# THE LAYOUT OF THIS MANUAL

PART I contains the introduction and describes how to install the product and how to begin your familiarisation. This learning process is assisted by the provision of many step by step examples which you can work through. All the examples have been collected together at the end of this part.

PART II describes some fundamental concepts of the QATS package, including:-

* the usage, repositioning and redimensioning of menus and windows;
* the versatile and sophisticated wild card filter sysytem, which crops up throughout other facilities of QATS;
* the connection and disconnection of overlays, giving the user some control over memory usage;
* the initiation of dependent, external jobs to run alongside QATS - the user may have many jobs running in the background and QATS provides an easy means of starting them up;
* the facility for selecting one PSION printer driver from many to allow for the necessity to be able to switch printer drivers according to differing printing requirements;
* the directory presentation options, available within many other QATS facilities;
* the QATS clock;
* and the facility for logging a session and creating and running command files to perform certain procedures automatically.

PART III covers QATS utilities, including:-

* job management, which allows the user control of all the jobs running in the machine;
* formatting (ie wiping clean) media;
* and media management, using fast copy, file delete and media directory programs together with the wild card filter and the directory presentation options.

PART IV covers the maintenance of the menu and window control table, including the addition and deletion of menus and windows and their amendment as to size, location and colour and how to save the tables. You will learn how to tailor the table to suit your own preferred methods of working and how to incorporate your own menu structures in order to start up your own SUPERBASIC and EXEC'able programs, including SUPERBASIC programs which have been compiled.

PART V covers the first part of the output control package including the facility to build the QATS printer drivers, which not only cater for printer independence but also form a central location for all sorts of data connected with printing such as specifications of heading lines, typefaces and translations; a facility to edit files exported from ARCHIVE for printing labels and mailing lists; and a facility for selecting a required QATS printer driver from those available.

PART VI describes the second part of the output control package, known as the output formatter. This is a comprehensive package which is designed to print HEX dumps, labels, mailing letters, sideways, columnar and straightforward reports to printers or to spool files for later concurrent printing. You may divide the printout into pages, adding headings and designating the typeface, and print to continuous or cut sheet stationery. One benefit of the output formatter is that users who write their own programs need not deal with the tricky problems of report management (allowing for page changes, printing headings, etc) and device independence for incompatible printers.

The QL Applications Traffic Supervisor (QATS) is a powerful utility designed to reduce the number of keystrokes needed to perform housekeeping and task manipulation on your QL. QATS is menu-driven and the inbuilt menus can be tailored to suit your own particular QL setup and working rhythm in order to maximise your productivity.

When you select an option from a menu then one of two things will happen. Either you will start up a facility or you will be shown another menu from which to make a choice and this could again lead to starting a facility or the presentation of another menu... and so on until you get to the routine you wish to initiate. For example, the START menu contains an option called PSION and if you select it you will be shown a menu called PSION which will present you with a list of PSION programs from which to choose. If you then choose the QUILL option QUILL will be started up. This is the essence of the system of control by which you select the facilities available as and when you require to use them.

If you don't like the way the menus are interlinked in the supplied version then you can change the setup to suit yourself. At the extreme you could have one single menu showing all the possible choices, both inbuilt facilities and those for initiating your own jobs, and then all would be available at a single keystroke. However, in practice it is usually easier to have like functions grouped under the control of separate menus and to select the functions using up to 3 or 4 keystokes.

QATS provides inbuilt facilities for:-

* initiating and returning from the PSION jobs (expanded memory only);
* initiating and returning from other EXEC'able, SWOPPER and SUPERBASIC programs;
* sophisticated wild card filename processing;
* fast copying of files, optionally selective;
* deleting files;
* formatting media;
* managing jobs in the QL;
* media directories showing files alphabetically or in other sequences with file sizes;
* comprehensive printing package including background printing (spooling).

All these facilities are described in this manual and you are recommended to read parts I and II before attempting any work with QATS. Although QATS has been designed to be quick and easy to use in a consistent style there is nevertheless quite a lot of detail to absorb and it would probably be wise to experiment before attempting to use the system in earnest. For this reason you are provided with a program to create an experiment disk and you should use this when working through the examples in section 3, which have been designed to give a good grounding in the use of QATS. After you have become proficient in the basic use of QATS via the examples you should then be in a good position to understand the more detailed and more formal exposition of QATS routines in later parts of this manual.

Finally, QATS runs alongside SUPERBASIC and it is possible to switch between the two by pressing CTRL C. This is allowed because there are some functions either not available in QATS (eg copying files while changing their name) or slightly easier in SUPERBASIC (eg. deleting/copying a single file). However, there are two side effects of this symbiosis. The first is that on return to QATS the menu colours may have changed - but this effect quickly disappears - and you will see the brief emergence of the standard QDOS red and white windows while switching between the PSION programs. On the whole this is a small price to pay for the flexibility.

# 1. Installation

The system consists of this manual, an optional EPROM cartridge and one or more QATS media, which may be microdrive cartridges and/or diskettes. Each medium as supplied will contain a program called CLONE_BAS, written in SUPERBASIC, and before going any further you should run this program to make a backup of each of the supplied media. Start up the QL, put the QATS medium in a drive and type LRUN dev_CLONE_BAS, where dev is the drive holding the QATS medium - flp1, mdv2, etc. Put away the supplied QATS media and use the copies for working. If you have SWOPPER (Version 2.02 onwards) you can replace the boot program by the boot_sf (or _sm) program. Next, generate a medium to be used for the familiarisation examples which are described in section 3. You will need a medium which can be formatted and you then type LRUN dev_QE_GEN_BAS, where dev is the drive containing your working copy of the QATS medium.

# 2. General points

## 2.1 Entering device names

A directory device has a name (MDV1_, FLP2_, etc) by which it is identifiable to the QL and this name consists of the device type (MDV, FLP, etc) followed by the drive number to identify which particular drive of the type is meant. When QATS expects a directory device name it will offer a list of the device types valid for the host QL and each type will be preceded by a number. You choose a device type by keying the required number (ENTER not required) and then keying the required drive number in the range 1 to 8 (again, ENTER not required). In the case of a host QL with only one type of directory device then QATS chooses that device name for you and asks directly for the drive number. If there is no reaction from QATS when you press a key it will almost certainly be because you have pressed a key which is not a valid response to the message.

## 2.2 Accepting default values

Whenever a message offers a default value of the form (default=...) you can accept the default by pressing ENTER. If you do not want the default then type any other appropriate response, usually (but not always) followed by ENTER.

## 2.3 Answering messages

Whenever a message offers a choice of replies in the form (y=yes,other=no) you can respond y or Y to select the first choice and any other key combination will select the second choice. In other words, the selection of the first option is always made by a particular choice of key depression(s) and the selection of the second option is always by non-specific key depression(s). Upper and lower case are equated here because it is all too easy to have unknowingly pressed CAPS LOCK and there is no real cause for this to be penalised in these sort of responses. This type of message is always arranged so that if a non-specific key is unintentionally pressed then taking that option will cause the least damage and for this reason the second form of this message - (n=no,other=yes) - can also appear. The advantages of the damage limitation approach outweigh the advantages of having one standard form of the message.

## 3. Initial familiarisation

### 3.1 The configuration file

QATS includes a configuration file which must be set up using the supplied SUPERBASIC program QATScon_bas. Start the program using LRUN and follow the instructions it displays, accepting the current default value by pressing ENTER except where indicated below. (dev means flp1 or mdv1, etc. - the drive from which QATS will read its files on your machine. VVVV is a version number.)

a) EPROM file: dev_QATS_eprom16k if you have the 16K EPROM or work from microdrives otherwise dev_QATS_eprom32k;
b) NUCLEUS file: dev_QATS_nucVVVV if a) is dev_QATS_eprom16k otherwise leave blank, ie type *ENTER or just ENTER if already blank;
c) UPDATES file: if supplied: then dev_QATS_upd16VVVV if a) is dev_QATS_eprom16k, otherwise dev_QATS_upd32VVVV
d) connections on startup (optional): dev_$co_QATS_utilities + others if required

### 3.2 Starting up

The optional EPROM cartridge fits into the ROM slot at the back of the QL (you may have to lever out the slot cover) and has an offset cutout to ensure correct fitting. If QATS is run with the EPROM in the ROM slot then the program will take 16k bytes less of memory.

EPROMS SHOULD ONLY BE FITTED OR REMOVED WITH THE QL DISCONNECTED FROM THE MAINS POWER SUPPLY.

With the EPROM cartridge fitted, if required, in the ROM slot and your working copy of the QATS medium in the BOOT drive, power up the QL. QATS will load various files according to the QATS_config setup and then the START menu will appear.

### 3.2 Examples

The next section takes you through some examples which will show the main features of QATS in the ways they are most likely to be used. At this stage instructions will be given without explanation but you will still be able to pick up something of the style of QATS. You should have available your working copy of the QATS medium, the medium generated as described in section 1 above and another one which can be used as the destination for media copying and contains no needed data.

The following conventions are used in the examples:

* ENTER - this means the ENTER key;
* ESC - this means the ESC key;
* CTRL C - this means press c whilst keeping the CTRL key depressed;

* keyboard - use of the word "press" implies a one character reply whereas the word "type" implies a string of characters, usually ending with ENTER. However, in either case the reply is shown enclosed in < and >. Do not type the < and the >, only what comes between them;

* QATS messages - what is between the square brackets is what is shown on the screen;

* FLP1 and FLP2 - all examples use flp1 and flp2. If your QL uses

different name for floppy drives or you wish to experiment on other media (eg. microdrives, hard disk, etc.) or you want to use different drive numbers then you will have to make the appropriate substitutions within the examples;

* references - references to other sections of the manual are shown enclosed between ( and ). For example (IV 2.1) means section 2.1 of PART IV.

List of Examples



Example 1: Starting a PSION program (II 4)

START: START menu showing, PSION programs on FLP1 (unless changed).

1. User: Press <p>
2. QATS: The PSION menu will be displayed
3. User: Press <a>
4. QATS: ABACUS will be started
5. User: Use ABACUS if required and then QUIT as usual
6. QATS: (Press CTRL C repeatedly until this cursor flashes ... key to proceed)
7. User: Press <CTRL C> (possibly more than once)
When the cursor starts flashing then press any key
8. QATS: The PSION menu will reappear
9. User: Press <ESC>
10. QATS: The START menu will appear

NB. In steps 3 or 9 press <d>,<e> or <q> to start ARCHIVE, EASEL or QUILL.

Example 2: Non-selective copy of FLP2 to FLP1 (III 4)

START: Utilities menu showing, source medium (from QATS_TESTGEN) in FLP2 and destination medium in FLP1.
NB. Formatting a medium wipes off all its files.

1. User: Press <c>
2. QATS: (Source device?...Choose a device name by number) (I 2.1)
3. User: Press the number indicated to select FLP
4. QATS: (Enter a drive number (1 to 8) : )
5. User: Press <2>
6. QATS: (Destination device?...Choose a device name by number)
7. User: Press the number indicated to select FLP
8. QATS: (Enter a drive number (1 to 8))

9. User: Press <1>
10. QATS: (Copy FROM FLP2_ TO FLP1_...Copy details correct? (n=no,other=yes)) (I 2.3)
11. User: Press any key except <n> or <N>

12. QATS: (FORMAT required? (y=yes,other=no))
13. User: Press <y>
14. QATS: (MEDIUM file name? (default=spare) : )  (I 2.2)
15. User: Press <ENTER>
16. QATS: (Confirm FLP1_spare to be formatted... (y=yes,other=no))
(I 2.3)
17. User: Press <y>
18. QATS: (1440/1440 : FLP1_spare...Press any key to proceed)
NB. The above numbers may vary from 1440/1440.
19. User: Press any key
20. QATS: The Print Directory window will appear

21. User: Press <ESC>
22. QATS: The copy will proceed.
23. QATS: (COPY PROCESS FINISHED)
Press <ESC> if you wish to return to the START menu.

**Example 3: Selective copy of FLP2 to FLP1 (II 2 and 6, III 4)**

**START: Utilities menu showing, source medium (from QATS_TESTGEN) in FLP2 and destination medium in FLP1.**
**NB. Formatting a medium wipes off all its files.**

1. Follow steps 1 to 20 of example 2
21. User: Press <1>
22. QATS: The directory for FLP2 will appear
23. User: Press any key
24. QATS: The Print Directory window will reappear
25. USER: Press <w>
26. QATS: (Wild card file name? (default=) : )

27. User: Type <epENTER> (II 2)
28. QATS: The Print Directory window will reappear
29. User: Press <1> (II 6)
30. QATS: The FLP2 directory will be shown. Names which begin "ep" will be highlighted
31. User: Press any key
32. QATS: The Print Directory window will reappear
33. User: Press <ESC>
34. QATS: The copy will proceed.
35. QATS: (COPY PROCESS FINISHED)
Press <ESC> if you wish to return to the START menu.

**Example 4: Selective copy with individual file selection (II 2 and 6, III 4)**

**START: Utilities menu showing, source medium (from QATS_TESTGEN) in FLP2 and destination medium in FLP1.**
**NB. Formatting a medium wipes off all its files.**

Follow steps 1 to 20 of example 2 and steps 21 to 26 of example 3

27. User: Type <qa_?ENTER> (II 2)
28. QATS: The Print Directory window will reappear
29. User: Press <1> (II 6)
30. QATS: The FLP2 directory will appear. Names which begin "qa" will be highlighted
31. User: Press any key
32. QATS: The Print Directory window will reappear
33. User: Press <ESC>
34. QATS: The Filename Selection window will appear
(Process qa filename? (y=yes,other=no))
35. User: Press <y>

NB. The Filename Selection window will continue to reappear and the user should sometimes press <y>, meaning copy this file, and sometimes press any other key, meaning do not copy this file, until the copy starts.

36. QATS: The copy will proceed. Only files for which <y> was pressed will be copied.
37. QATS: (COPY PROCESS FINISHED)
Press <ESC> if you wish to return to the START menu.

**Example 5: Non-selective copy of FLP1 to FLP1 (III 4)**

**START: Utilities menu showing, destination medium in FLP1.**
**NB. Formatting a medium wipes off all its files.**

1. Follow steps 1 to 8 of example 2
8. User: Press <2>

9. QATS: (Copy FROM FLP1_ TO FLP1_...Copy details correct? (n=no,other=yes))
10. User: Press any key except <n> or <N>
11. QATS: (FORMAT required? (y=yes,other=no))
12. User: Press <y>
13. QATS: (MEDIUM file name? (default=spare) : )
14. User: Press <ENTER>
15. QATS: (Confirm FLP1_spare to be formatted... (y=yes,other=no))
16. User: Press <y>
17. QATS: (Put destination medium in FLP1_ and press any key to proceed) (III 4.b)
18. User: Put destination medium in FLP1 and then press any key
19. QATS: (1440/1440 : FLP1_spare...Press any key to proceed)
20. User: Press any key
21. QATS: (Put source medium in FLP1_ and press any key to proceed)
22. User: Put source medium in FLP1 and then press any key
23. QATS: The Print Directory window will appear
24. User: Press <ESC>
25. QATS: The copy will proceed and you will be told when to swap the source and destination media in FLP1.
26. QATS: (COPY PROCESS FINISHED)

Press <ESC> if you wish to return to the START menu.

NB. Selective copying as described in examples 3 and 4 can also be carried out on one drive simply by specifying the same drive for source and destination as in steps 1 to 11 of example 5.

**Example 6: <u>Selective deletion of files from FLP1</u> (II 2 and 6, III 5)**

**START: Utilities menu showing, deletion medium in FLP1. The deletion medium can be the output from examples 2 or 5.**

1. User: Press <d>
2. QATS: (DELETION device?...Choose a device name by number) (I 2.1)
3. User: Press the number indicated to select FLP
4. QATS: (Enter a drive number (1 to 8) )
5. User: Press <1>
6. QATS: (CONFIRM: Delete from FLP1_...(y=yes,other=no)) (I 2.3)
7. User: Press <y>

8. QATS: Displays the Print Directory window
9. User: Press <1>
10. QATS: The directory for FLP1 will appear
11. User: Press any key
12. QATS: The Print Directory window will reappear
13. USER: Press <w>
14. QATS: (Wild card file name? (default=) : )

15. User: Type <epENTER> (II 2)
16. QATS: The Print Directory window will reappear
17. User: Press <1>
18. QATS: The FLP1 directory will be shown. Names which begin "ep" will be highlighted
19. User: Press any key
20. QATS: The Print Directory window will reappear
21. User: Press <ESC>
22. QATS: All files which begin with "ep" will be deleted
(More deletions from FLP1_? (y=yes,other=no))
23. User: Press any key except <y> or <Y> to finish this example OR
Press <y> to do more deletions from FLP1.

Press <ESC> if you wish to return to the START menu.

**Example 7: Selective deletion with individual file selection (II 2 and 6, III 5)**

**START: Utilities menu showing, deletion medium in FLP1. The deletion medium can be the output from examples 2 or 5.**

1. If you didn't reply <y> to step 23 follow steps 1 to 7 of example 6
8. Follow steps 8 to 14 of example 6
15. User: Type <qa_?ENTER> (II 2)
16. QATS: The Print Directory window will reappear
17. User: Press <1>
18. QATS: The FLP1 directory will be shown. Names which begin "qa" will be highlighted
19. User: Press any key
20. QATS: The Print Directory window will reappear
21. User: Press <ESC>
22. QATS: The Filename Selection window will appear
(Process qa filename? (y=yes,other=no))
23. User: Press <y>

NB. The Filename Selection window will continue to reappear and the user should sometimes press <y>, meaning delete this file, and sometimes press any other key, meaning do not delete this file, until the deletions start.

24. QATS: The files for which <y> was pressed will be deleted.
(More deletions from FLP1_? (y=yes,other=no))
25. User: Press any key except <y> or <Y> to finish this example OR
Press <y> to do more deletions from FLP1.
Press <ESC> if you wish to return to the START menu.

**Example 8: Non-selective deletion from FLP1 (III 4)**

**START: Utilities menu showing, deletion medium in FLP1. The deletion medium can be the output from examples 2 or 5.**

1. Unless this follows another deletion example do steps 1 to 7 of example 6.
8. QATS: The Print Directory window will reappear
9. User: Press <ESC>
10. QATS: All files will be deleted. (More deletions from FLP1_? (y=yes,other=no))
11. User: Press any key except <y> or <Y> to finish this example
Press <ESC> if you wish to return to the START menu.

NB. This is only an exercise - in practice you would usually FORMAT the medium.

Example 9: Complete directory of one medium on FLP1 (II 6, III 7)

START: Utilities menu showing, any medium in FLP1

1. User: Press <s>
2. QATS: (Choose a device name by number)
3. User: Press the number indicated to select FLP
4. QATS: (Enter a drive number (1 to 8) )
5. User: Press <1>
6. QATS: The Print Directory window will appear
7. User: Press <1>
8. QATS: The directory for FLP1 will be displayed
9. User: Press any key
10. QATS: The Print Directory window will reappear
11. User: Press <ESC> and the directory process will finish

Press <ESC> if you wish to return to the START menu.

Example 10: Complete directory of FLP1 + partial directory of FLP2 (II 2 and 6, III 6)

START: Utilities menu showing, any medium in FLP1 and the medium from QATS_TESTGEN in FLP2.

1. User: Press <m>
3. QATS: (Choose a device name by number)
3. User: Press the number indicated to select FLP
4. QATS: (Enter a drive number (1 to 8) )
5. User: Press <1>
6. QATS: (Wild card file name? (default=) : )
7. User: Press <ENTER>
8. QATS: ( More media? (y=yes,other=no) )
9. User: Press <y>
10. QATS: (Choose a device name by number)
11. User: Press the number indicated to select FLP
12. QATS: (Enter a drive number (1 to 8) )
13. User: Press <2>
14. QATS: (Wild card file name? (default=) : )
15. User: Type <qatsENTER>
16. QATS: ( More media? (y=yes,other=no) )
17. User: Press any key except <y> or <Y>
18. QATS: The Print Directory window will appear
19. User: Press <1>
20. QATS: The directory for FLP1 and FLP2 combined will be displayed

NB. If the message at the top of the large window showing data about numbers of sectors has not appeared then this means that there are more filenames to be displayed. Press any key at the end of each screenful to get the next.

21. User: Press any key
22. QATS: The Print Directory window will reappear

NB. Steps 23 - 25 should only be followed if you have a printer. The printout will show all the file sizes and names, as on the large window, with the addition of the name of the medium where the file can be found. If the same filename occurs on both media then both medium names will be shown.

23. User: Press <p>
24. QATS: (Enter printer name (default=ser1))
25. User: Press <ENTER> to print to ser1 OR
Type <parENTER> to print to a parallel printer interface

NB. The directory printout will be unformatted, without headings or paging. Formatted printouts will be obtained by writing the directory

to file (option <f> of the Print Directory window) and then processing the output file using the Output Formatter.

26. QATS: The combined directory will be printed.
The Print Directory window will reappear.
27. User: Press <ESC> and the directory process will finish
Press <ESC> if you wish to return to the START menu.

Example 11: Print an unformatted file to ser1 (VI)

**START: Connect $co_output_formatter (II 3) if necessary**
**Select option <o> from START menu followed by option <o> from Output Control menu**
**The file to be printed is assumed to be QE_PRINT on FLP1 (IV 5)**
**Printing will be in condensed mode on single sheet paper with standard headings**

1. QATS: (Where is the QATSprint_dat file?...Choose a device name by number) (VI 3.1)
2. User: Press the number to select FLP
3. QATS: (Enter a drive number (1 to 8) : )
4. USER: Press <1>
5. QATS: Displays Report codes details
   (Choose a report code entry by number (default=1) :)

6. User: Type <3ENTER>
7. QATS: (Immediate output to directory device?...(y=yes,other=no))
8. User: Press any key except <y> or <Y>
9. QATS: (Destination device name? (default=) : )
10. User: Type <ser1ENTER>
11. QATS: (Input device?...Choose a device name by number) (VI 3.2)
12. User: Press the number to select FLP
13. QATS: (Enter a drive number (1 to 8) : )
14. USER: Press <1>
15. QATS: The Print Directory window will appear
16. User: Press <w>
17. QATS: (Wild card file name? (default=) : )

18. User: Type <qe_printENTER>
19. QATS: The Print Directory window will appear
20. User: Press <ESC>

21. QATS: The Select for processing window will appear. (Process this file? qe_print)
22. User: Press <ENTER> (VI 5)
23. QATS: The qe_print - page 1 window will appear (VI 4.1.6)
24. User: Make sure ser1 has a sheet of paper ready and press <ENTER>
25. QATS: Page 1 will be printed

Repeat steps 23 to 25 until satisfied then respond <ESC> to the page window.

Example 12: Print an unformatted file to the screen (VI)

**START: Connect $co_output_formatter (II 3) if necessary**
**Select option <o> from start menu and option <o> from output control menu**
**The file to be printed is assumed to be QE_PRINT on FLP1 (IV 5)**
**Printing will be with standard headings**

Follow steps 1 to 20 of example 11 except steps 6 and 10:

6. User: Type <5ENTER>
10. User: Type <scr_512x200a0x0ENTER>

21. QATS: The Select for processing window will appear. (Process this file? qe_print)
22. User: Press <c> (VI 4.1)
23. QATS: The Request setup details window will appear
24. User: Press <d>
25. QATS: The Show current setup details window will appear
26. User: Press <d>
27. QATS: The Current Setup window will appear. Check the details.
28. User: Press any key to proceed

29. QATS: The Show current setup details window will appear
30. User: Press <ESC>
31. QATS: The Request setup details window will appear
32. User: Press <ESC>
33. QATS: The Select for processing window will appear
34. User: Press <ENTER>
35. QATS: The qe_print - page 1 window will appear
36. User: Press <ENTER>
37. QATS: Page 1 will be displayed
38. User: Press any key except <ESC> or <s> to proceed
39. QATS: The qe_print - page 2 window will appear. There about 400 lines in this file
40. User: Press <s> (VI 4.1.6)
41. QATS: (Skip to what page number? : )
42. User: Type <18ENTER>
43. QATS: The qe_print - page 18 window will appear
44. User: Press <ENTER>
45. QATS: Page 18 will be displayed
46. User: Press any key to proceed

Repeat steps 43 to 46 until last page displayed.
Press any key to proceed and the Output Control menu will appear.

**Example 13: Spool an unformatted file to FLP1 (VI)**

**START: Connect $co_output_formatter (II 3) if necessary**
**Select option <o> from start menu followed by option <o> from Output Control menu**
**The file to be printed is assumed to be QE_PRINT on FLP1 (IV 5)**
**Printing will be in normal mode, with headings, on continuous stationery**

Follow steps 1 to 5 of example 11.

6. User: Press <ENTER>
7. QATS: (Immediate output to directory device?...(y=yes,other=no))
8. User: Press <y> (VI 3.1 and 7)
9. QATS: (OUTPUT file name? (default=spool) : )
10. User: Press <ENTER>
11. QATS: (Enter spool file name...Will alignment be required?...(n=no,other=yes))
12. User: Press <n>
13. QATS: (How many copies? (1 to 255) (default=1) :)
14. User: Press <ENTER>
15. QATS: (Stationery code? (0 to 3 chars))
16. User: Press <ENTER>
17. QATS: (Final output device name?... : )
18. User: Type <ser1ENTER>
19. QATS: (Immediate output device?...Choose a device name by number)
20. User: Press the key to select FLP
21. QATS: (Enter a drive number (1 to 8) : )
22. User: Press <1>
23. QATS: (Input device?...Choose a device name by number) (VI 3.2)
24. User: Press the number to select FLP
25. QATS: (Enter a drive number (1 to 8) : )
26. User: Press <1>
27. QATS: The Print Directory window will appear
28. User: Press <w>
29. QATS: (Wild card file name? (default=) : )
30. User: Type <qe_printENTER>

31. QATS: The Print Directory window will appear
32. User: Press <ESC>
33. QATS: The Select for processing window will appear. (Process this file? qe_print)
34. User: Press <ENTER> (VI 5)

The spool file will be written to FLP1 and the Output control menu will appear.
Check that continuous stationery is ready in ser1 and press <ESCs>.
The watchdog spooler program will be loaded from FLP1 and will check the directory devices straightaway. All spool files will be printed and then deleted.
While printing continues, try some of the other examples to show that work can continue alongside the printing.

**Example 14: Print an unformatted file to ser1 (VI)**

**START: Connect $co_output_formatter (II 3) if necessary**
**Select option <o> from START menu followed by option <o> from Output Control menu**
**The file to be printed is assumed to be QE_PRINT on FLP1 (IV 5)**
**Printing will be in normal mode, no headings, on continuous stationery**

Follow steps 1 to 20 of example 11 except
6. User: Type <6ENTER>

21. QATS: The Select for processing window will appear. (Process this file? qe_print)
22. User: Make sure that there is continuous stationery ready in ser1. Press <ENTER>

Printing will proceed as for example 13 but unspooled and without headings.
The START menu will appear.

**Example 15: Export names and addresses from database (VI App A.2.3)**

**START: START menu showing, database program (=qatsmail) and file (=qedata_dbf) on FLP1**

1. User: Press <p>
2. QATS: PSION menu will be displayed
3. User: Press <d>
4. QATS: ARCHIVE will be started up
5. User: Type <run "flp1_qatsmail"ENTER>
6. QATS: (enter file name? (excluding suffix) : )
7. User: Type <flp1_qedataENTER>
8. QATS: The options menu will be displayed

NB. Make any selections required, particularly if the export file is to be used for examples 14 and 15 in which case it should be fairly short in order to save time and paper or you can use the edit export file function (V 3) to shorten the export file. qedata_dbf contains 19 records.

 9. User: Press <e>
10. QATS: (is your selection complete? (y=yes,other=no))
11. User: Press <y>
12. QATS: (Output device name? (eg flp2_ ) : )
13. User: Type <flp1_ENTER>
14. QATS: (Press ENTER when flp1_ ready)
15. User: Make sure correct medium is in flp1 and then press <ENTER>
16. QATS: (export file name? (up to 8 characters) : )
17. User: Type <qmailENTER>
18. QATS: (exporting...)... (export completed)
19. User: Press <q>
20. QATS: (goodbye)
21. User: Type <quitENTER>
Press <ESC> if you wish to return to the START menu.

**Example 16: Print labels (VI)**

**START: Connect $co_output_formatter (II 3) if necessary**
**Select option <o> from START menu followed by <o> from Output Control menu**
**The file to be printed is assumed to be qmail_exp on FLP1 from example 15**
**The QUILL template file for labels is assumed to be qelab5_lis on FLP1**
**Printing will be in normal mode on continuous labels stationery**

Follow steps 1 to 17 of example 11 except step 6:
 6. User: Type <7ENTER>

18. User: Type <qmail_expENTER>
19. QATS: The Print Directory window will appear
20. User: Press <ESC>
21. QATS: The Select for processing window will appear
22. User: Press <a> (VI 4.2)
23. QATS: The Alignment window will appear. (Alignment type? (x=XXX,other=code/file))
24. User: Press <x>
25. QATS: Prints (XXXXXXXXXXXX) on label. (More alignment required? (n=no,other=yes))
26. User: Adjust paper if necessary, press any key except <n> or <N>
Repeat steps 25 and 26 until paper correctly positioned
Press <n>
27. QATS: The Select for processing window will reappear
28. User: Press <1> (VI 5.3)
29. QATS: (LABEL PROCESSING...How many labels across the page? : )
30. User: Type <3ENTER>
31. QATS: (QUILL file name? : )
32. User: Type <qelab5_lisENTER>
33. QATS: (Choose a device name by number)
34. User: Select the number for FLP
35. QATS: (Enter a drive number (1 to 8)
36. User: Press <1>

The labels will be printed.
Press <ESC> if you wish to return to the START menu.

**Example 17: Print mailing list on single sheet stationery (VI)**

**START: Connect $co_output_formatter (II 3) if necessary.**
**Select option <o> from START menu followed by option <o> from the Output Control menu**
**The file to be printed is assumed to be qmail_exp on FLP1 from example 15**
**The QUILL template file for the mailshot letter is assumed to be**
**qelt22.lis on FLP1**

**Printing will be in normal mode on single sheet A4 stationery**

Follow steps 1 to 17 of example 11 except step 6
 6. User: Type <9ENTER>

18. User: Type <qmail_expENTER>
19. QATS: The Print Directory window will appear
20. User: Press <ESC>
21. QATS: The Select for processing window will appear. (Process qmail_exp?...)
22. User: Press <m> (VI 5.3)
23. QATS: (QUILL file name? : )
24. User: Type <qelt22_lisENTER>
25. QATS: (Choose a device name by number)
26. User: Select the number for FLP
27. QATS: (Enter a drive number (1 to 8)
28. User: Press <1>
29. QATS: The qmail_exp - page 1 window will appear
30. User: Make sure ser1 has a sheet of paper ready and press <ENTER>
31. QATS: The first letter will be printed
Repeat steps 29 to 31 until satisfied.

NB. Skip can be used to narrow further the export file selection. (VI 4.1.6)

32. User: Press <ESC>
Press <ESC> if you wish to return to the START menu.

**Example 18: Add a new menu (IV)**

**START: Connect $co_maintain_control_tables (II 3) if necessary**
**Select implicit option <!> from START menu**

1. QATS: The modification window will be shown
2. User: Press <n>
3. QATS: (Which response code links...leave) : )
4. User: Press <a>
5. QATS: (New entry created...)
   (Are you creating a command? (y=yes,other=no))
6. User: Press any key except <y> or <Y>
7. QATS: (Do you wish to change...(c/l/o/s/<ENTER>to end)
8. User: Press <ENTER>

NB. Width and depth default values have been taken deliberately in order that use of the menu movement keys may be shown later.

9. QATS: (Modify menu lines : )
10. User: Type <n Nominal Ledger,p Purchase Ledger,s Sales LedgerENTER>
11. QATS: (Adjust size to lines just entered? (n=no,other=yes))
12. User: Press <n>
13. QATS: The START menu will reappear
14. User: Press <a>
15. QATS: The Accounts menu will appear

NB. The new menu is deliberately the wrong size and in the wrong place
Press ALT and right/left cursor to increase/decrease the width
Press ALT and down/up cursor to increase/decrease the depth
Then press <ENTER> to see if the menu is the right size
Continue the above steps until the menu is the correct size
Now move the menu cursor to the position where the top left corner of the menu is required to be:-
Press CTRL and left/right cursor to move the cursor horizontally
Press CTRL and up/down cursor to move the cursor vertically
Press <ENTER> to show the menu in the new position
Press <ft> to clear away the clutter

**Example 19: Add a command or hidden menu (IV)**

**START: Connect $co_maintain_control_tables (II 3) if necessary, START menu showing**
**You should have completed example 18 before attempting this example.**

1. User: Press <a>
2. QATS: The Accounts menu will appear
3. User: Press <!>
4. QATS: The modification window will appear
5. User: Press <n>
6. QATS: (Which response code links...leave) : )
7. User: Press <n>
8. QATS: (New entry created...)
   (Are you creating a command? (y=yes,other=no))
9. User: Press <y> or <Y>
10. QATS: (Command number? (range=0 to 255,default=0) : )
11. User: Press <ENTER> to accept default
12. QATS: (Delete whole command entry? (y=yes,other=no))
13. User: Press any key except <y> or <Y>

15. User: Press <f>
16. QATS: (Priority?...(1 to 127 or 0 to set at run time, default=) : )
17. User: Type <64ENTER>
18. QATS: (Device...(* to set at run time, other to change, default=):)
19. User: Press any key except <*> or <ENTER>
20. QATS: (Choose a device name by number)
21. User: Press the number to give FLP
22. QATS: (Enter a drive number (1 to 8))
23. User: Press <1>
24. QATS: (File name?* to set at run time or file name (default...)

NB. For the purposes of this example we shall pretend that ABACUS is your nominal ledger program

25. User: Type <abacusENTER>
26. QATS: The modification window will be refreshed
The Accounts window will reappear
27. User: Press <n>
28. QATS: ABACUS (pretending to be your nominal ledger program) will start
Quit abacus, press <CTRL C> and press <ESC> if you wish to return to the START menu.

**Example 20: Modify a command or hidden menu (IV)**

**START: Connect $co_maintain_control_tables (II 3) if necessary, START menu showing**
**You should have completed example 19 before attempting this example**

1. User: Press <!>
2. QATS: The modification window will appear
3. User: Press <t>
4. QATS: (Start scan...other=code) : )
5. User: Press <ENTER>
6. QATS: (Enter code : )
7. User: Type <QATSpaENTER>
8. QATS: (Command: num= 0...<ESC> to end))
9. User: Press <c>
10. QATS: (Command number? (range=0 to 255,default=0) : )
11. User: Press <ENTER> to accept default
12. QATS: (Delete whole command entry? (y=yes,other=no))
13. User: Press any key except <y> or <Y>
14. QATS: (Foreground/back...(f,b,l,s or * to set at run time) : )
15. User: Press <f>
16. QATS: (Priority?...(1 to 127 or 0 to set at run time, default=64):)
17. User: Press <ENTER> to accept the default value
18. QATS: (Device...(* to set at run time, other to change, default=):)
19. User: Press any key except <*> or <ENTER>
20. QATS: (Choose a device name by number)
21. User: Press the number to give MDV
22. QATS: (Enter a drive number (1 to 8))
23. User: Press <1>
24. QATS: (File name? * to set at run time or file name (default...)
25. User: Press <ENTER>
26. QATS: (Entry number=...<ESC> to end))
27. User: Press <ESC>
28. QATS: The modification window will be refreshed
29. User: Press <ESC>
30. QATS: The START menu will be refreshed

**Example 21: Build printer details file (V 2)**

**START: Connect $co_build_QATS_printer_driver (II 3) if necessary**
**Select option <o> from the START menu and option <b> from the Output control menu**
**The $px_EPSON_FX-80 file is assumed to be on FLP1**

1. QATS: (On which device...by number)
2. User: Press the number to give FLP
3. QATS: (Enter a drive number (1 to 8))
4. User: Press <1>
5. QATS: The Select a group for amendment window will appear

6. User: Press <h> (VI 2.1.4 and 2.3.1)

7. QATS: The (standard) heading lines will be displayed
(Select item by number. (just ENTER to leave) : )
8. User: Type <3ENTER>
9. QATS: (Item 3. (* to delete,ENTER for no change,other to replace/insert)
10. User: Press any key except <*> or <ENTER>

11. QATS: (Type the heading followed by ENTER :)
12. User: Type <New heading line 3ENTER>

13. QATS: The heading lines will be displayed inc. the new line 3

14. User: Type <3ENTER>
15. QATS: (Item 3. (* to delete,ENTER for no change,other to replace/insert)
16. User: Press <*>
17. QATS: The heading lines will be displayed exc. the new line 3
(Select item by number. (just ENTER to leave) : )
18. User: Press <ENTER>
19. QATS: The Select a table for amendment window will appear

20. User: Press <w> (V 2.3.3)
21. QATS: (file name? (default=$px_EPSON_FX-80) : )
22. User: Type <$px_testENTER>
23. QATS: (Choose a device name by number)
24. User: Press the number to give FLP
25. QATS: (Enter a drive number (1 to 8))
26. User: Press <1>
27. QATS: The Select a group for amendment window will reappear
28. User: Press <ESC> (V 2.3.4)
29. QATS: (Write printer details...(y=yes,other=no))
30. User: Press any key except <y> or <Y>

Control returns to the Output control menu.
Example 21 continued overleaf.

NB. The procedure defined in steps 6 to 19 can be repeated for each group. All that differs in each case is that line 6 refers to a different option from the Select... window and sometimes steps 11 and 12 are each replaced by more than 1 step.

**Process Narratives/ESC strings/Typeface narratives/Typeface ESC strings (V 2.2 & 2.3.1)**

6. User: Press <n>/<e>/<N>/<E>
11. QATS: (Modify item : )
12. User: Edit the item and then press <ENTER>

**Process Typefaces (V 2.1.2 and 2.3.1)**

6. User: Press <f>
11a. QATS: (Choose a Typeface by number (ENTER to end))
12a. User: Type <2ENTER>
11b. QATS: (condensed...Choose a Typeface by number (ENTER to end))
12b. User: Type <7ENTER>
11c. QATS: (condensed bold...Choose a Typeface by number (ENTER to end))
12c. User: Type <8ENTER>
11d. QATS: (condensed bold underline...Choose a Typeface by number (ENTER to end))
12d. User: Type <ENTER>

**Process Setups (V 2.1.1 and 2.3.1)**

6. User: Press <s>
11a. QATS: (Choose a baud rate by number...1 75 2 300...7 9600 8 19200)
12a. User: Press <5>
11b. QATS: (ENTER lines per page (1 to 127, default=) : )
12b. User: Type <22ENTER>
11c. QATS: (ENTER the line spacing code : )
12c. User: Type <0>
11d. QATS: (ENTER the line spacing number (0 to 255, default=) : )
12d. User: Type <ENTER>
11e. QATS: (ENTER chars per line (1 to 137, default=) : )
12e. User: Type <ENTER>
11f. QATS: (ENTER left hand margin (0 to 136, default=) : )
12f. User: Type <10ENTER>
11g. QATS: (ENTER continuous or single sheet stationery (c or s))
12g. User: Press <c>

**Process Translate strings (V 2.1.3 and 2.3.1)**

6. User: Press <t>
11a. QATS: (Group or translate entry? (g=group,other=translate) : )
12a. User: Press any key except <g> or <G>
11b. QATS: (What printable character is to be translated? : )
12b. User: Press <£>
11c. QATS: (Modify translate string :)
12c. User: Edit the string and then press <ENTER>

**Process Report codes (V 2.1.5 and 2.3.1)**

6. User: Press <r>
11a. QATS: (Modify report code : )
12a. User: Edit the report code and then press <ENTER>
11b. QATS: (Enter setup number (1 to 256,default=) : )
12b. User: Type <7ENTER>
11c. QATS: (Enter typeface number (1 to 256,default=) : )
12c. User: Type <89ENTER>
11d. QATS: (Enter translate item number (1 to 256,default=) : )
12d. User: Type <1ENTER>
11e. QATS: (Enter heading line number (1 to 256,default=0) : )
12e. User: Type <1ENTER>

12f. User: Type <2ENTER>
11g. QATS: (Enter heading line number (1 to 256,default=0) : )
12g. User: Type <ENTER>

**Example 22: Create and run a command file (II 7)**

**START: Start menu showing, MDV cartridge in mdv1**

1. User: Press <1>
2. QATS: The log and autorun menu will appear
3. User: Press <1>
4. QATS: (Log file name? (default=) : )
5. User: Type <copyf2f1_spareENTER>
6. QATS: (...Choose a device name by number)
7. User: Press the number indicated to choose MDV
8. QATS: (Enter a drive number (1 to 8))
9. User: Press <1>
10. QATS: The log and autorun menu will reappear
11. User: Press <w>
12. QATS: (Type your message followed by <ENTER>)
13. User: Type <End of session backup. Copy flp2 to flp1, mname=spareENTER>
14. QATS: The log and autorun menu will reappear
15. User: Press <ESC>
16. QATS: The START menu will appear
17. User: Press <u>
18. QATS: The utilities menu will appear
19. User: Carry out steps 1 to 25 of Example 2
20. QATS: The utilities menu will be showing
21. User: Press <ESC>
22. QATS: The START menu will appear
23. User: Press <1>
24. QATS: The log and autorun menu will appear
25. User: Press <1>
26. QATS: The log file will be closed
27. User: Press <a>
28. QATS: (Command file name? (default=) : )
29. User: Type <copyf2f1_spareENTER>
30. QATS: (...Choose a device by number)
31. User: Press the key to choose MDV
32. QATS: (Enter a drive number (1 to 8))
33. User: Press <1>
34. QATS: The pause message will appear as entered in step 17 above
35. User: Make sure the correct media are in flp1 and flp2 and then press <ENTER>
36. QATS: Example 2 will be carried out automatically (mirabile dictu!)

## 1. Menus and Windows.

Menus are used for moving control through the functions of QATS. When you transfer to a menu then the menu you have just left is known as the calling menu and the one you are in is the called menu and its level number will be one greater than the calling menu. Menus are displayed with a shadow and consist of a single line heading, showing the level number, a title and the current free memory size, and a body containing a number of response lines. The first character of a response line is the option code used to make your response and the rest of the line should be descriptive of the action which will result from the choice. The option code must be entered as displayed since QATS distinguishes between capital and small letters here. In addition to the codes in the list there are some implicit responses which are allowed. ESC is an implicit response which means 'return to the calling menu' and SHIFT ESC allows return to a calling menu with a given level number. A return to level zero has the effect of abandoning QATS, although you will be offered the option to reload the tables file and restart. ^ (SHIFT 3) clears up the clutter on the screen, showing only the current menu and the trail and message windows. CTRL ^ toggles an automatic ^ for the START menu.

Windows are used as input and output areas by QATS functions for communication with the user. A window consists of a single line heading, containing a title followed by a recognition code in square brackets and the current free memory size, and a body area. Usually the body area is empty when the window first appears but sometimes it can contain what looks like a menu body, in which case you can make choices as for menus but the only available implicit response is ESC.

The current free memory size in fact shows the size of the largest contiguous area of free memory and this figure will vary as QATS obtains and frees memory areas, though not always by the size of the the area obtained or freed. Perhaps the easiest way to visualise this is as a bookshelf containing say 10 books with books 6 to 10 missing. If you remove book 4 then the largest area (6-10) remains the same but slot 4 is available for another book of the same or smaller size. If you then remove book 5 the available slots all join up and the largest free area increases by 2 at the time when only the one book (number 5) was removed.

When menus appear they can be moved from their current location and/or their size can be altered using the cursor keys as follows:-

a) cursor keys alone - moves in the indicated direction;
b) SHIFT+cursor keys - as above but movement is in steps of 2 pixels horizontally and 1 vertically;
c) CTRL+cursor keys - the cursor alone moves as in a) above;
d) ALT+cursor left/up - squeezes horizontally/vertically;
e) ALT+cursor right/down - expands horizontally/vertically.

While these keys (the movement keys) are being used the menu details disappear but will reappear when a non movement key is pressed. If the key pressed matches an option on the current menu then control moves to the selected menu otherwise more movement can continue. Remember that you can use the implicit option ^ (=hash, SHIFT 3) to clear the screen up if it begins to look messy, ie use hash to clean up the hash.

Windows can be moved in the same way but only after window movement has been enabled using the following extra implicit responses to a menu:-

* + (plus) enables, ie adds, movement;
* - (minus) disables, ie subtracts, movement;
* ^ (SHIFT 6) toggles between enable and disable.

Also, once movement is terminated by pressing a non movement key the window is said to have been opened and movement cannot restart until the window reappears in the ready-to-open state, which might not occur until the current function has finished and has been called again. The ready-to-open state is signified by the appearance of the cursor at the left in the heading line. Any menu/window moved around the screen will always reappear in the position where it was left until it is moved again.

## 2. The wild card filter.

The purpose of the wild card filter is to allow the user to select a group of filenames from a directory and process that selection as a unit and for this purpose a filename is deemed to consist of a number of subnames, each subname (except the last) followed by an underline character, viz:-

| file/wc name | subnames (how many and what they are) |
|---|---|
| boot | 1 - boot |
| mc_doc | 2 - mc and doc |
| mc_bb_doc | 3 - mc, bb and doc |
| _doc | 2 - null and doc |

The wc filter works from left to right comparing corresponding subnames of the filename and the current wc name supplied by the user. Null subnames in a wc name mean that the corresponding subname is to be ignored. As soon as the filter detects a non-match then the filename is considered not-selected and the next filename is checked. For example, to select all QUILL files from a directory the wc name to use is the last one in the list above, which says "ignore the first subname in each filename and select all filenames whose second subname is doc".

However, the wc filter can be a little more sophisticated than this and the user may specify two extra properties in wc names. These are to insert a + (plus sign) within a wc subname, meaning ignore this column of the corresponding file subname, and to add a - (minus sign) to the end of a wc subname, meaning that if there is a match on this subname then do not select this filename irrespective of how it has matched so far. For example, if the last wc name above had been input as "_doc-" (underline doc minus) then this would mean select all filenames <u>except</u> QUILL filenames.

To extend the example, suppose you had a naming convention for program files where the first subname was the program name and the second subname had the first character to represent the module type (s=Source, b=Binary or compiler output, etc.) and the second character represented a language name (a=Assembler, b=BCPL,c=C, etc.). Some wc names and their meaning would be:-

| | |
|---|---|
| _bb | Select all BCPL binary modules |
| _s | Select all source modules irrespective of language |
| _+b | Select all BCPL modules irrespective of source or binary |
| _bb- | Select all modules except BCPL binary modules |

If you enter a minus sign on its own then no filenames will be selected and this can be usefully employed when, for example, you wish to get out of a delete files function without deleting any files.

Perhaps the main use of the filter is in making up a list of files to be processed by another routine such as copy or delete files. The method in this case is to obtain a directory of the input medium, use the wc filter to select the required files and then carry out the required process on the selected files. This can also employ a further facility, which allows you to add _? (underline question mark) to any wc name constructed as described above. This will have no effect on which filenames will be selected/not selected to form a subgroup for further processing but when the subgroup list is passed to the next function (ie copy or delete files) each filename in the list will be presented in turn for you to decide whether or not this file is to be processed. This allows for a selective copy/delete within a subgroup.

3. Connecting services.

In order to maximise the amount of space available for user applications not all of the facilities of QATS are held permanently in memory, so it is necessary to read into QATS some file resident modules before certain functions can be performed. This is known as connecting a service and QATS functions exist for connecting services, disconnecting services to release memory and listing connected services. The CONNECT SERVICES menu is obtained by pressing the small c key in response to the START menu and the three connection facilities are then available for use by responding c, d or l respectively to that menu.

When you select the c option QATS will display a list of currently connected services and then open the "Select files by group" window and you will be asked for the device where the connectable services files are resident. Answer in the usual way and then a list of connectable services will be shown, from which you should select one entry using the displayed entry number. The chosen service will be conected and the list of connectables services will be redisplayed including the newly connected file.

NB. The connection function can only be applied to modules supplied as part of QATS.

IF you select the d option the DISCONNECT SERVICES window will appear and when the window is opened the currently connected modules will be listed and you will be invited to choose one for disconnection. The list shows a service number, memory size and name for each service. You type the service number followed by ENTER for the module to be disconnected and that module's list entry will be repeated with a request for confirmation. If you reply y then the memory allocated to that module is released for other use and control returns to the CONNECT SERVICES menu. The service numbers are not necessarily consecutive and the name is the name of the file used at connect time. If you change your mind about disconnecting a service then either enter a number which is not in the list or enter a valid number and reply n to the confirmation message and control will return to the calling menu.

If you select the l option the LIST CONNECTED SERVICES window will appear and when it is opened the connected modules will be

listed as for disconnection and control will return immediately to the CONNECT SERVICES menu.

4. **Initiating external jobs.**

NB. QATS cannot initiate PSION programs on a QL without memory expansion.

QATS can initiate jobs as background (=EXEC), foreground (=EXEC_W), Swopper (=EXEC_SR or EXEC_B) or SUPERBASIC (=LRUN) jobs. Background jobs are those which make little use of the screen and need little user intervention to run, except perhaps when they are first started up.

Normally, all the information required to start up a job is contained within the menu contol tables. So to start QUILL for instance it would simply be necessary to select option p (=PSION) from the START menu giving the PSION menu from which you select option q and control is immediately transferred to QUILL as a foreground job. (See example 1 in PART I.)

You will be able to set up the menu control tables to access any jobs you may wish to run but a generalised job start procedure is provided for one-off situations. If you do not have such a job you can run easily you can demonstrate this for yourself by setting up for and running one of the PSION packages. The procedure is initiated via the j option of the Utilities menu and the x option of the JOB MANAGEMENT menu. This action will give you the MODIFY JOB DETAILS window which show the job details and ask if they are to be modified. Answer yes and the details will be presented individually and can be altered as follows:-

(Assumptions: QUILL is to be started and is available on FLP1.)

Command type - enter F (there is no default)

NB. You must not use the Background option with PSION programs. If you do then the QL will lock up.

Priority - type any number between 1 and 127 and then press ENTER
device name - refuse the default by pressing any key except ENTER and
then enter FLP1 in the usual manner
File name - type QUILL followed by ENTER

The data as input and the modification required query will be re-presented and if you are dissatisfied with the details as shown you can repeat the above as many times as necessary or answer no to the query and QUILL will be loaded and initiated. When you QUIT the package and return to QATS you may have to press CTRL C, perhaps repeatedly, until the cursor in the message window at the bottom of the screen flashes.

5.
## Printer details swapping

This facility enables you to swap the current printer_dat file, which contains the printer setup for the PSION programs, for another file which has been prepared to a different specification. For example, sometimes you want to print to continuous stationery and sometimes to single sheet stationery and at the moment it can be a somewhat laborious process to switch between the two specifications. This facility simplifies and speeds up such changes.

The way it works is that you produce several printer_dat files using INSTALL_BAS in the following steps:-

* run INSTALL_BAS and enter a required printer specification;
* install the printer driver using F5;
* ESCape from INSTALL_BAS;
* copy printer_dat to a new file whose name is meaningful and starts $pd_ (you will have to put " (quotes) or ' (apostrophe) around the filename);
* repeat the above until you have all the varieties of printer driver required.

When you need to swap printer details you do so in the following steps:-

a) select the printer driver swap option;
b) enter the device name;
c) choose a printer driver name by number.

The steps are accomplished as follows:-

a) select option p of the PSION menu (=option p of the START menu);
b) enter in the usual way the name of the device containing the printer drivers;
c) the printer drivers will be listed and each name will be preceded by a number.
Enter the number of the driver you require and QATS will replace the current
printer driver with it and return to the PSION menu.

The following printer drivers for the EPSON FX-80 are supplied with QATS:-

| name | type | stationery | preamble |
|---|---|---|---|
| $pd_ser1_cont | serial | continuous | without ESC |
| $pd_ser1_cont_init | serial | continuous | with ESC |
| $pd_ser1_ss | serial | single sheet | without ESC |
| $pd_ser1_ss_init | serial | single sheet | with ESC |
| $pd_par_cont | parallel | continuous | without ESC |
| $pd_par_cont_init | parallel | continuous | with ESC |
| $pd_par_ss | parallel | single sheet | without ESC |
| $pd_par_ss_init | parallel | single sheet | with ESC |

## 6. Directory presentation

Directory presentation options are offered in the same way within several different facilities, notably file copy and deletion, media directories and the Output Formatter. The print directory window is opened in the course of these routines when the operating device(s) has been selected by the user and the relevant directory entry(ies) have been read in. The options are:-

f - file. Copies the directory to a directory device. This option would normally be used when the directory has many entries and you want to print it out neatly using the output formatter. The file will contain for each filename the file size and the name of each medium where the file is resident. At the end a list of medium names and their respective numbers of available and good sectors will appear;

l - large window, shows the directory in a large window. As many names as possible will be printed in the window and then some media information will be displayed in the heading line. If that data does not appear and the cusor is flashing within the large window then this means that there are further entries on subsequent pages. Press any key to show more entries;

p - print. Transfers the directory to a serial device of your choice, usually a printer, in the same format as for f above. You supply the name of the device and the output will be unformatted, ie no page breaks etc;

r - re-sort. This option allows you to change the order of the directory entries before choosing one of the presentation options. When you first come to the print directory window the directory will have been sorted into ascending order of filename but you can use this option to change the order. You can sort on one of the following keys: backup date, file name, reference date, file size or update date; in ascending or descending order. Sorting can take a few seconds, depending on the number of entries to be sorted and, all other things being equal, if you double the number of entries you might more than double the sort time so this option should be used with care;

s - small window. Shows the directory without the columnar and paged display of the large window. Press any key to return to the print directory window.

The print directory window also offers the option to input a wild card file name using option w, with the following effect on the above presentation options. The large window shows all the file names as usual except that those selected by the wild card option will be highlighted. When no wild card file name is in operation then of course all entries are selected and therefore highlighted. The other options show only the selected file names.

A further option in the case of f (file) and p (printer) is that you can choose an abbreviated output, consisting only of file names. This will be useful when compiling command files for programs such as the EDITOR and in future facilities of QATS.

The number of sectors allocated to a file varies according to the medium on which the file resides. Sectors are allocated individually for MDV and RAM but in blocks of 3 for FLP. The number shown in the body of the directory presentations is the number for MDV or RAM so if you display the directory of an FLP device you have to round up the file size to the nearest multiple of 3 above the figure shown in file

on FLP of 25,26 and 27 sectors all need the same area on the medium. This is reflected in the media data shown in the heading line of the large window by showing 3 pairs of figures. The first figure in each pair shows the total for the medium if it is MDV or RAM and the second shows the total for an FLP device. The three pairs of figures show the number of sectors for files selected by the current wild card file name, the number for files not selected and the total of the first 2 figures. The remainder of the medium data consists of the number of available sectors and the the number of good or usable sectors, some of which may have been allocated, and the medium name. If you add the total number of sectors, from the third pair of figures, and the number of available sectors and subtract the answer from the number of good sectors the difference is the number of sectors allocated to the directory.

## 7. The QATS clock

The QATS clock is not a ticking clock in the usual way but a display of the time which is refreshed as you move from menu to menu. This is a sufficiently accurate representation of the time without the obtrusiveness of a clock which keeps running and interferes with other programs' displays. The START menu has option <T> for setting the QL clock time. The set time and date window will be displayed and you simply edit the line as presented to show the correct time and then press <ENTER>.

When you leave QATS you will be offered the option of storing the current time in the config file and if you do store the time then when next you start up QATS the clock will be set to that time. If you dont want the time to be set by QATS on starting then take the zero option. If you dont want to alter the current value of the time stored in the config file, perhaps because you want it to remain at zero, then answer <n> to the initial request.

## 8. Logging and auto-running

This facility allows you to log - ie copy to a directory device - all characters input to QATS in a given session. This can form a useful record of what you have done in the session and could possibly be used if you wish to rerun a session, provided that the log file has been closed properly or recovered using a file recovery program if the session terminated in a disorderly fashion. The main use of the log facility, however, is as a recorder of a sequence of QATS input characters performing a certain function (such as copying a disk from one drive to another) for use by the auto-run facility as a repeatable function (a command).

The log and auto-run facilities operate in the following steps:-

a) log start;
b) enter an optional informative message;
c) carry out the routine you require to be repeatable;
d) log end;
e) auto-run when required.

The steps are accomplished as follows:-

a) select option 1 from the START menu followed by option 1 from the log and autorun menu. When the log and autorun window appears enter the name of the log file in the usual way. Control will then return to the calling menu. The file should be given a name descriptive of the function which it will contain, for example "copyf2f1_mname", which might mean "copy flp2 to flp1 allocating a medium name of 'mname' on flp2 (which will be formatted)";

b) select option w, which will allow you to record a pause message giving some information about how the routine operates. When you autorun the routine subsequently the pause message will be shown and QATS will wait until you press <ESC> if you wish to abandon the current autorun procedure or <ENTER> if you wish to proceed, thus giving you time to set up for the routine. For example, in the case of the copy routine above the pause message could be the meaning quoted above supplemented by some information about when to use the routine (eg. "At end of session") and the pause would give you time to put the appropriate media into flp1 and flp2;

c) leave the log menu by pressing <ESC> and carry out the required routine in the usual way. QATS will process your selected options as usual except that all your keystrokes will be recorded in the log file. Complete the routine by returning to the START menu;

d) log end by selecting option 1 of the START menu and option 1 of the log and autorun menu. This will close the log/command file;

e) when you wish to run a command file select option 1 from the START menu followed by option a from the log and autorun menu. When the Log and autorun window appears type the command file name and choose the device name of where the command files are in the usual way and the routine will be carried out automatically. If you have entered a pause message when you were logging the command file this will appear straightaway and you should carry out the setup for the command and press <ENTER>. When the autorun routine completes you will be left at the log and autorun menu, where you can select another command or carry on with other work.

When you want to record a command file you should do so in the normal course of working since when you are logging you are also

actually carrying out the functions and you can check that the routine is correct. In this way you can build commands files as a byproduct of your normal work and soon you will have a comprehensive set of commands for no great extra effort. It's probably a good idea to record commands on microdrive cartridges since the command files are small and you can normally be sure that a drive will be available for use, especially in the case of copy commands involving 2 floppy drives where you will not be able to run a command from either drive.

When you are using the log function you can autorun previously stored command files to form compound command files and indeed you can call previously stored compound commands as well. This is known as nesting the routines and the depth of nesting is not limited except by the available memory.

Finally, remember that the current version of the log and autorun facility is limited in scope and especially that when you run a command you must be sure that the environment will always be the same whenever the command is run. For example, changes you might make to the menu table could have the effect of invalidating command files where the route to be followed by the command has changed.

## 1. Introduction

Before any of the facilities described in this part can be used you must first be sure that service module $co_QATS_utilities is connected as described in PART II section 3. This service module contains facilities for job management, media formatting, file copying, file deletion and media directories. Each facility is accessed via the UTILITIES menu in the control tables as supplied.

## 2. Job management

When job management is selected control passes to the Job Management menu and when an option is selected the Job Management window appears. This window shows the name of the option selected and a list of jobs in the machine and asks for a job number to be entered. When the selected option has been completed control returns to the Job Management menu.

The job list consists of one line per job showing:-

- a QATS job reference number (ie the number you will enter);
- the job priority ;
- the job name (gibberish for the PSION programs and some others);
- remarks (blank, inactive or suspended)

(NB. SUPERBASIC will always be job 0 and has no name entry).

Job management offers the following options:-

d - delete a job, removes an inactive job and all its subsidiaries (active or not);
f - force delete a job, as for d but also removes active jobs;
l - list jobs as described above;
p - priority change, will change the priority of the selected job to a given value;
r - release the suspension of the selected job;
s - suspend a job for a given number of seconds (-1 means suspend indefinitely). If you suspend QATS indefinitely you will have to release the suspension via SUPERBASIC, if not itself indefinitely suspended, or start a second copy of QATS;
x - execute a job (see PART II).

## 3. Formatting a medium

To format a medium you enter a medium filename on request or accept the default (=spare), input the device name in the usual way (see Part I section 2.1) and react to the confirmation message (see Part I section 2.3). When the format is complete the medium filename, number of sectors available and total number of sectors on the medium are displayed and if you press any key control will then return to the UTILITIES menu.

## 4. Copying files

The copy facility works in the following steps:-

a) select the copy option;
b) enter the input and output device names;
c) format the output device if required;
d) make any required wild card selection;
e) ESC to commence copying.

The steps are accomplished as follows:-

a) select option c and the COPY FILES window will appear;
b) enter the input and output device names as usual. You will be asked to confirm the source and destination of the copy and offered the option to format the output medium. If you enter the same device name for input and output the copy will be carried out on the one drive and you will be told when to swap over the source and destination media;
c) if you wish to format then enter the medium name you require on the destination medium and answer the confirmation message. If you answer no the copy will proceed without formatting. If you answer yes the destination medium will be formatted and then the medium name, number of available sectors and total number of sectors will be displayed. Press any key for the copy to proceed;
d) if you require to copy only part of the source medium then enter a wild card name. IT IS ADVISABLE TO CHECK YOUR SELECTION USING THE LARGE SCREEN BEFORE PROCEEDING;
e) when you have the required selection press ESC and the copy will proceed. The copy routine loads files from the source medium until it runs out of files or memory and then copies all the loaded files to the destination medium. This cycle is repeated if necessary until the copy is complete. The order in which files are copied is determined by the current sorted order, so if you want to copy in say file size order then you should re-sort the directory (see Part II section 6). As soon as the utilities menu regains control (which may be before the destination medium finishes writing) you can start more processing.

NB. You can use the cancel key (CTRL SHIFT ESC) to abort during step e. Any files copied up to that point will of course remain copied but files loaded and not yet copied will not be copied.

## 5. Deleting files

The delete facility works in the following steps:-

a) select the delete option;
b) enter the deletion device name;
c) make any required wild card selection;
d) ESC to commence deletion.

The steps are accomplished as follows:-

a) select option d and the DELETE FILES window will appear;
b) enter the deletion device name as usual and answer the confirmation request;
c) if you require to delete not all of the files on the deletion medium then enter a wild card file name. IT IS ADVISABLE TO CHECK YOUR SELECTION USING THE LARGE SCREEN BEFORE PROCEEDING;
d) when you have the required selection press ESC and the delete will proceed. When the selected files have been deleted you will be offered the option to delete more files from the same medium. If you wish to delete more files press y and continue from step c) above. If you press any other key you will return to the utilities menu.

## 6. Obtaining multiple media directories

THE steps involved are:-

a) select the multiple media directories option;
b) enter the device name;
c) enter the wild card filename;
d) respond to the more media? request;
e) select the directory presentation options, press ESC to finish.

These steps are accomplished as follows:-

a) select option m and the Media Directory window will appear;
b) type a directory device name in the usual way;
c) reply to the wild card file name request (see 5);
Here the wc filter can be used to restrict the number of filenames read in from a directory to those in which you are interested, thus reducing the amount of memory required. This is useful for selecting filenames from a floppy or hard disk containing many files or when doing a combined directory of several media;
d) press the relevant key and go to step b above or e) below as appropriate;
e) you should now have the Print Directory window showing. This window gives options for how to present the directory (see Part II section 6).

## 7. Obtaining a single medium directory

THE steps involved are:-

a) select the single medium directory option;
b) enter the device name;
c) select the directory presentation options, press ESC to finish.

These steps are accomplished as follows:-

a) select option s and the Media Directory window will appear;
b) type a directory device name in the usual way;

window gives options for how to present the directory (see Part II section 6).

# QL Applications Traffic Supervisor - PART IV: MAINTAIN CONTROL TABLES

## 1. Introduction

Before any facilities described in this part can be used you must first connect service module $co_maintain_control_tables as described in PART II section 3.

When a menu is displayed it shows a number of explicit responses which can be made but there are also some implicit responses for every menu. ESC, SHIFT ESC and ↵ are three you have already met and exclamation mark is another. Its function is to enable amendment of the control tables. The modification process proceeds differently for menus and windows and the options available for modification also differ.

In the case of menus you select options in the normal way until the menu to be amended is showing and then press ! (exclamation mark) to obtain the modification menu. Any modification options then selected will apply to that menu. In the case of windows you select the modification menu irrespective of which menu is showing and then select the table scan option (see below) to display the window to be altered and the options available.

Before embarking on any amendment to the tables it is important to be aware of the structure of the tables. Each menu and window has its own entry in the tables and each entry has a recognition code. The recognition code of the START menu is <QATS> and the code for any other menu is derived by adding the option code used to obtain the menu to the recognition code of the calling menu. The code for the spooler is <QATSs>, ie option <s> from the START menu; for ARCHIVE is <QATSpd>, ie option <p> from the START menu and option <d> from the PSION menu; and for 'list all jobs in the machine' is <QATSujl>, ie option <u> from the START menu, <j> from the utilities menu and <l> from the job management menu. Recognition codes for windows are unstructured.

The control tables entries are held in ascending, alphanumeric (case dependent) order so when you select an option QATS adds the option code to the current menu recognition code and searches for the new entry and when you press <ESC> QATS strips off the last character of the current recognition code before searching. Menu entries are in fact divided into 2 types: entries that contain data required to display a menu and command entries, which contain no display data but only the data needed for starting an external job (EXEC, EXEC_W, EXEC_SR or LRUN) or an internal routine (copy files, delete files, etc.). Entries for external commands always have a command number of zero and entries for internal routines have a number in the range 1 to 255.

## 2. Modifying menus

The options available are:-

n - new menu. A new menu will always be connected to an existing menu and therefore the way to set up a new menu is to have on display the caller menu, press ! and then press n, at which point you will be asked for the option code from the caller to be used to connect to the new menu. This will be checked for validity. When the new menu has been created (you will have to wait a short time while the control tables are re-sorted) it will be displayed and then the other options below can be used to put flesh on the bones and alter any of the menu characteristics. When the menu creation is complete an automatic <ESC> will be issued to leave the modification routines and return to the calling menu. This

w - window, used to set up or change the window attributes:
- colours
  - background colour (paper, 0 to 255)
  - foreground colour (ink, 0 to 255)
  - border colour (0 to 255)
- location
  - horizontal coordinate in pixels of top left of window
  - vertical coordinate in pixels of top left of window
- orientation
  - orientation of response lines (horizontal or vertical). The modification window has horizontal orientation but all others as supplied have vertical orientation, the difference being that vertical orientatation means there will be only one response per menu line whereas horizontal orienation may result in more than one response per line.
- size
  - border width (0 to 127)
  - width in characters (exc. border)
  - depth in lines (exc. border and heading)

NB. The width and depth are shown with a calculated minimum and maximum and in the case of a new window the proffered defaults may be invalid! Furthermore, remember that some of the above attributes can be set or modified using movement keys (see PART II).

l - alter the options in the menu body. If option lines already exist they are displayed and can be edited, otherwise you add into a blank entry. A menu line consists of a one character option code and a description and each line is separated from the next by a comma;

k - change a menu code. This is used when you wish to rearrange the menu structure without having to re-enter all the data;

e - erase a menu from the control tables;

c - command, an alternative to the w and l options above, which sets up a hidden menu used to initiate an external job such as the PSION programs or other EXEC'able programs. The command number must always be zero for an external command and the remaining items can be set now in the tables or entered as an * to denote that the value will be supplied at run time. The command facility allows the user to set up an entry in the menu control tables for initiating EXEC'able, SUPERBASIC or SWOPPER (copyright COMPWARE LTD.) jobs. When you are asked to enter the job type you will be offerred the following options:-

* B - for starting a job as a background task (=EXEC);
* F - for starting a job as a foreground task (=EXEC_W);
* L - for starting a SUPERBASIC job (=LRUN);
* R - for starting a running job. This is used in the case of the spoolers or similar jobs which are required to continue running even when the user swops out of QATS and into another SWOPPER task. Press <SHIFT ALT F1> followed by <CTRL C> to get back to QATS (=EXEC_B);
* S - this is used to set up a job as a SWOPPER task (=EXEC_S).

When entering R and S entries the job name in the file name entry must be followed by an ' (apostrophe). QATS will supply the apostrophe preceding the device name as required by SWOPPER. For example, if you enter <abacus',100ENTER> then QATS will generate ('FLP1_abacus',100).

NB. An exception to the menu modification process occurs in the case where you wish to modify the details of a command entry. If you tried to select this type of "menu" you would of course initiate the job it was designed to initiate so instead you must use the Table Scan option detailed below and select the c option from those offered.

3.
**Modifying windows**

Windows are modified via the Table Scan option of the modification window. When the t option is selected you will be asked if you wish to scan starting from a recognition code or an entry number and you answer in the usual way. The recognition code is shown in square brackets in the window heading line and except in the case of the creation of a new window this is the response to the t option which you will normally use. You can move backwards and forwards through the table using - (minus) and + (plus) respectively and finish a table scan by pressing <ESC>. The options available for window modification in Table Scan are e,l and w as above and h and n.

The h option is used to set the heading to be displayed in the window title line.

The n option is used to establish an entry for a new window. Take the e option on entry to the Table Scan and type the number of the top of the range offered in order to be sure of getting a vacant entry in the table. Press n and the new entry will be allocated and the table re-sorted. The window can then be fleshed out as for menus using the rest of the options.

### 4. Saving the tables

When the control tables have been modified then those changes will be lost unless you save the tables. The save tables option differs from all others in the modification menu in that it is not necessary to have connected this service module before the option can be used. The tables will be saved to the file named in the configuration file @ATS_config. If you wish to save to a different file then you can make a temporary change to the tables file name using the Z option of the START menu. The save tables option is offered automatically at end of session if the tables have not been saved since the modification menu was last selected.

If you create lots of new menus and/or windows at one session you will find that after 20 or so additions the table becomes full and you may then save the tables, ESCape to level zero and reload the tables to give more vacant slots. This ensures that you save the tables before investing too much effort in modification.

### 5. Print the tables

You can print the contents of the control tables using option <p> from the modify menu. You will be asked for the name and drive, in the usual way, of the file to which the tables are to be copied in printable form. You can print the file using the Output Formatter or by some other means. If you want to create the file QE_PRINT used in some of the examples then specify QE_PRINT as the file name.

## 1. Introduction

Before you can use any of the functions described in this part you must first have connected service module $co_build_QATS_printer_driver or $co_edit_export_file as described in PART II section 3. The first of these service modules contains routines for building and swapping QATS printer drivers and the second contains the routine for editing an export file for labels/mailing list use. Each function is accessed by selecting the o option from the START menu and then selecting the b,s or e options respectively from the output control menu.

## 2. Build a QATS printer driver

The QATS printer driver has two distinct but linked purposes. Firstly, it will contain the specifications, such as heading lines and page size, for producing various reports and secondly it is the QATS equivalent - though extended in scope - of the PSION printer driver. The build function is the QATS equivalent of INSTALL_BAS.

### 2.1 Report specifications

Reports consist of data - the lines to be printed - and format information describing how the data is to look on the printed page. The data varies from run to run of the report but the format information doesn't change and can therefore be stored separately and called up for use when necessary. Furthermore, quite different reports often have the same format. By providing a central location for all the non-variable details the QATS printer driver can save quite a lot of work and those of you who write your own programs will no longer have to write routines for page breaks, page numbering, heading lines, etc, all you have to do is write the data lines themselves. In addition, once you separate the data and format information it becomes easier to allow for printing out the same data to different devices such as the screen or a printer where you would want different page sizes.

The QATS printer driver stores setups, typefaces, translate strings and headings in separate tables to which you can add new entries as you invent new reports. You specify a report by adding to a report codes table an entry containing the item numbers of entries from the other tables which taken together give sufficient information to tell the output formatter how to present the data. For example, report number 3 as supplied allows for printing using setup number 3 ( 9600 Baud transfer rate, 82 lines per page, 8 lines per inch spacing, 137 characters per line, left hand margin at 10, on single sheet stationery); typeface number 3 (condensed); no translate strings; and heading lines 1 and 2. If you want to print the same data to a 20 line screen then report number 5 applies, differing from report number 3 in that it uses different entries from the setups and typefaces tables.

#### 2.1.1 Setups

This table shows all the combinations of baud rate, lines per page, line spacing code and number, characters per line, left hand margin and continuous/single sheet stationery which are used in your installation.

#### 2.1.2 Typefaces

This table shows the combinations of typeface definitions to give a particular type of printing. For example, condensed on its

own, which might be used for printing program listings; and normal and bold, which might be used for printing labels.

### 2.1.3 Translate strings

This table shows all the cases where a given character must be replaced by another character (or string of characters) as for translate1 to translate10 for the PSION printer driver. You can have literally hundreds of different translate strings in the table. A second type of entry, known as a group entry, consists of a list of string item numbers, thus defining a set of strings. Strings can appear in more than one group. Entry number 1 should not be changed - it represents a null translate string.

### 2.1.4 Headings

This table shows all the headings which are used in your installation. Entries 1 and 2 as supplied are known as the standard headings.

Standard headings consist of two lines at the top of each page. Line 1 contains at the right hand margin the name of the file being printed (but without the device name prefix), a slash symbol and a three digit page number. Line 2 contains at the right hand margin the date and time of printing.

User defined headings consist of any number of lines of data entered by the user. Within each line the user can specify run time values, so called because they are calculated by the package at run time, as follows:-

<D> - will be replaced by the current date;
<F> - will be replaced by the file name;
<P> - will be replaced by slash current page number;
<T> - will be replaced by the current time of day.

Each run time value definition consists of: a less than symbol (SHIFT ,), a logical_OR symbol (SHIFT ), *a capital letter code, a logical_OR symbol and a greater than symbol (SHIFT .).*

*Thus, the standard heading lines are defined as:-*

*Line 1:* <F><P>
Line 2: <D> <T>

Note that heading lines are always printed right justified, ie the rightmost character of the heading line, after taking into account any transformation due to run time values, will be printed at the right hand margin.

### 2.1.5 Report codes

The report codes table is the one which brings together entries from the tables described in 2.1.1 to 2.1.4 above. A report code contains up to seven characters and is used as the mnemonic label for a combination of items (from the other tables) which taken together describe how a particular report is to be printed. You can specify 1 setup number, 1 typeface number, 1 translate number (must be a group entry) and zero or more heading line numbers.

To reiterate, the advantage of this method is that when you wish to set up the printer to print programs in standard layout

PART VI) and it can then obtain all the data needed to print as required. When program printing is finished you can switch to the report code for the new report format and again the setup is performed automatically. This saves user time and cuts down on errors and is particularly useful for cases where you are printing a report to a spool file which will not show on a hard copy device until later. By using a report code to set up the report format you can be more certain that when actual printing occurs you will not have set up (say) the page size wrongly when you were transferring to the spool file.

## 2.2 Printer driver

Printer control characters - usually preceded by an ESC character - are fed to a printer in order to accomplish certain functions, eg ESC C to set the page size for an Epson FX-80, and because the codes differ from printer to printer any generalised printing program, such as QUILL or the Output Formatter must have a means for the user to inform the program what are the values the codes take for a given set of operations for his particular printer. This table of values forms the printer driver for that printer. Within the QATS printer driver these values are defined across four tables of two types: the narrative window, which describes the function of the string; and the ESCape strings window, which shows the actual control character strings. Printer control characters are divided into two groups, each with a narrative and ESC strings window, which define control strings concerned with setting on typeface characteristics such as condensed, bold, enlarged, etc; and others concerned with print layout but also including the codes for setting off the typeface characteristics. In practice the division is quite arbitrary and its main reason is to limit the number of strings per window so that they can be shown on the screen without scrolling.

## 2.3 Operation

When you select the b option of the output control menu the Select files by group window will be displayed and you will be asked to specify the device on which the QATS printer driver files - whose names begin with "$px_" - are to be found. Specify the device name and drive in the usual way and a list of driver file names, each preceded by a selection number, will be displayed. If there is only one such file then it will be automatically chosen otherwise you type the selection number followed by ENTER and the relevant file will be chosen for processing. The file supplied with QATS is "$px_EPSON_FX-80", which contains the data for the Epson FX-80. When you have selected a file then the Select a table for amendment window will appear and this contains a list of options for further processing. Most of these options are concerned with display and amendment of the data tables.

### 2.3.1 Display and amendment of data tables

The display and amendment process works in the same general way for all these tables, with individual variations, and also covers a further table which is a sort of translate table reserved for sideways printing, containing ESC strings for turning characters sideways on the Epson FX-80. When you select a table by pressing its option code the relevant window and data will be displayed and you will be invited to select an item for change or just press ENTER to return to the 'Select a table for amendment' window. If you type an item number followed by ENTER you will then be asked whether you wish: to delete the item by pressing *; to leave the

any other key. Taking either of the first two options redisplays the window and data. Taking the replace option directs you into the individual amendment processes, which act according to the option code as follows:-

e - enter an ESCape string. This may consist of any combination of the following entities separated by commas
- an ASCII control code mnemonic such as ESC, ACK, etc;
- a decimal number in the range 0 to 255
- a HEX number in the range 00 to FF, preceded by a $ character
- any keyboard character, preceded by a " or ' character.

E - as for e above;
f - select by number any number of typeface characteristics from the list displayed;
h - type a string of up to 255 characters followed by ENTER;
n - type a string of up to 255 characters followed by ENTER;
N - as for n above
r - enter a setup number in the range 1 to 256;
- enter a typeface number in the range 1 to 256;
- enter a translate group item number;
- enter a number of heading item numbers in the range 1 to 256. Press just ENTER to end the list;

s - enter baud rate, selecting by number from the list presented;
- enter lines per page in the range 1 to 127;
- enter the line spacing code and (if applicable) the line spacing number;
- enter characters per line in the range 1 to 137;
- enter left hand margin in the range 0 to 136;
- set continous/single sheet stationery by pressing c or s, respectively;

s - press the key for the character to be turned sideways and then type an ESCape string as for e above;
t - choose whether the entry is to be a group entry or not and then type a list of valid translate item numbers for a group entry or a printable character followed by an ESC string for a string entry.

### 2.3.2 Printer toggle

When the tables are displayed they are shown on the screen in their respective windows. However, if you want the data to be written to the printer (or any other output device) then you can select the printer toggle option. If you do you will be asked for the name of the required destination device (eg par, ser1, flp1_pddata) and thereafter display will not take place within the window when each table is selected but the information will instead be written to the nominated device. If you select the printer toggle option again then display will revert to the windows. Whether the data is being displayed in the windows or on another device you can use the cancel key (CTRL SHIFT ESC) to terminate the display. This will be particularly useful when the sideways graphics window is being displayed and for other tables, such as the translate table, should their number of entries increase.

### 2.3.3 Write output file

If you select the write to output file option you will be given the opportunity to keep the current state of the tables. You will be asked for the name of the file to which the tables are to be written and the default will be the name of the file from which they were read. This request and the following request for a device name should be answered in the usual way. When the file has been written control will return to the 'Select a table for amendment' window. Note that you will also have an opportunity to write an output file when you leave the build function.

### 2.3.4 Terminating the build process

If you press ESC in response to the 'Select a table for amendment' window then the build process will end and you will be asked if you wish to keep the tables as amended.

## 3. Swap QATS printer driver

This facility performs much the same function for the output formatter as that described in PART II section 5 does for the PSION programs. The output formatter expects to find its printer driver information in a file called QATSprint_dat and this file will contain all the data generated for a particular make and model of printer using the build process described in section 2 above. If you are about to do some printing on a different printer from that described in the current version of QATSprint_dat then you will first have to swap the data for the new printer into QATSprint_dat.

When you select the s option you will be asked for the name and number of the device containing the files generated from the build process, all of whose names will begin with "$px_". When you have entered the device name in the usual way (see PART I section 2.1) a list of qualifying filenames, each preceded by a number, will be displayed. If there is only one $px file then it will be automatically selected otherwise you will have to type the number of the file you require followed by ENTER and it will be copied into the QATSprint_dat file on the same device. The previous contents of QATSprint_dat will be lost.

## 4. Edit an export file

The purpose of the export file editor is to allow you to scan an export file which is to be used later for the generation of labels and/or mailing letters in order to check that all required names and addresses are present and to delete any records you may decide you do not want. For example, it may be that it was not possible to define a selection within qatsmail (see PART VI) which was exclusive enough and now some records have to be deleted.

When you select the e option of the output control menu the Select a file by group window will be displayed. Press ENTER to open the window and you will be asked to specify the device on which the export file is to be found. Specify this in the usual way (see Part I section 2.1) and a list of export file names, each preceded by a selection number, will be displayed. (All the file names will have a suffix of "exp".) Type the number of the file you wish to edit followed by ENTER and that file will be read and its first record displayed. At this point and for each subsequent record you will be offered the choice of: deleting the record, by pressing y or Y; copying to end of file, by pressing c or C; or keeping the current record, by pressing any other key. You can continue to delete or keep records until all records have been scrutinised or, when you reach the point where you know there will be no further deletions, you can copy all remaining records to the destination file. When all the records have been processed the name of the destination file and the number of records it contains will be displayed. The name will be the same as that of the source file selected at the beginning except that the suffix will be changed to "eef". After the destination file name has been displayed the edit function ends and control returns to the output control menu.

# QL Applications Traffic Supervisor - PART VI: OUTPUT FORMATTER

## 1. Introduction

Before you can use the facilities described in this part you must first connect service module $co_output_formatter as described in PART II section 3.

The ostensible purpose of the output formatter is to print ASCII files onto a printer device, optionally adding formatting information such as headings and page numbers. However, the Output Formatter takes advantage of the device independence features of QDOS to form a generalised package for transcribing files from a directory device to any other device including the screen.

Apart from straightforward printing, the package also includes:-

* two "watchdog spooler" programs, so called because they keep a watch on all the directory devices and automatically print to a nominated printer (or any other output device) any print files as they appear on those devices. This allows for printing to continue in the background while you are engaged in other processing;

* columnar printing in as many columns as you choose across the page;

* sideways printing, principally for printing large spreadsheets from ABACUS;

* mailing list, enabling you to reprint the same QUILL file over and over again changing coded information on each document by substitution from an ARCHIVE file. For example you can print the same mailing shot letter with different addresses taken from your mailing file;

* labels printing, similar to the mailing list but printing labels - as many across the page as space permits;

* restart and recovery feature for cases where a paper wreck has occurred or you simply want to miss out a number of pages at the front of the file.

## 2. General operation

**Initiation**
- nominate output device or file;
- nominate input device.

**Preprocessing - optional, per file**
- change the formatting details;
- carry out alignment;
- carry out restart/recovery.

**Processing - choose one per file**
- columnar printing;
- delete a file;
- HEX dump;
- labels;
- mailing list;
- sideways printing;
- normal processing.

files list management;
change output device.

The initiation steps are carried out once only on entry to the Output Formatter and will result in a list of files to be processed. The preprocessing options can be selected in any combination before one of the processing options is taken. After the chosen process is complete the next file in the list is nominated for action until the end of the list, at which point the output formatter closes down and control returns to the calling menu. You also have the list management options available, for moving to and fro through the files list, and you can close the current output device and switch to a new one between processing each file.

## 3. Initiation

### 3.1 Nominate output device or file

When the output formatter is invoked and the window opened you will be asked to specify on which device the QATSprint_dat file, containing all the setup and printer driver information, is to be found. You specify the device name and number in the usual way and then a report codes window will appear. Press ENTER to open the window and the report codes will be listed and you can make your choice from these to give the correct setup and printer details for the printing you wish to do. This is covered in more detail in part V.

When the report code details have been set up then the Select output device window will appear and you can then specify the output destination device, ie is the immediate output to be to a directory device (in the form of a file on FLP, MDV, etc.) or to a non-directory device such as a printer or the screen.

If you take the latter option then you will be asked to enter a device name and this will be of the form: par, par_2k, serlc, scr, scr_512x200a0x0, etc, as described in the concepts section of the QL User Manual under devices.

If you take the former option then you will be asked for a file name and then a device name in the usual way except that the default file name will be "spool". If you refuse this default then output will go to the file you specify but if you accept the default then output will go to a spool file, for later processing by the watchdog spooler, and you will be required to enter some information specifying the spool processing, viz:-

* alignment - specify whether or not the final output from the watchdog spooler will require alignment before it can be printed;

* number of copies - the number of copies to be made by the watchdog spooler eg 3 printouts of a spooled labels file;

* stationery code - zero to three characters used to distinguish the stationery to which the final output will be going and normally only needed when that final output from the watchdog spooler is to paper. You must create your own system of stationery codes;

* device name of the final output - a device name such as par, scr, ser1, etc, specifying to the watchdog spooler where to write the final output.

### 3.2 Nominate input device

This is simply a question of entering in the usual way the name of the directory device containing the files to be processed by the Output Formatter. You will be able to use the directory presentation options as described in Part II section 6 to create a list of files to be processed.

## 4. Preprocessing

### 4.1 The formatting details

The formatting details are set to default values via your choice of a report code when nominating the output device but can be changed if required before each input file is processed. You can display the current settings at any time by selecting option d of the Request Setup Details window followed by option d of the display setups window. The formatting options are described below. Each option has its own display window and unless otherwise stated you will automatically return to the Request Setup Details window on setting the selected option. When you have finished setting the formatting details press ESC to return to the calling window.

#### 4.1.1 Typeface

The typeface can be set from the same list of options, alone or in combination, as specified in part V. The package does not check the validity of specified combinations or their effect on

the line length (see below) - these are the responsibility of the user. Whenever you select the typeface window the current settings will be destroyed and the typeface will first be initialised and then other options you choose will be effected.

The following options have the stated effect on the line length:-

* initialise, line length set to 80 characters;
* condensed, line length set to 136;
* enlarged, current value of line length halved.

When you have finished setting up the typeface press ENTER to return to the calling window.

### 4.1.2 ESC sequence

This option is intended for setting printer control codes either for non EPSON FX-80 compatible printers or where the required action is not available as an explicit option. You will be asked for the escape control character and what you type will be written to output prefixed by the character HEX 27. Next you will be asked how many more fields are required to complete this escape sequence and then you will be prompted to enter that number of decimal numbers/codes in the range 0 to 255 to be written as characters. For example, to set the line spacing for an EPSON FX-80 to 40/216 inches you would type:-

3 - as the escape control character;
1 ENTER - as the number of fields;
40 ENTER - as the one and only field;

and this is the equivalent of CHR$(27);"3";CHR$(40); in the EPSON manual.

### 4.1.3 Heading details

When you select the headings option the headings window (as in part V) will appear and you should press ENTER to open it, at which point the heading lines will be displayed and you will be asked if you require standard headings. If standard headings are required then the system will automatically select lines 1 and 2. If you require non-standard headings then you will be asked to enter a list of heading line numbers and this selection of lines will form the heading for this printout. Reply ENTER without a line number to terminate the selection process. If you require no headings then terminate the selection process straightaway.

### 4.1.4 Left hand margin

The left hand margin can be set in the range 2 to current line length minus 1.

### 4.1.5 Lines per page

The number of lines per page (including heading lines, if applicable) can be set in the range zero to 127.

### 4.1.6 Stationery type

The stationery type can be set as either continuous or single sheet. The word stationery in this context should be interpreted to apply to more than just paper - medium would perhaps be the more accurate general purpose word. If the stationery type is set as single sheet this means that before each page of output is

written a window will be displayed showing the current file name and next page number. You will then be offered the option to press:-

ESC - meaning abandon printing this file;
s - meaning skip to a specified page number;
ENTER - meaning write this page.

NB. In the case where the output is to an scr device it is necessary at the end of each page to signify that you want another page by pressing any key, at which time you will be given the page window as above. This is to ensure that the last screenful of data is not overwritten prematurely by a return to the calling window.

### 4.1.7 Width in characters

Set the current line length in the range zero to 137.

## 4.2 Carry out alignment

Alignment is the process of making trial prints and adjusting the paper position until the printing is in the right place. It is only a sensible choice when you are printing directly to paper, whether preprinted paper or not. If you select the alignment option you will be told the name of the file and then asked for the alignment type, which may be "x" or any other key.

If the alignment type required is "x" then a row of 12 "X"s will be printed at the left hand margin and the paper will be thrown to next top of form, otherwise the alignment routine will form a file name by adding "_align" to the quoted file name and ask for the name of the device where the thus formed file name is resident. You reply in the usual fashion and the file will then be printed for you to check whether or not the paper position needs adjustment. The file must have been set up previously by the user, normally via QUILL, to print an adequate alignment pattern and throw to top of form. If the file is not present then the Output Formatter will be aborted with a not found error message.

You are only given one chance to choose the type of alignment but once chosen you can repeat that alignment as many times as necessary.

## 4.3 Carry out restart/recovery

The restart/recovery routine will ask for the number of pages which have been printed correctly and then skip that number of pages before writing to output. The restart value is always reset to zero so restart/recovery must always be called explicitly for each file for which it is required. In the case of printing labels or mailing list letters a page is equivalent to one label or letter and the total number of pages is equal to the number of name and address records in the exported file.

# 5. Processing

## 5.1 Columnar printing

Columnar printing prints a page in columns where the start of the second column follows on from the bottom of column 1, which (if there are enough lines of data) will finish at the bottom of the page. The width of a column is calculated by dividing the number of characters per line minus the left hand margin size by the number of columns requested, discarding any remainder. For example, if there are 80 chars/line and the LHM is 10, the column sizes for 2, 3 and 4 columns/page are 35, 23 and 17. If you use QUILL to prepare a document for columnar printing, perhaps because you want QUILL's word wrap facility to break lines up at sensible points, you should specify a page width 2 characters less than the calculated column width for columnar printing. The completed _doc file should then be "printed" to a _lis file, using a printer driver referring to a "ser" device without "init", for subsequent printing by the output formatter. QUILL will add a line feed and carriage return to each line of the _lis file hence the allowance of 2 characters mentioned above.

## 5.2 Delete a file

The current file will be deleted from the medium, although its name will remain in the files list. You will be asked to confirm the deletion.

## 5.3 HEX dump

The current file will be printed as a HEX dump. There will be 1 line of print for each 16 bytes of file data and each line of print will contain: the byte address within the file in decimal and hex; 16 bytes of hex data shown as 4 groups of 8 hex digits; and the same 16 bytes shown as printable characters and dots for non-printable characters.

## 5.4 Labels and mailing lists

These two processes are very similar, the main difference being that the labels process will ask you how many labels are required across the page. Each process prints a file exported from ARCHIVE containing name and address records and uses another file, usually a QUILL file created via the print-to-file option, as a template for printing. The QUILL file will contain parameter fields indicating where values from the ARCHIVE records should be inserted into the label or mailing letter. Before you select either of these processes you should ensure that the current settings for stationery type and page size are correct but all other formatting details will have been set within QUILL. When you select either labels or mailing you will be asked for the name of the QUILL file, which you will enter according to the usual rules, and then printing proceeds. See Appendix A for more details.

## 5.5 Sideways printing

When you are using ABACUS to prepare a large spreadsheet you should use the Design
command to set the page and line sizes to their maxima, probably 254, and "print" the spreadsheet to a _lis file using $pd_sideways as a printer driver. When you select the sideways option in the output formatter you will be asked for the sideways page size and

spreadsheet rows printed at a time and the latter the maximum width the spreadsheet row can have.

### 5.6 Normal processing

A file selected for normal processing will simply be copied to the output device with formatting added as currently set.

NB. During all the above output processes you can use the cancel key (CTRL SHIFT ESC) to curtail the activity. If the stationery type is continuous then the whole of the report is cancelled. If the stationery type is single sheet then only the production of the current page is curtailed but you can use the ESC option in the page window to complete the cancellation if you want to.

## 6. Other processing

### 6.1 List management

List management allows you to step through the files list either forward by selecting the "do not process" option, or backwards, by selecting the "previous file" option. If either option attempts to move too far - past the last entry or in front of the first entry - the Output Formatter terminates and control passes back to the calling menu. This will also happen if the abandon option (ESC) is selected.

### 6.2 Change output device

This option allows you to close the current output device and then nominate a new output device as explained in 3.1 above.

# 7. The watchdog spoolers

## 7.1 Introduction

There are two watchdog spoolers - a general spooler, known as the output spooler, and a special form of spooler for use with PSION programs. The output spooler is invoked by taking the s option of the START menu and the PSION spooler by taking option s from the PSION menu. Each spooler will inspect the directories of all directory devices in its list of device names as frequently as its preset interval indicates and if it detects the presence of any spooled print files it will copy them to the indicated output device (see 3.1). The spoolers will feature in the jobs list from job management (see PART III) and can of course be controlled using job management functions. For example, if a spooler is suspended and you produce a spool file but do not want to wait for the suspension to expire automatically you can use the release suspension feature of job management to make the spooler start its search straightaway. The preset interval of automatic suspension starts from when the spooler finds no files to process.

The list of device names to be scanned by each spooler and the frequency in minutes that scanning should occur are set in the QATS_config file using the SUPERBASIC program QATScon_bas. You can also make a temporary change to these parameters using option Z from the START menu. In this case, however, the changes you make will not apply to any spoolers which had been started up before the changes were made. You may have to use the job management facilities (see Part III) to delete or force delete the spoolers and then start them up again in the usual way.

## 7.2 Layout of the output spooler spool file name

The spool file name layout is:-

**@acuuuulsss_d...d** where:-

col 1 @ identifies this name as being a spool file name;
col 2 a = alignment code: A means alignment will be required, other means ready for printing without alignment. If alignment is required then the spooler will open a window showing the stationery code and invite the user to carry out alignment as described in 4.2;
col 3 c = character representing the number of copies required in the range 1 to 255;
cols 4-7 uuuu = uniqueness number, 4 bytes to distinguish this spool name from all others. QATS puts the date and time of file creation here but users can put anything they know will establish uniqueness or leave it empty if they know that the other fields will make the name unique anyway;
cols 8-11 lsss = a string representing the stationery code. The code can be 0 to 3 characters long and l=the number of such characters. However, no matter what length the stationery code these 4 columns are always all allocated to it;
col 12 _ marks the start of the device name and the end of the above fields and must be present in this column as a literal;
cols 13 and ... d...d = device name to which this spool file

is to be written (see 3.1)

It is of course quite in order for a user program to write a file to a directory device for the spooler to process and provided that the file name conforms to the above standard layout such a file will be processed just like a QATS generated file.

## 7.3 The PSION spooler

Spool files requiring alignment are ignored while a foreground job is running because if the foreground job is a PSION program and you switch via CTRL C to the spooler to carry out the alignment process you will not be able to return to the PSION job. For this reason, and also because of the restrictions imposed on the format of filenames allowed with the PRINT commands within PSION programs, QATS has to provide the second watchdog spooler for use in the background to QUILL etc.

The spool file name layout is:-

**d...du_@cc** where:-

cols 1 to n **d...d** = a printer device name such as ser1, ser1c, par, etc.
excluding any names requiring a "_" (eg par_2k is excluded);
col n+1 **u** = a,b,c, etc. A single character temporary uniqueness code
which you add to ensure that the current name differs from those of other PSION spool files which may still be present;
col n+2 **_** "underline" - must be present as a literal;
col n+3 **@** (at) - must be present as a literal;
cols n+4 & 5 **cc** = number of copies required in the range 1 to 99.

NB. Note that QUILL will not handle printing to a file correctly if the current PSION printer driver does not specify SER as the printer device. If this problem occurs then save the document, quit QUILL and use the <p> option of the PSION menu to swap to a printer driver that does specify SER.

# APPENDIX A - LABELS AND MAILING LISTS

## A.1 Introduction

This appendix explains in more detail the label and mailing list processes, which are carried out in the following steps:-

a) export the required names and addresses from your ARCHIVE database using qatsmail;
b) edit the export file, if necessary, using the edit export file function (see part V);
c) prepare any required labels and/or mailing letters templates using QUILL;
d) print the (edited) export file using the l and/or m options of the output formatter. Note that you can use the same export file for both labels and mailing letters, thus ensuring that for a given mailshot the labels and letters will always match and be in the same order.

## A.2 The ARCHIVE program.

### A.2.1 Introduction

The ARCHIVE program (qatsmail_prg) is a simple name and address file maintenance program with the addition of facilities for selecting a subset of records and exporting either such a subset or the whole file. A tailoring program (qatstail_bas, written in SUPERBASIC) is available to alter field name references in the ARCHIVE program to match field names used in your existing name and address files.

To run qatsmail_prg you must start up ARCHIVE and then enter a RUN command (eg. RUN FLP2_qatsmail) to start the program. You will be asked for the name of your database file and when the file has been opened an options menu and the first record in the file will be displayed. Most of the options in the menu act as described in the ARCHIVE manual - here we shall be concerned only with the use of the select and export options.

### A.2.2 The select option

The select option allows you to form a subset of your file according to selection rules such as "give me all records whose title field contains Mr" and "give me all records where selection code field 1 contains 1 (which perhaps means a widget mark 1 has been purchased) ". All records which do not fit a selection statement will be temorarily unavailable to you but are not permanently deleted and you can use the reset option at any time to cancel all selections and make the complete file available again. Selections can be combined to narrow down the subset as far as you wish. If you carried out the two selections above without a reset in between you would be left with all the records for males who have purchased a widget mark 1 and clearly this would be useful for a mailing list as part of a marketing exercise to sell widget mark 2's to the male population. This subset could then be exported and used for printing mailing list letters and address labels and then you could reset and perhaps select out another target group for another mailing exercise, exporting the new subset to a differently named file. A selection is carried out in the following steps:-

and the steps are accomplished as follows:-

a) enter the number of the field you want to use from the PICK SELECTION FIELD menu;

b) enter the selection value followed by ENTER. Note that the case of the letters in the value is critical. When selection is complete you will be told how many records are now in the subset and this will give some indication of the success of the selection process. To increase your chances of selecting accurately always ensure that each field of a record is always entered in a standard fashion with respect to case and spacing;

c) when the selection is complete you will be offered the option to reset. If you do reset then all current selections, not simply the last one made, will be reversed and the whole file will be available again. If you do not reset you can do further selections or choose other options from the help menu but normally you will want to do an export of the subset before you do anything else.

Each record of the export file will contain the following fields:-

```
title$  - style of address such as Mr/Mrs/Miss
fname$  - forename(s)
sname$  - surname
aline1$ - 1st line of postal address
aline2$ - 2nd line of postal address
aline3$ - 3rd line of postal address
aline4$ - 4th line of postal address
pcode$  - postcode
scod1$ to scod9$ - selection code fields 1 to 9
```

Remember that these field names within the program qatsmail can be changed by using the qatstail program if the field names in your database are different.

### A.2.3 The export option

The export option is used to take the name and address fields from some or all of the records on the file and write them to an output file which will later be used by the labels and/or mailing list processes. Export works in the following steps:-

a) confirm selection complete;
b) ENTER a device name;
c) confirm readiness to export;
d) ENTER the export file name;

and the steps proceed as follows:-

a) you will be asked if your selection is complete, thus reminding you that you might have meant to do a selection before exporting. If you reply y then the export will proceed otherwise it will be abandoned;

b) type an output device name (eg. flp1) followed by ENTER;

c) you will be asked to press ENTER when you are ready to export and this will give you time to load a floppy disk or microdrive

d) you will be asked for the name to be given to the export file and you should enter up to 8 characters to form as meaningful a name as possible to identify what this export file contains. Exporting will start and on completion a message will be displayed.

NB. If you require to export more than the name and address details for each selected record then you can alter the export command in the qatsmail program.

## A.3 The QUILL file

The QUILL file acts as a template for the printed output and contains parameter values to show where given fields from the current export file record should be placed. The parameter values take the following form (similar to those used in headings, see PART V section 2.1.3):-

<fieldname>

ie. Less than symbol, logical-OR symbol, field name as used on the export file (must end with $ sign), logical-OR symbol and greater than symbol. The parameter value will be replaced in its entirety by the corresponding field from the current export file record and the width of the new field will be that of the export file field. As a result the effect on line justification will generally be unpredictable and for this reason a parameter value in a QUILL line should normally be the last item on the line other than more parameter values.

When the label or letter has been prepared use the print function in QUILL to print the document to a file and this _lis file can then be used by the output formatter. Note that QUILL will not allow this if the printer data refers to a parallel printer. If you normally use a par printer you should use the swap option of the PSION menu to overwrite your usual printer_dat file and replace the file again when the template file has been completed. Furthermore, if the template file is to be used in the production of labels then you should use a printer driver that does not include printer initialisation (ESC on the EPSON FX-80). See PART II section 5 for the supplied printer drivers and how to swap them.

EXAMPLE:

**Possible mailing list setup.**

```
<title$> <fname$> <sname$>
<addr1$>
<addr2$>
<addr3$>
<addr4$> <postcode$>
                        <D>
Dear <title$> <surname$>,
   You may be interested...
interested...
```

**Letter as printed.**

```
MR James Smith
     4 Acacia Road
     Neasden
     LONDON
   NW3 6ZZ
     14 Jul 1986
Dear MR Smith,
     You may be
```

Notes:
1) The example shows the effect if a field, in this case address line 4, is missing. 2) If the text of the letter, such as it is, was to be omitted you would then have a QUILL file suitable for printing labels (see qelabx and qeltxx files on

little care because the date on the letter will be that in the QL at the time that the letter is printed. If you send out such a letter and then find you have to provide another copy for some reason then the copy will have a new date on it.