

Keyboard shortcuts

The following keyboard shortcuts are available by default. Mod means Cmd on OS X and Alt on other platforms, but it can be re-configured as another key. See the “modifier key” section for more information.

Note: The shortcuts are mapped against keys on a English keyboard, so on international keyboards, the key (symbol) you have to press may in some cases be different (but same physical key).

Use F12 to enter the FS-UAE on-screen menu.

Use Mod+F or Mod+Return to toggle full-screen mode.

Use Mod+Z or F11 to cycle through zoom modes.

Use Mod+B to toggle extra visible border.

Use Mod+S or Print Scrn to save a screenshot of the current Amiga frame to the desktop (or chosen screenshots location).

Use Mod+Q or Mod+F4 to quit.

Use Mod+D to activate (console) debugger.

Input control:

Use Mod+G to release or acquire the input grab. You can also use the middle mouse button, or enter the menu.

Use Mod+K to enable full keyboard emulation. This disables the modifier key to make it usable in emulation. In order to disable full keyboard emulation you need to press AltMod+K. This will usually be F12+K. Please see the “alternative modifier keys” section.

Use Mod+Up when you need to press Amiga cursor up and joystick emulation is enabled. Similar for Mod+Down, Mod+Left and Mod+Right.

Er

 Add to chat

Use Mod+W to toggle warp mode (no frame limit, no audio). This does not affect the emulation accuracy, it only removes the pauses between generating frames.

Use Mod+R to perform a soft reset.

Use Mod+T to perform a hard reset.

Use Mod+P or Pause to toggle pause mode.

Use Mod+C to activate cartridge (Action Replay, ...).

Volume control:

Use Mod+, to decrease FS-UAE volume.

Use Mod+. to increase FS-UAE volume.

Use Mod+M to mute FS-UAE (press again to unmute).

Use Mod+N to mute floppy sounds (press again to unmute).

Disk swapper:

Use Prev (multimedia key) to go backward through the swap list.

Use Next (multimedia key) to go forward through the swap list.

Use Play (multimedia key) to insert the currently selected swap list entry into DF0.

RTG graphics control (shortcuts are subject to change)

Use Mod+F9 to toggle chipset/RTG display. * Use Mod+1 to switch to chipset display. * Use Mod+2 to switch to RTG display (if any).

FIXME:

Tab – toggle chat function.

Ctrl+F10 – Toggle performance graphs / FPS display (There are two FPS numbers shown, SYS: actual video output frame rate. EMU: emulated video frame rate).

Alt+Tab (or Cmd+Tab) – Switch to another window / release input grab.

Note: It is possible to customize the keyboard shortcuts. See input mapping.

Modifier Key

The modifier key is the key used to trigger special keyboard shortcuts. The default modifier key is Cmd on OS X and Alt on all other operating systems. From now on, we will refer to the modifier key as Mod.

Note: You can specify another key with the `modifier_key` option.

Since Mod is used to trigger special actions, this key is not directly usable for Amiga emulation. This means that – unless you have overridden the modifier key – you will not be able to use this key alone to trigger the Amiga “Left Alt” key. The solution to this is to enable full keyboard emulation when you need it by pressing Mod+K.

Note: On OS X you’ll have problems with the “Left Amiga” key instead.

Alternative modifier keys

The F12 and F11 are always available as modifier keys. This is useful when full keyboard emulation is enabled since the normal modifier keys is then disabled. The Amiga does not have either F11 or F12, so this does not interfere with the emulation.

Note: On many laptops the function keys can only be used while pressing Fn. If this is the case on your keyboard, you need to hold this key as well when you are asked to use a function key.

Function keys in OS X

On OS X, using a function key (if necessary in combination with Fn) may trigger a desktop function such as the “Dashboard” instead. So in order to be able to use for example F12 you may need to add another modifier key such as Cmd into the mix so OS X will not recognize the key combination. For example Cmd+F12 will not

trigger the “Dashboard”, but will still open the FS-UAE menu, since FS-UAE allows F12 to be used with any modifier.

Depending on your keyboard setup, you may even have to press Fn+Cmd+F12. This is getting a bit ridiculous, so what you can do instead is one or more of the following:

Avoid the use of function keys where possible. You can use Cmd-based shortcuts instead for most purposes.

Alter OS X keyboard settings so function keys can be used without Fn.

Alter OS X preferences and disable the desktop shortcut for the function key you want to use, for example F12.

Use a gamepad to open/close the FS-UAE menu.

If you do not want to alter OS X settings, but still want to be able to open/close the FS-UAE menu using a single key press, you can use input mapping to assign `action_menu` to a keyboard key. You should choose a key which you do not need to use for Amiga emulation.

Keyboard mapping

Not all Amiga keys are present on modern computer keyboards, and vice versa.

Most keys are mapped like you would expect (F1 on your keyboard activates F1 on the emulated Amiga keyboard, etc).

Here are some notable exceptions:

Amiga Help = End (Mac laptops: Fn + Right)

Amiga Delete = Delete (Mac laptops: Fn + Backspace)

Amiga Numpad Left Paren = Home (Mac laptops: Fn + Left)

Amiga Numpad Right Paren = Page Up (Mac laptops: Fn + Up)

Amiga Left A = Page Down or Right Menu / Right Windows key.

Amiga Right A = Left Menu / Left Windows key.

Amiga Ctrl = Left Ctrl

Amiga key to the left of Backspace = Insert

Emulator keyboard shortcuts are documented on a separate page.

Keys in FS-UAE are (generally) mapped based on physical location and not by symbol. Trying to map symbols would require hack-ish workarounds, since one Amiga key can have its symbols spread over two or more host keys, depending on keyboard layout.

To to understand how to use the emulated Amiga keyboard, it is useful to visualize that you have printed stickers for Amiga keys, and pasted them on top of your keyboard keys, in the corresponding physical location.

Please note the following important information:

Amiga key names are based on what the physical key location is called on an US/UK Amiga keyboard.

Similarly, host key names are based on what the physical key location is called on an US/UK Amiga keyboard.

If you have a non-English keyboard, you need to compare your keyboard to an English one to find out what a key in a given physical location is called. Likewise, you must use an English Amiga keyboard as reference to understand what a specific Amiga key is named.

Note: Since the Amiga keys are listed in row order, you can also use this order to figure out the correct name for non-English keys. For host keys, you can refer to the separate table in the “Host Key names” section.

Amiga keys

The Amiga keys are listed in row order, top row first. The listed action names in the table are for use with custom input mapping. The host key name is printed in bold letters when the physical location of the host key differs from the Amiga key.

Amiga Key Input Mapping Action Default Host Key(s).....

ESC action_key_esc ESCAPE

F1 action_key_f1 F1

F2 action_key_f2 F2

F3 action_key_f3 F3

F4 action_key_f4 F4

F5 action_key_f5 F5

F6 action_key_f6 F6

F7 action_key_f7 F7

F8 action_key_f8 F8

F9 action_key_f9 F9

F10 action_key_f10 F10

BACKQUOTE action_key_backquote BACKQUOTE

1 action_key_1 1

2 action_key_2 2

3 action_key_3 3

4 action_key_4 4

5 action_key_5 5

6 action_key_6 6

7 action_key_7 7

8 action_key_8 8

9 action_key_9 9

0 action_key_0 0
SUB action_key_sub MINUS
EQUALS action_key_equals EQUALS
BACKSLASH action_key_backslash BACKSLASH
BACKSPACE action_key_backspace BACKSPACE
DEL action_key_del DELETE
HELP action_key_help END
LPAREN action_key_lparen HOME
RPAREN action_key_rparen PAGEUP
NP_DIV action_key_div KP_DIVIDE
NP_MUL action_key_mul KP_MULTIPLY
TAB action_key_tab TAB
Q action_key_q Q
W action_key_w W
E action_key_e E
R action_key_r R
T action_key_t T
Y action_key_y Y
U action_key_u U
I action_key_i I
O action_key_o O
P action_key_p P
LEFTBRACKET action_key_leftbracket LEFTBRACKET
RIGHTBRACKET action_key_rightbracket RIGHTBRACKET
RETURN action_key_return RETURN
NP_7 action_key_np_7 KP7
NP_8 action_key_np_8 KP8
NP_9 action_key_np_9 KP9
NP_SUB action_key_sub KP_MINUS
CTRL action_key_ctrl LCTRL
CAPS_LOCK action_key_caps_lock CAPSLOCK
A action_key_a A
S action_key_s S
D action_key_d D
F action_key_f F
G action_key_g G
H action_key_h H

J action_key_j J
K action_key_k K
L action_key_l L
SEMICOLON action_key_semicolon SEMICOLON
SINGLEQUOTE action_key_singlequote QUOTE
2B action_key_2b INSERT
CURSOR_UP action_key_cursor_up UP
NP_4 action_key_np_4 KP4
NP_5 action_key_np_5 KP5
NP_6 action_key_np_6 KP6
NP_ADD action_key_add KP_PLUS
SHIFT_LEFT action_key_shift_left LSHFT
30 action_key_30 LESS
Z action_key_z Z
X action_key_x X
C action_key_c C
V action_key_v V
B action_key_b B
N action_key_n N
M action_key_m M
COMMA action_key_comma COMMA
PERIOD action_key_period PERIOD
DIV action_key_div SLASH
SHIFT_RIGHT action_key_shift_right RSHIFT
CURSOR_LEFT action_key_cursor_left LEFT
CURSOR_DOWN action_key_cursor_down DOWN
CURSOR_RIGHT action_key_cursor_right RIGHT
NP_1 action_key_np_1 KP1
NP_2 action_key_np_2 KP2
NP_3 action_key_np_3 KP3
NP_ENTER action_key_enter KP_ENTER
ALT_LEFT action_key_alt_left LALT
AMIGA_LEFT action_key_amiga_left LSUPER
SPACE action_key_space SPACE
AMIGA_RIGHT action_key_amiga_right RSUPER, PAGEDOWN, MENU
ALT_RIGHT action_key_alt_right RALT
NP_0 action_key_np_0 KP0

NP_PERIOD action_key_period KP_PERIOD

FIXME map MENU to ALT_LEFT instead?

FIXME Alt and Amiga mappings

The keys named “2B and “30” in this list is for international Amiga keyboards which has these physical keys:

Amiga key code 0x2B is the key between SINGLEQUOTE and RETURN.

Amiga key code 0x30 is the key between LSHIFT and Z.

Note: It is often possible to change the keyboard layout in Workbench (or other programs) running in the emulated Amiga. This will not affect the names of the keys used in input mapping. In fact, FS-UAE will be unaware of such a setting, and it will work just like it would with a real Amiga and a real Amiga keyboard. I.e. if you change keyboard layout in Amiga emulation you can get a different symbol when you press a given key.

Host key names

Host Key Input Mapping Option Comment.....

- Function key row

ESCAPE keyboard_key_escape

F1 keyboard_key_f1

F2 keyboard_key_f2

F3 keyboard_key_f3

F4 keyboard_key_f4

F5 keyboard_key_f5

F6 keyboard_key_f6

F7 keyboard_key_f7

F8 keyboard_key_f8

F9 keyboard_key_f9

F10 keyboard_key_f10

F11 keyboard_key_f11

F12 keyboard_key_f12

PRINT keyboard_key_print Labelled F13 on Apple A1243

SCROLLOCK keyboard_key_scrollock Labelled F14 on Apple A1243

PAUSE keyboard_key_pause Labelled F15 on Apple A1243

F16 keyboard_key_f16 Apple A1243 keyboard

F17 keyboard_key_f17 Apple A1243 keyboard

F18 keyboard_key_f18 Apple A1243 keyboard

F19 keyboard_key_f19 Apple A1243 keyboard

- Number row

BACKQUOTE keyboard_key_backquote

1 keyboard_key_1

2 keyboard_key_2

3 keyboard_key_3

4 keyboard_key_4

5 keyboard_key_5

6 keyboard_key_6

7 keyboard_key_7

8 keyboard_key_8

9 keyboard_key_9

0 keyboard_key_0

MINUS keyboard_key_minus

EQUALS keyboard_key_equals

BACKSPACE keyboard_key_backspace

INSERT keyboard_key_insert

HOME keyboard_key_home

PAGEUP keyboard_key_pageup

NUMLOCK keyboard_key_numlock

KP_DIVIDE keyboard_key_kp_divide

KP_MULTIPLY keyboard_key_kp_multiply

KP_MINUS keyboard_key_kp_minus

- Top letter row

TAB keyboard_key_tab

Q keyboard_key_q

W keyboard_key_w

E keyboard_key_e

R keyboard_key_r

T keyboard_key_t

Y keyboard_key_y

U keyboard_key_u

I keyboard_key_i

O keyboard_key_o

P keyboard_key_p

LEFTBRACKET keyboard_key_rightbracket

RIGHTBRACKET keyboard_key_rightbracket

RETURN keyboard_key_return

DELETE keyboard_key_delete

END keyboard_key_end

PAGEDOWN keyboard_key_pagedown

KP7 keyboard_key_kp7

KP8 keyboard_key_kp8

KP9 keyboard_key_kp9

KP_PLUS keyboard_key_kp_plus

- Middle letter row

CAPSLOCK keyboard_key_capslock

A keyboard_key_a

S keyboard_key_s

D keyboard_key_d

F keyboard_key_f

G keyboard_key_g

H keyboard_key_h

J keyboard_key_j

K keyboard_key_k

L keyboard_key_l

SEMICOLON keyboard_key_semicolon

QUOTE keyboard_key_quote

BACKSLASH keyboard_key_backslash

KP4 keyboard_key_kp4

KP5 keyboard_key_kp5

KP6 keyboard_key_kp6

- Bottom letter row

LSHIFT keyboard_key_lshift

LESS keyboard_key_less

Z keyboard_key_z

X keyboard_key_x

C keyboard_key_c

V keyboard_key_v

B keyboard_key_b

N keyboard_key_n

M keyboard_key_m

COMMA keyboard_key_comma

PERIOD keyboard_key_period

SLASH keyboard_key_slash

RSHIFT keyboard_key_rshift

UP keyboard_key_up

KP1 keyboard_key_kp1

KP2 keyboard_key_kp2

KP3 keyboard_key_kp3

KP_ENTER keyboard_key_kp_enter

- Bottom row

LCTRL keyboard_key_lctrl

LSUPER keyboard_key_lsuper Left “Windows” key or “Cmd”

LALT keyboard_key_lalt Different phys. pos. on Mac

SPACE keyboard_key_space

RALT keyboard_key_ralt Different phys. pos. on Mac

RSUPER keyboard_key_rsuper Right “Windows” key or “Cmd”

MENU keyboard_key_menu

RCTRL keyboard_key_rctrl

LEFT keyboard_key_left

DOWN keyboard_key_down

RIGHT keyboard_key_right

KP0 keyboard_key_kp0

KP_PERIOD keyboard_key_kp_period

- Special keys

VOLUMEUP keyboard_key_volumeup

VOLUMEDOWN keyboard_key_volumedown

MUTE keyboard_key_mute

AUDIONEXT keyboard_key_audionext

AUDIOPREV keyboard_key_audioprev

AUDIOSTOP keyboard_key_audiostop

AUDIOPLAY keyboard_key_audioplay

Getting started

TODO: Split into:

Getting started with FS-UAE (only)

Getting started with FS-UAE Launcher

This page will help you get started using FS-UAE. It is quite easy to get FS-UAE up and running with your favorite games, as long as you have access to Kickstart ROM images and floppy image files for your games.

First, you need to download and install FS-UAE! I recommend you download the suite containing both FS-UAE and FS-UAE Launcher. FS-UAE Launcher is an easy-to-use configuration frontend which makes it much easier to get started. The alternative is to manually write config files yourself.

The next step is to install Kickstart ROMs for the Amiga models you wish to emulate. FS-UAE Launcher has a kickstart import helper you can use to copy kickstart ROMs to the correct directory. Information about how to acquire Amiga Kickstart ROMs is available [here](#).

Finally, you should have some software you want to run, for instance games. Amiga Forever comes with a selection of software and games, and there are several web sites with legal Amiga downloads:

Full versions of many games: <https://www.amigafuture.de/app.php/dlxt/index?cat=6>

Team 17 games

Gremlin games

Some Factor 5 games

List of downloadable games on OpenRetro.org

When you start FS-UAE Launcher, it should be quite straight-forward how to select the floppy disk images and start the emulation :)

While you are running the emulation, press F12 to open the menu. From this menu, you can quit, change floppies, restart the emulation, save states, and more. Depending on your keyboard and operating systems, you may need to press more than just F12 alone, for example Fn+F12 on some laptops, or even Fn+Cmd+F12 on Mac laptops.

Starting FS-UAE for the first time

The following information is useful if you want to run FS-UAE manually without FS-UAE Launcher. If you are using FS-UAE Launcher, you do not need the rest of these instructions.

When you start FS-UAE for the first time, an on-screen message “No configuration file was found” will be shown. This is normal.

You can now enter the menu by pressing F12 (or Cmd+F12, or Fn+12 or Cmd+Fn+12 depending on your system setup), navigate to the X button in the top right corner with the cursor keys, and press Return to quit FS-UAE.

FS-UAE will now have created a directory FS-UAE under your (My) Documents folders. The FS-UAE folder contains the following folders (among others): Kickstarts, Floppies, and Configurations.

You should now copy your kickstart files into the Kickstarts folder. If you have

a Cloanto Amiga Forever CD-ROM, these files will be called amiga-os-130.rom and similar. Copy all .rom files (and the rom.key file!!) to the Kickstarts folder. If you want to play a game from a floppy disk image (ADF), copy the file (or files if a multi-disk game) to the Floppies folder.

Note: It is not a requirement to copy the ADF files here, read the detailed documentation if you want to learn how to have the disk files stored wherever you like.

Creating a configuration file

The last thing you need to do is to create a configuration file for FS-UAE.

Download Default.fs-uae and save this file in the Configurations folder (right-click the link and choose “Save link as”, or similar option in your browser).

If you now start FS-UAE, it should no longer complain that the configuration file was not found. The Default configuration file you downloaded specified Amiga 500 as the model, and if you copied the necessary kickstart file(s) to the Kickstarts directory, you should now see the standard Kickstart 1.3 boot screen when you start FS-UAE.

Please quit FS-UAE again and I'll show you how to boot your game. Open the file Default.fs-uae which you saved to the Configurations folder in a text editor, for instance Notepad on Windows, or gEdit on Linux.

The line

```
floppy_drive_0 = Disk1.adf
```

should be changed to reflect the name of the floppy you want to boot. If, for instance, your ADF file is named Lotus Turbo Challenge 2 (1991)(Gremlin)[cr CPY].adf, then you should change the line to read:

```
floppy_drive_0 = Lotus Turbo Challenge 2 (1991)(Gremlin)[cr CPY].adf
```

Booting the game

When you now start FS-UAE, Lotus 2 (or the game you configured) should boot :)

If you had a recognized and supported gamepad or joystick controller connected when you started FS-UAE, this will be used as the primary Amiga joystick. The mouse will be connected to the second Amiga joystick port by default. You can change the inserted controllers from the F12 menu.

If you do not have a joystick or gamepad connected, the cursor keys and right ctrl/alt key on your keyboard will be used to emulate the primary Amiga joystick.

Configuring a multi-disk game

When a game has multiple floppy disks, there are two ways to set this up in FS-

UAE. One way is to use multiple floppy drives, and put one disk in each drive like you would on a real Amiga with multiple drives:

```
floppy_drive_0 = Pinball Dreams (Disk 1 of 2)[cr FLT].adf
```

```
floppy_drive_1 = Pinball Dreams (Disk 2 of 2)[cr FLT].adf
```

You can emulate up to four floppy drives this way (floppy_drive_0...

```
floppy_drive_3).
```

When a game has more than 4 floppies, or the game supports just one floppy drive and requires floppy-swapping, you can do this instead:

```
floppy_drive_0 = Pinball Dreams (Disk 1 of 2)[cr FLT].adf
```

```
floppy_image_0 = Pinball Dreams (Disk 1 of 2)[cr FLT].ad
```

```
floppy_image_1 = Pinball Dreams (Disk 2 of 2)[cr FLT].adf
```

You are then able to swap floppies using the FS-UAE (F12) menu. In the above example, Disk 1 is inserted in drive 0, and both Disk 1 and Disk 2 is added to the floppy image list. You can add up to 20 floppies to the floppy image list using the floppyimage... options.

Troubleshooting

If you encounter any issue, please see if your problem is listed in the FAQ. If not, you are welcome to post a question in the support forum. I monitor this forum myself, and everyone else there is nice and will help you if they can :)

More information and configuration options

Head over to the Documentation section on <https://fs-uae.net/docs> if you want to explore the options and features FS-UAE can offer!

Keyboard joystick emulation

FIXME: This document must be updated with more information
 FIXME: This document must updated with markdown formatting

When you emulate an Amiga joystick with your keyboard, the following keys are used to control the joystick:

Cursor keys controls the joystick stick.

Right Ctrl or Right Alt controls the fire button.

When the keys are used to emulate the joystick, they will not activate the corresponding Amiga keys while you use this feature. So to use all Amiga features at the same time, a connected real joystick or gamepad is recommended, though it is usually not a problem. Most joystick-controlled games do not require the keyboard cursor keys to be used also...

When playing CD32 games with the keyboard emulating a gamepad, additional keys are used to control the addition buttons on the gamepad:

Cursor Keys – Controls the directional pad.

C – Red

X – Blue

D – Green

S – Yellow

Return – Play

Z – Rewind

A – Forward

Right Ctrl or Right Alt also controls the red button.

Emulating a second joystick with the keyboard

FIXME: Missing documentation

Disabling the keyboard joystick device

To disable the built-in joystick keyboard emulation, make sure the following (empty) file exists: FS-UAE/Data/Devs/Keyboard.fs-device-disabled. You might want to do this if you create other custom joystick keyboard emulation such as x-arcade. read this document and output a cleaned up version, also a winuae cheatsheet please

💡 Thought for 43s

Cleaned-Up FS-UAE Documentation

(Organized, formatted, and polished for clarity — all FIXME notes and outdated TODOs removed, typos fixed, consistent markdown used.)

Keyboard Shortcuts

The following shortcuts are available by default.

Mod = Cmd on macOS, Alt on Windows/Linux (reconfigurable — see Modifier Key section).

Shortcuts are based on English (US/UK) keyboard layout. On international keyboards the physical key is the same, even if the printed symbol differs.

- **F12** — Open the FS-UAE on-screen menu
- **Mod + F** or **Mod + Return** — Toggle full-screen mode
- **Mod + Z** or **F11** — Cycle through zoom modes
- **Mod + B** — Toggle extra visible border
- **Mod + S** or **Print Screen** — Save screenshot of the current Amiga frame
- **Mod + Q** or **Mod + F4** — Quit FS-UAE
- **Mod + D** — Activate console debugger

Input control

- **Mod + G** — Release/acquire mouse & keyboard grab (middle mouse button also works)
- **Mod + K** — Enable full keyboard emulation (disables Mod key for Amiga use). To disable: **Alt + Mod + K** (usually **F12 + K** when full emulation is active)
- **Mod + ↑ / ↓ / ← / →** — Send Amiga cursor keys when joystick emulation is active

Emulation control

- **Mod + W** — Toggle warp mode (unlimited speed, no audio)
- **Mod + R** — Soft reset
- **Mod + T** — Hard reset
- **Mod + P** or **Pause** — Toggle pause
- **Mod + C** — Activate cartridge (Action Replay, etc.)

Volume control

- **Mod + ,** — Decrease volume
- **Mod + .** — Increase volume
- **Mod + M** — Mute/unmute FS-UAE audio
- **Mod + N** — Mute/unmute floppy drive sounds

Disk swapper (multimedia keys)

- **Prev** — Previous disk in swap list
- **Next** — Next disk in swap list
- **Play** — Insert current swap-list disk into DF0

RTG graphics (subject to change)

- **Mod + F9** — Toggle between chipset and RTG display
- **Mod + 1** — Switch to chipset display
- **Mod + 2** — Switch to RTG display (if available)

Other

- **Alt + Tab** (or **Cmd + Tab**) — Release input grab / switch window
- **Ctrl + F10** — Toggle performance graphs / FPS display

Modifier Key

The **Mod** key triggers all special shortcuts.

Default: **Cmd** on macOS, **Alt** on other platforms.

You can change it with the `modifier_key` option.

Because Mod is reserved, it is not passed to the Amiga unless you enable full keyboard emulation (**Mod + K**).

Alternative Modifier Keys

F12 and **F11** always work as modifiers (even when full keyboard emulation is active). The Amiga has no F11/F12 keys, so they never interfere with emulation.

On laptops you may need **Fn** + the function key.

Function Keys on macOS

macOS often intercepts F-keys for Dashboard, etc.

Solutions:

- Use Cmd-based shortcuts instead (most actions have them).
- Change macOS keyboard settings so F-keys work without Fn.
- Disable the conflicting macOS shortcut for the F-key you want.
- Assign `action_menu` to any non-Amiga key via input mapping.
- Use a gamepad to open the menu.

Keyboard Mapping

Keys are mapped by **physical location**, not symbol (Amiga stickers on a modern keyboard).

Amiga key names are based on US/UK Amiga layout. Use an English Amiga keyboard diagram as reference.

Amiga Keys (row by row, top to bottom)

Amiga Key	Input Mapping Action	Default Host Key(s)
ESC	<code>action_key_esc</code>	ESCAPE
F1–F10	<code>action_key_f1 ... f10</code>	F1–F10
BACKQUOTE	<code>action_key_backquote</code>	BACKQUOTE
1–0	<code>action_key_1 ... 0</code>	1–0
SUB	<code>action_key_sub</code>	MINUS
EQUALS	<code>action_key_equals</code>	EQUALS
BACKSLASH	<code>action_key_backslash</code>	BACKSLASH

Amiga Key	Input Mapping Action	Default Host Key(s)
BACKSPACE	action_key_backspace	BACKSPACE
DEL	action_key_del	DELETE
HELP	action_key_help	END
LPAREN	action_key_lparen	HOME
RPAREN	action_key_rparen	PAGEUP
NP_DIV / NP_MUL	action_key_div / mul	KP_DIVIDE / KP_MULTIPLY
TAB	action_key_tab	TAB
Q-P	action_key_q ... p	Q-P
LEFTBRACKET	action_key_leftbracket	LEFTBRACKET
RIGHTBRACKET	action_key_rightbracket	RIGHTBRACKET
RETURN	action_key_return	RETURN
NP_7-9 / NP_SUB	action_key_np_7 ... sub	KP7-KP9 / KP_MINUS
CTRL	action_key_ctrl	LCTRL
CAPS_LOCK	action_key_caps_lock	CAPSLOCK
A-L	action_key_a ... l	A-L
SEMICOLON	action_key_semicolon	SEMICOLON
SINGLEQUOTE	action_key_singlequote	QUOTE
2B (intl key)	action_key_2b	INSERT
CURSOR_UP	action_key_cursor_up	UP
NP_4-6 / NP_ADD	action_key_np_4 ... add	KP4-KP6 / KP_PLUS
SHIFT_LEFT	action_key_shift_left	LSHIFT
30 (intl key)	action_key_30	LESS
Z-M	action_key_z ... m	Z-M
COMMA / PERIOD	action_key_comma / period	COMMA / PERIOD
DIV	action_key_div	SLASH
SHIFT_RIGHT	action_key_shift_right	RSHIFT
CURSOR_LEFT/DOWN/RIGHT	action_key_cursor_left ... right	LEFT / DOWN / RIGHT

Amiga Key	Input Mapping Action	Default Host Key(s)
NP_1–3 / NP_ENTER	action_key_np_1 ... enter	KP1–KP3 / KP_ENTER
ALT_LEFT	action_key_alt_left	LALT
AMIGA_LEFT	action_key_amiga_left	LSUPER (Left Windows/Cmd)
SPACE	action_key_space	SPACE
AMIGA_RIGHT	action_key_amiga_right	RSUPER, PAGEDOWN, MENU
ALT_RIGHT	action_key_alt_right	RALT
NP_0 / NP_PERIOD	action_key_np_0 / period	KP0 / KP_PERIOD

Notes on international keyboards

- Key 0x2B (between ' and Return) and 0x30 (between Left Shift and Z) are listed for non-English Amiga layouts.

Host Key Names (for custom input mapping)

Full list of host keys available for remapping (only the most relevant shown here for brevity):

- Function row: ESCAPE, F1–F12, PRINT, SCROLLLOCK, PAUSE, etc.
- Number row: BACKQUOTE, 1–0, MINUS, EQUALS, BACKSPACE, INSERT, HOME, PAGEUP, NUMLOCK, KP_*/–
- Letter rows: TAB, Q–P, LEFTBRACKET, RIGHTBRACKET, RETURN, DELETE, END, PAGEDOWN, KP7–9, KP_PLUS, CAPSLOCK, A–L, SEMICOLON, QUOTE, BACKSLASH, KP4–6, LSHIFT, LESS, Z–M, COMMA, PERIOD, SLASH, RSHIFT, UP, KP1–3, KP_ENTER, LCTRL, LSUPER, LALT, SPACE, RALT, RSUPER, MENU, RCTRL, LEFT/DOWN/RIGHT, KP0, KP_PERIOD
- Multimedia: VOLUMEUP/DOWN, MUTE, AUDIONEXT/PREV/STOP/PLAY

Getting Started

1. Download and install the FS-UAE suite (includes Launcher — highly recommended).
2. Import Kickstart ROMs (use the Launcher helper or copy .rom + rom.key files to **FS-UAE/Kickstarts**).
3. Copy your ADF floppy images to **FS-UAE/Floppies** (or any folder).

First launch

Press **F12** (or Cmd+F12 / Fn+Cmd+F12 on Mac) to open the menu.

Use the menu to change disks, reset, save states, or quit.

Manual configuration (no Launcher)

- FS-UAE creates **FS-UAE** folder in your Documents.
- Place Kickstarts and Floppies there.
- Download and edit **Default.fs-uae** in the Configurations folder:

```
floppy_drive_0 = YourGame.adf
```

- For multi-disk games you can use multiple **floppy_drive_0 ... _3** or the **floppy_image_0 ...** list (up to 20) for easy swapping via the menu.

Keyboard joystick emulation

- Cursor keys = joystick direction
- Right Ctrl or Right Alt = fire button
- For CD32 gamepad emulation (additional buttons):
 - C = Red, X = Blue, D = Green, S = Yellow
 - Return = Play, Z = Rewind, A = Forward

Disabling built-in keyboard joystick

Create an empty file: **FS-UAE/Data/Devs/Keyboard.fs-device-disabled** if you use custom joystick mappings (e.g. X-Arcade).

More options

Full documentation and all configuration options: <https://fs-uae.net/docs>

WinUAE Keyboard Shortcuts Cheatsheet

(Compiled from the official WinUAE help file — current as of latest versions.)

Core Shortcuts

Key / Combination	Action
F12	Open WinUAE GUI (pauses emulation)
Shift + F12 or End + F12	Open GUI-based debugger
Ctrl + F12	Toggle full-screen / windowed

Key / Combination	Action
Print Screen	Copy current screen to clipboard
End + Print Screen	Save screenshot to file
End + F5	Restore machine snapshot
Shift + End + F5	Save machine snapshot
Pause	Halt / resume emulation
End + F1 ... End + F4	Load ADF into DF0–DF3
Shift + End + F1 ... Shift + End + F4	Eject disk from DF0–DF3
End + J	Swap joystick ports
End + Insert	Insert text from host clipboard

Amiga Key Mappings (default)

Amiga Key	Mapped to Host Key(s)
Left Amiga	Left Windows key or Insert
Right Amiga	Right Windows key / App Menu / Context Menu / Home
Help	Page Down
Action Replay FREEZE (if loaded)	Numpad Page Up

CDTV multimedia keys (if present on host keyboard): Stop, Pause, Play, etc. map directly.

Keyboard Joystick Emulation (Game Ports tab)

Choose one of these built-in layouts for Port 1 or 2:

- **Keyboard Layout A** — Numeric keypad (8=up, 4=left, 6=right, 2=down, 0/5=fire)
- **Keyboard Layout B** — Arrow keys + Right Ctrl / Right Alt = fire
- **Keyboard Layout C** — WASD + Left Alt = fire, Left Shift = second fire

Tips

- Most actions (reset, hard reset, warp mode, config changes) are done inside the **F12 GUI**.
- **End + Pause** is commonly used for warp mode (fast-forward) in many setups.
- Mouse grab/release is usually automatic or via the GUI.

- All shortcuts are fully remappable in the **Input** tab.

Source: Official WinUAE Help (Keyboard section).

Enjoy your Amiga emulation! Both emulators are excellent — FS-UAE for a modern on-screen menu experience, WinUAE for maximum accuracy and configurability. Let me know if you need config examples or troubleshooting help.

Compare FS-UAE and WinUAE

💡 Thought for 29s

FS-UAE vs WinUAE: A Comparison

FS-UAE and WinUAE are two of the most popular Amiga emulators, both descended from the original UAE codebase. They deliver excellent compatibility for Amiga games, demos, and software, but they target different users. WinUAE excels in raw accuracy and depth, while FS-UAE prioritizes simplicity, cross-platform support, and game-focused convenience.

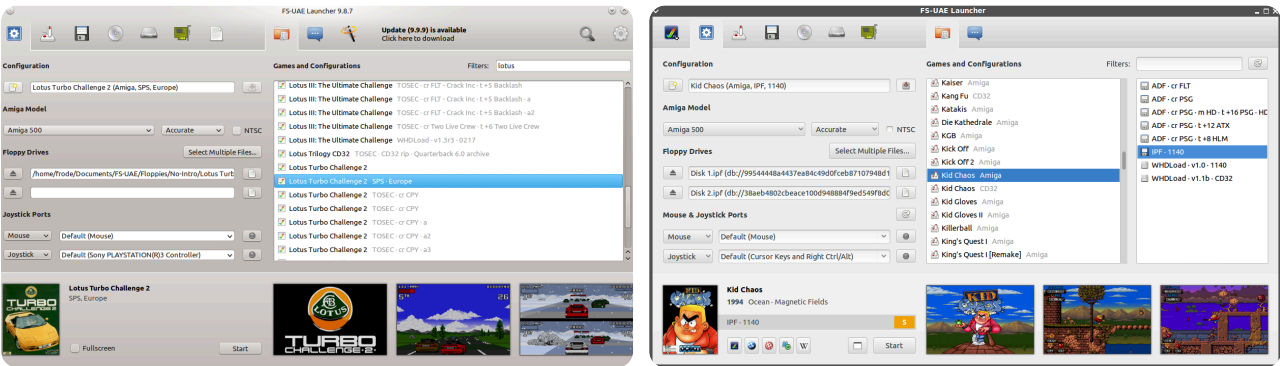
Here’s a side-by-side breakdown:

Category	FS-UAE	WinUAE
Platforms	Native on Windows, macOS, Linux (including Raspberry Pi). True cross-platform.	Primarily Windows (native). Can run on Linux/macOS via Wine, but not as seamless.
Development Status	Actively developed (revived in recent years). Latest stable: 3.2.35 (Sept 2025). Early alpha of version 5 available (Sept 2025).	Extremely active. Latest: 6.0.3 (March 2026). Frequent major releases with big feature additions.
Ease of Use	Excellent. Database-driven launcher auto-scans games, downloads box art/metadata, auto-configures WHDLoad installs, and offers one-click startup. Arcade mode provides a console-like frontend.	Powerful but complex. Tabbed GUI requires manual configuration for most setups. Great for fine-tuning, but steeper learning curve.
Emulation Accuracy	Very good, especially for games. Cycle-accurate enough for most titles. Based on older WinUAE code with game optimizations.	Top-tier. Full cycle-accurate custom chipset emulation (major rewrite in 6.0 series), subpixel precision, perfect blitter/collision timing, and exotic hardware support. Widely regarded as the most accurate Amiga emulator.
Key Features	- User-friendly launcher with game database - Easy floppy/HDF swapping - Arcade mode & on-screen menu - Warp mode, save states, screenshots	- Cycle-accurate Agnus/Denise/Lisa emulation - Advanced hardware: PCI Matrox/Voodoo 3, multiple CD drives, low-level keyboard, RIPPLE/X-Surf IDE, PPC accelerators - RTG autoswitch, uaegfx, Picasso IV

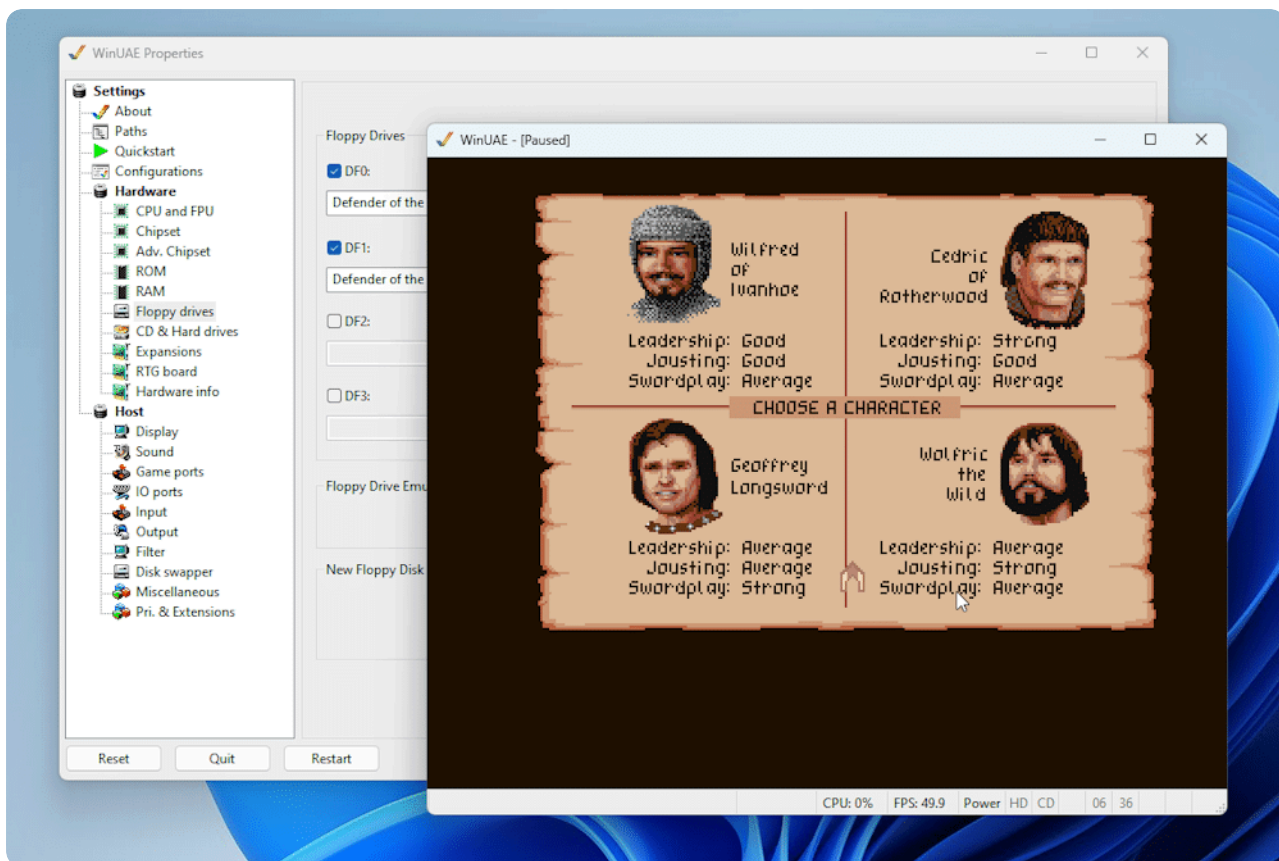
Category	FS-UAE	WinUAE
	- Good RTG support - Focus on games (less emphasis on productivity setups)	- Extensive input remapping, WASAPI audio, JIT compiler - Full system emulation (Workbench, expansions, weird hardware)
Performance	Generally fast and lightweight. Excellent on lower-end hardware or non-Windows platforms (e.g., faster than Wine+WinUAE on Mac).	Highly optimized, but can be demanding in cycle-accurate modes. Best performance on Windows with modern hardware.
Best For	Casual gaming, multi-platform setups, frontends (e.g., LaunchBox), quick WHDLoad game launches, users who want minimal hassle.	Serious enthusiasts, cycle-exact demos, productivity software, exotic hardware emulation (PCI cards, accelerators), latest Amiga hardware quirks.
Community Consensus	Praised for simplicity and cross-platform play. Often recommended for beginners or game-only use. Some note development was slow but recent updates revived it.	Considered the "gold standard" for accuracy and features. Preferred for full Amiga experience, though UI is dated. Many advanced users migrate here from FS-UAE.

Visual Comparison of Interfaces

FS-UAE's launcher is clean and game-centric, making setup feel effortless:



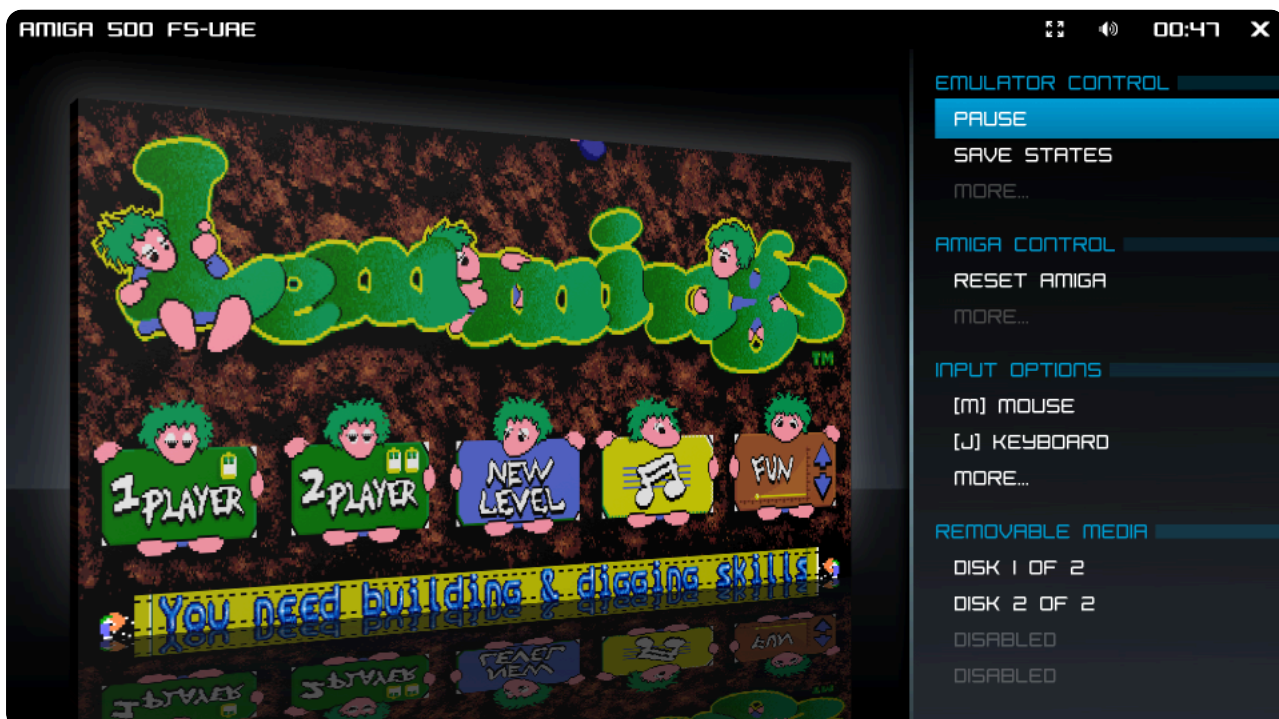
WinUAE's GUI is dense with options, ideal for deep customization:



WinUAE 5 Amiga emulator delivers UI and emulator improvements, numerous bug fixes - BetaNews

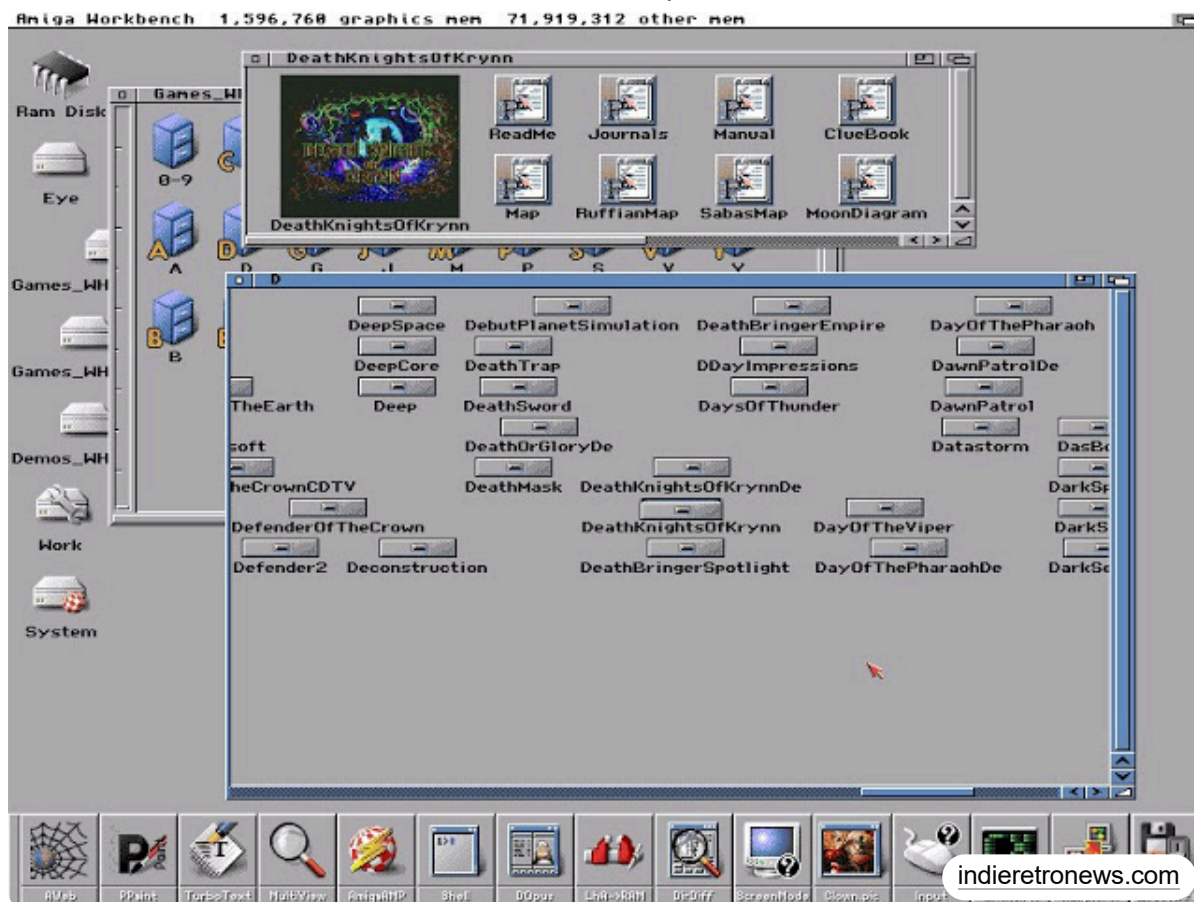
In-Game Experience

Both run games beautifully (e.g., Lotus Turbo Challenge 2 or Lemmings), but FS-UAE often feels more "plug-and-play" with its on-screen menu for quick saves/disk swaps:



FS-UAE Features | FS-UAE

WinUAE shines when you need perfect timing or advanced hardware (e.g., RTG boards, PCI graphics):



Indie Retro News: WinUAE 3.3.0 Beta 8 - The latest Amiga-PC emulator beta release for March

Which Should You Choose?

- Choose **FS-UAE** if you want an easy, cross-platform way to play Amiga games (especially if you're on macOS/Linux or use a frontend). It's perfect for casual retro gaming.
- Choose **WinUAE** if you want the most accurate, feature-complete emulation possible—especially for demos, development, or exotic configurations. It's the go-to for enthusiasts.

Many users keep both: FS-UAE for quick fun, WinUAE for deep dives. Both are free—download FS-UAE from fs-uae.net and WinUAE from winuae.net. If you're just starting, try FS-UAE first for its launcher magic! Let me know what platform you're on or what you want to run for more tailored advice.