Technical Requirements Checklist

for PlayStation Software

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About these Requirements

When to Use these Requirements

Please complete the attached Publisher Information Form and Technical Requirements Checklist **for each title submission**.

Prior to completing the form, please confirm that you have the latest version of the Requirements Checklist by contacting your Sony Computer Entertainment representative.

Completing the Checklist

Most sections of the Checklist begin with questions to determine whether or not a given requirement applies to your title.

If you mark a section as "Applicable", then you must meet all requirements stated in that section; otherwise you can skip to the next section.

In most cases, you will tick each checkbox to indicate that your title complies with the stated technical requirement. In some cases you will be asked to tick one of several alternatives, depending on the technical features of your title.

NOTE: If you do not comply with any of the stated technical requirements, this may delay your title testing and approval.

Master Disc Version Numbering System

To ensure accurate tracking of all titles, SCEA and SCEE require use of the Master Disc Version Numbering System outlined below for all Master Disc submissions. SCEI recommends use of this system, but does not require it.

The version number created using this system should be used whenever you refer to the version number of a product on all paperwork and discs.

The Version Number for any Master Disc submission comprises two parts - M.N where M=the Major Version and N=the Minor Version. The Version Number is assigned as follows:

Version	Description
0.1, 0.2, 0.3, etc.,	pre-master discs
1.0	first set of master discs
2.0, 3.0, 4.0 etc.	subsequent sets of re-mastered discs

Examples:

The first pre-master submission (such as for a standards check) would be Version 0.1.

The first master submission (for Approval to Manufacture black discs) would be Version 1.0.

A re-submission (such as for Approval to Manufacture black discs after failing QA, or for bug corrections) would be Version 1.1.

A re-master (for subsequent manufacturing of a title due to a running change in the software code or product recall) would be Version 2.0.

Publisher and Software Information Form

We, the publisher of this title, confirm that we have read and completed this Technical Requirements Checklist and that our submission disc(s) completely meet these requirements.

Name of Title: _____

Product Code: _____
(as described in section 3.3)

Master Disc Version: _____
(as described on the previous page)

Creation Date: _____
(as described in section 3.4)

License File: _____
(as described in section 3.1)

License Area: _____
(as described in section 3.7)

Boot File: _____
(as described in section 14.1)

Memory Card Filename: _____
(as described in section 12.1)

Name of Publisher: _____

Your Name: _____

Signature: _____

Your Title: _____

Phone: _____

Fax: _____

Mastering Checklist

1.0 Basic Mastering Rules

1.1 ☐ **Required: All submission discs contain exactly the same data.**

To avoid confusion, we compare bit images of all submitted discs on receipt. Please make sure that all the submission discs contains 100% same data.

Be especially careful on the file creation date. Different creation dates can easily occur when using several CD-Writers to create discs using NEWS mastering environments.

1.2 ☐ **Required: Three or more discs are verified and annotated as such on the disc.**

Please verify discs after creation (that is, check that the data written on CD -Recordable disc is identical to original data on the hard disc).

Please verify at least three discs out of eight discs. Verification can be performed with the CD-ROM Generator.

Please mark the verified discs in order to distinguish them from unverified discs.

While all territories require submission of three verified master discs, specifications for the five supplemental discs vary by territory:

SCEI:
Three verified master discs and five discs (duplication is acceptable) should be submitted.

SCEA:
Three verified master discs and five MASTER discs (duplication is NOT acceptable) should be submitted.

SCEE:
Three verified master discs and five MASTER discs (duplication is NOT acceptable) should be submitted.

1.3 ☐ **Required: This submission uses discs of linear velocity 1.25 meters per second (Sony CD-R71PS) are required.**

Reading precision is lower if other types of discs are used.

1.4 ☐ **Required: Discs have been created in single speed mode (from the recording dialog box) in the CD-ROM Generator.**

Double speed mode produces unstable CD-ROMs when using CDW-900E. Single-speed mode creates discs with lower error rates. Submitted discs should test at a C1 error rate of 50 or less. Submitted masters will be rejected due to excessive C1 error rates.

2.0 CD-ROM Regulation

2.1 General Regulation

2.1.2 ☐ **Required: All Program Data (excluding CD-DA data) must be contained on track one. This is due to ISO-9660 standards.**

2.1.3 ☐ **Required: Total data volume (including CD-DA data) must be more than one minute.**

This is due to Red Book standards. IMPORTANT: Please also see section four. It is required for your software title to adapt the requirements written in section four at the same time.

2.1.4 ☐ **Required: The length of each track is greater than four seconds.**

This is due to Red Book standards. It is recommended that the length of each track be more than 4.5 seconds.

2.1.5 ☐ **Required: Time length of pause immediately before and immediately after track one must be greater than two seconds. Time length of pause between tracks greater than track two seconds must be more than one second. This follows Red Book standards and is the default setup for the CD-ROM Generator software.**

2.2 Spurious Noise on CD-DA tracks

(Please tick A or B below)

☐ **A) Not applicable.** (This title does not utilize CD-DA data or the CD-DA data has been checked and no spurious noise is present; skip this section.)

☐ **B) Applicable.** (This title has been checked and the CD-DA data is confirmed to contain spurious noise; complete this section.)

2.2.1 ☐ **Recommended: If spurious noise is present, (and unavoidable) please submit a report letting us know which part (at ? minutes ? seconds) of which track has the noise.**

It is highly recommended not to put any spurious noise in CD-DA data.

Note that, when converting sound files with the Macintosh RAW2DA tool, the input data must be in Sound Designer II format. If you use AIFF format, some spurious noise might appear before and after the converted sound data.

Also note that, when transferring data from Macintosh to PC, do not choose MacBinary format. Doing so sometimes changes the resource part into spurious noise.

3.0   IDs for Master Disc Input on CD-ROM Generator

3.1 ☐ **Required: In the Additional Information dialog box (accessed from the Volume Screen), enter the correct License file in the "System Area File" field. Please ensure that the latest version of the file is used.**

SCEI:

License data file: (LICENSEJ.DAT) for Japanese market.

SCEA:

License data file: (LICENSEA.DAT) for US/Canadian market.

SCEE:

License data file: (LICENSEE.DAT) for European market.

3.2 ☐ **Required: In the Additional Information dialog box (accessed from the Volume Screen), check that PLAYSTATION is entered correctly in all capital letters into the "System Identifier" field.**

"PLAYSTATION" (in all capital letters)

The items mentioned in 3.1 and 3.2 above can be checked by booting the program with the Debugging Station. If it is booted successfully, the licensing screen (black with PlayStation logo) will appear after the white SCE logo.

3.3 ☐ **Required: In the Master Information dialog box (accessed from the Layout Screen), enter the Sony Computer Entertainment assigned Product Code for this title into the "Disc Name" field.**

The Product Codes for each territory are given below, where "xxxxx" = the numeric part of the Product Code as assigned to your title by Sony Computer Entertainment in the applicable territory:

Product Code	Description
SLPS-xxxxx	for 3rd party published software for SCEI territory
SCPS-xxxxx	for SCEI published software for SCEI territory
SIPS-xxxxx	for SCEI published software of "Yoge" brand for SCEI territory
SLUS-xxxxx	for licensed software for SCEA territory

SCUS-xxxxx	for SCEA published software for SCEA territory
SLES-xxxxx	for 3rd party published software for SCEE territory
SCES-xxxxx	for SCEE published software for SCEE territory

3.4 ☐ **Required: In the Master Information dialog box (accessed from the Layout Mode screen), enter or modify the time and date of burning the master disc into the "Creation Date" field. Ensure that the Creation Date is the same on all paperwork and written on the actual discs themselves.**

The creation date must be the actual date that the master disc was BURNED.

3.5 ☐ **Required: In the Master Information dialog box (accessed from the Layout Mode screen), enter the legal copyright holder in all capital letters into the "Copyright Holder" field.**

3.6 ☐ **Required: In the Master Information dialog box (accessed from the Layout Mode screen), enter the Publisher's name into the "Producer Name" field.**

3.7 ☐ **Required: In the Master Information dialog box (accessed from the Layout Mode screen), License Area code is input correctly (using an upper case letter) into the "License Area" field.**

"J" for Japanese market

"A" for US/Canada market

"E" for European market

Above mentioned 3.3 - 3.7 can be input in the window that appears by clicking the button named "Master" located in the bottom-right corner of the Layout Mode screen.

This information is not stored when the .CCS file is saved and must be re-entered every time CD-ROM Generator (prior to version 1.3) is used.

3.8 ☐ **Required: The disc has been checked using ID-CHECKER (M-CHECK.exe).**

ID-CHECKER (M-CHECK.exe) can verify whether 3.3 - 3.8 (above) have been correctly written onto the disc or not. This check can be performed on a Windows PC connected to a CDW-900E into which the disc to be checked has been inserted.

SCEI:

ID-Checker is located in SCE-NET/Software Library/Chapter on other tool /No.13.

No.	File Name	Type	Author	YY/MM/DD	Bytes	Access	Kind
13	mchk1221.lzh	B	sce00001	95/12/21	93819	0	UTL

Desc: DOSV,WIN/TOOL/MCHK1221.LZH/Master Disc Check Program v1.00

SCEA:

ID-Checker is located on the Developer Support BBS. The path is:

Conferences>Tools,Docs&Info>Tools>CDGenerator>MCHECK.ZIP

If you have any questions please contact the SCEA BBS administrator on 415-655-8181.

SCEE:

MCHECK.ZIP   In "CD Rom Writer" file area on the Developer Support BBS.

4.0   Special Notes on Creating CD-ROM Disc

4.1 ☐ **Required: The title does not seek within the area covering the very last three minutes of the entire data area of the disc.**

This refers to the very outside edge of the data-written area; not the very outside edge of the disc itself. For example, if there are 10 minutes of data on the disc, the last three minutes are the 8, 9 and 10 minute areas.

Currently, in PlayStation, seeking in the area covering the last three minutes (the very outside edge of the data-written area) may be unsuccessful.

To avoid this, please use one of the following solutions:

1) Put dummy data in the area covering the last three minutes.

2) In some cases like using CD-DA as BGM, the last CD-DA data (the last music) should be more than three minutes long. In this case, unless trying to play the music from the middle of the music or unless trying to repeat some part of the music, data seek within the last three minutes area will not happen.

3) If you want to locate any data in the last three minutes of the data-writable area, please be sure to make the last three minutes part ONE continuously accessed file. Make the length of the data file more than three minutes (For example, putting an opening movie or an ending movie to the area).

4) If the last data file extends into the last three minute of the data-writable area, only access the data from a seek PRIOR to the last three minutes of the end of the data area of the disc. This case basically applies to a completely "filled" disc where the file in question is literally at the end of the CD.

Figure 4.1
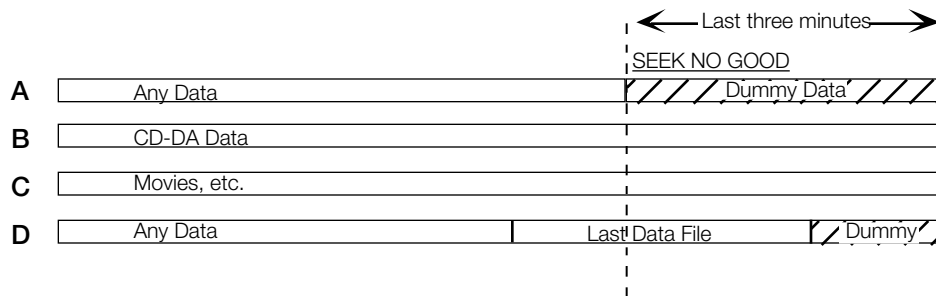
(Please tick A , B, C or D below)

4.1.2 □ **A)** **Three minutes dummy data is in the last three minutes of the disc. (See figure 4.1 A)**

4.1.3 □ **B)** **The length of the last CD-DA data is greater than three minutes and there is no data seek within the last three minutes of the CD-DA data. (See figure 4.1 B)**

4.1.4 □ **C)** **A file which lasts more than three minutes that is only read continuously beginning-to-end is the last file on the disc. (See figure 4.1 C)**

4.1.5 □ **D)** **A data file which extends into the last three minutes of the data-writable area of the disk is read only from a seek PRIOR to the last three minutes of the data-writable area. (See figure 4.1 D).**

5.0   Soak Test

5.1 □ **Required: This title continues to function correctly after an aging test of eight hours has been performed with the title in Demo Mode.**

5.2 □ **Required: This title continues to function correctly after an aging test of eight hours has been performed with the title in Pause Mode.**

5.3 □ **Required: This title continues to function correctly after aging tests of eight hours have been performed in all areas of this title where a consumer could reasonably be expected to leave this title unattended for extended periods. For example, Menu Screens, Save Game Screens etc.**

Text and Graphics Checklist

6.0   Sony Corporate Logos and the PlayStation Logo

6.1   ☐   **Required:** The four-letter Sony logotype is not used within this title (software code and packaging) except where this logo appears on a digitized image of a console or an official peripheral by Sony Computer Entertainment.

6.2   ☐   **Required: The PlayStation logo, or logotype and the Sony Computer Entertainment logo is not used within this title (software code) except where this logo appears on a digitized image of a console or an official peripheral by Sony Computer Entertainment.**

6.3   ☐   **Required: The word "Sony" is not used in association with the word "PlayStation" in any context within this PlayStation title (software code or packaging).**

7.0   PlayStation Component Naming Conventions

7.1   ☐   **Required: The following names are used in this title and its packaging when referring to the console or an official peripheral by Sony Computer Entertainment:**

(Note: For naming conventions in other languages, please refer to Appendix A <to be inserted in next release>)

	Japanese	English	French	German
General PlayStation component names		Console Controller Controller port Directional button Memory card slot		
Console component names		Power button Power indicator Reset button Open button Disc cover Controller port1 Controller port2 Memory card slot1 Memory card slot2		

Controller component names		Select button
		Start button
		Action buttons
		    button
		    ☐ button
		    O button
		    X button
		Shoulder buttons
		    L1 button
		    L2 button
		    R1 button
		    R2 button		

Peripheral names		Memory Card RFU adapter S video cable Euro-AV cable Mouse Link cable Multi tap Analog joystick		
Names of discs in multi-disc games		DISC 1 DISC 2 DISC 3 DISC 4		

7.2 ☐ **Required: When referring to a Multi tap connected to Controller port 1, the names of each port on the Multi tap are 1-A, 1-B, 1-C and 1-D. When referring to a Multi tap connected to Controller port 2, the names of each port on the Multi tap are 2-A, 2-B, 2-C and 2-D.**

8.0   Title Language

8.1   Language selection

(Please tick A or B below)

☐ **A)   Not applicable.** (This title does not include a language selection option).

☐ **B)   Applicable.** (This title includes a language selection option).

8.1.1   ☐   **Required: All critical on-screen text (and spoken word, where applicable) is in the language selected by the user on the language selection screen.**

Peripheral Handling Checklist

9.0   General

9.1   ☐   **Required: This title functions correctly if peripherals are added or removed.**

9.2   Multiple Peripherals
      (Please tick A or B below)
      ☐   **A)   Not applicable.** (This title does not support multiple peripherals; skip to section 10).
      ☐   **B)   Applicable.** (This title supports multiple peripherals; complete this section).

9.2.1   ☐   **Required: Different peripherals may be added or removed during gameplay without affecting gameplay.**

10.0   Connecting to a Controller Port

10.1   ☐   **Required: This title functions correctly when utilizing the control device with no adverse effects such as changes to game speed, input response times etc.**

10.2   ☐   **Required: This title continues to function correctly when three or more of the directional buttons on the control device are pressed simultaneously.**

After using the control device for an extraordinarily long time during heavy game mania, the props to support the buttons are worn away. In such a case, the user could unintentionally press three or more of the directional buttons simultaneously.

10.3   ☐   **Required: This title continues to function correctly when buttons on the control device are repeatedly pressed rapidly.**

10.4   ☐   **Required: This title continues to function correctly when all the buttons on the control device are pressed simultaneously.**

10.5   ☐   **Required: This title recognizes control devices correctly even when they are inserted after booting.**

10.6   ☐   **Required: This title does not crash or otherwise malfunction when a control device is connected or disconnected during gameplay. This title enters Pause mode if a controller becomes connected or disconnected. Recommended: In such cases, we recommend displaying a message informing the user that a peripheral has been connected or disconnected.**

10.7   ☐   **Required: This title is playable with the control devices (whether approved by SCE or not) that the packaging, user manual, or gameplay claim are compatible.**

11.0   Handling Specific Peripherals

11.1   Multi tap
      (Please tick A or B below)
      ☐   **A)   Not applicable.** (This title does not support the Multi tap; skip to 11.2)
      ☐   **B)   Applicable.** (This title supports the Multi tap; complete this section)

11.1.1	☐	**Required: This title doesn't hang up even under the following circumstance:**

        • **Controllers or Memory cards that are not used in the title are connected to the Multi tap**

        • **Controllers in use are unintentionally removed from the Multi tap.**

11.1.2	☐	**Required: This title continues to function correctly when the Multi tap is connected or removed during gameplay.**

11.1.3	☐	**Required: This title continues to function correctly when a peripheral is connected or removed from the Multi tap during gameplay.**

11.1.4	☐	**Required: This title uses Multi tap Library (libtap) version 3.3 or later.**

SCEI:

The library is located in SCE-NET/Software Library/Programmer Tool Kit/No.92.

No.	File Name	Type	Author	YY/MM/DD	Bytes	Access	Kind
92	ltap1114.lzh	B	sce00003	95/11/14	2747	185	LIB

Disc: PS/LIB/LTAP1114.LZH/Run Time Library Ver3.3 LIBTAP 11/14FIX version

SCEA:

The most recent release of libtap.lib is located on the Programmer Tools CD (Release 1.6). The CD Path is:

```
[CD Drive]:\PSX\LIB\libtap.lib
```

On the Developer Support BBS, the path is:

Conferences>Tools,Docs&Info>Tools>Prog.ToolsCD>Release1.6>PSX16.ZIP

If you have any questions please contact the SCEA BBS administrator on 415-655-8181.

SCEE:

LIBTAP.ZIP in "PlayStation Libraries" file area and the SCEE "Developer Support CD-ROM Version 1.0."

11.1.6	☐	**Required: This title adheres to the correct procedure for connecting the Multi tap to the Console and this is documented in the title user's manual.**

The Multi tap must function correctly when connected to either Controller port two (with a control device in Controller port 1) or Controller port one alone. The explanation of the connection and usage must be shown in the software user's manual.

There is a possibility that the console will not recognize a Multi tap unless a Controller is connected to Controller port A on the Multi tap during the connection. In order to avoid this problem, the following "Caution Clause" must be in the software user's manual.

Sample of the Caution Clause

"When using the Multi tap, at least one controller must be connected to port A".

Recommended location of the Caution Clause

Include the Caution Clause on the page explaining Multi tap usage on the page explaining Controller usage in the user's manual.

11.1.7	☐	**Required: Adding or Removing Controllers from the Multi-tap does not stop gameplay.**

Please do not stop gameplay even if :

• Unused Controllers and/or Memory cards are connected during gameplay.

• Unused Controllers and/or Memory cards are connected during gameplay.

• Needed Controller and/or Memory cards are disconnected during gameplay. Please do not lose the logic if the necessary controllers are removed during the middle of a game.

The removal or insertion of Memory cards or Controllers into the Multi tap must not adversely affect game logic or function. For example, if players 1,2,3 & four are controlled by peripherals in ports 1-A, 1-B, 1-C & 1-D, players 1,3 &4 must continue to function normally if the peripheral in port 1-B is removed.

Please avoid confusion if one (or more) of the Controllers is suddenly removed. For example:

1) Do not lose control of the remaining Controllers.

2) Do not allow a different controller to start controlling a different character (e.g. 1-C starts controlling character one instead of the assigned character), etc.

In the case described above, this means

1) Do not lose control of 1-A, 1-C and 1-D.

2) Do not allow, for example, 1-C to start controlling character one instead of character 3.

We strongly recommend settling and locking the Controller operation display.

11.2   **Analog Joystick**

(Please tick A or B below)

☐   **A)**   **Not applicable.** (This title does not use the Analog Joystick; skip to 11.3.)

☐   **B)**   **Applicable.** (This title uses the Analog Joystick; complete this section.)

11.2.1   ☐   **Required: There is Calibration Mode.**

(0 position calibration, idle movement, sensitivity, Maximum rate of twist etc.)

11.3   **neGcon™**

(Please tick A or B below)

☐   **A)**   **Not applicable.** (This title does not use the neGcon™ controller; skip to 11.4.)

☐   **B)**   **Applicable.** (This title uses the neGcon™ controller; complete this section.)

11.3.1   ☐   **Required: There is Calibration Mode.**

(0 position calibration, idle position range, sensitivity, maximum rate of twist etc.)

SCEI:

Please see "PlayStation/FAQ on feature of neGcon/No. 30" on BBS

SCEA:

Please see the neGcon FAQ on the Developer Support BBS, the path is:

Conferences>Tools,Docs&Info>Docs>FAQS >Peripherals

SCEE:

CTRLLER.ZIP   In "PlayStation Libraries" file area and the SCEE "Developer Support CD-ROM Version 1.0."

DEVGUIDE.ZIP   In "PlayStation Documentation" file area and the SCEE "Developer Support CD-ROM Version 1.0."

11.4   **Paddle/Volume Controller**

(Please tick A or B below)

☐   **A)**   **Not applicable.** (This title does not use the Paddle/Volume Controller; skip to 11.5.)

☐   **B)**   **Applicable.** (This title uses the Paddle/Volume; complete this section.)

11.4.1   ☐   **Required: There is Calibration Mode.**

(sensitivity, maximum rate of twist(right-left) etc.)

SCEI:

Please see "PlayStation/FAQ Feature of Volume Controller/No. 42"

SCEA:

Please see the Paddle/Volume Controller FAQ on the Developer Support BBS, the path is:

Conferences>Tools,Docs&Info>Docs>FAQS >Peripherals

SCEE:

CTRLLER.ZIP   In "PlayStation Libraries" file area and the SCEE "Developer Support CD-ROM Version 1.0."

DEVGUIDE.ZIP   In "PlayStation Documentation" file area and the SCEE "Developer Support CD-ROM Version 1.0."

11.5   **N.ASUKA (Controller for Pachinko)**

(Please tick A or B below)

☐ **A) Not applicable.** (This title does not use the Nasuka controller; skip to 11.6.)

☐ **B) Applicable.** (This title uses the Nasuka controller; complete this section.)

11.5.1   ☐ **Required: There is Calibration Mode.**

(0 position calibration, idle movement, sensitivity, maximum rate of twist etc.).

11.6   **Link Cable**

(Please tick A or B below)

☐ **A) Not applicable.** (This title does not use the Link Cable; skip to 11.7.)

☐ **B) Applicable.** (This title uses the Link Cable; complete this section.)

11.6.1   ☐ **Required: This title does not hang even if the Link Cable is suddenly removed during data transmission.**

11.6.2   ☐ **Required: This title enters Pause mode if the link cable is suddenly removed during data transmission. Recommended: In such cases, we recommend displaying a message informing the user that the link cable has been disconnected and the necessary correction steps.**

11.7   **Mouse**

(Please tick A or B below)

☐ **A) Not applicable.** (This title does not use the Mouse.)

☐ **B) Applicable. (**This title uses the Mouse.)

12.0 Memory Card

(Please tick A or B below)

☐ **A) Not applicable.** (This title does not support Memory cards; skip to section 13.)

☐ **B) Applicable.** (This title supports Memory cards; complete this entire section.)

12.1   **File name of the Memory card**

12.1.1   ☐ **Required: The file name of the Memory card is input correctly. The file name consists of the Key code (as shown below) plus the Product Code (assigned to your title by Sony Computer Entertainment in the applicable territory).**

Key Code	*Product Code*	*Description*
BI	SLPS-xxxxx	for 3rd party published software for SCEI territory
BI	SCPS-xxxxx	for SCEI published software for SCEI territory
BL	SIPS-xxxxx	for SCEI published software of "Yoge" brand for SCEI territory
BA	SLUS-xxxxx	for licensed software for SCEA territory
BA	SCUS-xxxxx	for SCEA published software for SCEA territory

| BE | SLES-xxxxx | for 3rd party published software for SCEE territory |
| BE | SCES-xxxxx | for SCEE published software for SCEE territory |

If your title represents one of following cases, please use the following instructions:

Case 1: Your title contains multiple discs. In this case, use the Product Code corresponding to the first disc of the set.

Case 2: You publish two product SKUs; one contains only a disc, the other contains a disc and peripheral bundle. In this case, use the Product Code corresponding to the unbundled version.

| 12.1.2 | ☐ | **Required: Verification that your Memory card data works properly with the built-in (ROM-based) Memory Card Manager in the PlayStation Console.** |

| 12.1.3 | ☐ | **Required: The Memory icon is displayed correctly.** |

| 12.1.4 | ☐ | **Required: The name of this title is displayed correctly.** |

| 12.1.5 | ☐ | **Required: The name of this title is saved in the correct manner.** |

| 12.1.6 | ☐ | **Required: Shift-JIS code must be utilized.** |

The Memory card saves a title name up to a maximum of 32 characters in length. If the title name is less than 32 characters, use a null letter (0x00) at the end or fill the vacant area with blanks (0x8140). ASCII code cannot be used because it might cause some trouble in the display of the software title name in some Memory card manager screens. Contact Developer Support for details on converting ASCII code to Shift-JIS.

| 12.2 | | **Ensuring that the Memory card can be formatted correctly** |

| 12.2.1 | ☐ | **Required: When the consumer chooses save mode with an unformatted Memory card, automatically proceed to the formatting procedure described below.** |

When the consumer chooses save mode with an unformatted memory card, the "formatting flow" should be started. Please do your best to prevent the player from unintentionally formatting the Memory card. Do not let the software start formatting the Memory Card automatically.

Please do not display a "format" option button. It might cause users to inadvertently erase all the existing data.

| 12.2.2 | ☐ | **Required: When the formatting flow starts, a dialog such as "The memory card is not formatted yet. Do you want to format it? Yes? or No?" is displayed. When "Yes" is chosen, saving should be started. When "No" is chosen, the flow should exit from save mode.** |

When the formatting flow starts, please display a dialog such as "The memory card is not formatted yet. Do you want to format it? Yes? or No?" When "Yes" is chosen, saving should be started. When "No" is chosen, the flow should exit from save mode.

Connector or line noise might cause an already-formatted Memory card to be regarded as unformatted. In order to let the user double check the Memory card, please display the previously mentioned messages.

To reiterate, please avoid auto-formatting when designing your title. Please display a dialog such as the one mentioned above when the user tries to save a title. This is to avoid any unintentional data erasure. Formatting should begin only when the user answers "yes" to the question.

| 12.3 | | **Procedure when the vacant block in the memory card is less than required** |

| 12.3.1 | ☐ | **Required: Judgment of a shortage of vacant blocks is made correctly.** |

When checking a Memory Card for available blocks to save a game, be sure to retry several times to ensure proper behavior. If enough blocks are not available, display a message such as "[x] blocks are required to save this game. Only [y] blocks are available."

When determining the free space in a Memory card, please count the number of vacant blocks, not the number of files. Since some titles require several blocks to save a file, the number of files already saved isn't the same as the number of blocks already occupied in the Memory card.

When determining whether or not the number of vacant blocks in a Memory card is sufficient for saving the title, please reserve the maximum number of blocks required for saving.

Usually, the number of blocks required to save a game varies due to the progress of gameplay. For example, a game may require a maximum of 5 blocks in total when a player reaches the final (20th) stage of the game, but may require only 2 blocks to be saved at an earlier stage of the game. In such a case, please reserve the maximum number of blocks for the game file in Memory Card.

Some titles require multiple blocks to save a single file. However, other titles can save several files. For example, a game that can save three files may require a maximum number of 3 blocks to save all these files. Since one file requires only one block, it is unnecessary to reserve 3 blocks at first. One block is enough.

12.3.2 ☐ **Required: A dialog such as "Vacant block is less than required" is displayed.**

If there are insufficient slots available on the selected Memory card to save this game title, the program must inform the user clearly. The user must be given the opportunity to delete a file, insert a different card, update the list of files displayed after swapping Memory cards, cancel the save, overwrite a file. These options must be available to the user when they attempt to save a game.

A game must never overwrite or delete another previously saved game (from the currently loaded, or any other, title) without explicit approval from the user. Wherever possible, the user should be offered a choice of which file, or files, to delete or overwrite.

12.4 **Procedure is correct when the Memory card is NOT inserted into Memory card slot:**

(Please tick A or B below)

12.4.1 ☐ **A)** **A message such as "Memory card is not inserted into the slot" is displayed.**

Please display a message such as "Memory card is not inserted into the slot" and exit from save mode.

12.4.2 ☐ **B)** **In an auto save title, a message such as "Memory card is not inserted into the slot" is unnecessary except when booting.**

Check whether or not a Memory card is inserted every time the player starts an auto save title. If not, please display the above mentioned message.

The exception procedure for an auto save title is only in this section, "procedure when the memory card is not inserted into the slot." There is no difference between an auto save title and other titles in other sections.

12.5 **In case of having memory card manager screen in the application software:**

(Please tick A or B below)

12.5.1 ☐ **A)** **There is no title-based Memory card manager screen.**

12.5.2 ☐ **B)** **All other titles' title name can be displayed in complete manner even in case of using all Shift-JIS codes or all ASCII codes.**

If the application software has Memory card control display, special attention must be paid to the display manner of other title names. At this time only Shift-JIS code is allowed for displaying title names in Memory card control display. The use of ASCII code is forbidden. However, in the past, ASCII code was also allowed and there are still some titles available that were designed with ASCII code. So, please make sure that your title can display both Shift-JIS code and ASCII code. Any title names with a combination of ASCII code and Shift-JIS code was and is not allowed. So, it's unnecessary to adapt for such combination titles.

12.6 **Other procedures**

12.6.1 ☐ **Required: This title does not crash even if the Memory card is removed or reinserted into a slot.**

However, it is not necessary for the game software to handle errors in the event that a Memory card is removed and/or inserted into a slot during a save or load operation. Note that the game manual should warn the user against removing or inserting a Memory card during a save or load operation.

12.6.2	☐	**Required: This title detects the removal and/or replacement of a Memory card.**

The removal and/or replacement of a Memory card must not have any detrimental effect on the performance of the product. For example, the title must not crash.

12.6.3	☐	**Required: The player can save this title even if the Memory card is inserted after booting.**

It is required that the player CAN save the title in the Memory card even if it is inserted after booting. Please do not design your title in such a way that it does not allow the Memory card to be inserted after booting.

12.6.4	☐	**Required: Points 12.2, 12.3 and 12.4 are checked every time just before saving. 12.5 is checked every time just before loading.**

This procedure can be omitted if the data was saved after power-on and no Memory card was removed or reinserted after the saving.

12.6.5	☐	**Required: 12.3, 12.4 and 12.5 are checked separately.**

12.6.6	☐	**Required: Clear messages are used to explain all aspects of Memory card operation. For example, "Memory card not present in Slot 1" or "Memory card in Slot one is not formatted". Do not use mixed messages such as "Memory card in Slot one is not formatted or there is not enough space on the Memory card to save your game."**

Please avoid displaying any mixed message such as "Memory card is not formatted OR there is no enough vacant space for further saving."

12.6.7	☐	**Required: This title checks whether or not saving and formatting are done correctly. It check whether or not Memory card or data is destroyed. It always checks this several times.**

12.7		Comparing data before saving:

(Please tick A, B or C below)

12.7.1	☐ A)	**Not applicable.** (There is no data which needs comparison with current data, to be saved.)
12.7.2	☐ B)	**When saving, data such as high-score, etc., are saved over the data in the Memory card. If the Memory card is inserted in the middle of gameplay, previously saved data in the Memory card and the data in memory are carefully compared and the appropriate one (higher score, etc.) is saved.**
12.7.3	☐ C)	**A dialog such as "Can we overwrite? Yes? or No?" is displayed before overwriting to ensure that the player wants the new data (such as high scores) saved.**

12.8		For titles that accept two memory cards:

(Please tick A or B below)

	☐ A)	**Not applicable.** (This title uses only memory card slot 1).
	☐ B)	**Applicable.**

12.8.1	☐	**Required: The player can choose which of the Memory cards inserted into the two slots is used to save or load this title.**

Please do not prioritize which of two memory card slots are used for saving and loading.

12.9		If the Memory card already has previously saved data from the title and has no more empty blocks:

(Please tick A or B below)

12.9.1	☐ A)	**This title can be overwritten correctly.**
12.9.2	☐ B)	**No overwriting action is adaptable.**

12.10		If no Memory card is inserted:

(Please tick A or B below)

12.10.1	☐ A)	**This title can be played.**
12.10.2	☐ B)	**This title cannot be played, but a caution, such as "Memory card is required for playing this title," is clearly mentioned in both the user's manual and on the outside of the packaging.**

Programming Checklist

13.0 Handling CD-ROM Read Error During Gameplay

13.1 ☐ **Required: Runtime Library Ver 3.0 or higher is utilized for developing this title.**

In Runtime Library Version 3.0, read error judgment and read error fixing functions are enforced. Please make sure to use Ver 3.0 or higher.

SCEI:

Runtime Library Version 3.0 released on Mar 17, 1995 in BBS and included in DTL-S2180 CD-ROM.

SCEA:

Runtime Library Version 3.4 is available on the Programmer Tools CD (Release 1.6).

On the Developer Support BBS, the path is:

`Conferences/Tools,Docs&Info/Tools/Prog.ToolsCD/Release1.6/PSX16.ZIP`

If you have any questions please contact the SCEA BBS administrator on 415-655-8181.

SCEE:

Available on the SCEE "Developer Support CD-ROM Version 1.0."

13.2 ☐ **Required: Error flags are checked for every CD access call that is made.**

13.3 ☐ **Required: The program is designed to repeat retry several times on CD Seek.**

13.4 ☐ **Required: The program is designed to repeat retry several times on CD Read.**

13.5 ☐ **Required: If it is apparent that CDseek or CDRead fails after attempts (that is, the disc is probably dirty or damaged), this game title gives the user a warning message such as "The CD appears to be dirty or damaged, please correct." It is recommended that, at this point, the user should be given the opportunity to save the game.**

14.0 Naming the Boot File

14.1 ☐ **Required: The name of the boot file corresponds correctly to the product code assigned to the title by the appropriate territory.**

Please name your boot file based on the following rule at SYSTEM.CNF;1 file. Put the SYSTEM.CNF;1 in the root directory, so that the file can transmit the boot file name change to the OS.

For anti piracy, if your title falls under one of the categories below, please follow the associated instructions.

Case 1: If your title uses multiple discs, please make sure that each disc has a unique boot file name that corresponds to the product code allocated to each individual disc.

Case 2: If you publish two SKUs, where one contains only a disc and the other contains the disc and a peripheral bundle, please use the product code assigned for the unbundled disc as the boot file name.

Boot File Naming Rule
Assuming the Product Code for a title is XXXX-AAAAA, put a full stop (period) between the 8th and 9th character and underscore between the two sections in place of the hyphen. The final boot file name should be XXXX_AAA.AA;1

Example:

Product Code = SLES-12345

Boot filename = SLES_123.45;1

Contents of SYSTEM.CNF;1
* Be careful. It should be full path.

```
BOOT = cdrom:\XXXX_AAA.AA;1
TCB = 4
EVENT = 10
STACK = 801fff00
```

15.0 Compatibility with Revision-C Hardware

15.1 ☐ **Required: This title uses the correct Vsync() suitable for its frame rate.**

In order to keep compatibility with every version of hardware even after Revision-C release, please follow these instructions.

Please use VSync(0) when the frame rate is 60 frame/seconds
Please use VSync(2) when the frame rate is 30 frame/seconds Not VSync(0)
Please use VSync(3) when the frame rate is 20 frame/seconds
Please use VSync(4) when the frame rate is 15 frame/seconds

This method is recommended to solve the problem of unintentional changes of frame rate caused by unintentional changes in the graphic drawing speed of Revision C.

Please do not use the thin rectangle region of less than 16-dot width while using MoveImage. The performance of this region cannot be recommended because it sometimes effects the necessary operation time.

Please do not hesitate to contact us through BBS if you have any questions.

If there is any request for use of a Revision-C debugging station at your internal debugging site, please do not hesitate to contact our account executives.

15.2 ☐ **Required: Regions of less than 16 dot-width are not utilized while using MoveImage.**

16.0 Multi-disc Titles

(Please tick A or B below)

☐ **A)** **Not Applicable.** (This title is not multi-disc; skip this section).

☐ **B)** **Applicable.** (This is a multi-disc title; complete this section).

16.1 ☐ **Required: Each disc of a multi-disc title is individually bootable on a PlayStation. If the discs are not stand-alone, they must display a message identifying the disc and asking the user to insert the first disc of the set.**

16.2 ☐ **Required: Each disc of a multi-disc title is labeled sequentially (i.e. 1, 2, 3...) for submission. The completed form of the disc name should be "DISC 1," "DISC 2," etc. "DISC" is all capital letters followed by a space and the disc number. Do not use "Disc 1" or "Disc1" or "disc 1" or "disc1."**

16.3 ☐ **Required: If a non-PlayStation disc, or a disc from another PlayStation game title, is inserted during disc swapping, a suitable message, such as "The disc inside is not appropriate disc" etc., prompting the user to insert the correct disc appears.**

17.0 Streaming Video

(Please tick A or B below)

  ☐ **A)** **Not applicable.** (This title does not use streaming video; skip to section 18.)

  ☐ **B)** **Applicable.** (This title uses streaming video; complete this section.)

17.1   ☐ **Required: The last frame is not accessed.**

When using streaming video, please insert several dummy frames at the end to absorb the time gap.

(If the last frame is the frame to be read and there is no dummy frame following it, a read error on the last frame might cause a hang-up.)

PAL/SCEE Checklist

18.0 Anti-piracy Screen

18.1 ☐ **Required: The anti-piracy screen template supplied by Developer Support must be displayed immediately after the PlayStation logo screen on bootup. The template can be found at the following locations:**

SCEI:

<to be inserted>

SCEA:

warning.tim is located in the Conferences area of the BBS. The path is as follows:

Conferences>Tools,Docs & Info>Docs>PAL Docs>warning.tim

SCEE:

warning.tim in the "PAL Issues" file area of the BBS.

18.2 ☐ **Required: The anti-piracy screen must be displayed for a minimum of 2 seconds and a maximum of 10 seconds and must not be bypassable.**

19.0 Memory Card Icons

19.1 ☐ **Required: The number of frames of animation for a saved game icon must not exceed the number of blocks required to save this game title. In other words, one block = one frame of animation, two blocks = one or two frames of animation, three or more blocks = one or two or three frames of animation.**

20.0 PAL Conversions

For PAL conversions, consult the 'Guidelines for PlayStation PAL Titles' (PALGUIDE.DOC version 2.1 or above). This document discusses all the major issues which should be addressed when producing a PAL PlayStation product for SCEE territories. PALGUIDE.DOC can be obtained from the following locations:

SCEI:

<to be inserted>

SCEA:

PALGUIDE.DOC is located in the Conferences area of the BBS. The path is as follows:

Conferences>Tools,Docs & Info>Docs>PAL Docs>PAL Conversion Guide

SCEE:

PALGUIDE.DOC is on the "PAL Issues" file area of the BBS. warning.tim is also in the 'PAL Issues' file area of the BBS.

If you have any questions concerning PAL titles, you are strongly advised to raise them at the earliest opportunity with your Account Manager.

Plan your development considering both PAL and NTSC formats during initial design. If possible - localise / customise for each display type, to take advantage of the benefits each form provides; e.g. PAL can calculate / draw more in one frame. NTSC has a faster refresh rate.

You should consider the following key issues as they may result in the failure of your product submission if gameplay is adversely affected:

20.1 ☐ **Recommended: SPU sequenced sound is running at the correct speed.**

20.2 ☐ **Recommended: Rendered sequences are running at the correct speed for PAL and look correct.**

20.3 ☐ **Recommended: The display is full screen PAL (at least 256/512 pixels).**

20.4 ☐ **Recommended: Text and essential display items are not placed close to display edges (i.e., not within 8/16 pixels of the edge of the screen).**

20.5 ☐ **Recommended: Game mechanics (including motion capture data where applicable) have been modified to ensure that a game converted from NTSC format does not appear inferior on a PAL system.**