

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

Version 1.0.1

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

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Revision History

Version	Revision Date	Description
1.0.1	01/24/2005	Changed an instance of "NITRO" to "Nintendo DS."
1.0.0	11/10/2004	Added support for 11/10/2004 version (revised heap manager and archiver).
0.5.1	10/12/2004	Added warnings about multi-thread operations.
0.5.0	08/20/2004	Added support for 09/02/2004 (fixed heap manager).
0.4.0	08/02/2004	Added support for 08/02/2004 version (fixed heap manager; added memory allocator).
0.3.0	07/20/2004	Added support for 07/20/2004 version (fixed heap manager).
0.2.0	6/10/2004	Added support for version 6/10/2004 (Archive Manager added).
0.1.1	5/28/2004	Added support for version 5/28/2004.
0.1.0	4/6/2004	Initial version.

1 About the Foundation Library

The Foundation Library provides system-related managers and functions for handling memory.

1.1 Functionality Provided in the Foundation Library

The Foundation Library currently provides the following functionality.

1.1.1 Memory Manager

A memory management system helps you to use the 4-megabyte memory effectively. The Foundation Library provides three types of memory managers that have special functionality for game software use. For details, see the Memory Manager Manual, `MemoryManager.pdf`, and function references.

1.1.2 Archive Manager

The Foundation Library provides an archive manager that your Nintendo DS application can use to easily manipulate archives that are created with the `nnsarc` general-purpose archiver that comes with NITRO-System. For details, see the manual for the Archive Manager (`ArchiveManager.pdf`) and the function reference.

1.1.3 List Structure

The Foundation Library provides functionality that makes it easy to realize a doubly-linked list structure. For details see the function reference.

1.1.4 Memory Allocator

The Foundation Library provides a way to allocate and release memory regardless of the type of Memory Manager. For details, see the manual for the Memory Allocator (`Allocator.pdf`) and the function reference.

1.2 Multi-Thread Operations

NITRO-System library was not designed to be fundamentally thread-safe (to support multiple threads). Note that foundation library API calls made from interrupt handlers and differing threads may not always work correctly.

2 Main Updates

2.1 Updates in Version 09/01/2005

2.1.1 Memory Allocator

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

2.2 Updates in Version 11/10/2004

2.2.1 Extended Heap Manager

In previous versions, the `NNS_FndCheckExpHeap()` and `NNS_FndCheckForMBlockExpHeap()` functions always returned `FALSE` in the final ROM (`FinalROM`) version library, and indicated that an error had been discovered. The functions have been changed so that they now always return `TRUE` to indicate that an error was not discovered.

2.2.2 Archiver Revision

The archiver **nnsarc** is now version 1.0.0. Changes in version 1.0.0 are as follows.

- When specifying `-x (--extract)` mode and getting files in the archive, error processing did not occur correctly when the specified directory could not be created. We have fixed this bug.
- When specifying the `-i (--index)` option and outputting the C-language file ID definition header file, two consecutive underscores were inserted after the symbol prefix when the beginning of the file name was a number. We have fixed this bug.

2.3 Updates in Version 09/02/2004

2.3.1 Extended Heap manager

Added the `NNS_FndCheckExpHeap()` function and the `NNS_FndCheckForMBlockExpHeap()` function. These functions allow you to check if the extended heap and the memory block that are allocated from the extended heap are destroyed.

2.4 Updates in Version 08/02/2004

2.4.1 Frame Heap Manager

Added the `NNS_FndResizeForMBlockFrmHeap()` function. You can use this function to change the

size of the memory block allocated from the frame heap.

2.4.2 Unit Heap Manager

Added the `NNS_FndGetMemBlockSizeForUnitHeap()` function. You can use this function to get the size of each memory block set in the unit heap.

2.4.3 Memory Allocator

Added the initial version of Memory Allocator.

2.5 Updates in Version 07/20/2004

2.5.1 Unit Heap Manager

Added the `NNS_FndCalcHeapSizeForUnitHeap()` function. You can use this function to get the necessary unit heap size from the memory block size and number.

2.5.2 Common to All Heaps

Corrected the `NNS_FndDumpHeap()` function so that it performs no processing in the last ROM (FinalROM) version library.

2.6 Updates in Version 6/10/2004

2.6.1 Archive Manager

Added the initial version of the Archive Manager.

2.7 Updates in Version 5/28/2004

2.7.1 List structure

Fixed the bug with `NNS_FndInsertListObject` in which the object was not inserted correctly

3 Known Problems

There are no known problems.

4 Future Plans

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