can be reduced or enlarged by using the mouse. The new size can be fixed by using the button, the background automatically being refreshed. This function can be used to minimize the size of a window, which is not used for the moment, and to enlarge it, if you want to work with it again.

3rd symbol:

This one shows a box containing arrows pointing into all directions. This function is the one which allows us to use the word 'windows'. E.A.S.E. supports 'real' windows, which means windows that can be scrolled into every direction. Also the contents of a window remain the same, whether you overlay it with another one or move it over the screen. A window is similar to a small frame through which you can see part of a greater picture. This frame can be moved over the picture to give you the possibility of seeing its whole contents. This is the only possibility to get round the restictions of the screenformat of the QL and to work with pages eight times the





size of the QL's screen. To quit this option have a second push on the button.

4th symbol:

This symbol shows a magnifying glass. The function can be used to enlarge a window to maximum size and to reduce it afterwards to its former state.

5th symbol:

This function is unique to E.A.S.E.. It allows the user to open another window upon the same page as the window selected. This gives you the possibility to work on seperate areas of the page simultaneously. The number of open windows is restricted to a maximum of seven. However this restriction will never affect your work, because the screenlayout would become very complex with too many windows beeing used. You will soon see, while working with E.A.S.E., that less might be more.

6th symbol:

This function is reverse to the one above. It removes a window from the screen. To prevent you from clearing a window erroneously, E.A.S.E. will ask for a safety affirmation before actually closing the window. Keep in mind that closing the last window upon a page will actually remove the page, too.

7th symbol:

The floppy- disk symbol with the number one opens a window and displays the directory of drive one.

8th symbol:

The directory of drive two

9th symbol:

The floppy- disk symbol with the question mark gives you the possibility to have access to other media than the standard ones. When using this command, E.A.S.E. asks you to enter the explicite name of the medium you want to have access to (e.g. 'flp1_', 'hdk1_' or 'mdv3_').

## Pulldownmenu

The so- called 'pulldownmenu' is the box at the top of the screen, labeled with 'Desk', 'File', 'Options' and 'Exit'. Each of these words is the headline of a number of

terms. If you point at one of the four and press the button, a small window will fall down, containing some options. Moving the arrow over these options inverts the lines. Select the option you want to activate by pressing the button again. This reads more complicatedly than it is in reality.

Desk
====

The first pulldownmenu contains some options to have access to some tools like a calculator and a game.

About E.A.S.E.: Displays a copyright- message.

Calculator: This command activates the inbuilt pocket calculator. The calculator supports scientific functions, the format of in- and output being the same as the one of Superbasic ('). This means that negative values have to be entered with a preceding minus sign, the exponential part has to be marked with an 'E'. The input medium is the mouse. Point at the key you want to press and push the button. The calculator layout shows the minus sign twice. The lower left is used to enter the sign, the other to start the mathematical function. To enter the exponent use the 'E'.

Some examples of numbers and how to enter them:

0.5 x $10^0$ : 0.5E0
-3 x $10^{-3}$ : -3E-3

You will find the '^'- key missing. With this calculator, we used the technique of the so called 'Reverse Polnic Notation' (RPN), which is in a similar form used by the calculators from Hewlett- Packard (') and by the programming language Forth. In this notation, you first must enter the numbers you want to work with and then the operation to perform with those ones. The numbers you enter are arranged in the calculator's memory by using a structure called 'stack'. This structure is called that way, because it is similar to a stack of plates. The one, you put on the stack last, will be the first to be put off. Using the stack in another way will result in many broken pieces. This structure is called in technical terms





'first in/ last out' or 'last in/ first out'. You can put a number on the stack by using the 'ENTER' command or remove a number from the stack by using 'C'. Operations working on two operands remove one item from the stack in the sense that, before you select the operation, there have to be two values on the stack. Afterwards there will only be one item on it, the result of the calculation. Operations of this type are addition, subtraction, multiplication, division and raising the power. Operations working with one operand, like the trigonometric functions (they are working in degrees!) only modify the value on top of the stack. Output functions, like 'PI' or 'MR' add a new value to the stack.

Examples:

| Calculation: | Input | Stack | (<- bottom | top ->) |
|---|---|---|---|---|
| 3+5 | 3 | 0 | 0 | 0 |
| | ENTER | 0 | 0 | 3 |
| | 5 | 0 | 0 | 3 |
| | + | 0 | 3 | 5 |
| | | 0 | 0 | 8 |
| sin (30) | 30 | 0 | 0 | 0 |
| | ENTER | 0 | 0 | 30 |
| | SIN | 0 | 0 | 0.5 |
| sin ((3+7)*(1+2)) | 3 | 0 | 0 | 0 |
| | ENTER | 0 | 0 | 3 |
| | 7 | 0 | 0 | 3 |
| | + | 0 | 3 | 7 |
| | | 0 | 0 | 10 |
| | 1 | 0 | 0 | 10 |
| | ENTER | 0 | 10 | 1 |
| | 2 | 0 | 10 | 1 |
| | + | 10 | 1 | 2 |
| | | 0 | 10 | 3 |
| | * | 0 | 0 | 30 |
| | SIN | 0 | 0 | 0.5 |

Working through the above examples and testing calculations of your own you will soon get familiar with RPN. Now the description of the command- set:

\+ Addition

| | |
|---|---|
| - | Subtraction |
| * | Multiplication |
| / | Division |
| ^ | Raising the power |
| SQR | Squareroot |
| SIN | Sine |
| COS | Cosine |
| TAN | Tangent |
| ASN | Arcsine |
| ACS | Arccosine |
| ATN | Arctangent |
| LN | Natural logarithm |
| LOG | Logarithm to base ten |
| EXP | e^ |
| PI | Output of pi (3.1415...) |
| C | Take uppermost number from stack |
| E | Input of the 'E' sign |
| ENTER | Put number on stack |
| MS | Displayed number to memory |
| MR | Displayed number from memory |
| MC | Clear memory |
| M+ | Add number to memory |
| M- | Subtract number from memory |
| X-Y | Swap the two uppermost values of the stack |

The stack used with the calculator supports up to four levels, which is enough in all cases. To store intermediate values, you can use the memory. The consequent usage of the window technique allows you to open up more than one calculator at the same As Because every calculator has its own stack and memory, this gives you the advantage of working with more than one simultaneously.

Game: E.A.S.E. contains a game that you will know from your childhood. It is a little puzzlegame, consisting of fifteen pieces, numbered from one to fifteen in a grid of four times four with a small gap giving the possibility to shift the pieces. When activated, the game will be in the order; you will have to restore afterwards. To shuffle the game, you can select the option 'SHUFFLE' at the lower left edge of the game. To move a piece, simply point at it and press the button; the computer will automatically determine the direction to shift to. To quantify your skill, a field appears which displays the





number of moves you needed. If the above instructions about the calculator have bored you, you can now relax playing puzzle (I need about 130 moves.). You also can activate more than one game simultaneously and play puzzle with other persons.

Panel: When you have finished playing, we will go on. This command activates a menu of its own, which can be handled like a pulldownmenu. It may be used to alter some system parameters, like the default drives or the printer device.

The commands in extenso:

Quit panel: The default option. Quits the panel without doing anything. It is used, if you activated the 'Panel' command erroneously.

Default medium: The default media for E.A.S.E. are the microdrives. If you work with a disc-station, this command can be used to switch to 'flp', the diskette symbols from now on giving the directories of 'flp1_' and 'flp2_'.

Printer device: Similar to the above, this command can be used to alter the printerdevice, which is standardly 'ser'.

Stepsize: Alters the scrollspeed of the windows.

Movesize: Alters the speed with which windows can be moved over the screen.

High resolution: Activates the four- colour- mode on the QL. Whenever possible, you should work with this mode, since it needs a lower amount of the rare memory than the other one.

Low resolution: Switches to low resolution.

The changing of the screenmode will close all open windows, which results in a loss of all processed data. An erroneous usage of these commands is therefore prevented by an affirmation request.

## File

**Copy:** Copies all files which are marked in the uppermost directory window. E.A.S.E. will ask you to enter the medium to copy to, this can be entered by selecting the appropriate icon.

**Delete:** Deletes all files which are marked in the uppermost directory window. Before every deletion, E.A.S.E. asks for an affirmation, which has to be answered by using the mouse. To switch this request off, select the item 'All', to quit the deletion, select 'Quit'.

**Format:** Prepares a new medium for use on the QL, respectively clears all files from a previously used medium. E.A.S.E. asks the user to specify the medium to format, which has to be entered in the same way as in the 'Copy' command, and to enter the mediumlabel. As this command erases all data from the medium, you should use it very cautiously E.A.S.E. will ask you whether you really want to format the medium.

**Start:** One of the most powerful commands of E.A.S.E.. It gives the possibility to call other programs from E.A.S.E.. After finishing work with the other program, you will find yourself back in E.A.S.E.. If you have to change the microdrive cartridge during your work, E.A.S.E. asks you to enter a cartridge containing the file 'desk_bin'. It is not necessary to insert your original copy. The only files you can start from E.A.S.E. are those which can also be started from Superbasic using the 'EXEC' command and Superbasic programs. If E.A.S.E. recognizes a file as not being executable and does not find the extension '_BAS', it asks you what to do. There are four possibilities, which are described in the following part:

**Quit:** Leaves 'Start' without doing anything.

**Run:** Starts a Superbasic program. This command leaves the E.A.S.E. system. To reload E.A.S.E. from Basic use the





command 'LRUN mdv1_BOOT' at the end of your program. Another possibility to restart E.A.S.E. is to use the new defined command 'DESK', which will reload E.A.S.E. (memory permitting!). When E.A.S.E. has been started by using this command, it is no more possible to start Basicprograms from E.A.S.E. (but if you quit E.A.S.E. with the option 'Exit to Basic', your Basic program will continue work behind the 'DESK' command).

**Show:** If the file is an ASCII- file, like e.g. a Superbasic '*' program, this option gives you the possibility to have a look on it. The output can be frozen with 'CTRL' & 'F5' or with the button. After pressing the button, you are back in E.A.S.E..

**Print:** Like show, but output is directed to the printer.

**Info:** Opens up a window containing all supported information about the marked file. This consists of the file length, the last update date and so on. Most of the dates are not supported in the QDOS version 1.03. They are yet supported by some extensions, like the CST '*' QDISK '*' controller. Therefore don't be suprised to find the remark 'Not supported' quite frequently.

## Options

**Show as text:** Just after booting, E.A.S.E. will display directories marked with small symbols, refering to the type of the file. If you do not like this form, or if you want to use the options 'Sort by length' or 'Sort by date', you can select this command. All following output will be displayed as text.

**Show as icons:** The reverse function to the above one. Changing these options will not result in an immediate change of the directory format, but will only work for windows, opened after changing 'Show' mode. This gives you the possibility of displaying

both types of directories simultaneously. The chosen mode is marked in the menu by a little arrow at the lefthand side of the option.

Sort by name: Sorts the uppermost directorywindow alphabethically by the filenames.

Sort by size: Sorts the uppermost directorytextwindow by the filelengths.

Sort by date: Sorts the uppermost directorytextwindow by the date of last access ( not supported in QDOS version 1.03 ).

Sort by marks: Sorts the marked files in the uppermost directorywindow to the top.

Exit

System reset: Quits E.A.S.E., sets the QL back to the switch- on status and clears the whole memory.

Exit to Basic: Quits E.A.S.E. and returns to Basic.

Start program: Similar to the 'Start' command. This command does not perform a memory- check, but clears E.A.S.E. from memory, so that the loaded program finds a clear QL. After work with the called program has been finished, E.A.S.E. will be rebooted. This command is necessary for programs which fit in the free amount of memory still available, but which, for themselves, need a much greater amount of memory to work properly. This might be the case for texteditors.

## Error messages

Error messages are displayed in a window of its own. They have to be confirmed by using the window-buttons ('Cancel' or 'Ok'). Most messages explain themselves. In the following part we will focus on a small number of messages.

'Too many windows open'

E.A.S.E. allows a maximum of seven windows to be opened simultaneously. When this message appears, you have tried to open more than seven windows. To go on, you first have to





close an old one.

'Sorry, I've run out of memory'

E.A.S.E. is a very complex program and therefore has a total length of about 64,000 bytes. When running, E.A.S.E. furthermore needs a certain amount of memory for its internal calculations.Additionally, a maximal sized window, for e.g. for a very long directory, can be sized up to 15,000 bytes. An unexpanded QL has only about 84,000 bytes free for the user. This shows that memory can become a problem. The only way to solve this problem is to buy a memory expansion, which will also drastically increase the performance of the Psion '=' programs.

'Directory window not open'

Some functions (e.g. 'Copy') are only possible, if there is an open directory window on the screen.

'No file marked'

There exists an open directory window, but no file is marked in it. This message will also appear when the copying or deletion have been finished.

All this might read very complicatedly. By using E.A.S.E. extensively, you will find, that the program is very easy to work with. E.A.S.E. is very usefull in conjunction with disk- drives, where it is possible to copy E.A.S.E. on every disk, combined with a BOOT- program. We ourselves work with this combination and are very satisfied with its performance. We hope, you will enjoy E.A.S.E. like we do.

## Patching E.A.S.E.

To start the program enter:

LRUN mdv1_patch_bas

This implies that a cartridge containing the program is inserted in drive one. This program can be used to adapt E.A.S.E. to your system. E.A.S.E. is normally configurated to work with an unexpanded QL. If you posses Disk- stations, you can configurate E.A.S.E. to have access to these. It is therefore possible to copy E.A.S.E. to all your disks making your work more comfortable.

You should use this program with backup copies only.