Namco System 22

The **Namco System 22** is an arcade system board developed by Namco. It was released in **1993** and was a pioneer of hardware-accelerated 3D texture-mapped polygon graphics in arcades. Its enhanced revision, the **System Super 22**, followed in 1995 with additional sprite capabilities and graphical effects. Notable games include *Ridge Racer*, *Rave Racer*, *Time Crisis*, *Cyber Cycles*, and *Alpine Racer*.

Quick reference

- **Emulators:** libretro-mame (default), mame
- **Folder:** `/userdata/roms/namco22`
- **Accepted ROM formats:** `.zip .7z`

BIOS

No BIOS files are required. All necessary data is self-contained within each game's ROM archive.

ROMs

Place your ROM files in:

`/userdata/roms/namco22/`

ROMs must match the MAME version used by your Batocera installation. Only parent ROM sets are needed (clones are optional). No CHD files are required for this system.

Game list

System 22

MAME ROM name	Game title	Year	Input type
acedrive	Ace Driver: Racing Evolution	1994	steering / pedals
cybrcomm	Cyber Commando	1994	joystick
raverace	Rave Racer	1995	steering / pedals
ridgerac	Ridge Racer	1993	steering / pedals
ridgeracf	Ridge Racer Full Scale	1993	steering / pedals
ridgera2	Ridge Racer 2	1994	steering / pedals
victlap	Ace Driver: Victory Lap	1996	steering / pedals

System Super 22

MAME ROM name	Game title	Year	Input type
adillor	Armadillo Racing	1997	analog stick
airco22b	Air Combat 22	1995	flight stick
alpinerd	Alpine Racer	1994	analog stick
alpines	Alpine Surfer	1996	analog stick
alpinr2b	Alpine Racer 2	1996	analog stick
aquajet	Aqua Jet	1996	analog stick / pedals
cybrcycc	Cyber Cycles	1995	steering / pedals
dirtdash	Dirt Dash	1995	steering / pedals
propcycl	Prop Cycle	1996	analog stick
timecris	Time Crisis	1996	lightgun
tokyowar	Tokyo Wars	1996	joystick / pedals

All games have **imperfect** emulation status in MAME, except ridgeracf (Ridge Racer Full Scale) which is **preliminary** and may not be playable.

Emulators

libretro-mame

This is the default emulator for Namco System 22 in Batocera. It runs MAME through a RetroArch core.

ES setting name batocera.conf key	Description ⇒ ES option key value
EMULATOR namco22.emulator	Choose which emulator to use. ⇒ libretro (default), mame
CORE namco22.core	Choose which core to use. ⇒ mame

mame

Standalone MAME can also be used. This may provide better compatibility and more configuration options.

ES setting name batocera.conf key	Description ⇒ ES option key value
EMULATOR namco22.emulator	Choose which emulator to use. ⇒ mame
CORE namco22.core	Choose which core to use. ⇒ mame

To use standalone MAME, set the emulator for the system (or per-game) in EmulationStation:

Game Settings → Per System Advanced Configuration → Namco System 22 → Emulator → MAME

Controls

Namco System 22 games use a variety of input devices. Most driving games (Ridge Racer, Rave Racer, Cyber Cycles, Dirt Dash) use **analog steering and pedals** — an analog gamepad or steering wheel controller is strongly recommended.

Time Crisis (`timecris`) is a **lightgun game**. You will need a compatible lightgun (such as Sinden, GUN4IR, or Wiimote) configured in Batocera. See the lightgun setup guide for details.

Games like Alpine Racer, Prop Cycle, and Aqua Jet were designed for specialized arcade controls (ski poles, bicycle pedals, jet ski handlebars). These are mapped to analog stick input in MAME.

If steering feels too sensitive or too sluggish in driving games, adjust the analog sensitivity in the MAME in-game menu (press **Tab** during gameplay → *Analog Controls*).

Hardware specifications

System 22 (1993)

Component	Specification
Main CPU	Motorola 68020 @ 24.576 MHz
DSP	2× Texas Instruments TMS320C25 @ 49.152 MHz
GPU	Evans & Sutherland TR3
Sound CPU	2× Namco C74 (Mitsubishi M37702) @ 16.384 MHz
Sound chip	Namco C352 (32 channels, 42 kHz stereo)
Display	640×480 @ 59.9 Hz
Polygon performance	~240,000 textured quads/sec
Graphics features	Texture mapping, Gouraud shading, translucency, fog, Z-buffering

System Super 22 (1995)

Component	Specification
Main CPU	Motorola 68EC020 @ 24.576 MHz
DSP	2× Texas Instruments TMS320C25 @ 49.152 MHz
GPU	Enhanced Evans & Sutherland TR3
Sound CPU	Mitsubishi M37710 @ 16.384 MHz
Sound chip	Namco C352 (32 channels, 42 kHz stereo)
Display	640×480 @ 59.9 Hz
Key enhancements	Hardware sprite layer with zoom/rotation, higher polygon rates

Troubleshooting

Graphical glitches

The MAME Namco System 22 driver (`namcos22.cpp`) has **imperfect** graphics emulation. You may notice:

- Texture mapping inaccuracies (off by 1 pixel)
- Garbage tiles in some attract mode sequences
- Occasional polygon rendering issues
- Mirror reflections in Ridge Racer 2 and Rave Racer may have visual artifacts

These are limitations of the current MAME driver, not Batocera-specific issues.

Performance

Emulating the Namco System 22 hardware (dual TMS320C25 DSPs + custom GPU) is CPU-intensive. An **x86_64** system is recommended. ARM-based devices (Raspberry Pi, Odroid) are unlikely to run these games at full speed.

Ridge Racer Full Scale not working

`ridgeracf` (Ridge Racer Full Scale) has **preliminary** emulation status in MAME and is not expected to be playable. This is a MAME limitation.

Controls not responding correctly

- Open the MAME in-game menu with **Tab**
- Navigate to *Input (this Machine)* to remap controls
- Navigate to *Analog Controls* to adjust sensitivity, speed, and dead zones for steering/pedal inputs

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