



Analogue Super Nt Reference Manual

Analogue

Celebrate & explore the history of video games with the respect it deserves.

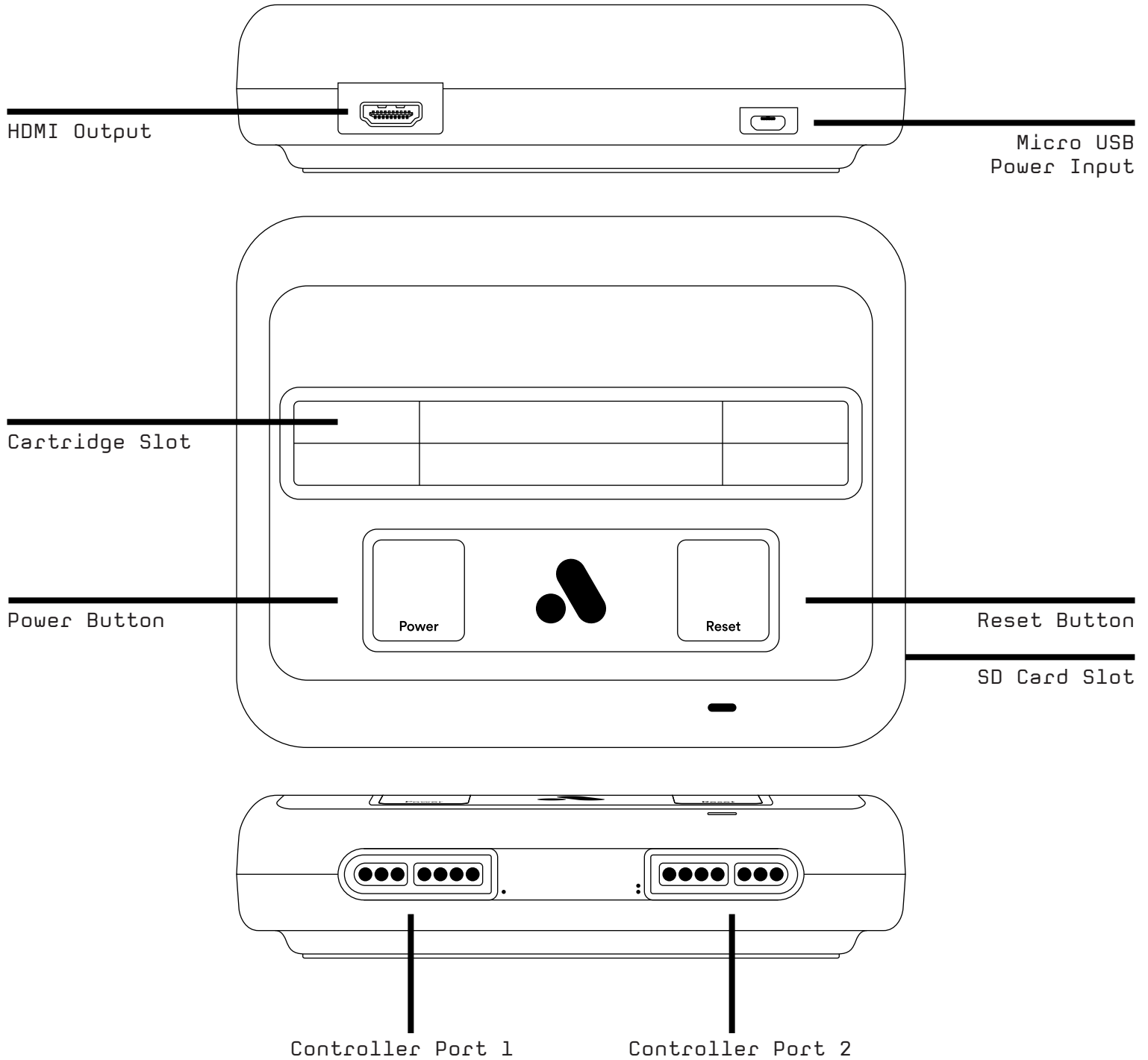
Congratulations on becoming an Analogue Super Nt owner.

A reimagining of perhaps the greatest video game system of all time. Engineered with an FPGA. No emulation. 1080p. Zero lag. Total accuracy. The Super Nt is not a plug n' play toy. It is the definitive way to explore Nintendo's 16-bit era. Compatible with the 2,200+ SNES and Super Famicom game cartridge library. Explore and re-live the greatest video game system of all time with no compromises.

Contents of your Super Nt Package

- Analogue Super Nt
- Super Turrigan Director's Cut (digital)
- Super Turrigan 2 (digital)
- HDMI cable
- USB cable
- Worldwide USB Power Supply [100-240v, 50/60hz, USA/JPN plug-type]

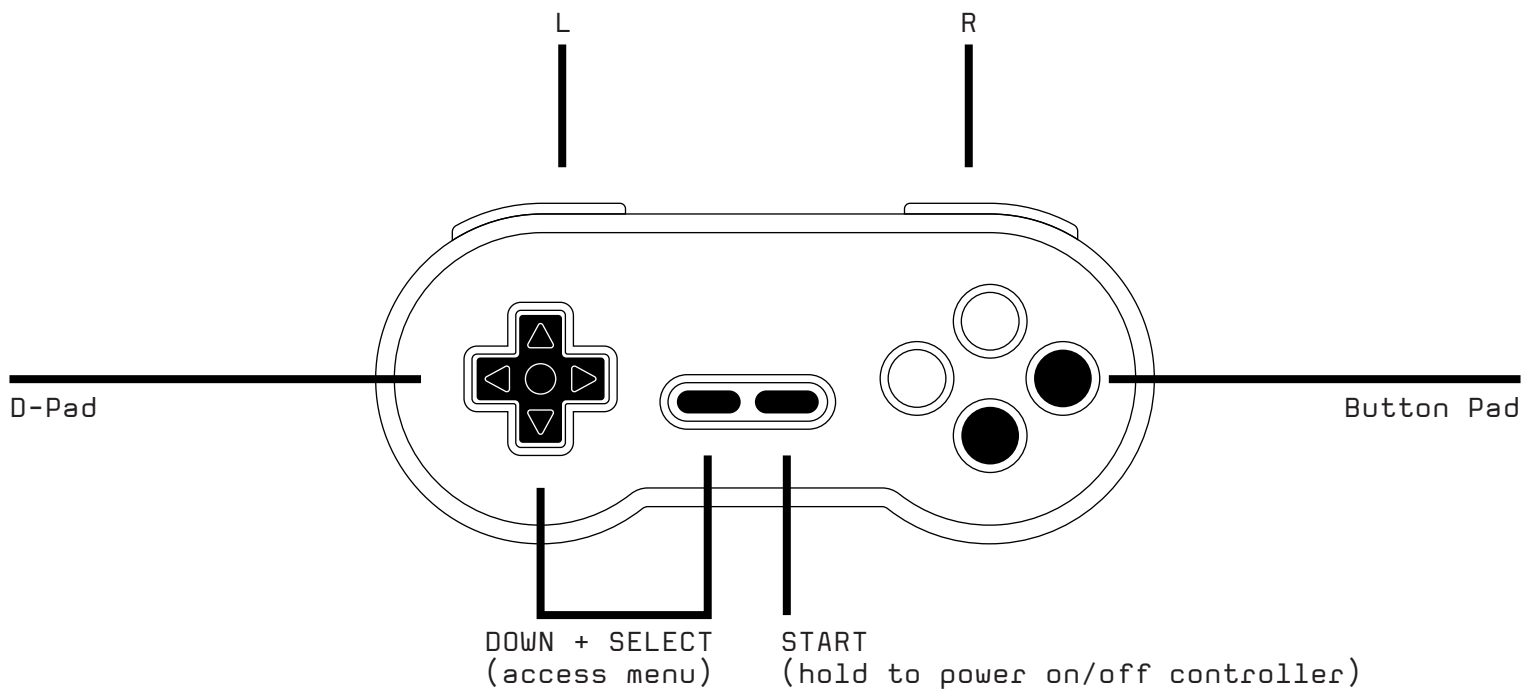
To start using your Super Nt, insert the AC adapter into the power input and plug in a HDMI cable into the respective input on your TV, monitor or projector. Press the power button on your Super Nt with or without a game cartridge inserted.



To start using your SN30 controller (not included) with a Retro Receiver for SNES (not included) please see the intructions below.

Pairing

- 1 Hold start for 3 seconds on your SN30 controller to enter pairing mode
- 2 Press pairing button on Retro Receiver to pair new controller
- 3 Wait until both LEDs are solid blue
- 4 Your controller is now paired



Setting Up Super Nt

1. Plug your micro-USB cable into your USB power supply
2. Plug your micro-USB cable into the Super Nt
3. Plug your USB power supply into a working AC Outlet
4. Plug one end of your HDMI cable into your Super Nt
5. Plug the other end of your HDMI cable into your TV/Monitor/Capture Device
6. Plug in SNES-compatible controllers into Controller Port 1 (and 2 if you wish)*
7. Insert a cartridge into the cartridge slot (optional)
8. Push the Power Button

Updating the Firmware

Before playing your Super Nt, make sure to update to the latest firmware at support.analogue.co. You will need a FAT16 or FAT32 formatted SD card to update the firmware.

In order to update the firmware, copy the latest firmware update file at support.analogue.co (with a .bin extension) to the root directory of your SD card. Make sure no other firmware files are in the root directory. Insert your SD card into the SD card slot on your Super Nt and turn the power on. The firmware update process will start automatically and takes approximately three minutes to complete. During that time the power LED will flicker red at the screen will be blank. When the process is complete the LED will show a steady color and you will see the Animated Super Nt Startup logo. Do not power off the Super Nt while the firmware is updating. If the power goes off for any reason, Don't Panic! The system may not display anything but it will look for a firmware file to flash to once the power is restored. You cannot brick your Super Nt with a failed firmware update.

When you update firmware, all settings are reset to their defaults. Take notes of your settings prior to updating.

Notes on Power

While any charger that can supply 5v/2A will work with the Super Nt, including a car charger, it is recommended to use the included high quality USB-to-micro USB cable.

Setting up your TV for perfect retro gaming

If your TV has a low-lag or Game Mode, enable it. Otherwise turn off all processing features on your TV or it may negatively effect gameplay and latency.

Default Controller Key Assignments & Hotkeys

Down + Select – Enter/Leave Menu

Entering the Menu does not pause a game and blocks controller inputs to the game, leaving the Menu returns to a game in progress and returns controller inputs to the game

Up + Select – Warm Reset

Same as pushing the reset button

Y – Confirm/Select Menu Option Key

B – Cancel/Back Key

Main Menu Options

Run Cartridge

Performs a Cold Reset (CPU registers and memory is reset) and runs the cartridge in the cartridge slot.

Super Turrigan Director's Cut

Allows you to play Super Turrigan Director's Cut, which is exclusive to this system. Download the manual from the non-Director's Cut version here :

http://www.gamesdatabase.org/Media/SYSTEM/Nintendo_SNES/manual/Formatted/Super_Turrigan_-_1993_-_Kemco.pdf

Super Turrigan 2

Allows you to play Super Turrigan 2. You can view the Super Turrigan 2 manual here :

http://www.nemmelheim.de/turrigan/other/superturrigan2_snes/manual/

Settings

Allows you to adjust the video, audio or system options, save settings and view the credits.

Tools

Allows you to enter Game Genie-style cheat codes.

Compatible Cartridges

- Official Nintendo-manufactured and approved cartridges (all regions)
- Unlicensed/Homebrew/Reproduction/Pirate cartridges
- Super Game Boy and Super Game Boy 2 (all regions)
- Oldskool Floppy-based Copiers and Backup Units like the Bung SF II Professor, Game Doctor SF2-7 and other floppy drive based copiers (Floppy drives should use a separate +12v power supply)
- Game Genie (“launch system timing” option may be required below, see below)
- Pro Action Replay
- Tristar Super 8, Super Retro Advance, Retro-bit RetroGen
- Super UFO Pro 8
- sd2snes
- Super EverDrive
- SNES PowerPak (“launch system timing” option may be required below, see below)
- SNES Nintendo Power flash cart
- Sufami Turbo and Cartridges with a BS-X Memory Pak slot

Compatible Controllers

- Official and aftermarket SNES controllers (all regions, all varieties)
- Official SNES Mouse and Hyperkin Mouse
- Multi-taps (never attach anything other than a wired regular SNES controller to a multi-tap)
- 8BitDo Retro Receiver
- Super Famicom NTT Data Controller (an option exists to force games to see this controller as a standard controller)

Settings Menu Structure & Outline

Factory Default Settings for each option are highlighted. If the option is not highlighted, then it is not enabled with the Factory Default Settings. If there is a range given to a particular option, then the default value for that range is highlighted after the range limits are given.

A Video
1 Resolution
a 480p60
b 720p60
c 1080p60 (assuming your display supports this resolution)
d 480p50
e 720p50
f 1080p50
2 Width & Height (when Advanced Mode is enabled, otherwise Screen Size)
a Width (depends on resolution, 1360 for 1080p)
b Horizontal Position (depends on resolution, 38 for 1080p)
c Height (depends on resolution, 1080 for 1080p)
d Vertical Position (depends on resolution, 42 for 1080p)
3 Screen Size (when Advanced Mode is disabled)
a 1:1
b 8:7
c 4:3 for 16:9
d 4:3 for 16:10
e 4x Height (1080p only)
f 4.5x Height (1080p only)
g 5x Height (1080p only)
4 Cropping (not shown unless Advanced Mode is enabled)
a Crop Left (0-31, 0)
b Crop Right (0-31, 0)
c Crop Top (0-31, 0)
d Crop Bottom (0-31, 0)
5 Scalers
a No Scaler
b HQ2x
c HQ3x
d HQ4x
e Scale 2x
f Scale 3x
g X-Ray
h Disable H Interpolation
i Disable V Interpolation
6 Scanlines
a No Scanlines
b Normal Scanlines
c Hybrid Scanlines
d Scanline Depth (0-255, 120)
7 Extra Features (not shown unless Advanced Mode is enabled)
a 64 Sprite Tiles
b Mode 5 & 6 Interlace Disable
c Pseudo-Hires Blending
8 Buffer Mode (not shown unless Advanced Mode is enabled)
a Fully Buffered
b Zero Delay
c Single Buffer
9 Color (not shown unless Advanced Mode is enabled)

a Limit RGB Range
b Lock Gamma Sliders Together
c Red (1.00-1.99, 1.00)
d Green (1.00-1.99, 1.00)
e Blue (1.00-1.99, 1.00)
10 Advanced Mode
B Audio
a -3db Output Cut
b Cartridge Audio Enable
c Swap Left & Right
d Cartridge Audio Volume (0-255, 175)
C System
1 Menu Options
a Skin
i Classic
ii SF
b Highlight Style
i Solid
ii Swipe
iii Flash
iv Rolling
v Throb
c Highlight Color
i Light Purple
ii Dark Purple
iii Red
iv Yellow
v Blue
vi Green
vii White
viii Magenta
d Font
i Alternate Font
ii Upper Case Only
e Menu Bounce
f Dim Game in Menu
g Prompt when saving RAM
h Save warning message
2 Controls & Hotkeys
a Reset Hotkey
i Left
ii Right
iii Down
iv Up
v Start
vi Select
vii B
viii A
b Menu Hotkey
i Left
ii Right
iii Down
iv Up
v Start
vi Select
vii B
viii A
c Confirm/Select Key
i A
ii B
iii X
iv Y
d Cancel/Back Key
i A
ii B
iii X
iv Y
e Disable Hotkeys

3 Startup Options
a Boot Sequence Delay (1-10, 4)
b Title → Menu
c Title → Cartridges
d Menu Direct
e Cartridge Direct
4 Hardware
a NTSC
b PAL
c Launch System Timing
d NTT Data Pad Compatibility
e SD Card Speed
i Normal Speed
ii Fast
iii Faster
f Debug
i Disable Audio Channels
1 0
2 1
3 2
4 3
5 4
6 5
7 6
8 7
9 8
ii Disable Main Audio
iii Disable Echo Audio
iv Disable Echo Feedback
v Disable Phase Modulation
vi Disable Interpolation
vii Force BRR Filter
1 None
2 1
3 2
4 3
viii Display Video Mode
ix Show Internal IRQs
x Show External IRQs
xi Highlight Scanline
xii Scanline Number (0-255, 0)
5 LED Options
a Standby Color
b Classic
c SF
d Center Pixel
e K-Pro Rainbow
f Load Custom Pattern
i File Browser
g Adjust Pattern
i Animate Pattern
ii Animate Speed (0-31, 16)
iii Pattern Position (0-255, 0)
h LED Brightness (0-31, 31)

D About
1 Special Thanks
2 Licensing
E E. Save/Clear Settings
1 Save Settings
2 Restore Factory Defaults

Video Settings

Resolution

480p modes set a resolution of 640×480
(no widescreen borders are added to the signal)

720p modes set a resolution of 1280×720

1080p modes set a resolution of 1920×1080

50p is intended for European and Australian PAL games, all Japanese and American games use the NTSC 60p frame rate. If you see visual artifacts like tearing (assuming the single buffer mode is off) or stuttering, check here to make sure your refresh rate matches the refresh rate of the game's region. This setting should be used in conjunction with the Hardware settings in the System Submenu.

The Super Nt supports EDID (Extended Display Identification Data) over HDMI. The display will send EDID information over the HDMI cable telling the Super Nt what display modes it supports. You may get an unsupported display mode to work, but if you do not, you may end up with no picture. Some NTSC displays may not report 50p support but will work with some or all 50 resolutions anyway. Almost all European displays support 60p. The Super Nt will start up with the highest resolution and frame rate your monitor supports unless you select a lower resolution setting and save the settings.

The SNES can display eight resolutions. By far the most common is 256×224, which is what virtually all NTSC games use. Some PAL games use 256×239. High resolution graphics using 512×224 and 512×239 are only used seldomly. Interlaced graphics using 256×448, 256×478, 512×448 and 512×478 are also seldomly used.

Video Settings

Width & Height

1. 480p Options

Minimum/Maximum Width (Horizontal Pixels) :
384/640

Horizontal Presets :
384, 438 (4:3 for 16:9), 480 (1:1), 487 (4:3 for 16:10),
512 (2x) 548 (8:7), 640

Minimum/Maximum Height (Vertical Pixels) : 480

Horizontal Position : 0-128

Vertical Position : 0-64

2. 720p Options

Minimum/Maximum Width (Horizontal Pixels) :
512/1280

Horizontal Presets :
512 (2x), 720 (1:1), 768 (3x), 822 (8:7), 877 (4:3 for
16:9), 975 (4:3 for 16:10), 1024 (4x), 1280 (5x)

Minimum/Maximum Height (Vertical Pixels) :
480/720

Vertical Presets : 480 (2x), 600 (2.5x), 720 (3x)

Horizontal Position : 0-128

Vertical Position : 0-64

3. 1080p Options

Minimum/Maximum Width (Horizontal Pixels) :
768/1920

Horizontal Presets :
768 (3x), 1024 (4x), 1200 (1:1), 1280 (5x), 1371 (8:7),
1462 (4:3 for 16:9), 1536 (6x), 1625 (4:3 for 16:10),
1792 (7x), 1920

Minimum/Maximum Height (Vertical Pixels) :
960/1200

Vertical Presets : 960 (4x), 1080 (4.5x), 1200 (5x)

Horizontal Position : 0-128

Vertical Position : 0-64

Proper Settings for Centering at 4x and 4.5x

4x = Vertical Position 47

4.5x = Vertical Position 43

5x = Vertical Position 42

Leave Horizontal Position to 38

Video Settings

Recommended Scaling Settings

If you are outputting your Super Nt to a 1080p or 4K native display, you should use the 5x vertical scale to fill up as much of the screen as possible. You should be able to see all essential information in most games and should not need to adjust the vertical position often. A 5x scale gives you essentially a 256×216 unscaled resolution, so you can use the horizontal and vertical positions to adjust the graphics if any vital details are lost.

If you want perfectly square pixels, choose a 5x horizontal scale. If you want the “ideal” pixel aspect ratio, choose the 8:7 option, preferably with horizontal interpolation enabled. 8:7 is arguably the intended aspect ratio for Nintendo games like Super Metroid and Super Mario All-Stars, which have circular objects which look like circles with the 8:7. Not all developers took the 8:7 ideal aspect ratio into consideration and circular objects in games like Chrono Trigger and Mortal Kombat 2 may look a little squashed. In that case, you would be better off choosing the 4:3 for 16:9 or the 6x option.

The Super Nt works with the Super Game Boy and Super Game Boy 2, which send the Game Boy’s video output through to SNES PPU. The proper pixel aspect ratio of the Game Boy, the pixels are truly square, giving a 160×144 resolution image slightly wider than tall. On original hardware and a CRT, the image would be stretched somewhat and this stretch will be seen with the Super Nt unless you are using a 5x/5x horizontal/vertical setting for 1080p, a 3x/3x for 720p and a 2x/2x for 480p. Disable all interpolation for the sharpest image.

Screen Size

In the simplified Screen Size setting, height settings are given only for 1080p modes. Horizontal and Vertical Interpolation is enabled.

Cropping

You can use the sliders to crop each edge of the screen by up to 32 pixels.

Cropping on the SNES is less crucial than it was on the NES. The NES always output 256×240 while the vast majority of SNES games only output 256×224. Most CRT displays in the SNES area could come pretty close to displaying the full 256×224, but you can use this option to try to replicate the cropping characteristics of a particular CRT. Note that many CRTs had curved bezels and tended to crop more pixels at the corners of the bezel than in the middle.

Graphical glitches and junk tiles that could be seen with cropped NES video will rarely be present in SNES games. NES games also had oddly colored tiles on the horizontal edges of some games, but the SNES hardware is fast enough that glitches are not present on the left and right edges of the screen either.

Scalers

Several scalers are available if you wish to apply them. “No scaler” uses nearest-neighbor interpolation where the color of a pixel is repeated horizontally and vertically as often as is necessary to get to the desired scaled resolution. This results in the sharpest, “pixel purist” graphics.

The HQ2x, HQ3x and HQ4x scalers interpolate a pixel based on the surrounding pixels. The result is generally a smoother image. The 2x, 3x and 4x refer to blocks of pixels, and the larger the block, the fewer colors will be used. Scale 2x and Scale 3x use a somewhat different algorithm but produce a similar result. X-Ray uses a simple algorithm to give inverted black and white graphics.

Using scalers may shift the image slightly, alter the colors considerably and will cause a little extra lag due to the processing of the image required.

The Disable H and V Interpolation options are useful with 8:7 and 4:3 for 16:9 or 16:10 modes with no scaler. These modes subtly blend the edges of pixels to make uneven nearest-neighbor scaled pixels less noticeable.

Video Settings

Scalers (cont.)

It can also eliminate shimmer in scrolling backgrounds on LCD displays. If you are using an integer horizontal or vertical scale, you should not need to use these options. If you are using a true integer horizontal or vertical scale, you should not need to use these options.

When the Disable Horizontal or Vertical Interpolation box is checked, that means the interpolation is NOT being applied to the video. You can set each form of interpolation independently.

Scanlines

The Super Nt can generate artificial scanlines to reproduce the scanning beam structure of a CRT. Normal Scanlines dims pixels by the same amount regardless of the pixel's color. Hybrid Scanlines targets more realistic scanlines by adjusting for gamma when dimming a pixel's color. With hybrid scanlines, darker objects have thicker scanlines than lighter objects.

The Scanline Depth slider can be set from 0-255 and uses a default of 120.

In the opinion of many people, the thickness of the scanlines produced in 720p modes is the ideal thickness. This dims every third line. Scanlines in 1080p modes dim every fourth (4x-4.5x) or fifth (5x) line. Some people view this as making the lines too thin. Scanlines in 480p mode dim every second line. Some view these scanlines as too thick. CRTs varied in their scanline thickness, with higher quality displays tending to produce more pronounced scanlines.

In the 1080p/5x mode, if you use scanlines, you should adjust the Vertical Position in the Width and Height from the default of 42 to 40 to allow the scanlines to align themselves with the bottom edge of each line of scaled pixels.

Extra Features

The 64 Sprite Tiles option allows the Super Nt to display 64 sprites per line instead of the 32 that the SNES can canonically display. This should reduce flicker in games displaying a large number moving objects on the screen at a time. Games which have been noted to take advantage of the extra tiles include Super Fire Pro Wrestling – Queen's Special and MegaMan X3. Some games will show glitches with the setting on, however. Final Fantasy III will show characters walk over the battle screen menus instead of under the menus as seen when Terra has the flashback early in the game to her enslavement under the Empire.

The Mode 5 & 6 Interlace Disable eliminates combing artifacts in a few games that use an interlaced mode. It does not work with all games that use interlacing. It will work with Ranma 1/2: Chounai Gekitou Hen and Chrono Trigger during a particular sequence.

The Pseudo-Hires Blending can be used in two games, Jurassic Park and Kirby's Dream Land 3 that use pseudo high res graphics and color math to produce transparent background tiles. Through an RGB or S-Video connection from an original SNES, these tiles will have alternating vertical stripes. But through composite these tiles will look transparent. The Blending option gives you back the intended transparent look to tiles you could have only experienced on a CRT.

Video Settings

Buffer Mode

The buffering modes on the Super Nt address the issue that the SNES's native refresh rate is 60.09881fps for NTSC consoles and 50.00697fps for PAL consoles. Modern displays and HDMI interfaces expect either 60fps, 59.94fps or 50fps and are generally not tolerant of refresh rates that vary from that specification. Super Nt has three modes that deal with the frame rate differential in different ways.

Fully Buffered Mode option buffers full frames to achieve a 60.0988 frame rate using only 60fps. This mode avoids tearing at the cost of latency. The Super Nt must render at least 1 frame ahead of the game's internal rendering to stay ahead.

Zero Delay Mode slows the SNES down to achieve a true 60fps frame rate, a speed difference of 0.16%. There is no latency penalty with this method but this method causes the Super Nt to fall 1 second every 10 minutes behind an original SNES running the same software.

Single Buffer mode is something of a compromise between the two methods described above. Like the Full Buffer option, the original frame rate is being generated within the Super Nt. Unlike the Full Buffer, only a portion of the next frame is being pre-rendered, giving latency of no more than 1 frame depending on when the player activates an input. The drawback is a recurring retrace line that is visible once per every several seconds.

Color

Limiting RGB Range adjusts the color output range to accommodate those displays which do not handle 24-bit RGB natively. Many LCDs as found on TVs do not show a full range of RGB for each of the three primaries, red, green and blue. Each primary color is represented by an 8-bit value, giving 256 levels of color for each primary. Full RGB displays accept values of 0-255 for each color primary. Limited RGB displays only accept values of 16-235, with values below 15 being designated as black and values above 235 being designated as white. The identical RGB value will not produce the same color in limited RGB versus full RGB because limited RGB tries to cover the same color space as full RGB but has fewer values to cover the range.

You should use Full RGB if your display supports it. If you turn on the Limited RGB Option and see black turn to dark gray, then you should not use this option. If the black stays black, then keep this option on.

The Lock Gamma Sliders Together option disables your ability to set the gamma for Red, Green and Blue independently.

Red, Green & Blue sliders can be set from 1.00 to 1.99 in .01 increments.

Advanced Mode

Enabling this option adds the Cropping, Extra Features, Buffer Mode and Color options to the Video Submenu and turns the simplified Screen Size options into the Width & Height options.

Audio Settings

-3db Output Cut – Some monitor embedded speakers and soundbars clip or cannot recognize a full-volume signal. This option reduces the volume to reduce the peaks below their maximum amount (0db). Try this option if you are not hearing any sound or hearing clipping from the Super Nt.

Cartridge Audio Enable – Use this option to enable expansion audio from the Super Game Boy, Super Game Boy 2 or sd2snes with games supporting MSU-1 audio. You should disable this option if you are not using one of the above because the audio inputs can pick up bus noise.

Swap Left & Right – This option reverses stereo.

Cartridge Audio Volume – Sets the volume of the expansion audio.

System Settings

Menu Options

Skin – Changes graphics and colors of certain menu graphics, options are:

Classic – A SNES inspired theme

SF – A SNES inspired theme

Highlight Style – Used to indicate the current menu option

Highlight Color – Used to determine the color of the current menu option

Font – Changes the menu font, Alternate Font uses a thicker, standard 8x8 font instead of the default font

Menu Bounce – The menus will drop down instead of instantly appearing

Dim Game in Menu – The game will be dimmed when the menu is active, making it easier to see the menu options but more difficult to see the effects of changing video parameters.

Controls & Hotkeys

Reset Hotkey – You can use almost any combination of controller buttons and directionals for this option. You cannot use the L and R buttons or the Up and Down or Left and Right directionals at the same time.

Menu Hotkey – You can use almost any combination of controller buttons and directionals for this option. You cannot use the L and R buttons or the Up and Down or Left and Right directionals at the same time.

Confirm/Select Key – You can only choose one button and the choice takes effect immediately. Use the currently assigned button to choose the new assignment. If you select the button used by the complimentary option, that button will be changed automatically from B to A, A to B, X to Y or Y to X.

Cancel/Back Key - You can only choose one button and the choice takes effect immediately.

Use the currently assigned button to choose the new assignment. If you select the button used by the complimentary option, that button will be changed automatically from B to A, A to B, X to Y or Y to X.

Disable Hotkeys – This option disables reset and menu access, but you have to power cycle the Super Nt to get the menu working again. This is useful if you are trying for a speedrun and do not want to activate a menu or a reset by accident. The state of this option will not be saved when you Save Settings.

Startup Options

Boot Sequence Delay – This slider can go from 1-10 and determines how much of a delay will be used before the screen will be activated. Some LCDs cannot handle information immediately available from the HDMI interface, so if you are not getting a picture you may want to add a little delay to give the display time to set up the picture parameters.

Title – Menu – Starts up directly with the Root Menu after showing the startup sequence

Title – Cartridges – Starts any cartridge inserted in the Super Nt after showing the startup sequence

Menu Direct – Starts up directly with the Root Menu without showing the startup sequence

Cartridge Direct – Starts any cartridge inserted in the Super Nt without showing the startup sequence.

System Settings

Hardware

NTSC – Sets the console to identify as a U.S. or Japanese console

PAL – Sets the console to identify as a European console

These settings should be set in conjunction with 60p modes for NTSC and 50p modes for PAL in the Video Submenu. If you see a message when a game loads that says something like “This game is not designed for your Super NES or Super Famicom”, then you have a region conflict. Switch to the proper region and that message should go away. What this option actually does is to set bit 4 at address location (at all banks except \$40-7F) \$213E (PPU Status Register) to 0 for NTSC or 1 for PAL.

Launch System Timing – The Game Genie and SNES PowerPak require this option to be enabled when those devices are plugged into the Super Nt’s cartridge slot.

NTT Data Pad Compatibility – This allows you to use the NTT Data Pad, which may have the same regular button layout as a standard SNES controller (in addition to its numberpad) but sends a unique controller ID that some games do not recognize. Nothing other than the Super Famicom games that support the NTT Data Pad directly can use the numberpad on the NTT Data Pad at this time.

LED Options

These options control the colors displayed by the Super Nt’s RGB LED.

Standby Color – LED Color is White

Classic – LED Color cycles from White to Purple

SF – LED Color cycles between Red, Green, Blue and Yellow

Center Pixel – LED Color will be whatever the pixel in the center of the screen’s color is. If you choose this option, you may not see the LED show color when the system turns on if you boot to the menu because the center pixel is black.

K-Pro Rainbow – LED Color cycles through the rainbow.

Load Custom Pattern – Allows you to load a custom pattern contained on the SD card. Will send you to the File Browser. Pattern files are 768 bytes in size. Here is a link to a few custom patterns :

<http://atariage.com/forums/topic/242970-fpga-based-videogame-system/page-367#entry3978645>

Adjust Pattern – These options allow you to adjust the animation speed and position of the pattern selected in the previous menu.

Animate Pattern – Will disable animation and leave the LED set to the last displayed color if disabled. Equivalent to setting the Animate Speed to 0.

Animate Speed – Determine the speed at which the LED changes colors, slider settings range from 0-31.

Pattern Position – Determines the currently displayed color within the pattern. Each pattern consists of 256 RGB values.

LED Brightness – Determines the brightness of the LED in a slider with settings from 0-31.

Save/Clear Settings

Save Settings – Saves menu settings to the Super Nt's internal flash memory

Restore Factory Defaults – Restores Factory Defaults, so take notes of your settings prior to updating.

+ special thanks to great hierophant



**Now you're playing with
Analogue.**