

N I N T E N D O  
**NITRO**-System  
**Library Release Notes**

Version: 09/01/2005

**The contents in this document are highly  
confidential and should be handled accordingly.**

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# 1 Overview

This package is the 09/01/2005 version of the Nintendo NITRO-System Library.

Nintendo NITRO-System is a collective term for the basic tools and libraries that are used to develop game software for the Nintendo DS system. This document contains the release notes for the NITRO-System Library that is included with Nintendo NITRO-System.

## 2 Package Contents

The Nintendo NITRO-System Library package contains the following:

- Foundation library (Fnd library)
- Graphics Foundation Library (Gfd library)
- 2D Graphics Library (G2D library)
- 3D Graphics Library (G3D library)
- NITRO-Composer (Sound library)
- Multiple Channel Stream library (mcs library)
- Tools for various converters
- Manuals and Function Reference

### 2.1 Extracting the NITRO-System Library Package

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Extract the Nintendo NITRO-System Library package to any location on the local drive. The Nintendo NITRO-System Library package is a compressed `.zip` file. You must use an appropriate extraction tool to extract the `.zip` file. When the package is extracted, a directory named `NitroSystem` is created.

### 2.2 NITRO-SDK Version

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The Nintendo NITRO-System Library that is supplied with this release requires NITRO-SDK 2.2. If you are using an older version of the NITRO-SDK, update the NITRO-SDK.

## 3 Changes from the 03/28/2005 Version

Here are the major changes in this version. For details on the changes, see the release notes for each library.

### 3.1 Revisions to the Fnd Library

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The function `FndInitAllocatorForSDKHeap` was accidentally called `FndInitAllocatorForOSHeap`. This has been corrected.

### 3.2 Revisions to the Gfd Library

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The function that outputs debugging information `NNS_GfdDumpXXX()` has been added to various VRAM managers.

### 3.3 Revisions to the G2D Library and Tools

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#### 3.3.1 Added Converter Features and Fixed Bugs

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- The `-br/` option has been added for the conversion process in which a rectangular area of the character file has been specified.
- The `-rtp` option has been added to remove transparent pixels from the boundary region when calculating boundary region information.
- The `-oua` option has been added to extract and output the text string as user extended attribute information in the extended comment field (added with nce file v1.04).
- A problem has been corrected related to specifying a greater transfer size than was needed when outputting the VRAM transfer information.
- A problem has been corrected for a warning message output erroneously in the middle of a valid conversion processing.
- A problem has been corrected to convert screens that were not multiples of 256 in height properly.
- A problem has been corrected for rectangular area information to be output as is instead of one size larger.

#### 3.3.2 Library Bug Fixes

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- A problem has been corrected for the animation sequence rendering that would fail when the lead animation frame was specified as having a display time of zero in the cell animation.
- A problem has been corrected for animation updating that was not being performed properly in the case for data that the multicell node attribute and `NNS_G2D_MCANIM_PLAYMODE_CONTINUE` were set.

- A problem has been corrected for an assert that fails if the transformation enable flag is not set for the OBJ and the OBJ is registered by the OAM manager with an affine reference number.
- A problem has been corrected in which an assert warning erroneously outputs when the affine parameters were not used but `NNSG2dOamExEntryFunctions.getAffineCapacity` and `NNSG2dOamExEntryFunctions.funcs.entryNewAffine` were set to NULL for setting a registration function with the extended OAM manager using `NNS_G2dSetOamManExEntryFunctions()`.
- A problem has been corrected in which cells were not drawn correctly when using OBJ drawing without using affine transformation after drawing a cell with the renderer using software sprites that use affine transformation.
- A problem has been corrected in `NNS_G2dBGSetup` and `NNS_G2dBGLoadElements` in which the extended palette was being loaded into the wrong slot with the sub-screen as the target.
- A problem has been corrected in `NNS_G2dBGSetup` which resulted in the wrong BG mode when reading an affine-extended BG into a BG3 that is an affine-extended BG.
- A problem has been corrected in `NNS_G2dTextCanvasDrawTaggedText` in which changes made using a tag process callback to `TextCanvas` were not reflected in the rendered drawing.

### 3.4 Revisions to the G3D Library and Tools

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Corrected a problem to smoothly do animations that rotate through small angles.

### 3.5 Revisions to the MCS Library

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DEBUGGER SHARING is supported with IS-NITRO-DEBUGGER version 1.56 and later.

### 3.6 NITRO-Composer Revisions

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- Until this version, it has been impossible to play back stream data from a sound archive initialized by `NNS_SndArcInitOnMemory`. Stream data in these archives can now be played back like stream data archives initialized by the `NNS_SndArcInit` function.
- Options have been added to specify filenames (i.e., `*.sdat`, `*.sadl`, and `*.sbd1`) that are output by the sound archiver `sndarc`.
- An option has been added to specify preprocessed files. These files are processed before the sound archive definition file (`*.sarc`) that has been specified as an argument by the sound archiver `sndarc`.
- `NNS_SndArcInitWithResult` has been added to confirm whether or not sound archive initialization is successful for situations where it is possible that the file will fail to load.
- Two functions have been added: `NNS_SndCaptureIsActive` to find whether or not a capture is executing and `NNS_SndCaptureGetCaptureType` to retrieve information about the capture type that is currently executing.
- A problem has been corrected in which one out of two calls to `NNS_SndUpdateDriverInfo` would fail even if called one time per frame.

- A problem has been corrected in which filename paths specified without using @PATH were mistakenly interpreted as relative paths from the wrong directory. This problem led to occurrences of conversion errors.

### **3.7 NITRO-Player Revisions**

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- It is now possible to initialize the MIDI feature of a DS System from the menu or the tool bar in the NITRO-Player application.
- When conversions are performed, the NITRO-Player log displayed a problem where only a certain number of characters could be displayed. This problem has been corrected.

## 4 NITRO-System Library Information

Information regarding the Nintendo NITRO-System is located in the `docs` directory of the NITRO-System source tree. Read the following documents first.

(1) Build System

Storage location: `NitroSystem\docs\Readme\BuildSystem.pdf`

This document explains the procedures for building the Nintendo NITRO-System Library and demo programs, and the structure of the source tree.

(2) Foundation Library Release Notes

Storage location: `NitroSystem\docs\Foundation\Foundation_ReleaseNotes.pdf`

This document contains the release notes for the Nintendo NITRO-System Foundation Library.

(3) Graphics Foundation Library Release Notes

Location: `NitroSystem\docs\GraphicsFoundation\GraphicsFoundation_ReleaseNotes.pdf`

This document contains the release notes for the Nintendo NITRO-System Graphics Foundation library.

(4) G2D Library Release Notes

Storage Location: `NitroSystem\docs\G2D\G2D_ReleaseNotes.pdf`

This document contains the release notes for the NINTENDO NITRO-System G2D Library.

(5) G3D Library Release Notes

Location: `NitroSystem\docs\G3D\G3D_ReleaseNotes.pdf`

This document contains the release notes for the Nintendo NITRO-System G3D library.

(6) NITRO-Composer Release Notes

Storage location: `NitroSystem\docs\NitroComposer\NITRO_Composer_ReleaseNotes.pdf`

This document contains the release notes for the Nintendo NITRO-System NITRO-Composer.

(7) `mcs` (Multiple Channel Stream) Library Release Notes

Location: `NitroSystem\docs\mcs\mcs_ReleaseNotes.pdf`

This document is the release notes for the Nintendo NITRO-System `mcs` library.

(8) NITRO-Player Release Notes

Location: `NitroSystem\docs\NitroPlayer\NITRO_Player_ReleaseNotes.pdf`

This document contains the release notes for the Nintendo NITRO-System NITRO-Player.

## 5 Cautions

### 5.1 Operations in Multi-Thread

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NITRO-System library is not designed to be thread-safe (supporting multi-thread). Therefore, when calling API of NITRO-System's library from the interrupt handler or a different thread, it might not work properly.

### 5.2 Regarding Image Data and Music Data in Samples

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Copyrights for the image data and music data used in the demo and sample programs included in this package are the property of Nintendo. This data may only be used in the demo and sample programs in this package, and may not be used in any other programs.

### 5.3 Font licenses

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Versions released on and after 06/06/2005 of the Nintendo NITRO-System library includes a font converter (fontcvtr). By using this fontcvtr, you can convert any font installed on a PC to a form usable by Nintendo DS. However, in order to sell software that uses these fonts, you must obtain licenses for them. Please obtain the required licenses for each game program. fontcvtr and NITRO-System do not include licenses for any fonts, including LC fonts.



This package contains the software developed by Apache Software Foundation (<http://www.apache.org/>).

