QuickFile

COLLABORATORS

	TITLE : QuickFile		
ACTION	*NAME*	*DATE*	*SIGNATURE*
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REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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QuickFile

1.1 Contents

QuickFile v2.02   18 December 1993 by Alan Wigginton

This program is
SHAREWARE
, not public domain, however it can be freely
distributed provided all documentation and sample files are included
unchanged. Please read the conditions of use section before continuing.

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1.2 copyright

Quickfile copyright 1992, 1993 by Alan Wigginton

I accept no liability for any loss or damage resulting from the use of
this program. Users must evaluate the program and decide its usefulness
for their own purposes.

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1.3 shareware

Shareware is software that you can try before you buy. It is freely
distributable, but if you continue to use it, you should send the author a
registration fee. This fee is usually very low compared to commercial
programs.

Please support the shareware concept and ensure that quality low cost
software for the Amiga continues to be written and enhanced.

1.4 Conditions of Use

                QuickFile is not Public Domain, however it can be freely ←
                    distributed
provided all documentation and sample files are included unchanged. This
version is fully functional, except that the 'About QuickFile' requester
will be frequently displayed to remind you that it is unregistered.

I accept no liability for any loss or damage resulting from the use of
this program. Users must evaluate the program and decide its usefulness
for their own purposes.

If you continue to use this program for more than one month, you should
send $30 registration fee to:

            Registration Details
              Alan Wigginton
    23 Carissa St
    Shailer Park, Queensland 4128.
    AUSTRALIA

Overseas users - please do not send personal cheques. Please send either an
international money order or an overseas bank draft in Australian Dollars
drawn on an Australian bank. Any cash currency is also OK, however sending
cash through the mail is at your risk.

I intend to develop the program further if enough interest is shown and

would appreciate any constructive comments you may have, even if you decide
not to register. Enclosing a stamped self addressed envelope will ensure a
personal reply.

1.5   Registration Details

Registration will entitle you to:

    – A registered copy of the latest version of the program with the
  about requester display removed.
    – Free support and advice – slow mail only I'm afraid
    (You are welcome to phone providing you pay the call charges)
    – Upgrades to future versions for a nominal cost.

Registration will also encourage me to continue to develop the program.

Please include the version number (from the about requester) of your
copy. I would also be interested to know:

    – Where you obtained your copy of the program
    – Your system configuration. Model, memory etc.
    – What you are using the program for.

1.6   Program Description

            QuickFile is simple and flexible, flat file database. It uses
            random access
            with
            indexes
             for fast access to records. Files can be larger than available
ram, but as much of the file as possible is kept in ram to reduce disk
accesses. Features include:

    – Multiple indexes that are automatically maintained.
    – Character, date, integer and floating point data types
    – Up to 250 characters per field and 250 fields per record.
    – Form and list style displays and reports.
    – Unlimited number of views of each file.
    – Fast sorting with multiple sort keys supported
    – Search operators include Like, Equal, Between, Sounds Like, Not Like
      and Not Equal.
    – Fields can be added, changed, or deleted at any time.
    – Flexible export/import
    – Flexible multi column label printing.
    – Runs on WB1.3 or later and should be OK with 512K ram.

QuickFile is written in C and compiled with NorthC (Fish 384) from Steve
Hawtin.

1.7 Quick Start

                WARNING. QuickFile is a random access data base that buffers ↩
                   records in
   memory. Failure to exit the program properly after updates are
   made will result in lost updates.
ALWAYS   exit the program before a reboot or power off.
DO   backup your files regularly. When backing up a data base make
   sure you backup all of the files – definition, data and indexes.

It is strongly suggested that you copy QuickFile to a work disk before you
try adding or updating records. The easiest way to do this is to drag the
QuickFile drawer into another disk window.

Use the QFDefine program to define a new database or change an existing
file definition. Use the QuickFile program for all other functions.

The current
                view
                 determines format of the display, reports,
and exported or imported files.

The current
                index
                 determines the sequence for displays and reports.

                Sorting
                 and
                Selecting
                 create temporary indexes.

Two demonstration databases are provided. Click on one of these icons to
start Quickfile and display the first record in the file.

It is a good idea to browse through this document to get a feel for the
program before trying to do too much.

I recommend that you place each database in a separate drawer (directory)
as a number of index and view files for different databases can be
confusing. This also makes it easy to backup the database by simply
dragging the drawer to a backup disk.

                Starting QuickFile

                File Requester

1.8 Starting QuickFile

                Starting from Workbench

QuickFile can be started from the WorkBench using the QuickFile icon or a
project icon for a data base.

If you start QuickFile from a project, the file is opened and the first
record is displayed.

If you start it from the program icon, a
                file requester
                 is displayed for
you to select the file you want to open.

Icons are not generated by the program. Sorry, but if you want them you
will have to create them yourself.

Starting from the Shell or CLI"

To start QuickFile from the CLI, type the program name followed by a file
name (optional) as a parameter. For example

   QuickFile [data:addressbook]

If you include a filename, the file is opened and the first record is
displayed.

If you do not give a file name, a
                file requester
                 is displayed for
you to select the file you want to open.

1.9   File Requesters

QuickFile supports the following file requesters (in order of preference):

      The ASL requester (WB2) will be used if asl.library is in your
      LIBS: directory.

      The ARP requester will be used if arp.library is in your LIBS:
      directory.

      If you have neither, QuickFile will use a requester with simple
      string gadgets for you to enter Drawer and File names.

   This file requester will be used whenever a file name is required.

1.10   Main Window

                The main window title bar is used to display a status line and ←
                   status
messages.

The status line contains. the name of the current view, the name of the
current index, the current record number and the total number of records.

A row of

buttons

is displayed across the bottom of the window to control frequently used functions.

Remaining functions are accessed via

Menus

.

The vertical scroll bar on the right hand side is used to move from record to record through the file.

The horizontal scroll bar at the bottom is used to display additional fields that do not fit in the window. This usage is the same for both form and list displays.

Editing Keys

Form Display

List Display

1.11 indexes

QuickFile uses indexes to sequence the records and to provide rapid access by key field value.

Searching an index is much faster than searching the whole file. Any record out of thousands can be located in seconds – under 1 second if the file is completely in ram, longer if records have to be retrieved from a floppy.

Each data base must have at least one index, and you can have a number of indexes, all of which are automatically maintained as you add, change and delete records.

The current index name is displayed in the title line. If other indexes are available you can choose them with Indexes item on the View menu.

Indexing has some overheads, but with QuickFile these are quite small. The downside is that its capacity is limited to relatively small files (like 10,000 to 20,000 records).

1.12 random

Random access means locating a record in a file directly using its offset from the start of the file, instead of reading sequentially through the file record by record until you find the one you want.

This means you don't have to read and write all of the file if you only want to update one record.

Random access is generally only a useful technique when combined with indexing. Without indexing you have to supply the number of the record you want, which isn't particularly useful.

1.13 About Views

                    Views allow you to display data from a file in different ways. ←
                        There are
two basic types
                    FORM
                     and
                    LIST
                        .

A view may display only some of the fields from the file, and it may only show part of some fields.

Each view has its own field titles, positions and lengths, window size and report details. Once you have a view set out the way you want it, you can save it for future use.

The
                    Define View
                     requester is used to select or change the fields included
in a view. The positions of fields on a form can be changed by dragging them around with the mouse.

When you open a file, QuickFile looks for a view called filename.VIEW and loads it. If it doesn't find one, it creates a default view in ram. To use your favourite view automatically, save it as filename.VIEW in the same directory as the data base. A View is only saved if you explicitly save it, otherwise any changes to a view will be lost when you exit the program.

If you want to keep things simple and are happy with the default view, you need not define a view at all.

Views are typically used to print labels, export or import selected fields or print lists containing only selected fields.

1.14 Editing Keys

Standard Amiga text gadgets are used for entering data. These provide the following editing keys:

```
   right Amiga-X      Erase all text in the gadget (as does Control-X)
   right Amiga-Q      Restores the text that was present before you
       changed it.
   Shift-left arrow   Moves the cursor to the beginning of the field.
   Shift-right arrow  Moves the cursor to the end of the field.
   Shift-Del          Erases all characters from the cursor to the end of
       the gadget.
   Shift-Backspace    Erases all characters to the left of the cursor.
```

The ENTER key will normally move the cursor to the next field on the
screen. If pressed on the last field, it will wrap around to the first
field.

1.15   changes

 CHANGES SINCE VERSION 1.3

   – Now able to define views that can be saved and reloaded. Views specify
     field title, position and length, window sizes and report details.

   – Position fields on the FORM display by dragging with the mouse.

   – Multi column label printing

   – Vastly improved searching

   – Descending as well as ascending order for sorting and indexing

   – Many minor improvements and bug fixes.

   – Preset export formats added and improved flexibility provided for
     custom formats.

1.16   Form Display

The FORM DISPLAY shows a single record per screen in the format specified
by the current view.

This can display all details for a record. If there are more fields in the
view than will fit in the window, the horizontal slider can be used to
scroll the display.

The LIST button can be used to quickly change to a list display with the
current view.

Field positions can be changed by dragging fields around the window with
the mouse. Note that the program does not stop you from positioning fields
on top of other fields. This does no harm, but it does look odd.

To add or delete fields, change field titles or displayed lengths, press
the VIEW button;

1.17   List Display

                 The LIST display shows as many records as will fit in the window ↩
                     with a
single line per record.

This allows you to display records in the context of the records before and
after it.

If the records are wider than the window, the horizontal slider can be used
to scroll left or right.

To update a record double click on it with the left mouse button

Before using the Modify or Delete buttons, select a record using a single
press of the left mouse button.

If You use the
                Modify button
                 without a record selected, the first record on
the screen will be displayed for modification.

If you use the
                Delete button
                 without selecting a record, you will get an
error message.

1.18   Main Window Gadgets

                Main Window Gadgets

  GoTo Button
        Go to a record by key

  Insert Button
        Insert a new record into the file

  Modify Button
        Modify a record

  Delete Button
        Delete a record

  Form/List Button
        Toggle between list and form

  View Button
        Change view details

  Sliders
        Scroll through records

1.19   QuickFile Menu Commands

                Project Menu

```
                        Open

                        Save

                        Close

                        SaveAs

                        Reorganise

                        Exit
                          View Menu

                        Indexes

                        Views

                        New View

                        Load View
                              Save View
          Tools Menu

                        Select

                        Sort

                        Rebuild Index

                        Import

                        Export
                          Print Menu

                        Print Displayed Records

                        Print Current Index
                         Options Menu

                        About

                        Buffers
```

1.20 features

```
                        Block Size

                        Buffers

                        Defining Files

                        Delete record

                        Export
```

1.21 Block Size

Block Size

QuickFile reads and writes records in groups called blocks. This improves
performance as fewer reads and writes are required. Free space is also
left in each block to allow records in the block to expand without having
to move them on disk.

Block size is specified when a file is defined and cannot be changed later.
Block size must be larger than record size, but is not otherwise critical.
Typical values are in the range of 1000 to 4000 bytes.

1.22 buffers

A buffer is a chunk of ram used to hold a block of records. ←
QuickFile will
try to keep as many blocks in ram as possible to reduce disk accesses.
Performance is much better, particularly with floppies, if records can be
held in ram rather than having to be read from disk.

You can specify the number of blocks to be used for a file with the
QFDefine program. You can override the number temporarily by selecting the

                 Buffers
                  item from the options menu.

Generally you should try to have the whole file in memory. Limit the number
of buffers if your ram is limited or you want to reserve ram for another
application.

Buffering combines the speed of a memory based database with the capacity
of a random access.

1.23   Go To Requester

                 The GoTo requester finds a record by key value using the current
                 index
                 .
This makes access extremely fast, even on large files.

Only The key fields for the current index are displayed.

You only need to enter enough of the key to identify the record you want,
but you must start at the beginning of the key - if you enter only the
second key field, you will go to the start of the file.

Press RETURN on the last key field or click on the OK button to perform the
GoTo.

If the key you enter does not exist, the following record is displayed. You
can enter "SM" to position on the record for SMITH, which will be followed
by SMITHERS, SMITHFIELD etc.

1.24   Insert a Record

Pressing the INSERT button displays a blank form for you to enter values
for a new record. Press RETURN on each field to move you to the next field.

Press the Copy button to copy the contents of the last record displayed or
added. This is useful if you are entering records with similar values in
some fields of each record. Warning - it replaces anything you have keyed.

Press Insert to store the details and clear the fields ready for the next
record.

Press Cancel to return to Browse mode. NB When Cancel is pressed any
values displayed on the screen will be lost. Press Insert to insert the
record, then Cancel.

You cannot insert a record that is completely blank.

The vertical scroll gadget is disabled while you are in insert mode.

The horizontal scroll gadget can be used to scroll the display and access
fields that do not fit in the window.

1.25   Modify a Record

Pressing the MODIFY button displays the current record for you to make
changes.

Press RETURN to move to the next field.

Press the Update button to store the changes.

Press the Cancel button to keep the current values.

The vertical scroll gadget is disabled while you are in insert mode.

The horizontal scroll gadget can be used to scroll the display and access
fields that do not fit in the window.

1.26   Delete the Current Record

Pressing the DELETE button displays a requester asking you to confirm the
deletion.

Press OK to delete the record.

Press Cancel if you really want to keep it.

Once the record has been deleted you cannot get it back.

1.27   List/Form Button

The LIST button is displayed on the Form screen. It will change the view
to a List view.

This is the same as selecting Views from the View menu, pressing the Alter
button and changing the type to List.

The FORM button is displayed on the List screen. It will change the view
to a Form view.

This is the same as selecting Views from the View menu, pressing the Alter
button and changing the type to Form.

1.28   Alter View

                    Pressing the VIEW button displays the
                    Define View
                     requester showing
the current view ready for your changes.

This is a shortcut for selecting the View menu item, selecting a view and
pressing the Alter button.

1.29   Scrolling

Scrolling is controlled by two slider type gadgets.

Vertical Slider

    This controls movement through the file and works in the usual way.
    Press the arrows to move one record at a time.
    Click in the box to move one page at a time – for the form display this
    is also one record at a time.
    Drag the knob to move as far as you like.

Horizontal Slider

    If there are more fields than will fit in the current window, this
    can be used to display the next group of fields. This works the same as
    the vertical slider except that there are no arrows.

1.30   Open a New File

Selecting the OPEN menu item brings up a file requester for you to select
the file to process.

Always select the definition name – the one with no extension.

If you select a file that is not a QuickFile definition, you will be given
a message saying that the definition cannot be found.

1.31   Save Changes to a File

Selecting the SAVE menu item writes all updated blocks and indexes to disk.
You should use this periodically during a long update session.

1.32 Close the Current File

Selecting the CLOSE menu item writes all updated records and indexes to
disk and closes the file but leaves the program running so you can open
another file.

1.33 Create a new file from the current file

Selecting the SAVE AS menu item creates a new file from the currently open
file. If the current index is a selection, only the selected records are
written to the new file.

A file requester is displayed for you to enter the new file name. It is
best to create this in a different drawer.

The new file is reorganised as it is written. Indexes for the new file are
not created – they will be built when you first open the new file.

When the file has been created, a requester is displayed to ask if you want
to open the newly created file or continue with the file currently open.

1.34 Reorganise a file

This reorganises a file by creating a new reorganised version and then
copying that version over the main file.

Reorganising is not essential, but if you have been doing many additions
and deletions, it may reduce file size and will improve performance.

During reorganisation free space is adjusted to the value specified in
the file definition and records are physically stored in the sequence of
the active key. Select your most used key sequence before reorganising to
optimise access with that key.

The current index is used so it is possible to include only selected
records in the reorganised file. If the current index is a selection, you
will be asked for confirmation to avoid accidental loss of data, as all
records not in the selection will be discarded.

The file requester will be displayed for you to enter a name for the work
file required. This should be in a different drawer to the main file. It
is not automatically deleted and may be kept as a back up if you like.

After the copy is created, a requester is displayed to ensure that you
want to replace your existing file with the reorganised copy.

1.35 exitprogram

Selecting the EXIT menu item writes all updated records and indexes to
disk, closes the file and exits the program.

Selecting the Close gadget on the screen has the same effect.

A requester is displayed to confirm your choice.

Note that you do not have the option of exiting the program without saving
the file. This is because records may be written back to the file any time
while you are running the program.

1.36   Select an Index

Choosing the INDEXES menu item displays a requester showing a list of
indexes for you to choose from. If you have performed a sort or selection,
the list will include "Selected" and/or "Sorted".

Double click on an index to use it, or click once to select it.

When you change indexes, the same record is displayed but the file will be
in a new sequence. e.g. You can use this to find a book by a particular
author, then select the subject index to list all other books on the same
subject.

Pressing the Drop Button removes the selected index from memory and frees
the space used. You can only drop the Selected or Sorted indexes. To
remove any permanent index use the QFDefine program.

1.37   Select a View

                Selecting the VIEWS menu item displays a requester showing a list ←
                    of views
for you to choose from. If you have not created or loaded any views, you
will have a single view called filename.VIEW.

Double click on a view to use it, or click once to select it.

Press the Alter button to bring up the
                Define View Requester
                to change the view.

Press the Drop button to drop the selected view. You cannot drop the last
view – you must have at least one loaded.

1.38   Create a New View

                Selecting the NEW VIEW menu item creates a new view called ' ←
                    unnamed' and

```
displays it in the
                Define View
                  requester.
```

1.39 Load or Save View

Selecting the LOAD VIEW menu item brings up a file requester for you to
select a view to load.

When you load a view, it becomes the current view and the display will
change accordingly.

If fields have been deleted from the file definition, they will be
automatically dropped from the view.

If field names have been changed or new fields added, they will appear at
the end of the view.

The fields in the view and the file definition are associated by name. If
you load a view from another file, it will display only those fields that
are the same in both files.

SAVE VIEW

Brings up a file requester for you to enter the file name for the view.
The current view name is displayed as a default.

The default view for a file is named filename.VIEW, but a view can have
any name.

Note that you are not reminded to save a changed view before you close a
file.

1.40 Define View Requester

The view requester is displayed when you select an option to define or
change a view. If you selected New View, a new view called 'Unnamed' is
displayed.

To change an existing view you press the VIEW button, or select VIEWS from
the VIEW menu, highlight the view you want to change, then press the ALTER
button.

The Define View requester contains the following elements

Name
  This name identifies the view and is displayed in the view selection
  list. The current view name is also displayed in the window title bar.

Available Fields List
  This is a list of the fields in the current file. Clicking on a field

will add it to the current view.

Selected Fields List
  This is a list of the fields in the current view. Clicking on a field in
  this list will select it and display its name and length below the list
  box. These can then be changed if required. The changes will only affect
  the current view.

  If a field is highlighted, new fields will be added before the high-
  lighted field, otherwise new fields will be added at the end of the
  list. To remove highlighting click in the blank part of the box.

Type Button
  This button toggles between Form and List to select the basic view type.

Field Names Button
  This turns the display of field names on and off. Turning field names
  off is normally only used for printing labels.

Field Title String Gadget
  You use this to change the field title for this view only. For example
  you may want a short title for a short field on the list display while
  keeping the full name for the form display.
  The title can be blank. This gadget is disabled unless one of the
  selected fields is highlighted.

Length String Gadget
  Changing this length allows you to have a display length different to
  the file length. This can be useful for reducing field lengths on a list
  display to fit in more fields. It can also be used to print an initial
  instead of a first name on a mailing label. This gadget is disabled
  unless one of the selected fields is highlighted.

IMPORTANT NOTE: You must press enter after changing either the field name
  or length or your changes will be ignored.

Delete
  The delete button will delete the highlighted field from the selected
  fields list. No confirmation is asked – it is deleted immediately. This
  gadget is disabled unless one of the selected fields is highlighted.

OK Button
  Accepts the new or changed view

Cancel
  Cancels any changes you have made.

1.41 Sort Requester

                 The Sort Requester is very similar to the index requester as a ←
                     sort
effectively creates a temporary index that is updated automatically as you
add, delete and change records. The Sort index is discarded when the file
is closed, but until then you will not need to re-sort to place changed or
new records in the right sequence.

See

                    Index Requester
                     for details on specifying the sequence.

If you request a sort while displaying selected records, only the records
in the selection are sorted.

Date, integer and number fields are sorted correctly according to their
value, rather than their ASCII sequence.

You can sort over as many fields as you like with a single sort.

Press OK to start the sort, or Cancel if you have changed your mind.
Sorting is quite fast so you shouldn't have to wait long. A sort (over one
field) of the 1300 records on my largest file takes 22 seconds on my
standard A500.

The sort technique used requires that all sort keys be resident in memory,
so record buffers are freed to increase the memory available to the sort.
You will notice that disk activity increases after a sort as buffers are
reloaded. If you are short of memory, it may help to sort using less than
the full length of long fields.

1.42   Define Index Requester

The Define Index requester is displayed when you are adding or changing an
index. A similar requester is used for defining a sort key.

It contains the following elements

Name
  This name identifies the index and is displayed in the index selection
  list and in the window title bar when the index is active. It is also
  used to form the file name for the index.

Available Fields
  This is a list of the fields defined in this file. Clicking on a field
  will add it to the fields selected for this index.

Selected Fields
  This is a list of the fields in the current index. The order of the
  fields in this box determines their priority in the sort. The first
  field is the primary key, the second will only be used for records where
  the first keys are equal and so on.

  Clicking on a field in this list will select it and display its name
  and length below the list box.

  If a field is highlighted, any new fields will be added before the
  highlighted field, otherwise new fields will be added at the end. To
  remove highlighting click in the blank part of the box.

Length
  Changing this length allows you to index on part of a long field.

   IMPORTANT: YOU MUST PRESS ENTER OR RETURN AFTER CHANGING A LENGTH OR
         YOUR CHANGES WILL BE IGNORED

Order
   This toggles between A..Z and Z..A to select whether the index is to be
   sorted into ascending or descending order.

Delete
   The delete button will delete the highlighted field from the selected
   fields list. No confirmation is asked – it is deleted immediately.

OK Button
   Accepts the new or changed index

Cancel
   Cancels any changes you have made.

1.43   selection

                A selection is a sub-set of the data base that matches specified
conditions. QuickFile searches through the whole data base looking for
records with fields matching requested values, and creates an index
containing these records. You can then browse, print, export or create a
new database with the selected records.

The selection is updated automatically for deletions and changes but not
additions. Records you add to the data base will not be added to the
selection.

When displaying a selection, the title bar will show the number of records
selected. Don't panic, you haven't lost your file. The full number will be
displayed when you choose a full index again.

The selected data will be in the same sequence as the current Index. You
can sort it into another sequence if required. If the current index is
the result of a previous selection, only the selected records are
searched, which is much faster than searching the full file.

You can use any number of criteria for a search, but the more you have the
slower the search will be.

Two values can be specified for each item. The second value is primarily
for the Between operator, but it can be used to specify an alternative
value for the other operators.

                     Search Operators

                     Search Panel
                        Search Details

1.44   Search Operators

The operators available for searching are:

Like
  Matches fields that contain the search string anywhere within them. eg
  "bit" would find "The Hobbit" and "Bitter Sweet".

Equal
  Matches a field only if it exactly equals the search value. Note that
  case is not significant so that dog will match Dog or even dOG.

Between
  Matches a field with a value equal to or between the specified pair of
  values. This can also be used to perform a less than or greater than
  search. e.g. 'between 41 and 999' is the same as 'greater than 40'.

Sounds Like
  Matches fields where the first word sounds like the search value. This
  is really a bit of a gimmick as it is not very smart. It uses a version
  of the old soundex technique which requires that you know the first
  character, and has a number of other limitations. It can be useful
  though. NOTE it only looks at the first word of the field.

  Please don't write and tell me that it doesn't work with such and such,
  unless you include a better (and compact) algorithm.

Not Like
  As for like but will only match records that do not contain the search
  value.

Not Equal
  As for equal but will only match records that do not match the search
  criteria.

The above operators can be combined with 'and' and 'or'. For details see
the
                Search Panel
                .

1.45   Search Panel

The Search Panel displays a list of search criteria with buttons ←
                for
inserting, modifying and deleting them.

Clicking on the Insert or Modify will display the
                criteria requester
                 for
you to insert or modify the details.

For insertions, if an item is selected, the new item will be inserted
before the selected item, otherwise it will be inserted at the end of the

list.

Clicking on delete will bring up a requester for you to confirm the
deletion of the selected item.

Search criteria linked with 'and' will select only records that match all
criteria, while search criteria linked with 'or' will select records that
match either criteria.

'And' has higher precedence so criteria are formed into groups split by
'or'. All criteria in a group must be satisfied for a record to be
selected, but a record will be selected if it matches any group. That is
confusing and is probably best explained with an example:

```
      Occupation equal   programmer
  and location   equal   sydney
  or  Occupation equal   programmer
  and location   equal   canberra
```

This will find all programmers who live in Sydney or Canberra. Note that
Occupation had to be repeated. The following would give all programmers
who live in Sydney and EVERBODY who lives in Canberra.

```
      Occupation equal   programmer
  and location   equal   sydney
  or  location   equal   canberra
```

You can also do things like

```
      Name   like   john
  and  Name   notlike smith
```

which would find all persons named John, except those named John Smith.

1.46 Search Details

                    The Search Details requester contains the following items:

Connector Button (AND or OR)
  This toggles between AND and OR to specify how this search item is
  combined with the previous one. It has no effect for the first item.

Available Fields List
  This lists all the fields in the file for you to select the field to
  search on. The current selection is displayed under the list.

Comparison Operator
  This determines the
              operator
               to be used for this search item.

Value 1
  This is the primary search value. It is always used. If you want to
  search for empty fields leave this empty.

```
Value 2
  This is the secondary search value. Its primary use is with the between
  operator but can be used to enter an second search value for the other
  operators.

  Note that with Not Equal and Not Like, value 1 and value 2 are joined by
  AND rather than OR. It will find all records except those that contain
  value 1 or value 2. Using OR in this situation would select every
  record.
```

1.47 Rebuild Index

```
Selecting the Rebuild Index menu item Rebuilds the current index (believe
it or not!!).

This can be used if the index and data files are inconsistent for some
reason (eg a system failure). The index is rebuilt from the data file.

Try using this if the program is failing with a 'Block not found message'
or any messages to the effect that QuickFile could not find a record it
looked for.
```

1.48 export

```
                EXPORT Allows you to write all, or selected, records to an ASCII  ←
                    file for
exchanging data with other applications such as word processors, other
data bases etc.

The order and length of the fields in the export file is determined by the
current view. Before doing the export, you may need to create a new view
to give the record layout you want.

A requester is displayed for you to select the record format to be used.
A number of
                preset formats
                 are provided or you can tailor your own

                record and field Separators
                 by selecting the Custom format.

The headers button determines whether a header record containing the field
names is to be included at the start of the file.

Pressing the OK Button displays a file requester for you to specify the
name of the export file .

All records from the current index will be written. If you are displaying
Selected records, only the selected records will be written.
```

1.49   import

IMPORT works in a similar way to Export, except records are loaded ↩
from an
ASCII file into your data base.

The sequence and length of fields in the input file are determined from
the current view. You should create and select the view before selecting
the import function.

Both sequence and length can be different from that in the database. Also,
not all database fields need to be present in the ASCII file. Any fields
not present will be set to blank in your data base.

Record and Field separators
 are the same as for export.
Only one
preset format
 and Custom formats are available for Import.

NB: It is vital that the sequence and number of fields you set in the
selected fields box of the field selector correspond to the sequence of
fields in the ASCII file you are importing.

Make you sure to backup your database before you import a file into an
existing data base. If you get the format wrong, it is easier to restore
than to fix or delete all of the incorrect records.

Also use plenty of buffers if you are going to import a large number of
records.

     Example:

  Data Base
 Surname   40
 First Names   40
 Street   30
 Suburb   30
 Postcode   10
 Date of Birth 11

  ASCII File record example

     "Alan","Wigginton"
     "William","Smith"

  This will work correctly provided you ensure that you set up a
  view in the sequence that they are in the ASCII file.
  The Import field selector should show the selected fields as:-

    First Name   40
    Surname   40

  This will load First Name and Surname to the correct fields in
  the data base and set the remaining fields to blank.

1.50   Preset Export/Import Formats

A number of preset formats are provided including the mailmerge ↩
formats for
a number of wordprocessors. You can choose from:

 Custom
   This allows you to define your own format using predefined

                 Separator characters
                 .

 "...",
   This is a quote and comma delimited text file such as used for data for
   BASIC programs.

The following preset formats are available only for Export, not Import.

    Final Copy
    Interword
    KindWords 3
    ProWrite
    WordWorth

Only the KindWords 3 version has been tested. If you have a problem with
any of them please send me a copy of the specification for the format and,
if possible, a sample file that works.

If you require a format that is not included, let me know as I should be
able to include it very easily.

1.51   Field and Record Separators

The Custom delimiter buttons work like cycle gadgets in that the selection
changes with each click. You can only select from the predefined delimiter
codes.

  Field Start
  This is fairly obvious and is the character that marks the start of a
  field.

  Field End
  This marks the end of a field. It differs from the field separator in
  that a separator does not appear after the last field in a record while a
  field end character appears after every field.

  Field Separator
  This separates each field in the record. It does not appear after the
  last field in each record

Record End
Marks the end of each record

If Field Start is used, a Field End must also be used. If neither Field End
nor Field Separator is used, the records will be fixed length with each
field padded to its maximum length with spaces.

Example 1   "field1","field2"{LF}

This is a fairly common text file format and is defined by

```
Field Start = "    (Quotation mark)
Field End   = "    (Quotation mark)
Field Sep   = ,  (Comma)
Record End  = {LF} (Line Feed x'0A')
```

Example 2 field1{TAB}field2{TAB}{LF}

```
Field Start = None
Field End   = {TAB}  (Tab character x'09')
Field Sep   = None
Record End  = {LF}   (Line Feed x'0A')
```

The available characters are:

LF   Line Feed. This is the standard Amiga end of line character.

TAB   Fields are separated by a TAB character.

CRLF   This is the MSDOS style end of line character; a carriage
          return followed by a line feed.

NONE   No character used

'   Single quotation mark

"   Double quotation mark

Do not use the same character as a field and record separator for
import.

1.52   print

PRINT Displayed Records

Prints the records currently displayed on the screen. This will be a
single record for a form display.

PRINT All~Records in Current Index

Prints all records in the current index (or Sort or Selection).

The fields printed and the style (form or list) of report is determined by
the current view.

The print requester is displayed for you to enter formatting details for
your report. If this is a new report, defaults will be taken from your
current printer preferences.

Your current printer preferences will be restored after the report is
printed.

The fields that can be entered are:

Title
  Allows you to enter a title to be printed at the top of each page of
  your report. The title line will also show the current date at the left
  margin and the page number at the right margin. The title will be
  automatically centred.

  The title line is only printed if you enter a Title. Note that even a
  single space will print a blank title. Use CTRL-X to ensure that all
  characters are deleted.

Left and Right Margins
  Allows you to temporarily override the current preferences settings.
  QuickFile will not print beyond the character position specified in the
  right margin.

Lines/Page
  This controls the number of lines QuickFile will use on each page. The
  default is paper size minus 8 to provide a top and bottom margin.

  NB QuickFile issues a Form Feed when a new page is required. This
  depends on you setting the page height on your printer correctly, and
  may be a limitation with some printers. If you have a problem with this,
  let me know and I will look at using the preferences paper size.

  A value of zero will suppress the report title and page breaks.

Print Pitch.
  This button operates like a WB2 cycle gadget. Each time you press it, it
  displays the next value from the following

  PICA (10 cpi)
  ELITE (12 cpi)
  FINE (15 or 17 cpi) depending on your printer

Lines Per Inch
  This button toggles between 6 and 8 lines per inch.

If you are printing a form type view, a number of additional fields are
displayed which allow you to print the form in multiple columns such as
multi-column address labels. See
                labels
                 for full details.

Press the OK button to start printing or the cancel button to cancel any
changes you have entered.

Saving the view will save all of your report settings.

1.53 labels

Label printing is available for FORM type views only. You will ←
normally
define a special view as follows:

   Create a new view using the
                New View
                 menu item, or load a suitable
   view.

   Set Field Labels for the view to No

   Arrange the fields in the top left hand corner of the FORM screen to
   match the desired label format

   Select print and use the following fields in the print requester to
   control your label format.

Labels Across
  This specifies the number of labels to print across the page

Label Width
  This specifies the width of each label. One additional space will be
  allowed between labels. If you want to print labels further apart,
  increase this value.

Labels Down
  This specifies the number of labels to print down the page. This number
  of labels will print in each column, before the next column is filled.
  For example 3 across and 4 down will print in the following sequence:

     1   5   9
     2   6 10
     3   7 11
     4   8 12
    13
    14 etc

Label Height
  This is the height of each label in lines. An additional blank line will
  be printed between each label. The default is the number of lines in the
  form.

You will probably want to set Lines Per Page to zero to suppress page
breaks as well.

If you are printing a single column of labels only, you can leave all of
the above fields blank and use the number of lines in the form to
determine the label height.

1.54 about

About

Tells you about QuickFile. If it is a registered copy, the name of the
registered user is displayed.

1.55 Buffer Control

This displays the number of ram buffers allowed for the file and allows
you to change it temporarily. The items shown are:

Blocks in file.
  The size of the current file expressed in blocks. This gives the number
  of buffers required to hold the whole file in memory.

Buffers in use.
  The number of ram buffers currently allocated. This starts at 1 when you
  open a file.

Buffer size.
  Gives the amount of ram required for each buffer allocated.

Maximum buffers.
  The maximum number of buffers that QuickFile will use. This can be
  changed to alter the number to be used for the current session. The next
  time you open the file, the maximum will revert to the number specified
  in the file definition.

  To permanently change the maximum number of buffers, use the QFDefine
  program.

1.56 Defining Files

                The file definition is now in a separate program called QFDefine. ←
                  While
this may not be as convenient, it keeps the main program smaller. This is
mainly for my benefit when compiling and linking as I only have a floppy
based, 1 meg A500.

The QFDefine program may be started from Workbench by clicking on its icon,
or from the Shell using its path and name.

You can change just about everything in a file definition, except the
block size, even after you have loaded data to the file. You can change
field names, types and lengths. You can add or delete fields, and add or
delete indexes. Caution should be used when changing the type for fields
that contain data.

WARNING: Deleting a field makes its data inaccessible, even if you
        re-add the same field. If you accidentally delete a field, reload
        the definition without saving your changes and start your changes
        again.

1.57   File Details

The file details are shown in the box in the top left of the QFDefine
window

Block Size
  QuickFile does not read and write single records at a time, but builds
  them into blocks. This reduces the number of disk reads and writes
  required. Around 2000 seems to give good results. The only way to change
  block size is to export the whole file, define a new data base and use
  import to recreate your file. Block size must be larger than the maximum
  record size plus free space, plus some space for control fields (2 bytes
  per field plus 2 bytes for the record length).

Free Space
  Specifies the amount of free space to be left in each block to allow for
  records to expand. As QuickFile only stores the actual data entered (not
  trailing blanks), additional space is required if a change makes a field
  longer. 100 seems to work OK. Records are moved to another block if
  necessary, so this is not critical.

Buffers
  This is the maximum number of buffers QuickFile will use for holding
  blocks of records in memory. Unless you have very large files or are
  short of memory, use a large figure such as 100. QuickFile will never
  use more buffers than are required for the whole file.

  The more of the file in memory, the faster QuickFile works. The memory
  used is approximately (number of buffers * buffer size).

1.58   fields

                Use the QFDefine program to define or change fields.

The fields defined for this file are listed in the box at the right of the
window.

Use the Add button to add a field. A requester will appear for the field
details. If a field is highlighted when you press add, the new field will
be added before the highlighted field, otherwise it is added to the end of
the list.

To change or delete fields, click on the field, then press the appropriate
button. A requester will appear for you to make changes or to confirm the

deletion.

The Field Requester contains the following fields

    Name string gadget
    Enter a name of up to 12 characters for the field.

    Length
    Enter the required length. 60 characters is a practical maximum length
    as no left and right scrolling is provided and more characters cannot be
    displayed. (You can scroll within fields on the update screen, but this
    is pretty tedious). The maximum is 250. The minimum length of a date
    field is 11 characters.

    Space is used only for the number of characters entered in each record,
    not for the maximum field length. In fact, if a field is empty it takes
    up no space at all.

    Type button
    This cycles around the available field types. Choose from character,
    date, integer or number (real). See
                    Field Types
                     for more detail.

All of these values can be changed at any time without any unexpected
effects. If you reduce the length of a field, excess data is only
discarded from records as they are updated. Increasing the field length
will restore the old data except for records you have changed. Note that
reorganise will reformat ALL records.

1.59 Field Types

Character
  This the usual character string. You should probably avoid double quote
  characters as you may need these for delimiters when exporting data.

Date
  These have a minimum length of 11 characters and are always entered as
  day/month/year.

  The separator can be any of /-. or a space.

  Month can be entered as a number or a three character name

  Year can be entered as two or four digits. If two digits are used, a
  number greater than 50 is assumed to be this century, 50 or less, the
  next century.

     eg. 3/6/94   is interpreted as 03-Jun-1994
    1-aug-10 is interpreted as 01-Aug-2010

  Leading zeroes can be omitted.

  Dates are always displayed in the format 14-Apr-1993.

```
   The following are valid dates
      03/08/93   3-8-93   3.aug.93   03 aug 1993
```

Integer
  Whole number, no decimals. These are displayed right justified.

Number.
  Real numbers with decimals. Numbers are displayed right justified, but
  are not reformatted after you enter then. If you want decimal points to
  line up, you will have to enter the same number of decimal places in
  each record.

1.60 Defining Indexes

                Use the QFDefine program to define or change index field ←
                    definitions.

You must define at least one index to be used for sequencing your records,
and quickly locating records. If you are not sure pick any field that will
give a useful sequence, such as surname, title etc. Each index can use a
number of fields to give precise control of sequence.

If you change an index on an existing file, it will be rebuilt the next
time you open the file with the main QuickFile program.

Insert Button
  Pressing this brings up the
                Define Index
                 requester. You must give
  the index a name (up to 8 characters) and select the fields to be used.
  You can use a portion of a long field for an index by changing the
  default length in the field requester. This will reduce sort storage
  requirements when rebuilding indexes.

Modify Button
  Click on an index to highlight it before pressing this button. Displays
  the Define Index requester for you to change the fields.

Delete Button
  Click on an index to highlight it before pressing this button. Displays
  a requester showing the fields in the index. Press OK to delete the
  index, press cancel if you have changed your mind.

You can have any number of indexes but you should limit yourself to those
you are going to use regularly. I find it difficult to see how more than 2
or 3 would be useful, particularly as sorting is quite fast.

Indexes are maintained automatically as you add, modify and delete records
on your file so they reduce the need for sorting and resorting.

1.61   File Types

FILES

QuickFile uses four types of file distinguished by extension. These
are not text files and cannot be edited with most text editors. Using a
hex editor will probably corrupt the file. YOU HAVE BEEN WARNED.

The DEFINITION FILE has no extension. This is the name you enter when
specifying a file name for QuickFile.

The DATA FILE has an extension of .Data.

VIEW files usually have an extension of .View, but this is not
essential.

INDEX FILES have an extension of .nameX where 'name' is the name of the
index as specified in the file definition.

1.62   Possible Problems

LOST UPDATES

If you are prevented from saving your changes by a program error, system
or power failure, your file will probably be in an inconsistent state.

1. The updated indexes will not have been written to disk. This is only
    done if you Save, Exit or Close the file. Each index must be rebuilt.
    See "Index doesn't match data file" below.

2. Changed records may not have been written to disk and will have to be
    re-done. Note that because of the way buffering works, changes are not
    necessarily written to disk in the order they are done.

INDEX DOESN'T MATCH DATA FILE

It is possible for an index and data file to get out of synchronisation.
This can be caused by not closing a file properly, typically because of a
guru or power loss with a file open.

If you suspect an index has been corrupted in some way, you can delete the
index file (called filename.indnameX). When you next open the file, the
index will be rebuilt. This is indicated by a message such as "getblock:
Block not found" being displayed in the Console window.

You can also rebuild an index by selecting the Rebuild Index item from
the QuickFile tools menu.

BUGS

You can give several fields the same name. This will cause some odd effects
but should not cause any major problems.

Error handling is still less than adequate. an Out of Memory condition
should display a requester advising you to free some memory. In some cases
there may not be enough memory to display the requester, and the program
will stop with an error message.

Disk errors will also cause an immediate termination.

The program has been reasonably tested, but only on my A500. Some bugs
refuse to show up until you hit exactly the right combination of
conditions, so please let me know of any problems you find.

Sending a copy of your database and the version of the program you are
using together with instructions on how to duplicate the problem will
help me to fix the problem.

1.63   limits

QuickFile is limited in some areas. These may be enhanced in future

Calculations

    There is no facility for totalling, or calculating a column based on
    other columns.

Field Length

    While up to 250 characters are allowed per field, this is not very
    useful as each field is limited to one line.

Number of Records per File

    The theoretical limit is currently 65,535. In practice it is much
    lower because of the indexing technique which will run out of either
    memory or processor speed. Each index requires a contiguous area of
    ram 4(n + 200) bytes in size, where n is the number of records in the
    file. The sort technique also limits the size of the file. The sort
    loads all sort keys to ram and also requires 8 bytes per record in one
    contiguous area.

    My largest file is about 2800 records (115 chars per record) and it is
    fine. The largest file I know of is almost 7000 records and works
    well even on my 1meg A500. A realistic maximum is probably in the
    order of 10,000 to 20,000.

    While files can be larger than available memory, operation is much
    faster if you set the number of buffers large enough to contain the
    whole file.

    I would be interested to hear from anyone using it with larger files.

Number of fields per record

  250. But I got bored at about 60, so you take your chances if you want

to try more.

Maximum characters per field

   250

Number of indexes

  More than you should ever need to use.