Fujitsu Micro 7

The Fujitsu Micro 7 (FM-7) is a computer developed by Fujitsu. It was released exclusively in Japan and Spain on November 1982, retailing for ¥126,000 Yen ($1,250 USD; $4,216.44 in 2021).

The FM-7 is a stripped down version of the prior FM-8 computer, originally referred to as the FM-8 Jr. It primarily competed with the NEC PC-8801 and the Sharp X1 series of computers.

Model list (list source):

<table>
<thead>
<tr>
<th>Model</th>
<th>Release</th>
<th>Main CPU</th>
<th>Sub CPU</th>
<th>RAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM-8</td>
<td>1981-05</td>
<td>M68A09 @ 1MHz</td>
<td>M6809</td>
<td>64K (main) + 48K (VRAM)</td>
</tr>
<tr>
<td>FM-7</td>
<td>1982-11</td>
<td>M68B09 @ 2MHz</td>
<td>M68B09</td>
<td>64K (main) + 48K (VRAM)</td>
</tr>
<tr>
<td>FM-NEW7</td>
<td>1984-05</td>
<td>M68B09 @ 2MHz</td>
<td>M68B09</td>
<td>64K (main) + 48K (VRAM)</td>
</tr>
<tr>
<td>FM-77</td>
<td>1984-05</td>
<td>M68B09E @ 2MHz</td>
<td>M68B09E</td>
<td>64/256K (main) + 48K (VRAM)</td>
</tr>
<tr>
<td>FM-77AV</td>
<td>1985-10</td>
<td>M68B09E @ 2MHz</td>
<td>M68B09</td>
<td>128/192K (main) + 96K (VRAM)</td>
</tr>
<tr>
<td>FM-77AV20</td>
<td>1986-10</td>
<td>M68B09E @ 2MHz</td>
<td>M68B09</td>
<td>128/192K (main) + 96K (VRAM)</td>
</tr>
<tr>
<td>FM-77AV40</td>
<td>1986-10</td>
<td>M68B09E @ 2MHz</td>
<td>M68B09</td>
<td>192/448K (main) + 144K (VRAM)</td>
</tr>
<tr>
<td>FM-77AV20EX</td>
<td>1987-11</td>
<td>M68B09E @ 2MHz</td>
<td>M68B09</td>
<td>128/192K (main) + 96K (VRAM)</td>
</tr>
<tr>
<td>FM-77AV40EX</td>
<td>1987-11</td>
<td>M68B09E @ 2MHz</td>
<td>M68B09</td>
<td>192/448K (main) + 144K (VRAM)</td>
</tr>
<tr>
<td>FM-77AV40SX</td>
<td>1988-11</td>
<td>M68B09E @ 2MHz</td>
<td>M68B09</td>
<td>192/448K (main) + 144K (VRAM)</td>
</tr>
</tbody>
</table>

The only emulator Batocera employs for this system is MAME/MESS's FM-7 core, which is still experimental and lacking documentation. Therefore, emulation of this system can really only be recommended to advanced users.

This system scrapes metadata for the “fm7” group and loads the fm7 set from the currently selected theme, if available.
Quick reference

- **Emulator:** MAME
- **Folder:** /userdata/roms/fm7
- **Accepted ROM formats:** .wav, .t77, .mfi, .dfi, .hfe, .mfm, .td0, .imd, .d77, .d88, .1dd, .cqm, .cqi, .dsk, .zip, .7z

BIOS

Requires MAME BIOS file fm7.zip or *.7z in either roms/fm7 or BIOS folder.

Optionally fm77av.zip or *.7z for FM-77AV support.

ROMs

Place your Fujitsu Micro 7 ROMs in /userdata/roms/fm7.

Emulators

MAME

**MAME**, the Multiple Arcade Machine Emulator, is a multi-purpose emulation framework which facilitates the emulation of vintage hardware and software. Originally targeting vintage arcade machines, MAME has since absorbed the sister-project **MESS** (Multi Emulator Super System) to support a wide variety of vintage computers, video game consoles and calculators as well. MAME doesn't use an individual “core” for each system like RetroArch does, instead the ROM itself usually contains the necessary information to accurately emulate it, thus making it specific to the version of MAME it was made for. Overall it's a very complicated subject, we have a [guide specific to arcade](#) just for it.

**MAME configuration**

MAME offers a **Menu** in-game ([H0TKEY] + ⊞ or [Tab] on the keyboard). This can be used to manually adjust inputs or game settings. If you're having issues with a specific game, check the [MAMEdev FAQ for that game here](#). For MESS systems specifically, you might find more information on [MESS's wiki](#). All options can also be edited by opening the mame.ini file.

Standardized features available to all versions of this emulator: fm7.videomode, fm7.decoration, fm7.padtokeyboard

<table>
<thead>
<tr>
<th>ES setting name batocera.conf_key</th>
<th>Description ⇒ ES option key_value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settings that apply to all versions of this emulator</td>
<td></td>
</tr>
</tbody>
</table>

https://wiki.batocera.org/
<table>
<thead>
<tr>
<th>ES setting name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>batocera.conf_key</td>
<td>ES option key_value</td>
</tr>
</tbody>
</table>
| VIDEO MODE fm7.video    | BGFX for post-processing, accel/opengl for raw image.  
⇒ BGFX bgfx, Accel accel, OpenGL opengl.  |
| BGFX GRAPHICS API fm7.bgfxbackend | Depends on video mode being set to BGFX. Vulkan is better, when supported.  
⇒ MAME Detect automatic, OpenGL opengl, OpenGL ES gles, Vulkan vulkan.  |
| BGFX VIDEO FILTER fm7.bgfxshaders | Apply a post-processing effect.  
⇒ Off None, Bilinear default, CRT Geom crt-geom, CRT Geom Deluxe crt-geom-deluxe, Super Eagle eagle, HLSL hlsl, HQ2X hpq2x, HQ3X hpq3x, HQ4X hpq4x.  |
| CRT SWITCHRES fm7.switchres | Allows the use of switchres profiles if present.  
⇒ Off, On.  |
| VERTICAL ROTATION (TATE) fm7.rotation | Rotates screen by 90 degrees. Intended for rotating displays.  
⇒ Off None, Rotate 90 autoror, Rotate 270 autorol.  |
| ALT DPAD MODE fm7.altdpad | If the D-Pad is oriented incorrectly for your controller.  
⇒ Off (Default) 0, DS3 Orientation 1, X360 Orientation 2.  |

Settings specific to fm7

| FM-7 MODEL fm7.altmodel | ⇒ FM-7 fm7, FM-77AV fm77av.  |
| MEDIA TYPE fm7.altromtype | Type of ROM file to load.  
⇒ Cassette cass, Disk (Drive 1) flop1, Disk (Drive 2) flop2.  |
| UI KEYS fm7.enableui | Open with hotkey + D-pad up or Scroll Lock in-game.  
⇒ Off at Start 0, On at Start 1.  |

Controls

Here are the default FM-7's controls shown on a Batocera RetroPad:

Troubleshooting

Further troubleshooting

For problems with MAME specifically, there are some tips on the troubleshooting section on MAME's system page.

For further troubleshooting, refer to the generic support pages.