

QuickFile

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WRITTEN BY		January 6, 2023	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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Chapter 1

QuickFile

1.1 Contents

QuickFile v3.10 05 March 1995 by Alan Wigginton

This program is not public domain, however it can be freely distributed provided all documentation and sample files are included unchanged. Please read the

conditions of use
before proceeding.

Contents

Notices

Conditions of Use

Program Description

Getting Started

Main Window

Gadgets

Menus

Defining Files

Features

Possible Problems

1.2 copyright

Quickfile copyright 1992-1994 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 Conditions of Use

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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.

This version of the program can be used for free on the condition that you write and let me know that you are using it - a postcard will do.

Donations of money, stamps, software etc will be gratefully accepted. If you would like to register for updates, bug fixes and support, please send at least \$20.00 to the address below. Overseas users please use international money order or bank draft - not personal cheques. Any cash currency is OK, but send it at your own risk.

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

Registration will get you the latest version of the program and prompt attention by mail to any problems you may encounter. You will also be advised when major upgrades are available.

The next upgrade will probably again be shareware with an annoying requester in the freely distributable version.

I would appreciate any comments or suggestions.

1.4 Program Description

QuickFile is a 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 with unique and non-unique keys
- Data types include Character, date, integer, floating point, calculated, cycle, image and external.
- 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.
- Sort over any number of keys, ascending and descending order.
- 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.
- Multi-level report grouping and totalling
- Any number of open windows
- Online context-sensitive help

System Requirements

```
Amiga computer with 1meg or more RAM (May run in 512k)
Workbench 2.04 or later
mathieeesingtrans.library }
mathieeedoubbas.library   } Included with WB2
mathieeedoubtrans.library }
```

QuickFile will work with XFH-handler (a file compression program) but XFH-handler requires that the decompressed file fit completely in ram. To work with QuickFile such programs must support update of an existing file.

QuickFile is written in C using DICE version 3.0.

1.5 Getting Started

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.

To install QuickFile to a hard disk or floppy, drag the QuickFile icon to the drawer of your choice. If you want to use the AmigaGuide help system, drag the QuickFile.guide icon to the same directory. If you don't already have AmigaGuide, you can install it by doubleclicking the InstallAmigaGuide icon.

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 suggest 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
- Keyboard Control

1.6 Starting QuickFile

QuickFile opens a window on the default public screen. The default window size is just slightly narrower and shorter than the screen size. The window size and position are saved with each view.

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, the 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.

1.7 Main Window

The Title Bar displays a status line containing the name of the current view, the name of the current index, the current record number and the total number of records. Status and information messages are also displayed here

A row of buttons is displayed across the top of the window to control frequently used functions.

Remaining functions are accessed via Menus

The vertical scroll bar moves 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.

You can also use the arrow keys to scroll

Windows can be resized using the standard size gadget and iconified using the standard zoom gadget.

Keyboard Controls
Form Display
List Display

1.8 indexes

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

Each data base must have at least one index, but you can have any number. Indexes are automatically maintained as you add, change and delete records.

If you make an index unique, QuickFile will stop you from creating duplicate entries.

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).

1.9 random

Random access means locating a record 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.

1.10 About Views

Views allow you to display data from a file in different ways. ↔

There are

two basic types

FORM
and
LIST
.

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. If this isn't found, it uses its standard layout. 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.

1.11 Keyboard Control

These keys can be used if no string gadget is active

RETURN	Same as OK button
ESC	Same as CANCEL button
TAB	Activates first string gadget
HELP	Displays help text using AmigaGuide. Only available if Amigaguide.library is in libs: and QuickFile.guide is in the same drawer as the QuickFile program.
Down arrow	Next record
Up arrow	Previous record
Shift-down arrow	Next page
Shift-up arrow	Previous page

Other keyboard shortcuts for gadgets are identified by an underlined character. For cycle gadgets, pressing the key cycles forward, pressing the shifted key cycles backward.

NOTE: The above will not work if the cursor is in a string gadget. Press RETURN or ESC to deactivate the string gadget then press the required key.

The following keys can be used in string gadgets:

TAB	Move to next field
Shift-TAB	Move to previous field
Down arrow	Move to next field
Up arrow	Move to previous field
RETURN	De-activate string gadget if value is valid
ESC	De-activate string gadget ignoring errors
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.

1.12 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 FORM/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. Field sizes can be changed by dragging the bottom right corner of the drag box. Note that although field height can be changed, only

images will actually use more than a single line.

Pressing the "R" button displayed at the start of an external field will run the command defined for the field, provided the field is not empty.

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

1.13 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.

1.14 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

Images CheckBox
Toggle image display

Sliders
Scroll through records

1.15 QuickFile Menu Commands

Project Menu

Open
Open a new file in a new window

Load
Open a new file replacing the current file

Save
Save changes to the file

Close
Close the file and window

SaveAs
Create a new file from the current file

New
Define a new file

Alter
Alter the current file definition

Import
Import records from a text file

Export
Export records to a text file

Reorganise
Optimise the file

View Menu

Views
Display list of loaded views

New
Create a new view

Load
Load a view from disk

Save
Save changes to a view

SaveAs
Rename and save a view

Reset Form
Set view back to default layout

Order Menu

Indexes
Display list of indexes

Sort
Sort file into a new sequence
Show Sorted Display file in sorted sequence

Rebuild Index
Rebuild current index

Selection Menu

Select
Create a subset of records

Show Selected
Display selected records

Show All
Display all records

Print Menu

Print Displayed Records

Print Current Index
Options Menu

About

Buffers

1.16 features

Block Size

Index, Define

Buffers

Insert Record

Control Breaks
Keyboard usage
Defining Files
Label Printing
Delete record
Modify Record
Export
Program Limits
External Fields
Printing
Field Types
Report Groups
File Types
Selecting
GoTo Record
Sorting
Images
Summaries
Import
Views, About
Indexes, About
View, Define

1.17 Block Size

QuickFile reads and writes data in fixed size blocks. Each block contains a number of records, the number depending on the block size and the size of each record. 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. Block size must be larger than maximum record size, but is not otherwise

critical. Typical values are in the range of 1000 to 4000 bytes.

1.18 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 maximum number of buffers to be used for a file when
you define it . 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 memory is limited or you want to reserve it for
another application.

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

1.19 Go To Requester

GoTo finds a record by key value using the current
index
. This gives
fast access to any record, 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.

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.

1.20 Image Display

The Images checkbox in the main window toggles image display on and off
for faster processing.

Images appear in the form display only, with no scaling or palette
remapping, however they are clipped to fit in your field box.

Only a file name is stored in the database with the image being loaded

from the file for display. The external path specified in the file definition is used as a default path for the image file.

Searching, sorting and printing operate on the file name.

To display images with the correct palette and resolution, use an external field with your favourite display program.

1.21 External Fields

External fields allow you to reference any type of external file from within QuickFile. You can use them to display pictures or text files, or to play sounds or animations.

You define a command line to be run when you define the field. You can also provide a default path for the data files.

When you create records in your database, you store a file name in the external file. Pressing the "R" button beside the file name will run the command you defined for the field including the current file name.

Any program that can be run from the Shell should be able to be used. Any error messages will be displayed in a separate window.

1.22 Insert a Record

Pressing the INSERT button displays a blank form for you to enter values for a new record.

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 (or RETURN) to store the details and clear the fields ready for the next record.

Press Cancel (or ESC) 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.

1.23 Modify a Record

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

For images or external fields, you can enter the file name in the string gadget or press the "F" button to get a file requester. Names entered into the string gadget are not validated.

Press the Update button (or RETURN) to store the changes.

Press the Cancel button (or ESC) to keep the current values.

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

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

A change that would cause a unique index to have duplicate entries is not allowed.

1.24 Delete the Current Record

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

Press the OK button (or RETURN) to delete the record.

Press Cancel button (or ESC) if you really want to keep it.

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

1.25 Form/List Button

This will toggle the current view between FORM and LIST formats.

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

Note that changes made in one mode will affect the other mode also. You may be better off creating another view.

1.26 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.

1.27 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.

Scrolling may also be done using the up and down arrow keys for a single record, or the shifted keys for a full screen.

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.

1.28 Open a New File

OPEN opens a new file in a new window.

LOAD opens a new file that replaces the file in the current window.

A file requester is presented for you to select the file to process. The rather complex pattern in the requester hides index, data, and .info files. If it also hides your definition files, clear the pattern gadget.

1.29 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.

1.30 Close the Current Window

Selecting the CLOSE menu item writes all updated records and indexes to disk and closes the file and window.

Closing the last window will exit the program.

You will be asked to confirm that you really do want to close the file.

If you have altered any views, a requester will be displayed for each changed view to allow you to save them.

1.31 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.

1.32 Reorganise a file

This reorganises a file by creating a new optimised 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.

You cannot reorganise if you are displaying a selection.

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.

1.33 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 Close Button will remove a "Sort" or "Selection" from memory and free the space used. To remove any permanent index alter the file

definition.

1.34 Select a View

Selecting the VIEWS menu item displays a requester showing a list ↔
of
currently loaded 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 Close button to drop the selected view. You cannot close all
views - you must have at least one loaded.

1.35 Create a New View

Selecting the NEW VIEW menu item creates a new view called ' ↔
unnamed' and
displays it in the
Define View
requester.

1.36 Load View

LOAD VIEW

Selecting the LOAD VIEW menu item brings up a file requester for you to
select a view to load. Only filenames ending in ".view" are displayed.
Clear the pattern gadget in the file requester to display all files.

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

If fields in the view cannot be located in the file definition, they will
be dropped, and a requester displayed to warn you. This will happen if you
delete fields from, or change field names in the file definition.

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.

1.37 Save View

SAVE

Saves changes made to an existing view. If the view has been newly created a file requester will be displayed to confirm the name.

SAVE AS

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. It is suggested that the .view suffix be used for easy identification.

It is recommended that you save views in the same drawer as the file definition.

1.38 Reset field positions in form

This resets field positions for the current view to the default positions, with the fields listed down the screen. Field sequence is maintained and the list display is not affected.

This may be useful as a lot of adding and deleting of fields in a view can cause large gaps, as fields are always added to the end of the view.

1.39 Define View Requester

The view requester is used to define or change a view.

To create a new view, select NEW from the VIEW menu. The new view is given the name "unnamed", which you can change.

To change an existing view, press the VIEW button, or select VIEWS from the VIEW menu, highlight the view you want to change, then press the ALTER button. You cannot change the name of an existing view - to do this use the Save As menu item.

The Define View requester contains the following elements

Name

Identifies the view. This can be changed for a new view, but is display only for an existing view.

Available Fields List

Lists the fields in the current file. Clicking on a field will add it to the current view.

View Fields List

Lists the fields in the current view. Clicking on a field in this list will select it and display its title and length below the list box. These can then be changed if required. The changes will only affect the current view.

New fields will be added before the current selected field. To add fields to the end of the list, select the "== End ==" item.

Type Buttons

Choose type of view - FORM or LIST.

Headings Check Box

Field names are displayed if this is checked. This is normally only turned off for printing labels.

Field Title String Gadget

This is the text gadget under the View Fields list. You can 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 View Fields is selected.

Length String Gadget

Use this to reduce or increase the field display length for this view only. 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 View Fields is highlighted.

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

Clear Button

Deletes all fields from the View Fields list.

Delete Button

Deletes the selected field from the View 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.

1.40 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.

If you request a sort while displaying selected records, only the records

in the selection are sorted.

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

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.

Available Fields

Lists the fields defined in this file. Clicking on a field will add it to the Sort Fields.

Index Fields

Lists the fields to be used for the sort. 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.

New fields are inserted before the currently selected field. To add a field to the end of the list, select the "==" End ==" entry.

Length

Changing this length allows you to sort over part of a long field, to save memory and speed sorting

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

Order

Select A..Z for ascending sequence or Z..A for descending. You can mix these on different fields in the same index.

Clear Button

Deletes all fields from the Index Field List

Delete

Deletes the selected field from the Index Fields list. No confirmation is asked - it is deleted immediately.

OK Button

Performs the sort

Cancel

Cancels the sort and retains previous sort details.

1.41 Define Index Requester

The Define Index requester is displayed when you are adding or changing an index.

See

About Indexes
for general information on indexes.

Gadgets

Name

Identifies the index and is used to form the file name for the index.

Unique CheckBox

If checked, duplicate index entries will not be allowed.

Available Fields

Lists fields defined in this file. Clicking on a field will add it to the fields selected for this index.

Index Fields

Lists fields in the current index. The order of the fields in this box determines their priority for ordering. 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.

A new field is added after the selected field. Select == End == to add a field to the end of the list.

Length

Changing this length allows you to index on part of a long field. This reduces memory requirements for rebuilding indexes.

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

Order Buttons

Select A..Z for ascending order or Z..A for descending order. You can mix these on different fields in the same index.

Delete

Deletes the selected field from the selected fields list. No confirmation is asked - it is deleted immediately.

Clear

Deletes all fields from the selected fields list.

OK Button

Accepts the new or changed index

Cancel

Cancels any changes you have made.

1.42 selection

A selection is a subset 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.

Search Operators

Search Panel


Search Details

1.43 Show selected records

Selecting the "Show Selected" menu item will display only those records selected by the last search - which may be none at all.

Selecting the "Show All" menu item will display all records using the first index defined for the file.

1.44 Search Panel

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

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.

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

For insertions, the new item will be inserted before the selected item. To insert a new item at the end of the list, select the "==" End ==" item.

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 both 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 EVERYBODY 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.

1.45 Search Details

The Search Details requester contains the following items:

And, Or Buttons

Choose AND or OR to specify how this search item is combined with the previous one. It has no effect for the first item.

Available Fields List

Lsts all fields in the file definition. The current selection is displayed under the list. Click on a field to use it for the search.

Comparison Operator (like, equal etc)

Choose the
operator
to be used for this search item.

Value 1

Primary search value. It is always used. If you want to search for empty fields leave this empty.

Value 2

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.

1.46 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 that it only looks at the first word of the field.

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

.

1.47 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 will 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 will load records 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 those 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.

A requester is displayed for you to select the record format to be used. One

preset format
 ("...",) is provided or you can tailor your own by
 selecting Custom and choosing the
 Record and Field separators
 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.

Be sure to backup your database before you import a file into an existing database. 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 set up a view with fields 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

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. The same goes for separator characters.

1.51 Field and Record Separators

ou can only select from the predefined delimiter codes in the cycle gadgets.

Field Start

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

Field End

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

Separates fields in the record. It does not appear after the last field in a 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 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 are 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 Print Requester contains:

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

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 Cycle Gadget.

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

Lines Per Inch Cycle Gadget

Toggles between 6 and 8 lines per inch.

Output To Cycle Gadget

Allows you to send the report to the printer or the window
.

If you are printing a FORM 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.

If you are printing a LIST view, a Group By list is displayed. This lists the report groups defined for this report. See Report Groups
.

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 Screen Report

Reports may be directed to the screen and will be almost identical to printed reports except that print pitch is ignored.

Output pauses when the screen is full, and will continue when the RETURN key or the CONTINUE button is pressed. The report can be terminated by pressing the ESC key or pressing the CANCEL button.

Backward paging is not provided.

Only about 78 columns will be visible on the screen as there is no sideways scrolling.

1.54 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

Number of labels to print across the page

Label Width

Width of each label in characters. One additional space will be allowed between labels. If you want to print labels further apart, increase this value.

Labels Down

Number of labels to print down the page before starting a new column. 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

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.

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.

1.55 Report Groups

A "group by" field is only printed when its value changes. You can also calculate summary values for each group. Each group can be based on several fields, although usually only one is used. Any number of fields may be summarised for a group. You may know report groups as control breaks.

Note that records must be sorted into the correct sequence for this to work. They are not sorted automatically.

The types of groups available are

Report. Gives a summary value for the whole report. If used, it must be the first group in the list.

Page. Groups will start on a new page. Group fields will print before column headings.

Subtitle Prints the group fields on a separate line at the start of each group. Reduces line length but looks best when each group contains a good number of records.

Normal Field prints in the first line of the group only, but space is used in each line.

You can have several levels of groups of the same type, but they must be listed from highest level to lowest.

Example

Group Requester

1.56 Report Group Example

This example shows two groups with totals.

Group 1 : City Type: Normal Group Fields: City
Summaries: Value (total)

Group 2 : Salesman Type: Normal Group Fields: Salesman
Summaries: Value (total)

Resulting report:

City	Salesman	Client	Value
Brisbane	Fred Smith	ABC Company	8000.00
	XYZ Limited		6400.00
	Zip Electronics		12000.00

```
Salesman Tot          26400.00

John Brown  ZZZ Computers    5000.00
           GWZ Peripherals    7200.00

Salesman Tot          12200.00

City Tot             28600.00

Sydney  George Gray ACE Packaging    500.00
```

Note: The file would need to be sorted over City and Salesman for this to print correctly.

1.57 Report Group Requester

This defines the type, grouping fields, and summaries for a single ←
report
group.

See

Report Groups
for a general description of the functions.

Gadgets

Group string gadget

Names the group. This name is printed on summary lines.

Type

Type of group

View Fields list

Lists the fields available in the current view for group and summary functions. The selected field in this list can be added to either the Group Fields or Summaries lists.

Group Fields list

Fields used for grouping. A new group starts when any of these fields change. A group field is not required for a Report level group.

Press the INS button under this list to add the currently selected View Field to this list.

Press the DEL button to delete the currently selected field from this list

Summaries list

Fields to be summarised for this group. Selecting an item from this list will update the check boxes to show the summaries requested.

Insert and delete operate as for the Group Fields list.

Tot, Cnt, Avg check boxes

These identify the summaries required for the currently selected Summary field. Any or all may be checked for one field.

OK and Cancel Buttons

Return to the Print Requester.

1.58 Buffer Control

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, alter the file definition.

1.59 File Definition

Use the New item on the Project menu to create a new file definition. ↔

Use the Alter item on the Project menu to alter the current definition.

The data and any open views are saved before you alter the current definition and any sorted or selected details are dropped.

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.

Block size, Buffers, Free Space see
File Details

Defining Fields

Defining Indexes

External Path

This is a default path used for images and external files. The file name in each record is stored as a name relative to this path which can reduce the number of characters in each record. It is ignored if you enter a full path name for file (ie includes a colon).

Press OK to save any changes you have made and return to the main panel.

Press CANCEL to reload the original file definition.

1.60 File Details

The file details are shown at the top left of the Definition panel.

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).

WARNING. If you using a compression program like XFH-handler with QuickFile, set the number of buffers to 3. XFH will already have the decompressed copy of the file in ram.

1.61 Defining fields

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.

The fields defined so far are listed in the box at the right of the window.

Use the Add button to add a new 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 selected field. To add a field to the end of the list, select the "==" End ==" item. After each field is added the requester is cleared but remains active for you to add another field. Press CANCEL when you have finished adding fields.

To change an existing field, click on the field name, then press the Modify button. The Field Requester is displayed for you to enter your changes.

To delete a field click on the field name, then press the Delete button. You will be asked to confirm the deletion

1.62 Field Requester

Displays the current attributes of a field and allows you to change them. ↔

Name string gadget

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

Length

60 characters is a practical maximum length as no left and right scrolling is provided and more characters cannot be displayed on a form. 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.

Decimals

Number of decimals stored and displayed for the field. Values entered in the field will be rounded to this number of decimals. Can be 0.

Type Push buttons

Choose the field type for this field. See Field Types for more details.

Mandatory Check Box

If checked, the field must have a value in all records. You will not be able to add a new record without a value in this field.

Justify Right Check Box

If checked, the field will be displayed with the value right justified. This is the default for Integer, Float, and Calculated fields. Character and date fields default to justified left.

Expression String Gadget

Contents depend on field type

Calc: The expression to calculate the field value

Cycle: The list of possible values

External: The command string to be run to process the field content.

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.

1.63 Field Types

Character

Standard character string.

Float.

Real numbers with decimals.

Integer

Whole number, no decimals.

Calculated

The field value is calculated from other fields, which may themselves be calculated fields.

Enter the calculation in the expression string gadget. The expression can contain field names, constants, and the add (+), subtract (-), multiply (*) and divide (/) operators. Field names containing spaces must be enclosed in double quotes ("). Normal precedence rules apply and brackets may be used to control sequence. Fields must be defined before they can be referenced.

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.

For example 03/08/93 3-8-93 3.aug.93 03 aug 1993 are all valid

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

Cycle

A list of values is associated with a cycle field. The value is maintained using a cycling button instead of a string gadget.

Enter the list of values, separated by commas, in the expression string gadget. Any spaces you enter will be included in the value - you probably don't want leading spaces.

for example Blue,Green,Light Blue,Red
instead of Blue, Green, Light Blue, Red

Image

An

image that is displayed in the QuickFile window. Only the file name is stored in the database.

External

Holds file names that can be run using an external program. This can be used for images, sounds, text files, animations or whatever. Enter the command template in the expression string gadget with %s to represent the file name. The full path name of the command is required. For example

dh0:utilities/display %s

1.64 Defining Indexes

You must define at least one index. 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.

You can index on any field type including calculated fields. You can also define an index as unique to prevent duplicate records being created.

If you change an index on an existing file, it will be rebuilt when you return to the display panel.

Select the index from the list and press the appropriate button. The

Index Requester is displayed for you to define or alter an index definition.

You can have any number of indexes but you should limit yourself to those you are going to use regularly.

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

1.65 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.

1.66 Possible Problems

DATA INTEGRITY

If you are prevented from saving your changes by a program error, system or power failure, your file may 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 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.

A mismatch between the index and data is indicated by a message such as "getblock: Block not found".

To correct this you can rebuild an index by selecting the Rebuild Index item from the QuickFile tools menu, or you can delete the index file (called filename.indnameX). When you next open the file, the index will be rebuilt.

SAVING MEMORY

If you are short of memory, you can reduce memory requirements by not using the online help. You can do this by either removing AmigaGuide.library from your libs: directory or by moving QuickFile.guide to a different directory from the QuickFile program.

If you are using a compression program such as XFH-handler, reduce the number of buffers in the

file definition

to 3. Otherwise both XFH and

QuickFile will be holding the file in ram:

BUGS and OTHER CREATURES

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. Known problems and restrictions are:

- If you drag a field off the bottom of the window, the drag box is drawn over the border but is not erased properly if you release the mouse button.
- Date and character fields cannot be used in calculations but you can enter them into expressions.
- Fields are always added to the bottom of a view, even though you can insert them anywhere in the list of fields for the view.
- A Field is clipped horizontally, but not vertically, if it does not fit completely in the visible window. This causes images to disappear instead of being clipped if you make the window too small.
- No attempt is made to remap image palettes. You may get odd colours or a block of a single colour.

If you write to me with a problem you would like fixed, it is much easier for me if you send a copy of your database, the version of the program you are using, and instructions on how to duplicate the problem.

1.67 limits

Field Length

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

Record Length

32,767 bytes

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.

Number of fields per record

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

Number of indexes

No limit.

Number of views

No limit.
