NAME

MAME − Multi-purpose emulation framework

SYNOPSIS

mame [*options*] *gamename*

DESCRIPTION

Started in 1997 by Nicola Salmoria, MAME was originally intended as a series of emulators for individual games, which were later combined into a single multi−game emulator. In the following years, MAME grew over and over up to the actual size, with more than 100 contributors to the project.

OPTIONS

Core commands

−help, −?

Displays current MAME version and copyright notice.

−validate, −valid

Performs internal validation on every driver in the system. Run this before submitting changes to ensure that you haven't violated any of the core system rules.

Configuration commands

−createconfig, −cc

Creates the default **mame.ini** file in the current directory. All the configuration options (not commands) described below can be permanently changed by editing this configuration file.

−showconfig, −sc

Displays the current configuration settings.

−showusage, −su

Displays a summary of all the command line options. For options that are not mentioned here, the short summary given by **−showusage** is usually sufficient.

Frontend commands

All the list commands below write info to the screen. If you wish to write the info to a textfile instead, use redirection. For example, **mame −listxml > ~/mamelist.xml** writes the full list of supported game to file *mamelist.xml* in your home directory.

−listxml, −lx [*gamename*|*wildcard*]

List comprehensive details for all of the supported games. The output is quite long, so it is usually better to redirect this into a file. The output is in XML format. By default all games are listed; however, you can limit this list by specifying a driver name or wildcard after the −listxml command.

−listfull, −ll [*gamename*|*wildcard*]

Displays a list of game driver names and descriptions. By default all games are listed; however, you can limit this list by specifying a driver name or wildcard after the −listfull command.

−listsource, −ls [*gamename*|*wildcard*]

Displays a list of drivers and the names of the source files their game drivers live in. Useful for finding which driver a game runs on in order to fix bugs. By default all games are listed; however, you can limit this list by specifying a driver name or wildcard after the −listsource command.

−listclones, −lc [*gamename*|*wildcard*]

Displays a list of clones. By default all clones are listed; however, you can limit this list by specifying a driver name or wildcard after the −listclones command.

−listbrothers, −lb [*gamename*|*wildcard*]

Displays a list of "brothers" or other drivers from same sourcefile. By default all games are listed; however, you can limit this list by specifying a driver name or wildcard after the −listbrothers command.

−listcrc
Displays a full list of CRCs of all ROM images referenced by all drivers within MAME code.

−listroms, −lr *gamename*
Displays a list of ROM images referenced by the specified game.

−listsamples *gamename*
Displays a list of samples referenced by the specified game.

−verifyroms [*gamename*|*wildcard*]
Checks for invalid or missing ROM images. By default all drivers that have valid ZIP files or directories in the rompath are verified; however, you can limit this list by specifying a driver name or wildcard after the −verifyroms command.

−verifysamples [*gamename*|*wildcard*]
Checks for invalid or missing samples. By default all drivers that have valid ZIP files or directories in the samplepath are verified; however, you can limit this list by specifying a driver name or wildcard after the −verifyroms command.

−romident
Attempts to identify ROM files, if they are known to MAME, in the specified .zip file or directory. This command can be used to try and identify ROM sets taken from unknown boards. On exit, the errorlevel is returned as one of the following:
0 all files were identified
7 all files were identified except for some "non−ROM" files
8 some files were identified
9 no files were identified

−listdevices, −ld
Output the list of devices referenced by a given game or set of games.

−listslots, −lslot
Output the list of available slots and slot devices for the system.

−listmedia, −lm
Output the list of available media for the system.

−listsoftware, −lsoft
Output the list of known software for the system.

−verifysoftware, −vsoft [*gamename*|*wildcard*]
Checks for invalid or missing ROM images in your software lists. By default all drivers that have valid ZIP files or directories in the rompath are verified; however, you can limit this list by specifying a specific driver name or wildcard.

−getsoftlist, −glist
Retrieve software list by name.

−verifysoftlist, −vlist [*softwarelistname*]
Checks a specified software list for missing ROM images if files exist for issued softwarelistname. By default, all drivers that have valid ZIP files or directories in the rompath are verified; however, you can limit this list by specifying a specific softwarelistname (without .XML).

−listmidi, −mlist
Create a list of list available MIDI I/O devices for use with emulation.

−listnetwork, −nlist
List available network adapters.

Configuration options

−[no]readconfig, −[no]rc
Enables or disables the reading of the config files. When enabled (which is the default), MAME reads the following config files in order:

1. **mame.ini**
the main configuration file
2. *name***.ini**
where *name* is your executable name, i.e. mame unless you changed it (e.g. if you renamed mame to mame0137, the parsed file will be *mame0137.ini*)
3. **debug.ini**, if the debugger is enabled
4. **vector.ini**, for vector games only
5. *[driver]***.ini**
based on the source filename of the game driver
6. *[parent]***.ini**
for clones only, may be called recursively
7. *[gamename]***.ini**
note this sometimes resolves to the same of the source driver
The settings in the later ini's override those in the earlier ini's. So, for example, if you wanted to disable overlay effects in the vector games, you can create a vector.ini with the "effect none" line in it, and it will override whatever effect value you have in your mame.ini. The default is ON (−readconfig).

−[no]writeconfig, −[no]wc
Write configuration to *[driver]*.ini on exit. Default is OFF (−nowriteconfig).

Search path options
Be careful to use the path, directory and file options in mame.ini **ONLY**. Otherwise, the outcome may be unpredictable and not consistent across releases.

−rompath, −rp, −biospath, −bp *pathname*
Specifies a list of paths within which to find ROM or hard disk images. Multiple paths can be specified by separating them with semicolons. The default is 'roms' (that is, a directory "roms" in the same directory as the MAME executable).

−hashpath *pathname*
Specifies a list of paths within which to search for software hash files. Multiple paths can be specified by separating them with semicolons. The default is 'hash' (that is, a directory 'hash' in the same directory as the MAME executable).

−samplepath, −sp *pathname*
Specifies a list of paths within which to find sample files. Multiple paths can be specified by separating them with semicolons. The default is 'samples' (that is, a directory "samples" in the same directory as the MAME executable).

−artpath, −artwork_directory *pathname*
Specifies a list of paths within which to find artwork files. Multiple paths can be specified by separating them with semicolons. The default is 'artwork' (that is, a directory "artwork" in the same directory as the MAME executable).

−ctrlrpath, −ctrlr_directory *pathname*
Specifies a list of paths within which to find controller−specific configuration files. Multiple paths can be specified by separating them with semicolons. The default is 'ctrlr' (that is, a directory "ctrlr" in the same directory as the MAME executable).

−inipath *pathname*
Specifies a list of paths within which to find .INI files. Multiple paths can be specified by separating them with semicolons. The default is '/etc/mame/'.

−fontpath *pathname*
Specifies a list of paths within which to find .BDF font files. Multiple paths can be specified by separating them with semicolons. The default is '.' (that is, search in the same directory as the MAME executable).

−cheatpath *pathname*
Specifies a list of paths within which to find cheat files. Multiple paths can be specified by separating them with semicolons. The default is ’cheat’ (that is, a directory ’cheat’ in the same directory as the MAME executable).

−crosshairpath *pathname*
Specifies a list of paths within which to find crosshair files. Multiple paths can be specified by separating them with semicolons. The default is ’crosshair’ (that is, a directory "crosshair" in the same directory as the MAME executable). If the Crosshair is set to default in the menu, MAME will look for gamenamespecified crosshairpath, where # is the player number. Failing that, MAME will use built−in default crosshairs.

−pluginspath *pathname*
Specifies a single path within which to find plugins. The default is ’plugins’ (that is, a directory ’plugins’ in the same directory as the MAME executable).

−languagepath *pathname*
Specifies a single path within which to find language files. The default is ’language’ (that is, a directory ’language’ in the same directory as the MAME executable).

Output Directory Options

−cfg_directory *pathname*
Specifies a single directory where configuration files are stored. Configuration files store user configurable settings that are read at startup and written when MAME exits. The default is ’cfg’ (that is, a directory "cfg" in the same directory as the MAME executable). If this directory does not exist, it will be automatically created.

−nvram_directory *pathname*
Specifies a single directory where NVRAM files are stored. NVRAM files store the contents of EEPROM and non−volatile RAM (NVRAM) for games which used this type of hardware. This data is read at startup and written when MAME exits. The default is ’nvram’ (that is, a directory "nvram" in the same directory as the MAME executable). If this directory does not exist, it will be automatically created.

−input_directory *pathname*
Specifies a single directory where input recording files are stored. Input recordings are created via the −record option and played back via the −playback option. The default is ’inp’ (that is, a directory "inp" in the same directory as the MAME executable). If this directory does not exist, it will be automatically created.

−state_directory *pathname*
Specifies a single directory where save state files are stored. Save state files are read and written either upon user request, or when using the −autosave option. The default is ’sta’ (that is, a directory "sta" in the same directory as the MAME executable). If this directory does not exist, it will be automatically created.

−snapshot_directory *pathname*
Specifies a single directory where screen snapshots are stored, when requested by the user. The default is ’snap’ (that is, a directory "snap" in the same directory as the MAME executable). If this directory does not exist, it will be automatically created.

−diff_directory *pathname*
Specifies a single directory where hard drive differencing files are stored. Hard drive differencing files store any data that is written back to a hard disk image, in order to preserve the original image. The differencing files are created at startup when a game with a hard disk image. The default is ’diff’ (that is, a directory "diff" in the same directory as the MAME executable). If this directory does not exist, it will be automatically created.

−comment_directory *pathname*
Specifies a single directory where debugger comment files are stored. Debugger comment files are written by the debugger when comments are added to the disassembly for a game. The default is 'comments' (that is, a directory "comments" in the same directory as the MAME executable). If this directory does not exist, it will be automatically created.

State/playback options

−state *slot*
Immediately after starting the specified game, will cause the save state in the specified *slot* to be loaded.

−[no]autosave
When enabled, automatically creates a save state file when exiting MAME and automatically attempts to reload it when later starting MAME with the same game. This only works for games that have explicitly enabled save state support in their driver. The default is OFF (−noautosave).

−playback, −pb *filename*
Specifies a file from which to play back a series of game inputs. This feature does not work reliably for all games, but can be used to watch a previously recorded game session from start to finish. In order to make things consistent, you should only record and playback with all configuration (.cfg), NVRAM (.nv), and memory card files deleted. The default is NULL (no playback).

−[no]exit_after_playback
If play back is enabled (see −playback option) the program exits when end of file is reached. Otherwise the machine will continue to run. Default is OFF (−noexit_after_playback).

−record, −rec *filename*
Specifies a file to record all input from a game session. This can be used to record a game session for later playback. This feature does not work reliably for all games, but can be used to watch a previously recorded game session from start to finish. In order to make things consistent, you should only record and playback with all configuration (.cfg), NVRAM (.nv), and memory card files deleted. The default is NULL (no recording).

−[no]record_timecode
Specify whether to create a timecode file. It contains a line with elapsed times on each press of timecode shortcut key (default is F12). This option works only when recording mode is enabled (−record option). The file is saved on inp folder. Default is OFF (−norecord_timecode).

−mngwrite *filename*
Writes each video frame to the given *filename* in MNG format, producing an animation of the game session. Note that −mngwrite only writes video frames; it does not save any audio data. Use −wavwrite for that, and reassemble the audio/video using offline tools. The default is NULL (no recording).

−aviwrite *filename*
Stream video and sound data to the given *filename* in AVI format, producing an animation of the game session complete with sound. The default is NULL (no recording).

−wavwrite *filename*
Writes the final mixer output to the given *filename* in WAV format, producing an audio recording of the game session. The default is NULL (no recording).

−snapname *string*
Describes how MAME should name files for snapshots. *string* provides a template that is used to generate a filename. Three simple substitutions are provided: the / character represents the path separator on any target platform (even Windows); the literal **%g** represents the driver name of the current game; and the literal **%i** represents an incrementing index. If **%i** is omitted, then each snapshot taken will overwrite the previous one; otherwise, MAME will find the next empty value for **%i** and use that for a filename. The default is **%g/%i**, which creates a separate folder for each game, and names the snapshots under it starting with 0000 and increasing from there. Example: if

you use **mame robby −snapname foo/%g%i** snapshots will be saved as **snaps/foo/robby0000.png**, **snaps/foo/robby0001.png** and so on.

−snapsize *width***x***height*
Hard−codes the size for snapshots and movie recording. By default, MAME will create snapshots at the game's current resolution in raw pixels, and will create movies at the game's starting resolution in raw pixels. If you specify this option, then MAME will create both snapshots and movies at the size specified, and will bilinear filter the result. Note that this size does not automatically rotate if the game is vertically oriented. The default is 'auto'.

−snapview internal|**auto**|*viewname*
Specifies the view to use when rendering snapshots and movies. By default, both use a special 'internal' view, which renders a separate snapshot per screen or renders movies only of the first screen. By specifying this option, you can override this default behavior and select a single view that will apply to all snapshots and movies. Note that *viewname* does not need to be a perfect match; rather, it will select the first view whose name matches all the characters specified by *viewname*. For example, −snapview native will match the "Native (15:14)" view even though it is not a perfect match. *viewname* can also be 'auto', which selects the first view with all screens present. The default value is 'internal'.

−[no]snapbilinear
Specify whether snapshot/movie should have bilinear filtering applied. Default is ON (−snapbilinear).

−statename *string*
Describes how MAME should store save state files, relative to the state_directory path. *string* provides a template that is used to generate a relative path. Two simple substitutions are provided: the / character represents the path separator on any target platform (even Windows); the literal **%g** represents the driver name of the current game. The default is '%g', which creates a separate folder for each game. Example: if you use **mame robby −statename foo/%g** save states will be stored inside **sta/foo/robby/**.

−[no]burnin
Tracks brightness of the screen during play and at the end of emulation generates a PNG that can be used to simulate burn−in effects on other games. The resulting PNG is created such that the least used−areas of the screen are fully white (since burned−in areas are darker, all other areas of the screen must be lightened a touch). The intention is that this PNG can be loaded via an artwork file with a low alpha (e.g, 0.1−0.2 seems to work well) and blended over the entire screen. The PNG files are saved in the snap directory under the gamename\burnin−<screen.name>.png. The default is OFF (−noburnin).

Performance options

−[no]autoframeskip, −[no]afs
Automatically determines the frameskip level while you're playing the game, adjusting it constantly in a frantic attempt to keep the game running at full speed. Turning this on overrides the value you have set for −frameskip below. The default is OFF (−noautoframeskip).

−frameskip, −fs *value*
Specifies the frameskip value (autoframeskip must be disabled). This is the number of frames out of every 12 to drop when running. For example, if you say −frameskip 2, then MAME will display 10 out of every 12 frames. By skipping those frames, you may be able to get full speed in a game that requires more horsepower than your computer has. The default value is 0, which skips no frames.

−seconds_to_run, −str *value*
This option can be used for benchmarking and automated testing. It tells MAME to stop execution after a fixed number of seconds. By combining this with a fixed set of other command line options, you can set up a consistent environment for benchmarking MAME performance. In addition, upon exit, the −str option will write a screenshot called final.png to the game's snapshot directory.

−[no]throttle
Configures the default thottling setting. When throttling is on, MAME attempts to keep the game running at the game's intended speed. When throttling is off, MAME runs the game as fast as it can. Note that the fastest speed is more often than not limited by your graphics card, especially for older games. The default is ON (−throttle).

−[no]sleep
Allows MAME to give time back to the system when running with −throttle. This allows other programs to have some CPU time, assuming that the game isn't taxing 100% of your CPU resources. This option can potentially cause hiccups in performance if other demanding programs are running. The default is ON (−sleep).

−speed *value*
Controls the speed of gameplay, relative to realtime; smaller numbers are slower. Default is 1.00.

−[no]refreshspeed, −[no]rs
Automatically adjusts the **−speed** parameter to keep the effective refresh rate below that of the lowest screen refresh rate. Default is OFF (−norefreshspeed).

−numprocessors, −np *value*
Set number of processors; this overrides the number the system reports.

−bench *value*
Benchmark for the given number of emulated seconds; implies −video none −sound none −nothrottle.

−[no]sdlvideofps
Show SDL video performance. Default is OFF (−nosdlvideofps).

Rotation options

−[no]rotate
Rotate the game to match its normal state (horizontal/vertical). This ensures that both vertically and horizontally oriented games show up correctly without the need to rotate your monitor. If you want to keep the game displaying 'raw' on the screen the way it would have in the arcade, turn this option OFF. The default is ON (−rotate).

−[no]ror | −[no]rol
Rotate the game screen to the right (clockwise) or left (counter− clockwise) relative to either its normal state (if −rotate is specified) or its native state (if −norotate is specified). Default for both is OFF (−noror −norol).

−[no]autoror | −[no]autorol
These options are designed for use with pivoting screens that only pivot in a single direction. If your screen only pivots clockwise, use −autorol to ensure that the game will fill the screen either horizontally or vertically in one of the directions you can handle. If your screen only pivots counter−clockwise, use −autoror. Default for both is OFF (−noautoror −noautorol).

−[no]flipx −[no]flipy
Flip (mirror) the game screen either horizontally (−flipx) or vertically (−flipy). The flips are applied after the −rotate and −ror/−rol options are applied. Default for both is OFF (−noflipx −noflipy).

Artwork options

−[no]artwork_crop, −[no]artcrop
Enable cropping of artwork to the game screen area only. This option can also be controlled via the Video Options menu in the user interface. The default is OFF (−noartwork_crop).

−[no]use_backdrops, −[no]backdrop
Enables/disables the display of backdrops. The default is ON (−use_backdrops).

−[no]use_overlays, −[no]overlay
Enables/disables the display of overlays. The default is ON (−use_overlays).

−[no]use_bezels, −[no]bezel
Enables/disables the display of bezels. The default is ON (−use_bezels).

−[no]use_cpanels, −[no]cpanel
Enables/disables the display of cpanels. The default is ON (−use_bezels).

−[no]use_marquees, −[no]marquee
Enables/disables the display of marquees. The default is ON (−use_bezels).

Screen options

−brightness *value*
Controls the default brightness, or black level, of the game screens. This option does not affect the artwork or other parts of the display. Using the MAME UI, you can individually set the brightness for each game screen; this option controls the initial value for all visible game screens. The standard value is 1.0. Selecting lower values (down to 0.1) will produce a darkened display, while selecting higher values (up to 2.0) will give a brighter display. The default is 1.0.

−contrast *value*
Controls the contrast, or white level, of the game screens. This option does not affect the artwork or other parts of the display. Using the MAME UI, you can individually set the contrast for each game screen; this option controls the initial value for all visible game screens. The standard value is 1.0. Selecting lower values (down to 0.1) will produce a dimmer display, while selecting higher values (up to 2.0) will give a more saturated display. The default is 1.0.

−gamma *value*
Controls the gamma, which produces a potentially nonlinear black to white ramp, for the game screens. This option does not affect the artwork or other parts of the display. Using the MAME UI, you can individually set the gamma for each game screen; this option controls the initial value for all visible game screens. The standard value is 1.0, which gives a linear ramp from black to white. Selecting lower values (down to 0.1) will increase the nonlinearity toward black, while selecting higher values (up to 3.0) will push the nonlinearity toward white. The default is 1.0.

−pause_brightness *value*
This controls the brightness level when MAME is paused. The default value is 0.65.

−effect [*none*|*filename[.png]*]
Name of a PNG file to use for visual effects, or ’none’. Default is ’none’.

Vector rendering options

−beam_width_min *value*

−beam_width_max *value*
Sets the minimum and maximum width of the vectors. This is a scaling factor against the standard vector width, which is interpolated between minimum and maximum according to the beam’s intensity. A value of 1.0 will keep the default vector line width. Smaller values will reduce the width, and larger values will increase the width. The default is 1.0.

−beam_intensity_weight *value*
Applies an exponential weight to the minimum and maximum beam width. For positive values the interpolated scaling factor will affect lines with higher intensity more than lines with lower intensity. The default is 0.0.

−flicker *value*
Simulates a vector "flicker" effect, similar to a vector monitor that needs adjustment. This option requires a float argument in the range of 0.00−100.00 (0=none, 100=maximum). The default is 0.

Video options

−video [*soft*|*opengl*|*none*]
Specifies which video subsystem to use for drawing:
soft uses software rendering, which is slower but more compatible.
opengl uses OpenGL and your graphics accelerator to speed up many aspects of drawing MAME including compositing artwork, overlays, and bezels, as well as stretching the image to fit your screen. output on some cards.
none does no drawing and is intended for CPU benchmarking.
Default is 'soft'.

−numscreens [*1-4*]
Number of screens to create; usually, you want just one. Default is '1'.

−[no]window, −[no]w
Run MAME in either full screen or a window. This is a fully−featured window mode where the window resizes as necessary to track what the game does. And you can resize it yourself with your OS's standard window controls. The default is OFF (−nowindow).

−[no]maximize, −[no]max
Controls initial window size in windowed mode. If it is set on, the window will initially be set to the maximum supported size when you start MAME. If it is turned off, the window will start out at the smallest supported size. This option only has an effect when the −window option is used. The default is ON (−maximize).

−[no]keepaspect, −[no]ka
Forces the correct aspect ratio. This means when you're resizing the window in windowed mode the actual game image will resize in discrete steps to maintain the proper shape of the game graphics. If you turn this off you can resize the window to anything you like and get funny squishing and stretching. The same applies for full−screen. Default is ON (−keepaspect).

−[no]unevenstretch, −[no]ues
Allow non−integer stretch factors. Video purists should stay far, far away from this option, while everyone else will be happy to know that it lets you fill the screen properly in full−screen mode. Default is ON (−unevenstretch).

−[no]unevenstretchx, −[no]uesx
Act as −[no]unevenstretch on horizontal basis only.

−[no]intoverscan, −[no]ios
Allow overscan on integer scaled targets.

−intscalex, −sx
Set horizontal integer scale factor.

−intscaley, −sy
Set vertical integer scale factor.

−[no]centerh
Center horizontally within the view area. Default is ON (−centerh).

−[no]centerv
Center vertically within the view area. Default is ON (−centerv).

−[no]waitvsync, −[no]vs
Enable waiting for the start of VBLANK before flipping screens; reduces tearing effects. Default is OFF (−nowaitvsync).

−[no]syncrefresh, −[no]srf
Enable using the start of VBLANK for throttling instead of the game time. Default is OFF (−nosyncrefresh).

Software video rendering subsystem options
NOTE: All the options in this group are available only with softare video rendering subsystem, i.e **−video soft**.

−prescale [*value*]
Scale screen rendering by this amount in software. Default is 1.

−scalemode, −sm [*none*|*async*|*yv12*|*yuy2*|*yv12x2*|*yuy2x2*]
Hardware scaling mode.
none use software rendering.
async async overlay.
yv12 yv12 overlay.
yuy2 yuy2 overlay.
yv12x2 yv12 overlay using x2 prescaling.
yuy2x2 yuy2 overlay using x2 prescaling.
Default is NONE.

OpenGL video rendering subsystem options
NOTE: All the options in this group are available only with OpenGL video rendering subsystem, i.e **−video opengl**.

−[no]filter, −[no]glfilter, −[no]flt
Enable bilinear filtering on screen output. Default is ON (−filter).

−prescale [*value*]
Scale screen rendering by this amount in software. Default is 1.

−[no]gl_forcepow2texture
Force power of two textures. Default is OFF (−nogl_forcepow2texture).

−[no]gl_notexturerect
Don’t use OpenGL GL_ARB_texture_rectangle. Turn off if corruption occurs in OpenGL mode, at cost of some performance loss. Default is ON (−gl_notexturerect).

−[no]gl_vbo
Enable OpenGL VBO, if available, for a performance increase. Turn off if corruption occurs. Default is ON (−gl_vbo).

−[no]gl_pbo
Enable OpenGL PBO, if available, for a performance increase. Turn off if corruption occurs. Default is ON (−gl_pbo).

−[no]gl_glsl
Enable OpenGL GLSL, if available, for a performance increase. Default is OFF (−nogl_glsl).

−gl_glsl_filter *value*
Enable OpenGL GLSL filtering instead of FF filtering 0=plain, 1=bilinear. Default is 1: bilinear.

−glsl_shader_mame[0−9]
Preferred custom OpenGL GLSL shader set mame bitmap (from 0 to 9).

−glsl_shader_screen[0−9]
Preferred custom OpenGL GLSL shader screen bitmap (from 0 to 9).

−screen
Explicit name for all screens; ’auto’ here will try to make a best guess.

−aspect, −screen_aspect
Aspect ratio for all screens; ’auto’ here will try to make a best guess.

−resolution, −r
Preferred resolution for all screens; format is *width*x*height*[*@refreshrate*] or ’auto’.

−view Preferred view for all screens

−screen[0−3]
Explicit name of the first|second|third|fourth screen; ’auto’ here will try to make a best guess.

−aspect[0−3]
Aspect ratio of the first|second|third|fourth screen; 'auto' here will try to make a best guess.

−resolution[0−3], −r[0−3]
Preferred resolution for the first|second|third|fourth screen; format is *width*x*height*[*@refreshrate*] or 'auto'.

−view[0−3]
Preferred view for the first|second|third|fourth screen.

BGFX post−processing options

NOTE: All the options in this group are available only when BGFX video post−processing is enabled, i.e **−video bgfx**. For full info on BGFX please visit official MAME documentation page:
http://docs.mamedev.org/advanced/bgfx.html

−bgfx_path *pathname*
This is where your BGFX shader files are stored. The default is 'bgfx' (that is, a directory "bgfx" in the same directory as the MAME executable).

−bgfx_backend *auto|opengl*
Selects a rendering backend for BGFX to use. The default is 'auto', which will let MAME choose the best selection for you.

−bgfx_debug
Enables BGFX debugging features. Most users will not need to use this.

−bgfx_screen_chains *default|unfiltered|hlsl*[,...]
This dictates how to handle BGFX rendering on a per−display basis. For each display specify one of the possible choices:
default default bilinear filterered output
unfiltered nearest neighbor unfiltered output
hlsl HLSL display simulation through shaders
Separate directives for each window with a comma (,) and for each physical screen with a colon (:). For example, for an emulated game with 3 displays emulated on 3 windows on your monitor, **−bgfx_screen_chains default,unfiltered,default** specifies to apply default filter on what is been rendered on the first and third window and leave the content of the second window unfiltered.

−bgfx_shadow_mask *filename*
This specifies the shadow mask effect PNG file. Default is 'slot-mask.png'.

−bgfx_avi_name *filename*
This specifies a filename for BGFX output logging.

Full screen options

−[no]switchres
Affects full screen mode only. Chooses if MAME can try to change the screen resolution (color depth is normally left alone) when in full−screen mode. If it's off, you always get your desktop resolution in full−screen mode (which can be useful for LCDs). Default is OFF (−noswitchres).

−[no]useallheads
Split full screen image across monitors. Default is OFF (−nouseallheads).

Sound options

−[no]sound
Enable or disable sound altogether. The default is ON (−sound).

−samplerate, −srf *value*
Sets the audio sample rate. Smaller values (e.g. 11025) cause lower audio quality but faster emulation speed. Higher values (e.g. 48000) cause higher audio quality but slower emulation speed. The default is 48000.

−[no]samples
Use samples if available. The default is ON (−samples).

−volume, −vol *value*
Sets the startup volume. It can later be changed with the user interface (see Keys section). The volume is an attenuation in dB: e.g., "−volume −12" will start with −12dB attenuation. The default is 0.

−audio_latency *value*
This controls the amount of latency built into the audio streaming. The latency parameter controls the lower threshold. The default is 1 (meaning lower=1/5 and upper=2/5). Set it to 2 (−audio_latency 2) to keep the sound buffer between 2/5 and 3/5 full. If you crank it up to 4, you can definitely notice the lag.

Input options

−[no]coin_lockout, −[no]coinlock
Enables simulation of the "coin lockout" feature that is implmeneted on a number of game PCBs. It was up to the operator whether or not the coin lockout outputs were actually connected to the coin mechanisms. If this feature is enabled, then attempts to enter a coin while the lockout is active will fail and will display a popup message in the user interface. If this feature is disabled, the coin lockout signal will be ignored. The default is ON (−coin_lockout).

−ctrlr *controller*
Enables support for special controllers. Configuration files are loaded from the ctrlrpath. They are in the same format as the .cfg files that are saved, but only control configuration data is read from the file. The default is NULL (no controller file).

−[no]mouse
Controls whether or not MAME looks for a mouse controller to use. Note that in many cases, lightguns are treated as mice by the operating system, so you may need to enable this to enable lightgun support. When this is enabled, you will not be able to use your mouse while playing a game. If you want to get control of your computer back, you will need to either pause the game or quit. The default is OFF (−nomouse).

−[no]joystick, −[no]joy
Controls whether or not MAME looks for joystick/gamepad controllers. The default is ON (−joystick).

−[no]lightgun, −[no]gun
Controls whether or not MAME makes use of lightgun controllers. Note that most lightguns map to the mouse, so using −lightgun and −mouse together may produce strange results. The default is OFF (−nolightgun).

−[no]multikeyboard, −[no]multikey
Determines whether MAME differentiates between multiple keyboards. Some systems may report more than one keyboard; by default, the data from all of these keyboards is combined so that it looks like a single keyboard. Turning this option on will enable MAME to report keypresses on different keyboards independently. The default is OFF (−nomultikeyboard).

−[no]multimouse
Determines whether MAME differentiates between multiple mice. Some systems may report more than one mouse device; by default, the data from all of these mice is combined so that it looks like a single mouse. Turning this option on will enable MAME to report mouse movement and button presses on different mice independently. The default is OFF (−nomultimouse).

−[no]steadykey, −[no]steady
Some games require two or more buttons to be pressed at exactly the same time to make special moves. Due to limitations in the PC keyboard hardware, it can be difficult or even impossible to accomplish that using the standard keyboard handling. This option selects a different handling that makes it easier to register simultaneous button presses, but has the disadvantage of making

controls less responsive. The default is OFF (−nosteadykey).

−[no]ui_active
Enable MAME user interface on top of emulated keyboard (if present). Default is OFF (−noui_active).

−[no]offscreen_reload, −[no]reload
Controls whether or not MAME treats a second button input from a lightgun as a reload signal. In this case, MAME will report the gun's position as (0,MAX) with the trigger held, which is equivalent to an offscreen reload. This is only needed for games that required you to shoot offscreen to reload, and then only if your gun does not support off screen reloads. The default is OFF (−nooffscreen_reload).

−joystick_map, −joymap *map*
Controls how joystick values map to digital joystick controls. See /usr/share/doc/mame/config.txt for full details on *map* format.

−joystick_deadzone, −joy_deadzone, −jdz *value*
If you play with an analog joystick, the center can drift a little. joystick_deadzone tells how far along an axis you must move before the axis starts to change. This option expects a float in the range of 0.0 to 1.0. Where 0 is the center of the joystick and 1 is the outer limit. The default is 0.3.

−joystick_saturation, −joy_saturation, −jsat *value*
If you play with an analog joystick, the ends can drift a little, and may not match in the +/− directions. joystick_saturation tells how far along an axis movement change will be accepted before it reaches the maximum range. This option expects a float in the range of 0.0 to 1.0, where 0 is the center of the joystick and 1 is the outer limit. The default is 0.85.

−[no]natural, −[no]nat
Allows user to specify whether or not to use a natural keyboard. This allows you to start your game or system in a 'native' mode, depending on your region, allowing compatibility for non−"QWERTY" style keyboards. The default is OFF (−nonatural).

−[no]joystick_contradictory, −[no]joy_contradictory
Enable contradictory direction digital joystick input at the same time. Default is OFF (−nojoystick_contradictory).

−coin_impulse *time*
Set coin impulse time. A negative value for *time* disables the impulse; set *time* to 0 to obey driver or give a positive value to set impulse time.

−uimodekey, −umk *value*
Specifies the key used to toggle between full and partial UI mode.

−uifontprovider *auto*|*sdl*|*none*
Provider for ui font.

−output *console*|*network*|*none*
Provider for output.

−keyboardprovider *auto*|*sdl*|*none*
Provider for keyboard input.

−mouseprovider *auto*|*sdl*|*none*
Provider for mouse input.

−lightgunprovider *auto*|*none*
Provider for lightgun input.

−joystickprovider *auto*|*sdl*|*none*
Provider for joystick input.

−[no]keymap
Enable keymap for non−QWERTY keyboards. Used in conjunction with **−keymap_file**. Default is OFF (−nokeymap).

−keymap_file *keymap_file*
Specifies the full path to the keymap file to be used. A few keymap files are available in **/usr/share/games/mess/keymaps**.

−joy_idx[0−8] *joystick*
With these options you can assign a joystick to a specific index in MAME. Even if the kernel will list the joysticks in a different order on the next boot, MAME will still see the joystick as e.g. "Joystick 2". Use mame −v to see which joysticks are recognized. Default is 'auto'.

−[no]sixaxis
Use special handling for PS3 Sixaxis controllers. Default is OFF (−nosixaxis).

−mouse_index[1−8]
Map mouse to specific index in MAME.

−keyb_idx[0−8] *keyboard*
With these options you can assign a keyboard to a specific index in MAME.

−videodriver, −vd *auto*|*x11*|*directfb*
SDL video driver to use; 'auto' selects SDL default.

−renderdriver, −rd *auto*|*software*|*opengl*|*directfb*
SDL render driver to use; 'auto' selects SDL default.

−audiodriver, −ad *auto*|*alsa*|*arts*
SDL audio driver to use; 'auto' selects SDL default.

−gl_lib *auto*|*alsa*|*arts*
Alternative libGL.so to use; 'auto' selects SDL default.

Input automatic enable options

−paddle_device, −paddle [*none*|*keyboard*|*mouse*|*lightgun*|*joystick*]

−adstick_device, −adstick [*none*|*keyboard*|*mouse*|*lightgun*|*joystick*]

−pedal_device, −pedal [*none*|*keyboard*|*mouse*|*lightgun*|*joystick*]

−dial_device, −dial [*none*|*keyboard*|*mouse*|*lightgun*|*joystick*]

−trackball_device, −trackball [*none*|*keyboard*|*mouse*|*lightgun*|*joystick*]

−lightgun_device [*none*|*keyboard*|*mouse*|*lightgun*|*joystick*]

−positional_device [*none*|*keyboard*|*mouse*|*lightgun*|*joystick*]

−mouse_device [*none*|*keyboard*|*mouse*|*lightgun*|*joystick*]
Each of these options controls autoenabling the mouse, or joystick depending on the presence of a particular class of analog control for a particular game. For example, if you specify the option −paddle mouse, then any game that has a paddle control will automatically enable mouse controls just as if you had explicitly specified −mouse. Note that these controls override the values of −[no]mouse, −[no]joystick, etc.

Debugging options

−[no]log
Creates a file called error.log which contains all of the internal log messages generated by the MAME core and game drivers. The default is OFF (−nolog).

−[no]verbose, −[no]v
Displays internal diagnostic information. This information is very useful for debugging problems with your configuration. **IMPORTANT**: when reporting bugs, please run with mame −verbose and include the resulting information. The default is OFF (−noverbose).

−[no]update_in_pause
Enables updating the screen bitmap while the game is paused. This is useful for debuggin in some scenarios (and gets in the way in others). Default is OFF (−noupdate_in_pause).

−[no]debug, −[no]d
Activates the integrated debugger. By default, the debugger is entered by pressing the tilde (~) key during emulation. It is also entered immediately at startup. The default is OFF (−nodebug).

−debugscript *filename*
Specifies a file that contains a list of debugger commands to execute immediately upon startup. The default is NULL (no commands).

−debugger *debugger_name*
Name of the debugger to use. Default is AUTO.

−debugger_font, −dfont *font_name*
Specifies the font to use for debugging. Default is AUTO.

−debugger_font_size, −dfontsize *size*
Specifies the font size to use for debugging.

−[no]oslog
Outputs the error.log data to the system debugger. This can be used at the same time as −log to output the log data to both targets as well. Default is OFF (−nooslog).

Communication options

−comm_localhost
Local address to bind to.

−comm_localport
Local port to bind to.

−comm_remotehost
Remote address to connect to.

−comm_remoteport
Remote port to connect to.

Misc options

−[no]drc
Enable DRC cpu core if available. Default is ON (−drc).

−[no]drc_use_c
Force DRC use C backend. Default is OFF (−nodrc_use_c).

−[no]drc_log_uml
Write DRC UML disassembly log. Default is OFF (−nodrc_log_uml).

−[no]drc_log_native
Write DRC native disassembly log. Default is OFF (−no_drc_log_native).

−bios *biosname*
Specifies the specific BIOS to use with the current game, for game systems that make use of a BIOS. The −listxml output will list all of the possible BIOS names for a game. The default is 'default'.

−[no]cheat, −[no]c
Activates the cheat menu with autofire options and other tricks from the cheat database, if present. The default is OFF (−nocheat).

−[no]skip_gameinfo
Forces MAME to skip displaying the game info screen. The default is OFF (−noskip_gameinfo).

−uifont *fontname*
Specifies the name of a BDF font file to use for the UI font. If this font cannot be found or cannot be loaded, the system will fall back to its built−in UI font. On some platforms *fontname* can be a system font name instead of a BDF font file. The default is 'default' (use the OSD−determined default font).

−ui *simple|cabinet*
Type of UI.

−ramsize, −ram *value*
Size of RAM (if supported by driver).

−[no]confirm_quit
Display confirm quit screen on exit. Default is ON (−confirm_quit).

−[no]ui_mouse
Display UI mouse cursor. Default is OFF (−noui_mouse).

−autoboot_command, −ab *command*
Command string to execute after machine boot (in quotes ""). To issue a quote to the emulation, use """ in the string. Using **\n** will issue a create a new line, issuing what was typed prior as a command. Example: **−autoboot_command "load """$""",8,1\n"**.

−autoboot_delay [*value*]
Timer delay (in seconds) to trigger command execution on autoboot. Default is 2.

−autoboot_script, −script [*filename.lua*]
File containing scripting to execute after machine boot.

−[no]console
Enable emulator LUA console. Default is OFF (−noconsole).

−[no]plugins
Enable LUA plugin support. Default is ON (−plugins).

−plugin *value*
List of plugins to enable.

−noplugin *value*
List of plugins to disable.

−language, −lang *value*
Display language. Default is 'English'.

−watchdog *value*
Specifies a number of seconds after which MAME should automatically exit if it detects that the emulation has locked up.

SEE ALSO

chdman(1), jedutil(1), ldresample(1), ldverify(1), romcmp(1)

LEGAL NOTICE

Please visit the MAME website for some important legal information:

http://mamedev.org/legal.html