

Nintendo DS Lot Check Instructions

(Only for Nintendo Wi-Fi Connection-Compatible Game Software)

Version 1.30

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Revision History

Version	Revision Date	Description
1.30	2007/12/13	<ul style="list-style-type: none"> Changed section 1.2 heading to Items Applicable when the Type of Game Servers Used Is Limited. Moved Items for Software That Uses Only the Nintendo Download Server from section 1.2 to section 1.2.1. Added section 1.2.2 Items that Do Not Need to Be Checked when Only the Nintendo General-Purpose Ranking Library Is Used, and Friend Features Are not Used. Changed the test methods for 60000-99999 level errors for DS 4-1 to reference Chapter 3 of these instructions. Added DS 4-5, "Original Game Software Errors [Required]." Added DS 5-1, "Changing the Authentication Server Connection Point [Required]." In both the Overview and Pass/Fail Determination of DS 5-3, "Prohibiting Transition to Sleep Mode During Communications [Required]," added the statement that the referenced guideline uses Power Save Mode. Changed DS 5-5, "Communication Operations [Required]", to be applicable to all software. Revised the Overview and Pass/Fail Determination of DS 6-3, Guideline "8.3.7 Limitations for Communications with the Ranking Server [Required]", to include the new limitations. Added methods for confirming some of the 60000-99999 level error codes to Chapter 3.
1.20	2007/09/05	<ul style="list-style-type: none"> Revised based on Nintendo Wi-Fi Connection Programming Guidelines version 1.3.3. Added section 1.2 Items for Software that Uses Only the Nintendo Download Server. Added specific details on testing for DS 4-1, "Display When Errors Occur [Required]" and "Displaying Error Codes [Required]", for each error. For DS 4-2, "Displaying Animation [Required]", changed to the timing for displaying animation from only while connecting to Nintendo Wi-Fi Connection to always during use of Nintendo Wi-Fi Connection. Added DS 4-3, "Disassociating DS and DS Game Card [Required]". Changed DS 4-5, "Disconnecting Wi-Fi Communications When there is No Input [Recommended]". Changed the software to be checked to "All software" for DS 5-2, "Prohibiting Transition to Sleep Mode During Communications [Required]". Added an overview when using the Nitro DWC-DL library, the test methods and pass/fail criteria to DS 5-4, "Processes During Communications [Required]". Added DS 6-2, "Acquiring Friend Rankings [Required]". Added DS 6-4, "Referencing Others' Data Regions [Required]".
1.10	2006/06/29	<ul style="list-style-type: none"> Full revision based on <i>Nintendo Wi-Fi Connection Programming Guidelines</i>, version 1.2.0. In Chapter 1 Overview, a description was added indicating that not everything in the guidelines was covered in the Lot Check explanatory materials. Added 1.1 Table of Guidelines. "Supported?" was changed to "Software to be Inspected", a clarification that makes it easier to understand which software will be subject to inspection. The terminology used is changed to reflect the contents of Nintendo Wi-Fi Terminology.
1.00	2005/11/09	First release, based on Nintendo Wi-Fi Connection Programming Guidelines, Version 1.0.0.

1 Overview

This document provides references to guidelines, an overview of items being tested, testing methods, and pass/fail criteria for the Wi-Fi functionality of Nintendo Wi-Fi Connection-compatible game software as used in Nintendo's lot check procedure. When submitting game software to Lot Check, refer to the testing instructions contained in this document and use the *Nintendo DS Lot Check Checklist (only for Nintendo Wi-Fi Connection)*, included in this package, to check off tested items. Submit the list and the game at the same time.

Programmers should carefully read *Nintendo Wi-Fi Connection Programming Guidelines* as early as possible in the development process. Using the Lot Check Checklist to check your game before submitting the master should help make the process go more smoothly. However, note that this document does not cover all items in the guidelines, and that the development process must follow the guidelines.

The contents of this document are synchronized with the current version of *Nintendo Wi-Fi Connection Programming Guidelines*. The guidelines are revised as needed, so always use the latest version of the guidelines and this document.

1.1 Tables of Testing Requirements

The tables of testing requirements is structured in the manner shown below.

1.1.1 Test Number

These are numbers assigned to each of the testing requirements. They correspond to the Lot Check Checklist items.

1.1.2 Category

These classify the testing requirements according to function.

1.1.3 Guideline

This row provides a reference to the programming guideline being tested and its level of importance.

[Required]: Required items.

[Recommended]: Recommended items.

1.1.4 Overview

This row contains an explanation of the test, background information, and supplemental information, allowing you to better understand the reason for conducting the tests.

1.1.5 Test Procedure

This row describes the testing procedure.

If numbers, for example (1) and (2), appear in this row, the test procedures and the pass/fail determinations are linked through the numbers. To conduct appropriate test procedures, refer to the information items in the “Pass/Fail Determination” and “Software to be Inspected” rows that have been assigned identical numbers.

1.1.6 Pass/Fail Determination

This row describes the kind of action that will be judged okay if you implement the procedure described in “Test Procedure”.

If numbers, for example (1) and (2), appear in this row, the pass/fail determination applies to a “Test Procedure” that has been assigned identical numbers.

1.1.7 Software to Be Inspected

This column indicates the software that must be tested for a particular test procedure. For example, if “Target software uses wireless communications” appears in the “Software to be Inspected” row, the software that supports DS Wireless Communications software must be used to conduct test procedures. However, there is no need to perform test procedures with the software that does not implement wireless communication features. If numbers, for example (1) and (2), appear in this row, refer to the “Test Procedure” and “Pass/Fail Determination” rows to see which items in those rows apply to the software based on corresponding numbers.

1.2 Items Applicable when the Type of Game Servers Used Is Limited

Some programming guidelines do not need to be tested with all software. For example, not all tests need to be performed on Nintendo Wi-Fi Connection-compatible software titles that only use a limited type of servers, such as the Nintendo download server, because they do not use concepts like “friend”.

1.2.1 Items that Do Not Need to Be Checked for Software that Uses Only the Nintendo Download Server

- 2.2 User management (all)
- DS4-3, DS4-4, DS4-10, DS4-11
- DS5-2, DS5-3, DS5-4
- 2.6 Special Features (all)
- DS7-1

Note: For all other items, check the field for which the software is to be checked and conduct all required tests.

1.2.2 Items that Do Not Need to Be Checked when Only the Nintendo General-Purpose Ranking Library Is Used, and Friend Features Are not Used

- 2.2 User Management (all)
- DS4-3, DS4-4
- DS5-2, DS5-3, DS5-4
- DS6-4, DS6-5

Note: For all other items, check the “software to be inspected” field and conduct all required tests.

2 Description of Testing Requirements

This section provides the overview, test procedure, and pass/failure determination information for each referenced guideline used as part of the Lot Check testing procedure for Nintendo Wi-Fi Connection-compatible game software.

2.1 Development and Connection Environments

Test Number	DS 1-1	Category	Development and Connection Environments
Guideline	3.2 Connecting Through Access Points and Routers [Required]		
Overview	Because users are able to join Nintendo Wi-Fi Connection by accessing the Internet through a wireless LAN, verify that at least one type of commercially available access point (AP) can connect.		
Test Procedure	Connect to the Internet using a commercially available access point.		
Pass/Fail Determination	Passes if connection, matching, and game play all work as intended.		
Software to be Inspected	All software.		

2.2 User Management

Test Number	DS 2-1	Category	User Management
Guideline	4.2 Creating and Saving User Data [Required]		
Overview	To create a friendship using DS Wireless Communications, your own friend code must be generated from the user data without requiring a connection to Nintendo WFC.		
Test Procedure	Exchange friend codes using DS Wireless Communications between two DS systems that have not yet connected to Nintendo Wi-Fi Connection. Next, establish a connection through Nintendo Wi-Fi Connection and attempt matchmaking between the DS systems. (The only condition for matchmaking is that it take place between friends.)		
Pass/Fail Determination	Passes if matchmaking is successful between DS systems that have shared friend codes.		
Software to be Inspected	All software that implements DS Wireless Play.		

Test Number	DS 2-2	Category	User Management
Guideline	4.3.1 Implementing the Friend Information Exchange Feature [Required]		
Overview	Implements a simple procedure to enable the exchange of friend information using DS Wireless Communications without entering the friend code. The method used for friend information exchange during DS Wireless Communications can be either automatic or manual.		
Test Procedure	Connect with a new communication partner using DS Wireless Communications. Friend information <i>must not</i> have been previously exchanged.		
Pass/Fail Determination	<p>The test passes if all of the following are met:</p> <ul style="list-style-type: none"> • The friend information of the communication partner can be checked on a list after terminating DS Wireless Communications. • There is no one-sided transfer of friend information. • Matchmaking is successful over Nintendo Wi-Fi Connection between those systems that shared friend information. 		
Software to be Inspected	Software that implements DS Wireless Play.		

Test Number	DS 2-3	Category	User Management
Guideline	4.3.2 Prohibiting Construction of Unilateral Friendships [Required]		
Overview	<p>When exchanging friend information during DS Wireless Play, to ensure information is not exchanged with the wrong party, specifications require parties to verify each other and exchange information only after approval.</p> <p>Note: Because it is not possible to confirm mutual approval with Chance Encounter Communication, friends cannot be established by these means.</p>		
Test Procedure	Exchange friend information using DS Wireless Play.		
Pass/Fail Determination	Passes if each party knows the other party's name, and then friend information can be exchanged.		
Software to be Inspected	Software that implements DS Wireless Play.		

Test Number	DS 2-4	Category	User Management
Guideline	4.4.1 Implementation of Friend Code Input Feature [Required]		
Overview	<p>Implement a feature to allow players to build friendships by entering friend codes when DS Wireless Communications is not possible or feasible.</p> <p>In addition, make it possible for the entered friend code to be checked and edited before connecting to Nintendo Wi-Fi Connection and establishing friendships.</p>		
Test Procedure	<p>(1) Connect to Nintendo Wi-Fi Connection with two Nintendo DS systems.</p> <p>(2) Enter the friend codes acquired in (1) to each of the Nintendo DS systems.</p> <p>(3) Attempt matchmaking (which is required to be between friends only) between the two Nintendo DS systems over Nintendo Wi-Fi Connection.</p> <p>(4) Enter a friend code different from that acquired in (1) in each DS.</p> <p>(5) If the software is compatible with a version for a different market or with different titles over Nintendo Wi-Fi Connection, perform tests (2) – (4) between compatible titles.</p>		
Pass/Fail Determination	<p>The test passes if all of the following are met:</p> <p>(1) 12-digit friend code is issued.</p> <p>(2) Person whose friend code was entered is added to the friend roster.</p> <p>(3) Matchmaking with the person with whom the friend code was exchanged is successful.</p> <p>(4) Player is informed that the entered code was incorrect but is also allowed to correct it.</p> <p>(5) Operates just as (2) – (4).</p>		
Software to be Inspected	<p>(1) – (4): All software.</p> <p>(5) Software with Wi-Fi communication compatibility between software of different markets or different titles.</p>		

Test Number	DS 2-5	Category	User Management
Guideline	4.4.2 Displaying Friend Codes [Required]		
Overview	Implement a feature to display the player's own friend code to share it with another player when exchanging friend codes.		
Test Procedure	Connect to Nintendo Wi-Fi Connection for the first time.		
Pass/Fail Determination	<p>The test passes if all of the following are met:</p> <ul style="list-style-type: none"> • Friend code is issued and there is a menu or other method where you can view your own friend code. • Friend code can be viewed at later times after it is issued. 		
Software to be Inspected	All software.		

Test Number	DS 2-6	Category	User Management
Guideline	4.4.3 Verifying Friend Information Offline [Required]		
Overview	Because the DS can be transported to an offline environment, features for entering friend codes, displaying friend codes, and displaying a friend roster must be available even without network connection.		
Test Procedure	Check each of the features for entering a friend code within a game, displaying friend codes, and displaying a friend roster.		
Pass/Fail Determination	Passes if each feature can be verified to work offline.		
Software to be Inspected	All software.		

Test Number	DS 2-7	Category	User Management
Guideline	4.5 Implementing a Method for Ending Friendships [Required]		
Overview	Implement an ability to end an existing friendship.		
Test Procedure	(1) End friendship with the target partner from the friend roster or in other situations. (2) Reconnect to Nintendo Wi-Fi Connection and attempt matchmaking between friends with the target partner whose friendship was just ended.		
Pass/Fail Determination	The test passes if all of the following are met: (1) Information of the target is removed from friend roster. (2) Matchmaking between friends with the target fails.		
Software to be Inspected	All software.		

Test Number	DS 2-8	Category	User Management
Guideline	4.7.2 Distinguishing Between Rivals and Friends [Required]		
Overview	Because a "rival" has several restrictions over Nintendo Wi-Fi Connection compared to a "friend", allow the player to identify the matchmaking target as "friend" or "rival".		
Test Procedure	(1) Establish a friendship with a partner using DS Wireless Communications or the partner's friend code. (2) Establish a rival relationship with a partner using Chance Encounter Communication or by playing against the partner in a Nintendo Wi-Fi Connection game.		
Pass/Fail Determination	The test passes if the partner can be identified as "friend" or "rival".		
Software to be Inspected	Software able to register opponent as a "rival" for selection in future matchmaking.		

Test Number	DS 2-9	Category	User Management
Guideline	4.7.3 Establishing Rivals Through Chance Encounter Communication [Required]		
Overview	When adding a stranger as a "rival" through Chance Encounter Communication, always confirm with the player first, and start the Chance Encounter Communication after receiving a confirmation.		
Test Procedure	(1) Perform Chance Encounter Communication. (2) Perform Wi-Fi communication between "friends" over Nintendo Wi-Fi Connection. (3) Perform Wi-Fi communication between "rivals" over Nintendo Wi-Fi Connection.		
Pass/Fail Determination	The test passes if all of the following are met: (1) First, displays a confirmation message to the player, and after the encounter registers to the list the other party of Chance Encounter Communication as a "rival." (2) Cannot perform chance encounter matchmaking between friends. (3) Able to perform chance encounter matchmaking between rivals.		
Software to be Inspected	Software that supports the rival feature for specifying the registered rivals at matchmaking, and the Chance Encounter Communication feature.		

Test Number	DS 2-10	Category	User Management
Guideline	4.7.4 Establishing a Rival for Wi-Fi Competitive Play [Required]		
Overview	When adding a stranger as a "rival" for Wi-Fi competitive play, always confirm the intent and get the consent from both players first.		
Test Procedure	(1) Establish Wi-Fi competitive play with a stranger and register the opponent as a "rival." (2) Perform Wi-Fi communication between "friends" over Nintendo Wi-Fi Connection. (3) Perform Wi-Fi communication between "rivals" over Nintendo Wi-Fi Connection.		
Pass/Fail Determination	The test passes if all of the following are met: (1) Displays the confirmation message for registering the opponent as a rival. After registration, this opponent will be displayed in the list. (2) Cannot perform matchmaking with registered opponent between friends. (3) Able to perform matchmaking with registered opponent between rivals.		
Software to be Inspected	Software able to register opponent as a "rival" for selection in future matchmaking.		

Test Number	DS 2-11	Category	User Management
Guideline	4.7.5 Implementing a Method for Ending Rival Relationships [Required]		
Overview	Implement the ability to end an existing rival relationship.		
Test Procedure	(1) End a rival relationship with the target partner from the rival roster, or in other situations. (2) Reconnect to Nintendo Wi-Fi Connection and attempt matchmaking between rivals with the target.		
Pass/Fail Determination	The test passes if all of the following are met: (1) Information of the target is removed from the rival roster. (2) Matchmaking between rivals with the target fails.		
Software to be Inspected	Software able to register opponent as a “rival” for selection in future matchmaking.		

Test Number	DS 2-12	Category	User Management
Guideline	4.7.6 Prohibiting Promotions to Friends [Required]		
Overview	Make sure a “rival” cannot be promoted to a “friend” without using the standard steps required for building friendships, to prevent becoming friends with a stranger.		
Test Procedure	Play the game in the normal manner.		
Pass/Fail Determination	The test passes if the game is not able to promote a “rival” to a “friend” without going through the standard procedure.		
Software to be Inspected	Software able to register opponent as a “rival” for selection in future matchmaking.		

2.3 Nintendo Wi-Fi Connection Settings

Test Number	DS 3-1	Category	Nintendo Wi-Fi Connection Settings
Guideline	5.1 Implementing Nintendo Wi-Fi Connection Configuration [Required]		
Overview	Nintendo Wi-Fi Connection settings must be implemented in the case of Nintendo Wi-Fi Connection-compatible software.		
Test Procedure	Play the game in the normal manner.		
Pass/Fail Determination	Passes if Nintendo Wi-Fi Connection settings have been implemented.		
Software to be Inspected	All software.		

Test Number	DS 3-2	Category	Nintendo Wi-Fi Connection Settings
Guideline	5.3 Prohibiting Processing Unique to a Game [Required]		
Overview	Game-specific processing, such as playing background music, must not be performed while making Nintendo Wi-Fi Connection settings.		
Test Procedure	Enter Nintendo Wi-Fi Connection settings.		
Pass/Fail Determination	Passes if there is no game-specific processing, such as background music, while making Nintendo Wi-Fi Connection settings.		
Software to be Inspected	All software.		

Test Number	DS 3-3	Category	Nintendo Wi-Fi Connection Settings
Guideline	5.4.1 Using Game-Side Language Settings [Required]		
Overview	The language used in Nintendo Wi-Fi Connection Settings should follow the language setting of the game software. Make sure the language matches when the Nintendo Wi-Fi Connection Settings display is opened through the game software.		
Test Procedure	Check Nintendo Wi-Fi Connection Settings with all languages supported in the game software.		
Pass/Fail Determination	Passes if the language used in Nintendo Wi-Fi Connection Settings corresponds to that used in the game.		
Software to be Inspected	All software.		

Test Number	DS 3-4	Category	Nintendo Wi-Fi Connection Settings
Guideline	5.4.2 English Notation [Required]		
Overview	Nintendo Wi-Fi Connection Settings has settings for both the U.S. English (for North America) and U.K. English (for Europe). The appropriate language version for the destination of the game software must be used. However, use U.K. English if the ROM is shared for both North American and European markets.		
Test Procedure	Search for an access point in an area where there is no active access point.		
Pass/Fail Determination	<p>(1)</p> <ul style="list-style-type: none"> The message shown in North America is: "No compatible access point in range. Please try again. For help, call 1-800-895-1672 in the USA and Canada or visit www.nintendowifi.com." The message shown in Europe is: "No compatible access point in range. Please try again. For help, visit www.nintendowifi.com." <p>(2)</p> <p>Passes if the U.K. English version is shown.</p> <p>Note: From version 2.1 of the DWC Library, the English notation is as shown for the U.K. alone.</p>		
Software to be Inspected	<p>(1) Software titles that use English in the game.</p> <p>(2) Software titles that share a single ROM for both North American and European versions of the game.</p>		

Test Number	DS 3-5	Category	Nintendo Wi-Fi Connection Settings
Guideline	5.5 Displays that Correspond to Wireless Communications in Nintendo Wi-Fi Connection Configuration [Required]		
Overview	Because Wi-Fi communication might be enabled during the Nintendo Wi-Fi Connection Settings process, the menu that transitions to the Nintendo Wi-Fi Connection Settings screen must either be followed by a confirmation message when selected, or have an icon for Nintendo WFC.		
Test Procedure	Check the menus that open Nintendo Wi-Fi Connection Settings.		
Pass/Fail Determination	<ul style="list-style-type: none"> Confirmation through a message. Icon that indicates support for Nintendo WFC is added. Passes if either of the above methods is used to receive player confirmation before transitioning to the Nintendo Wi-Fi Connection Settings screen.		
Software to be Inspected	All software.		

Test Number	DS 3-6	Category	Nintendo Wi-Fi Connection Settings
Guideline	5.6 Nintendo Wi-Fi Connection Configuration Sequence [Required]		
Overview	When Wi-Fi user information is deleted or moved in the Nintendo Wi-Fi Connection Settings option, the DS is set to power off, preventing a return to the current game operation. For this reason, game data shall be saved before entering Nintendo Wi-Fi Connection Settings.		
Test Procedure	After progressing the game to a certain point, enter the Nintendo Wi-Fi Connection Settings screen, turn off power, and restart.		
Pass/Fail Determination	The test passes if the game resumes from the point where the user entered the Nintendo Wi-Fi Connection Settings screen.		
Software to be Inspected	All software.		

2.4 Nintendo WFC Connection/Disconnection

Test Number	DS 4-1	Category	Nintendo WFC Connection/Disconnection
Guideline	6.2.2 Displaying Errors [Required] 6.2.3 Displaying Error Codes [Required]		
Overview	When an error occurs during Nintendo Wi-Fi Connection, display the error code and error message to allow the player to perform the appropriate action. (For cases when errors do not need to be displayed, refer to the guidelines.) Because the error code is a negative number, always reverse the sign to a positive number before displaying the code on screen.		
Test Procedure	Verification method for 2XXXX errors: <ul style="list-style-type: none"> Generate errors using the authentication server error simulator. (For details, see the authentication server error simulator manual.) Verification method for 5XXXX errors: <ul style="list-style-type: none"> Generate errors by changing access point settings. (For details, see the authentication server error simulator manual.) Verification method for 60000 to 99999 errors: <ul style="list-style-type: none"> Refer to Chapter 3 "Reference Material" for currently available verification methods. 		
Pass/Fail Determination	The test passes if all of the following are met: <ul style="list-style-type: none"> An appropriate error code and error message are displayed for the intended error. All error codes are displayed as positive numbers. 		
Software to be Inspected	All software.		

Test Number	DS 4-2	Category	Nintendo WFC Connection/Disconnection
Guideline	6.2.4 Displaying Animation [Required]		
Overview	While connected to Nintendo Wi-Fi Connection (that is, Wi-Fi communication is enabled), animate part of the Nintendo Wi-Fi Connection wait screen such that the player will not assume that the application is locked up.		
Test Procedure	Connect to Nintendo Wi-Fi Connection. While performing all playable modes, disconnect from Nintendo Wi-Fi connection.		
Pass/Fail Determination	The test passes if an animation is displayed in any location on the screen.		
Software to be Inspected	All software.		

Test Number	DS 4-3	Category	Nintendo WFC Connection/Disconnection
Guideline	6.2.5 Disassociating DS and DS Game Card [Required]		
Overview	Always clear all friend flags when removing the association of the Nintendo DS with a Nintendo DS Game Card, as long as the player is made aware that friendships will continue by keeping the friend roster or by other means.		
Test Procedure	<p>(1) Establish a friendship between two Nintendo DS systems. Of those two, use one to connect to another DS using Nintendo Wi-Fi Connection, and remove the association between the Nintendo DS and DS Game Card.</p> <p>(2) Use the other DS to connect to Nintendo Wi-Fi Connection and play part of the game that accesses friend data before recovering the friendship.</p>		
Pass/Fail Determination	Software passes the test if the data of the other party who was a friend with the old DS can no longer be used.		
Software to be Inspected	Software titles that allow access to friend data over networks (ranking, storage, and others), if a user unilaterally has the "friend" information.		

Test Number	DS 4-4	Category	Nintendo WFC Connection/Disconnection
Guideline	6.2.6 Displaying Friendship Restore Information for a Game [Required]		
Overview	If the game is capable of recovering friendship information left in the Nintendo DS Card, appropriate recovery instructions shall be displayed following the connection flow timing.		
Test Procedure	<p>(1) Start the game software in the Nintendo DS system connected to Nintendo Wi-Fi Connection and a different Nintendo DS system, connect to Nintendo Wi-Fi Connection, and obtain a new friend code.</p> <p>(2) Follow the recovery instructions, then attempt matchmaking with a person from a previous friend roster.</p>		
Pass/Fail Determination	<p>The test passes if all of the following are met:</p> <p>(1) The game-specific recovery information is displayed at connection or is shown in the Instruction Booklet.</p> <p>(2) Following the recovery instructions results in successful matchmaking with a previous friend under the friends-only condition.</p>		
Software to be Inspected	Software with a game-specific friendship recovery feature.		

Test Number	DS 4-5	Category	Nintendo WFC Connection/Disconnection
Guideline	6.2.7 Original Game Software Errors [Required]		
Overview	When implementing game-specific error processing, do not display a game-specific error code with the onscreen message if that error code has not been approved by Nintendo. This is done to prevent duplicate error codes.		
Test Procedure	Display the game-specific error message(s) while connected to Nintendo Wi-Fi Connection.		
Pass/Fail Determination	The test passes if all error codes are approved by Nintendo.		
Software to be Inspected	Software that displays unique errors.		

Test Number	DS 4-6	Category	Nintendo WFC Connection/Disconnection
Guideline	6.2.8 Disconnecting Wi-Fi Communications When there is No Input [Recommended]		
Overview	When disconnecting from Nintendo Wi-Fi Connection after a period of no input from the user, display a message that warns of a disconnection so that Nintendo Wi-Fi Connection is not disconnected at a time unintended by the user.		
Test Procedure	Connect to Nintendo Wi-Fi Connection, then disconnect by leaving the system in a no-input state for a set period.		
Pass/Fail Determination	The test passes if the software displays a message warning of a “disconnection after a set period of no input” before reaching the set no input period.		
Software to be Inspected	Software that disconnects from Nintendo Wi-Fi Connection after a set period of inactivity.		

Test Number	DS 4-7	Category	Nintendo WFC Connection/Disconnection
Guideline	6.3.1 Confirmation Through Message [Required]		
Overview	When confirming the establishment of Wi-Fi communication with the player, display a message such as “Would you like to communicate using Nintendo Wi-Fi Connection?”, and obtain player approval before enabling Wi-Fi communication.		
Test Procedure	Select the menu for enabling Wi-Fi communication.		
Pass/Fail Determination	The test passes if the required message is displayed, and Wi-Fi communication is enabled after obtaining player approval.		
Software to be Inspected	Software that provides message confirmation to the player.		

Test Number	DS 4-8	Category	Nintendo WFC Connection/Disconnection
Guideline	6.3.2 Confirmation Through Nintendo Wi-Fi Connection Icon [Required] 6.3.3 Do Not Alter the Nintendo Wi-Fi Connection Icon [Required]		
Overview	<p>When indicating the enabling of Wi-Fi communication using the Nintendo Wi-Fi Connection support icon, always use the icons provided by Nintendo. The icons must not be changed in any way, including their size and coloration.</p> <p>If the associated menu item is in an unselected state, modification of a level that will not confuse the player may be performed.</p> <p>Note: Because this icon is similar to the Nintendo DS Wireless icon, be careful when using it.</p>		
Test Procedure	Select the menu for enabling Wi-Fi communication.		
Pass/Fail Determination	The test passes if the Nintendo-provided icon is displayed correctly.		
Software to be Inspected	Software that provides icon confirmation to the player.		

Test Number	DS 4-9	Category	Nintendo WFC Connection/Disconnection
Guideline	6.4.1 Displaying the Wi-Fi Reception Strength Icons [Required] 6.4.2 Modifying the Wi-Fi Reception Strength Icons [Required]		
Overview	<p>If the user agrees to enable Wi-Fi communication, always display the Wi-Fi reception strength icons specified by Nintendo. The icon indicates the signal strength of reception data. The icon itself, including its size and coloration, may not be altered. However, minor changes in the hue of green, yellow, and red colors are allowed as long as the 3 levels are still easy to differentiate.</p> <p>Note: Because this icon is similar to the Nintendo DS Wireless Communications reception strength icon, be careful when using it.</p>		
Test Procedure	<p>(1) Agree to enable Wi-Fi communication and connect with Nintendo Wi-Fi Connection.</p> <p>(2) Move away from the access point currently connected.</p>		
Pass/Fail Determination	<p>The test passes if all of the following are met:</p> <p>(1) The Nintendo-provided icon is displayed.</p> <p>(2) When the signal reception strength changes, the graphics appropriate to match the change are displayed.</p>		
Software to be Inspected	All software.		

Test Number	DS 4-10	Category	Nintendo WFC Connection/Disconnection
Guideline	6.5.1 Checking Improper Names and Disconnecting from Nintendo Wi-Fi Connection [Required]		
Overview	<p>To make sure that a name used in Nintendo WFC does not offend another person, it is sent to the authentication server to verify that it is appropriate. If the name is deemed inappropriate, a standard message is displayed and the user is disconnected from Nintendo WFC.</p> <p>If Wi-Fi communication is performed only among friends, there is no need to display the standard message or to disconnect from Nintendo WFC.</p>		
Test Procedure	Set the name used over Nintendo WFC as "badword" (not case sensitive) and connect to Nintendo WFC.		
Pass/Fail Determination	<p>The test passes if all of the following are met:</p> <ul style="list-style-type: none">• The standard message is displayed.• The user is disconnected from Nintendo WFC.		
Software to be Inspected	<ul style="list-style-type: none">• Software able to communicate with people other than friends in Nintendo WFC.• Software able to communicate only with friends in Nintendo WFC, but creates ranking that anyone can view.		

Test Number	DS 4-11	Category	Nintendo WFC Connection/Disconnection
Guideline	6.5.2 Implementing a Function for Changing Names [Required]		
Overview	Implement a feature that allows the Nintendo WFC name to be changed when the name is determined inappropriate by authentication server name check.		
Test Procedure	During game play, select the menu for changing the name.		
Pass/Fail Determination	The test passes if the name is changed and Wi-Fi connection is successful.		
Software to be Inspected	<ul style="list-style-type: none">• Software that does not create Nintendo WFC name from the DS owner information.• Software that does not automatically change the Nintendo WFC name to an appropriate default name.• Software able to communicate only with "friends" in Nintendo WFC, but creates ranking that anyone can view.		

2.5 Processes During Wi-Fi Communication

Test Number	DS 5-1	Category	Processes During Wi-Fi Communication
Guideline	7.1 Changing the Authentication Server Connection Point [Required]		
Overview	There are two types of authentication servers: one is for developers and one is for retail products. When creating the Master ROM, you must use the <code>DWC_SetAuthServer()</code> function to switch the connection target to the server for retail products.		
Test Procedure	<p>Note: The test below can only be performed by software that implements the illegal name check feature.</p> <p>Connect to Nintendo Wi-Fi Connection with “tset” configured as the illegal name check target.</p>		
Pass/Fail Determination	The test passes if “tset” is not determined to be an illegal name.		
Software to be Inspected	All software.		

Test Number	DS 5-2	Category	Processes During Wi-Fi Communication
Guideline	7.2 Disabling Soft Reset During Communications [Required]		
Overview	Because performing a soft reset during Wi-Fi communications may offend the person you are communicating with, soft reset will be disabled during Wi-Fi communications.		
Test Procedure	Press START, SELECT, L Button, and R Button simultaneously during Wi-Fi communications.		
Pass/Fail Determination	The test passes if soft reset is disabled during Wi-Fi communications.		
Software to be Inspected	Software with soft reset function.		

Test Number	DS 5-3	Category	Processes During Wi-Fi Communication
Guideline	7.3 Prohibiting Transition to Sleep Mode During Communications [Required]		
Overview	Entering Sleep Mode during Wi-Fi communication will disconnect Wi-Fi communications. As this may offend the person you are communicating with, transition to Sleep Mode during Wi-Fi communications is prohibited. Instead, transition to Power Save Mode, which will turn the LCD or backlight OFF, and continue communications.		
Test Procedure	Close the DS system during Wi-Fi communications.		
Pass/Fail Determination	The test passes if the LCD or backlight are turned OFF and the Nintendo DS system does not transition to Sleep Mode (slow blinking of Power LED).		
Software to be Inspected	All software.		

Test Number	DS 5-4	Category	Processes During Wi-Fi Communication
Guideline	7.4.1 Transitioning After a Fixed Amount of Time While Waiting for Input [Recommended] 7.4.2 Input Wait Display [Recommended]		
Overview	In Wi-Fi communication, if there is a situation where the player must wait for an input from another player, set a timeout period after which the player will progress to the next scene. This is to insure that a player will not have to wait for the other player for an extended period of time. In addition, while waiting for player input, indicate status onscreen to prompt player input.		
Test Procedure	During Wi-Fi communication, advance to a scene where a player needs to wait for input from another player.		
Pass/Fail Determination	The test passes if all of the following are met: <ul style="list-style-type: none"> • A timeout is set and the game advances after a set period. • A screen is displayed to inform the players that it is waiting for player input. 		
Software to be Inspected	Software with scenes that require waiting for input from another player during Wi-Fi communications.		

Test Number	DS 5-5	Category	Processes During Wi-Fi Communication
Guideline	7.5 Communication Operations [Required]		
Overview	Because there is a chance of communication operations (such as update of friend roster) when there is no network operation intended by the application (such as starting connection to other clients), call the <code>DWC_ProcessFriendsMatch()</code> function approximately once every game frame. Note: <code>DWC_ProcessFriendsMatch()</code> cannot be used when only the NitroDWC-DL library is used, so it is necessary to confirm, using the <code>DWC_UpdateConnection()</code> function, that connection with the access point is maintained.		
Test Procedure	(1) Perform matchmaking between two Nintendo DS systems. (2) Connect one Nintendo DS system to Nintendo WFC, and monitor the status of the other Nintendo DS system while it is a friend. Repeatedly connect and disconnect the other Nintendo DS system from Nintendo WFC. (3) Generate an error between the DS and access point (for example, turn off the access point's power) during a mode where neither the Nintendo download server nor the ranking server are being accessed.		
Pass/Fail Determination	The test passes if all of the following are met: <ol style="list-style-type: none"> (1) Both Nintendo DS systems display successful matchmaking at approximately the same time. (2) The connection and disconnection status is immediately reflected to the other DS. (3) When communication with the access point is terminated, the game disconnects and displays the appropriate error code and message. 		
Software to be Inspected	(1) All software. (2) Software that allows status of friends to be checked. (3) All software.		

2.6 Special Features

Test Number	DS 6-1	Category	Special Features
Guideline	8.3.3 Observing Relationships with Other Parties [Required]		
Overview	Just as with standard data communication, observe relationships of friend, rival, and stranger when performing data communication using the general-purpose ranking library feature.		
Test Procedure	Check the content displayed in the rankings.		
Pass/Fail Determination	The test passes if a relationship with friend, rival, and stranger is observed.		
Software to be Inspected	Software that uses the general-purpose ranking library.		

Test Number	DS 6-2	Category	Special Features
Guideline	8.3.4 Acquiring Friend Rankings [Required]		
Overview	Because friends whose friend rankings are being obtained are specified by a GS profile ID, ranking information can be obtained even if the friend was registered unilaterally. For this reason, when exchanging free words and other information using user-defined data, confirm that only the data for parties who are established as friends can be obtained when using features such as friend ranking.		
Test Procedure	<p>(1) Enter the friend code of the other party and register it in the friend roster. (At this time, do not establish a “friend” relationship with the party that has the entered friend code.)</p> <p>(2) Connect to Nintendo Wi-Fi Connection and get ranking data.</p>		
Pass/Fail Determination	Passes if it is impossible to obtain information about a party that has merely been registered in the friend roster and for which a friend relationship has not yet been established.		
Software to be Inspected	<ul style="list-style-type: none"> Software that uses the general-purpose ranking library. Software that uses user-defined data to exchange free words. 		

Test Number	DS 6-3	Category	Special Features
Guideline	8.3.7 Limitations for Communications with the Ranking Server [Required]		
Overview	To reduce the load on the ranking server, make sure that the ranking server is accessed no more than ten times in five minutes, and do not allow ranking information to be obtained repeatedly at any time that a player chooses.		
Test Procedure	Play the game to observe all of Nintendo Wi-Fi Connection services.		
Pass/Fail Determination	<p>The test passes if all of the following are met:</p> <ul style="list-style-type: none"> The ranking server is accessed no more than ten times in five minutes. Ranking is not obtained repeatedly at any time that a player chooses. 		
Software to be Inspected	Software that uses the general-purpose ranking library.		

Test Number	DS 6-4	Category	Special Features
Guideline	8.4.1 Referencing Other Player's Data Regions [Required]		
Overview	Because the data of players registered on the friend roster can be accessed, it is possible to access the data region of other people merely by entering their friend code. For this reason, check whether a friendship has been established when performing communication allowed only among friends, such as free-word communication using the other person's data region.		
Test Procedure	(1) Enter the friend code of the other party and register it in the friend roster. (At this time, do not establish a "friend" relationship with the party that has the entered friend code.) (2) Connect to Nintendo Wi-Fi Connection and get data for the other person from data storage.		
Pass/Fail Determination	Passes if information for parties that are not friends cannot be obtained from data storage merely by entering their friend code in the friend roster.		
Software to be Inspected	Software that uses data storage.		

Test Number	DS 6-5	Category	Special Features
Guideline	8.4.2 Access Frequency Limitation [Required]		
Overview	Frequent access of data storage may be viewed by the GameSpy server as an attack on the server, and the connection may be terminated. Therefore, make sure that access frequency does not exceed ten times per second.		
Test Procedure	Connect to Nintendo Wi-Fi Connection and play a scene where data is exchanged with data storage.		
Pass/Fail Determination	Passes if data can be sent to and received from data storage without being disconnected from the GameSpy server.		
Software to be Inspected	Software that uses data storage.		

2.7 Other

Test Number	DS 7-1	Category	Other
Guideline	9-3 Limitations on Reproducing Information Obtained Inside Games On Websites [Required]		
Overview	When reproducing information obtained from Nintendo WFC-compatible software where it might be seen by an unspecified large number of people (such as typical web sites), always obtain user consent before reproducing information. This way you can avoid situations where the user is not aware of information available to the public. Also, treat the content as if communicating with strangers, and make sure that free-word communication or similar information is not being made available.		
Test Procedure	(1) Play the game to observe all Nintendo Wi-Fi Connection services. (2) Verify information on the web sites and other places.		
Pass/Fail Determination	The test passes if all of the following are met: (1) Received consent from the player that information is going to be reproduced and can be seen by an unspecified large number of people. (2) The reproduced information is limited to the information handled in a manner consistent with "communication with a stranger."		
Software to be Inspected	Software that reproduces information obtained from the game to web sites or other public locations.		

Test Number	DS 7-2	Category	Other
Guideline	9-4 Displaying the North American ESRB Online Rating Notice [Required]		
Overview	<p>If your Nintendo Wi-Fi Connection-supported game is required by the ESRB to display the ESRB Online Rating Notice, you must display it before the start of Nintendo Wi-Fi Connection following the specifications set by the ESRB. The requirement is indicated on the ESRB rating certificate. Typically the notice is required if the game has features such as:</p> <ul style="list-style-type: none"> • Unrestricted communication between players during network connection. • Capability of sending/receiving contents that have not been evaluated by ESRB (such as user-created data). <p>The text of the ESRB Online Rating Notice as of January 1, 2008 is as follows:</p> <p>Online Interactions Not Rated by the ESRB</p> <p>NOTE: Games that launch before June 1, 2008 may display the old ESRB Online Rating Notice as follows:</p> <p>ESRB Notice: Game Experience May Change During Online Play</p>		
Test Procedure	Start Nintendo Wi-Fi Connection using the shortest steps from the game startup.		
Pass/Fail Determination	The test passes if the ESRB online notice described in "Overview" is shown before the connection is made.		
Software to be Inspected	<ul style="list-style-type: none"> • North American market software with unrestricted communication ability during DWC. • North American market software with the ability to send/receive content not rated by ESRB. 		

Test Number	DS 7-3	Category	Other
Guideline	9-5 Standardization of Terminology and Names [Required]		
Overview	Use proper names for terms and names related to Nintendo Wi-Fi Connection according to <i>Nintendo Wi-Fi Connection Terminology (for Wii and Nintendo DS)</i> . However, if images are used for convenience, use images that are as close as possible to the actual image.		
Test Procedure	Play the game normally.		
Pass/Fail Determination	Passes if the proper names are used according to <i>Nintendo Wi-Fi Connection Terminology (for Wii and Nintendo DS)</i> .		
Software to be Inspected	All software.		

3 Reference Material

Errors between level 60000 and 99999 describe checks enforced by the Lot Check instructions.

Display an appropriate error message not only for the error codes mentioned below, but whenever any error between level 60000 and 99999 is detected.

Errors between level 60000 and 99999 are related to the GameSpy server. However, by using the following filtering method for router packets, checks are performed for emulation in the event that no response is received from the server.

Packet Filtering Method (for a BUFFALO WHR-G54S)

Direction: LAN to WAN (reverse direction).

Operation: Ignore (do not select the Deny option, as it causes improper behavior).

Target Address: Specify each of the IP addresses mentioned below.

Protocol: All protocols.

Error Code	61020
URL (IP Address)	gpcm.gs.nintendowifi.net (207.38.11.34)
Timing	Whenever a connection with Nintendo Wi-Fi Connection is made.
Target	All software.
Error Code	92020
URL (IP Address)	<gamename>.gamestats.gs.nintendowifi.net (207.38.11.49)
Timing	Whenever a persistent storage connection is made.
Target	Software that uses persistent storage.
Error Code	98020
URL (IP Address)	gamestats2.gs.nintendowifi.net (207.38.11.146)
Timing	Whenever a ranking server connection is made.
Target	Software that uses ranking.

Error Code	85020
URL (IP Address)	<gamename>.ms<masterindex>.gs.nintendowifi.net (either 207.38.11.14 or 207.38.11.11)
Timing	Whenever matchmaking with a partner is done.
Target	Software that performs matchmaking with a partner.
Supplementary Notes	<p>Errors will occur differently, depending on the matchmaking method.</p> <ul style="list-style-type: none"> • Peer matchmaking with friend unspecified: An error will be detected even if matchmaking is started by a single player. • Peer matchmaking with friend specified: An error will be detected by both parties during the matchmaking process. • Server-client matchmaking: Errors will only be displayed on child devices. Errors will not be displayed on the parent device, which will continue to search for child devices.

Error Code	86420
URL (IP Address)	<gamename>.natneg1.gs.nintendowifi.net (IP: 207.38.11.12) <gamename>.natneg2.gs.nintendowifi.net (IP: 207.38.11.13)
Timing	Whenever matchmaking with a partner is done.
Target	Software that performs matchmaking with a partner.
Supplementary Notes	<p>This does not occur when two systems are connected to the same NAT device (such as a router). It occurs when matchmaking is attempted between two systems connected to different NAT devices. It will occur even if packets to only one of the IP addresses are filtered.</p> <p>This error is detected when a prescribed number of NAT negotiation failures have occurred. Consequently, it will be treated as a timeout before it is issued if timeouts have been implemented for matchmaking, and the cause for matchmaking failure will not be apparent to the user. Exercise caution.</p> <p>Additionally, for peer matchmaking with friend unspecified (<code>DWC_ConnectToAnybodyAsync()</code>) and peer matchmaking with friend specified (<code>DWC_ConnectToFriendsAsync()</code>) this error will take time because the error code of 86420 will occur when NAT negotiation has failed a prescribed number of times. With server-client matchmaking (<code>DWC_ConnectToGameServerAsync()</code>), the time before an error occurs is shorter than cases with peer matchmaking as described above: An error code of 86420 occurs immediately when NAT negotiation fails.</p>

- IP Address:
IP addresses may change without notice. Consequently, use a command similar to `nslookup` to find the actual IP addresses.
- <gamename> :
<gamename> is the gamename assigned by GameSpy when Design Statement Checksheet A is returned.

- <masterindex> :
<masterindex> is a number assigned by Nintendo and printed in the error simulation user ID field of the returned Design Statement Checksheet A. Contact Nintendo if you need this information and the number is missing from the sheet.
- DWC-DL Library:
The aforementioned error codes are not detected when the DWC-DL library is used.

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