



# **DVD-RW**

# **Video Format Recorder**

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## **TEST SPECIFICATION**

**Version 1.31**  
**June 2005**

## Amendment for DVD-RW VF Recorder TS Version 1.31 (June 2005)

The following pages were amended without changing the version number of the TS.

- **Amendment 1 (August 9, 2005)**

Page	Location	Amendment
Page 6	<b>3.1.1</b> / Line 4	"Class 0" was deleted from the name of 1x-speed Standard Blank Test Disc.
Page 9	<b>3.2.1.1</b> / Line 2	"Class 0" was deleted from the name of 1x-speed Standard Blank Test Disc.
Page 18	<b>Annex D</b>	"Class 0" was deleted from the name of 1x-speed Standard Blank Test Disc.

- **Minor amendment (July 15, 2009)**

Page	Location	Amendment
Page 15	<b>Annex A</b>	<ul style="list-style-type: none"><li>• Class-A Lab information of "Industrial Technology Research Institute", "PIONEER CORPORATION", "Sony Corporation (addition)" and "Victor Company of Japan, Limited" was updated.</li></ul>
Pages 18 to 19	<b>Annex D</b>	<ul style="list-style-type: none"><li>• A note regarding Class-A Lab information was added.</li><li>• Class-A Lab information of "PIONEER CORPORATION" and "Matsushita Electric Industrial Co., Ltd. (company name)" was updated.</li><li>• The supplier of the Test Discs LVP00.06 and LVP08.01 was changed from "Royal Philips Electronics" to "OM&amp;T B.V.".</li></ul>

- **Minor amendment (January 2010)**

Page	Location	Amendment
Page 15	<b>Annex A</b>	<ul style="list-style-type: none"><li>• Class-A Lab information of "PIONEER CORPORATION" and "Victor Company of Japan, Limited" were updated.</li></ul>
Pages 18 to 19	<b>Annex D</b>	<ul style="list-style-type: none"><li>• Class-A Lab information of "PIONEER CORPORATION" and "Panasonic Corporation" were updated.</li></ul>

- **Amendment 2 (January 2012)**

Page	Location	Amendment
Page 15	<b>Annex A</b>	<ul style="list-style-type: none"><li>• "Toshiba Corporation" was deleted from the Class-A Lab list.</li><li>• The company name "Victor Company of Japan, Limited" was changed to "JVC KENWOOD Corporation".</li></ul>
Pages 18 to 19	<b>Annex D</b>	<ul style="list-style-type: none"><li>• The supplier of the Test Stream Disc (TDL-0002) was changed from "Toshiba Corporation" to "ALMEDIO INC.".</li><li>• DVD File System Verifier (TFSV03) from Toshiba was discontinued.</li></ul>

- **Amendment 3 (June 2012)**

Page	Location	Amendment
Page 15	<b>Annex A</b>	<ul style="list-style-type: none"><li>• "Industrial Technology Research Institute" was deleted from the Class-A Lab list.</li><li>• Class-A Lab information of "Sony Corporation" was updated.</li></ul>

## Conditions for Publication

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### Inquiry

For any further explanation of the contents of this document or in case of any perceived inconsistency or ambiguity of interpretation, please consult:

DVD Format/Logo Licensing Corporation

Address: 2F Shibadaimon Makita Bldg., 2-5-8 Shibadaimon, Minato-ku, Tokyo, 105-0012 Japan

Fax: +81-3-5777-2884

E-mail: [info@dvdflc.co.jp](mailto:info@dvdflc.co.jp) URL: <http://www.dvdflc.co.jp>

## Revision History

- April 2001  
DVD-RW Video Format Recorder Test Specification Version 1.0 was distributed to SG-10 members.
- April 26, 2001  
VTF members approved DVD-RW Video Format Recorder Test Specification Version 1.0.
- June 22, 2001  
VTF members agreed to add Note sentence in **1.1 Scope**.
- February 2002  
DVD-RW Video Format Recorder Test Specification Version 1.1(draft) to add test specification for 625/50 TV system was distributed to SG-10 members.
- March 29, 2002  
DVD-RW Video Format Recorder Test Specification Version 1.1 was approved by VTF members.
- January 2003  
Version 1.2(draft) to add test specification for 2x-speed Recorder was distributed to SG-10 members.
- March 14, 2003  
DVD-RW Video Format Recorder Test Specification Version 1.2 was approved by VTF members.
- October 10, 2004  
Version 1.3 to introduce "Class" concept was approved by VPC members.
- June 2005  
Version 1.0i updated Class-A Lab List (add Toshiba) and was edited as electronic files.

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## Forms for DVD Format verification

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Test result of Recording characteristics for Class 0 Basic speed ..... F3

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## **1. General**

### **1.1 Scope**

The scope of this Test Specification is the testing DVD-RW Video Format Recorders for compliance with DVD Specifications listed in **1.2**. The test procedure described herein could be used by Class-A Verification Labs, Class-B Verification Labs and Quality Assurance Departments of DVD-RW Video Format Recorder manufacturer. The scope of this Test Specification is limited to product's compliance to DVD Specifications and not to evaluate performance of products.

Note: This product is regarded as an associated product conforming to the plural DVD Specifications (e.g. DVD-RW and DVD-Video Book). Therefore this Test Specification involves at least two kinds of test group which may link to the verification fee.

### **1.2 Normative References**

DVD Specifications for Re-recordable Disc (DVD-RW)

Part 1: Physical Specifications Version 1.2

Optional Specifications 2x-speed DVD-RW Revision 1.0

Optional Specifications 4x-speed DVD-RW Revision 2.0

Part 2: File System Specifications Version 1.0

DVD Specifications for Read-Only Disc

Part 3: Video Specifications Version 1.1

### **1.3 Scope of Products Covered**

- Class 0 DVD-RW Video Format Recorder (1x only) for 525/60 TV system and/or 625/50 TV system
- Class 0&1 DVD-RW Video Format Recorder (2x max.) for 525/60 TV system and/or 625/50 TV system
- Class 0&1 DVD-RW Video Format Recorder (4x max.) for 525/60 TV system and/or 625/50 TV system

Notes:

- The Class 0 Recorder (1x only) means that it is adaptable to the DVD-RW discs having Class 0 and the recording speed is 1x-speed only.
- The Class 0&1 Recorder (2x max.) means that it is adaptable to the DVD-RW discs having Class 0, Class 1 or Class 0&1, and the maximum recording speed for Class 0&1 disc is 2x-speed.
- The Class 0&1 Recorder (4x max.) means that it is adaptable to the DVD-RW disc having Class 0, Class 1 or Class 0&1, and the maximum recording speed for the disc supporting 4x-speed recording may be 4x-speed.

## 2. DVD Logo

DVD Format/Logo Licensing Corporation owns the rights to license the DVD Logo. To be able to use the DVD Logo, DVD manufacturer must have:

- a. License to use the Logo and
- b. DVD Specification compliance of the product for logo consideration must be validated by the test specifications as defined in this document.

Licensing terms for the DVD Logo are available from the DVD Format/Logo Licensing Corporation.

This chapter describes the mechanism to be used for product compliance testing.

### 2.1 Definition of Terms Used

**First Production Model-** The **First Production Model** must be tested and approved by any of the appropriate Class-A Verification Labs (see definition of Class-A Labs below) for compliance with DVD Specifications. Class-A labs will use the test specifications described in this document for compliance verification.

The following parameters must be used to determine a **First Production Model**:

- DVD Specifications Version n.x changing to n+1.x
- Initial or the latest production model at the start of Logo Program for each licensee
- Production model that supports additional Class

**Next Production Model -** A **Next Production Model** does not require compliance verification from a Class-A Verification Lab, but must be tested by licensee in its QA department for compliance with DVD Specifications. Licensee's QA department must have the test tools required to perform the tests specified in this document and must, at minimum, use the test procedure referred to in this document (licensee is free to have its own QA procedure, equipment and tools as long as it is a superset of the specification described in this document). A Licensee without its own QA department can get the product tested by a certified Third Party Class-B Verification Lab (see definition of Class-B Labs below).

The following parameters must be used to determine a **Next Production Model**:

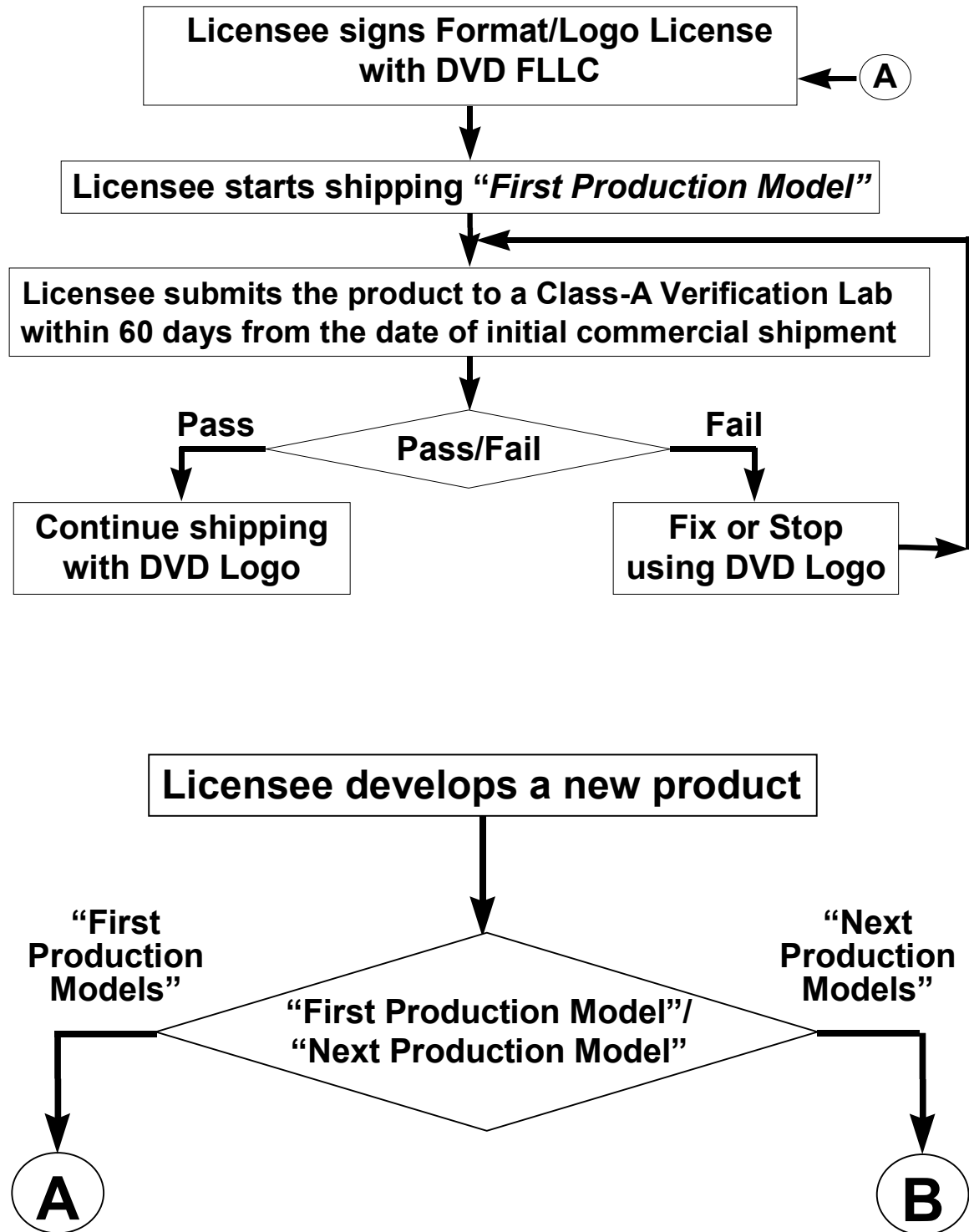
- DVD Specifications Version n.x changing to n.x+1
- Change to add or reduce applicable recording speed(s) without adding Class (i.e. Basic recording speed)
- Significant changes at Licensees discretion to Pickup head, LSI and/or firmware related to DVD format

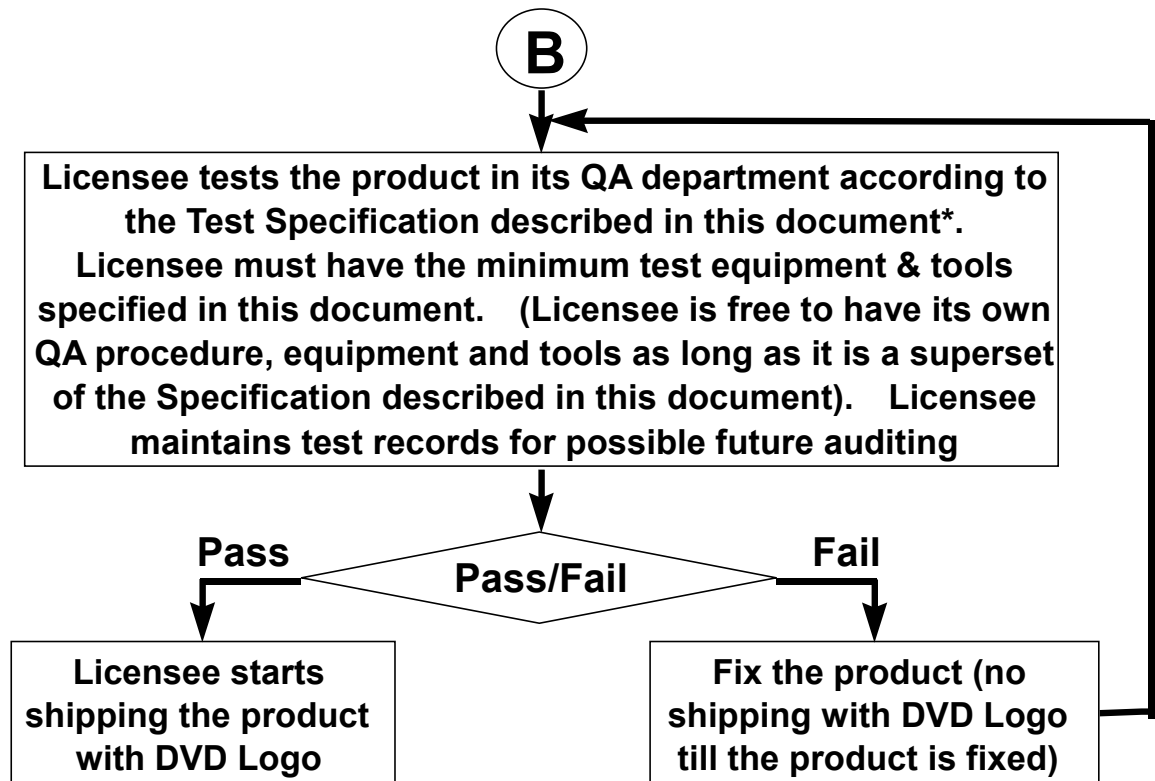
***Class-A Verification Labs*** - Class-A Verification Labs are experts in DVD technology and provide independent expert assessment of Licensee's product compliance with DVD Specifications. Class-A labs also provide additional services such as interpretation of DVD Specifications, Test Tool development, Class-B Lab and Licensee auditing, etc.

***Class-B Verification Labs*** - DVD-RW Video Format Recorder Class-B Verification Labs provide DVD-RW Video Format Recorder testing strictly according to the **DVD-RW Video Format Recorder Test Specification** (They can not interpret the specifications).

## 2.2 DVD Logo Mechanism

The DVD Logo mechanism is described in the following flow chart:





\*: Licensee without own QA department can get the product tested by a **DVD-RW Video Format Recorder Class-B Verification Lab**.

### 3. Test Tools and Test Specifications

This chapter covers the test specifications and tool requirements for the physical and logical compliance testing.

#### 3.1 Test Tools

The following tools are required to perform the tests specified and shall be available before executing the test procedures.

##### 3.1.1 Test Discs

The following test discs are used for this verification activity. As for acquisition, refer to **Annex D**.

(For 525/60 TV system and 625/50 TV system)

- 1x-speed DVD-RW Standard Blank Test Disc : RWBTD-011 or equivalent DVD-RW disc
- 4x/2x-speed Class 1 DVD-RW Standard Blank Test Disc : RWBTD-031

(For 525/60 TV system)

- DVD-RW Standard Signal Test Disc : RWSTD-101
- Test Stream Disc : TDL-0002
- Navigation Files Test Disc Vol. 1 : DVD-NF002
- Navigation Files Test Disc Vol. 2 : DVD-NF100 (Dual layer, Parallel Track Path) or  
DVD-NF150 (Dual layer, Opposite Track Path)

(For 625/50 TV system)

- DVD-RW Standard Signal Test Disc : RWSTD-101P
- PAL Test Stream Disc : LVP00.06
- PAL Multi-channel Test Disc : LVP08.01
- PAL Navigation Files Test Disc Vol. 1 : DVD-NF200
- PAL Navigation Files Test Disc Vol. 2 : DVD-NF250 (Dual layer, Parallel Track Path)

##### 3.1.2 Verifiers

To be able to check the discs recorded by DVD-RW Video Format Recorder, the following verifiers are necessary.  
As for acquisition, refer to **Annex D**.

Verifier for information data in Lead-in area and RMA is:

- Information Area Verifier (RMAV-001)

DVD Video Verifier is:

- DVD Audio/Video Verifier (DVD-AV02 Ver. 1.2)

File System Verifier is:

- DVD File System Verifier (TFSV03) or
- DVD File System Verifier (DVD-FV20AV)

ADP\_TY & ADP\_ID Verifier is:

- ADP\_TY & ID Verifier (ADPV-001)

### **3.1.3 DVD-RW measuring system (Playback)**

DVD-RW measuring system (Playback) shall have functions at least for executing the tests defined in **3.2.1.1, 3.2.1.2, 3.2.1.3, 3.2.2.1, 3.2.2.2, 3.2.2.3, 3.2.3.1, 3.2.3.2 and 3.2.3.3**. Its reading beam condition shall be as defined in 2.1.3.2 of DVD Specifications for Re-recordable Disc Part 1: Ver. 1.2 and its scanning velocity shall be 3.49 m/s (1x-speed). This system is to be equipped by each Lab and applicant individually.

### 3.2 Test Specifications

The following sections describe the test procedures required for verification of the DVD products specified in 1.3.

#### • Test procedure

The discs recorded with DVD-RW Recorder have to be in compliance with the physical DVD requirements as indicated in DVD Specifications for Re-recordable Disc Part 1: Ver. 1.2, Optional Specifications 2x-speed DVD-RW Rev. 1.0 and Optional Specifications 4x-speed DVD-RW Rev. 2.0.

Test will be carried out according to the nomination of "Class" and "Maximum recording speed" applied in **Form 2V**.

Test procedure of each recording speed is described respectively in the following sections from 3.2.1 to 3.2.3.

**Table 3.2-1** shows the relation between Recorder type, Test speed and Test Discs to be used.

**Table 3.2-1 : Recorder type, Test recording speeds and Test Discs to be used**

Recorder type		Test recording speed		
Class	Adaptable recording speed	Class 0 Basic speed (1x-speed)	Class 1 Basic speed (2x-speed)	4x speed
0	1x	1x Blank Test Disc RWBTD-011	-----	-----
0&1	2x, 1x	1x Blank Test Disc RWBTD-011	4x/2x Blank Test Disc RWBTD-031	-----
0&1	4x, 2x, 1x	1x Blank Test Disc RWBTD-011	4x/2x Blank Test Disc RWBTD-031	4x/2x Blank Test Disc RWBTD-031

#### • Forms to be submitted

An applicant is requested to submit the test samples with the test results, which may be obtained by self-verification or verification conducted by Class-B Lab.

**Table 3.2-2** shows the relation between "Recorder type" and "Form No." to be submitted.

When "✓" is marked in the column of **Table 3.2-2** for each product of "A-F", the correspondent Forms shall be submitted.

**Table 3.2-2 : Recorder type and Forms to be submitted**

Recorder type				Forms No. to be submitted										
	TV system	Class	Adaptable recording speed	3V	4V	5V, 6V	7V	8V	9V	10V to 12V	13V	14V to 16V	17V to 20V	21V
A	525/60	0	1x	✓	✓	✓					✓	✓		✓
B		0&1	2x, 1x	✓		✓	✓	✓	✓		✓	✓		✓
C		0&1	4x, 2x, 1x	✓		✓	✓		✓	✓	✓	✓		✓
D	625/50	0	1x	✓	✓	✓					✓		✓	✓
E		0&1	2x, 1x	✓		✓	✓	✓	✓		✓		✓	✓
F		0&1	4x, 2x, 1x	✓		✓	✓		✓	✓	✓		✓	✓



### 3.2.1 Physical Specification Test for "Class 0 Recorder" and "Class 0&1 Recorder"

#### 3.2.1.1 Recording characteristics for Class 0 Basic speed

- 100% Full Color Bar signal shall be written with Class 0 Basic speed in the user area of a 1x-speed DVD-RW Standard Blank Test Disc (RWBTD-011) by the test DVD-RW Video Format Recorder.  
Write Strategy variations (refer to Annex K of DVD Specifications for Re-recordable Disc Part 1 Ver. 1.2) can be used for this recording. For the items that the evaluation radius is specified, the writing zones shall be at least 5 mm band in radius including the measuring points of R = 25 mm, 40 mm and 55 mm.
- Measure the characteristic of the Recorded layer using DVD-RW measuring system (Playback) or equivalent system in accordance with **Form 3V**.

#### 3.2.1.2 Linking characteristics for Class 0 Basic speed

- This test is only for "Class 0 Recorder". "Class 0&1 Recorder" need not execute this test.
- 100% Full Color Bar signal shall be written with Class 0 Basic speed in the user area of a 1x-speed DVD-RW Standard Blank Test Disc (RWBTD-011) by the DVD-RW Video Format Recorder. And append the same signal according to the linking scheme that is adopted to the DVD-RW Video Format Recorder.
- Using DVD-RW measuring system (Playback), check whether the time difference between "the peak of LPP" and "center of 14T" is smaller than 7T (260 ns) in any place of around Linked area.  
If the linking is done properly, mark OK in **Form 4V**.

#### 3.2.1.3 Information data in Lead-in and RMA for Class 0 Basic speed

- The 1x-speed DVD-RW Standard Blank Test Disc (RWBTD-011) recorded in the test of **3.2.1.1** shall be used for this check.
- Using DVD-RW measuring system (Playback) or Information area Verifier, check the recorded information data in Lead-in and RMA of the recorded DVD-RW Standard Blank Test Disc. The applicant shall describe in **Form 5V** the values recorded in each area and Class-A Lab will check them.

#### 3.2.1.4 Reading characteristics for 525/60 TV system and/or 625/50 TV system

A DVD-RW Standard Signal Test Disc (RWSTD-101 for 525/60 TV system and/or RWSTD-101P for 625/50 TV system) shall be read by the DVD-RW Video Format Recorder.

If the 30 minutes of video with music is played back seamlessly, mark OK in **Form 6V**.

### 3.2.2 Physical Specification Test for "Class 0&1 Recorder (2x max.)" and "Class 0&1 Recorder (4x max.)"

#### 3.2.2.1 Recording characteristics for Class 1 Basic speed

- 100% Full Color Bar signal shall be written with Class 1 Basic speed (2x)\* in the user area of a 4x/2x-speed Class 1 DVD-RW Standard Blank Test Disc (RWBTD-031) by the DVD-RW Video Format Recorder.

Write Strategy variations (refer to 2.1.2 and Annex A of Optional Specifications 2x-speed DVD-RW Rev. 1.0) can be used for this recording. For the items that the evaluation radius is specified, the writing zones shall be at least 5 mm band in radius including the measuring points of R = 25 mm, 40 mm and 55 mm.

- Measure the characteristic of the Recorded layer using DVD-RW measuring system (Playback) or equivalent system in accordance with **Form 7V**.

\*Note: DVD Recorder may automatically select the recording speed according to the type of the inserted disc and the recording speed may not be set by user operation. "Class 0&1 Recorder (4x max.)" may possibly select 4x-speed recording for all user area or outer radius area of the 4x/2x-speed Blank Test Disc. In such case, describe the condition that the Recorder uses Class 1 Basic-speed (2x) in the designated area in **Form 7V**.

#### 3.2.2.2 Linking characteristics for Class 1 Basic speed

- This test is only for "Class 0&1 Recorder (2x max.)". "Class 0&1 Recorder (4x max.)" need not execute this test.
- 100% Full Color Bar signal shall be written with Class 1 Basic speed in the user area of a 4x/2x-speed DVD-RW Standard Blank Test Disc (RWBTD-031) by the DVD-RW Video Format Recorder. And append the same signal according to the linking scheme that is adopted to the DVD-RW Video Format Recorder.
- Using DVD-RW measuring system (Playback), check whether the time difference between "the peak of LPP" and "center of 14T" is smaller than 7T (260 ns) in any place of around Linked area.

If the linking is done properly, mark OK in **Form 8V**.

#### 3.2.2.3 Information data in Lead-in and RMA for Class 1 Basic speed

- The 4x/2x-speed DVD-RW Standard Blank Test Disc (RWBTD-031) recorded in the test of **3.2.2.1** shall be used for this check.
- Using DVD-RW measuring system (Playback) or Information area Verifier, check the recorded information data in Lead-in and RMA of the recorded DVD-RW Standard Blank Test Disc. The applicant shall describe in **Form 9V** the values recorded in each area and Class-A Lab will check them.

### 3.2.3 Physical Specification Test for "Class 0&1 Recorder (4x max.)"

#### 3.2.3.1 Recording characteristics for 4x-speed

- 100% Full Color Bar signal shall be written with 4x-speed\* in the user area of a 4x/2x-speed Class 1 DVD-RW Standard Blank Test Disc (RWBTD-031) by the DVD-RW Video Format Recorder.  
Write Strategy variations (refer to 2.1.2 and Annex A of Optional Specifications 4x-speed DVD-RW Rev. 2.0) can be used for this recording. For the items that the evaluation radius is specified, the writing zones shall be at least 5 mm band in radius including the measuring points of  $R = 25\text{ mm}$ ,  $40\text{ mm}$  and  $55\text{ mm}$ .
- Measure the characteristic of the Recorded layer using DVD-RW measuring system (Playback) or equivalent system in accordance with **Form 10V**.

\*Note: DVD Recorder may automatically select the recording speed according to the type of the inserted disc and the recording speed may not be set by user operation. "Class 0&1 Recorder (4x max.)" may possibly select 4x-speed recording for all user area or outer radius area of the 4x/2x-speed Blank Test Disc. In such case, describe the condition that the Recorder uses 4x-speed recording in the designated area in **Form 10V**.

#### 3.2.3.2 Linking characteristics for 4x-speed

- This test shall be performed under the condition keeping 4x-speed recording.
- 100% Full Color Bar signal shall be written with 4x-speed in the user area of a 4x/2x-speed DVD-RW Standard Blank Test Disc (RWBTD-031) by the DVD-RW Video Format Recorder. And append the same signal according to the linking scheme that is adopted to the DVD-RW Video Format Recorder.
- Using DVD-RW measuring system (Playback), check whether the time difference between "the peak of LPP" and "center of 14T" is smaller than 7T (260 ns) in any place of around Linked area.  
If the linking is done properly, mark OK in **Form 11V**.

#### 3.2.3.3 Information data in Lead-in and RMA for 4x-speed

- The 4x/2x-speed DVD-RW Standard Blank Test Disc (RWBTD-031) recorded in the test of **3.2.3.1** shall be used for this check.
- Using DVD-RW measuring system (Playback) or Information area Verifier, check the recorded information data in Lead-in and RMA of the recorded DVD-RW Standard Blank Test Disc. The applicant shall describe in **Form 12V** the values recorded in each area and Class-A Lab will check them.

### 3.2.4 Video Format Specification Test for 525/60 TV system

The following sections describe the procedures of logical test required for the DVD-RW Video Format Recorder for 525/60 TV system.

#### 3.2.4.1 Recording capability

- Nominate the "Operation Nomination" in **Form 13V** and record arbitrary contents on a DVD-RW Standard Blank Test Disc and finalize the disc. Next, play back the presentation data and navigation data. Finally, check the recorded disc using the DVD Video Verifier and the File System Verifier at some items in accordance with **Form 13V**.
- When the function corresponding to the Check item has not been supported by the DVD-RW Video Format Recorder, i.e. "Operation Nomination" is described with hyphen '-', the Check item can be skipped.
- If the DVD-RW Video Format Recorder has any operations regarding recording other than the nominated Check Items in **Form 13V**, nominate "Check Items", and "Operation Nomination" for the operation in blank rows in **Form 13V**. Then, execute the operations on the recorded disc and play back the presentation data and navigation data and check the recorded disc using the DVD Video Verifier and the File System Verifier at some items, which are nominated, in accordance with **Form 13V**.

NOTE 1: All operations regarding recording shall be nominated by the applicant. If blank rows to nominate the operations are insufficient, blank rows shall be made and nominated.

NOTE 2: All Check Items are basically optional functions, but it should be done as much as the Recorder supports the corresponding function.

NOTE 3: The nominated Check Items are judged from the results based on DVD Video Verifier. Therefore, after verified, the judgment is written on **Form 13V**.

NOTE 4: If the DVD Video Verifier put out message of incompatibility besides the nominated "Operation Nomination", the applicable function shall be nominated in **Form 13V**.

#### 3.2.4.2 Playback capability

##### a. Presentation data

- Playback the test stream disc: TDL-0002 and check the presentation data of Audio, Video, Sub-pictures, Max. bit-rate, Slide show and general presentation in accordance with **Form 14V**.

##### b. Navigation data structure

- Playback the Navigation Files Test Disc Vol. 1: DVD-NF002 and check the Sub-picture & highlights, Pan-scan, Sub-pictures, Audio selections, Simple seamless, Seamless multi-angle, Non-seamless multi-angle, Parental control, Still pictures, Linear Title play, Chapter search, Time search, Part of Title access, PGC playback control, Navigation between PG's, Cell still, Highlight, Linear Title control, Non-linear Title control, Title with branch structure, GPRM in register mode, Navi-commands & GPRM, Navigation timer and Command execution in accordance with **Form 15V**.
- Playback the Navigation Files Test Disc Vol. 2: DVD-NF100 or DVD-NF150 and check the UOP blocking, Highlight, Cell playback, Angle blocks, E-STD boundary, Parental, Navigation commands, Random/Shuffle and Domain transitions in accordance with **Form 16V**.

### 3.2.5 Video Format Specification Test for 625/50 TV system

The following sections describe the procedures of logical test required for the DVD-RW Video Format Recorder for 625/50 TV system.

#### 3.2.5.1 Recording capability

- Nominate the "Operation Nomination" in **Form 13V** and record arbitrary contents on a DVD-RW Standard Blank Test Disc and finalize the disc. Next, play back the presentation data and navigation data. Finally, check the recorded disc using the DVD Video Verifier and the File System Verifier at some items in accordance with **Form 13V**.
- When the function corresponding to the Check item has not been supported by the DVD-RW Video Format Recorder, i.e. "Operation Nomination" is described with hyphen '-', the Check item can be skipped.
- If the DVD-RW Video Format Recorder has any operations regarding recording other than the nominated Check Items in **Form 13V**, nominate "Check Items", and "Operation Nomination" for the operation in blank rows in **Form 13V**. Then, execute the operations on the recorded disc and play back the presentation data and navigation data and check the recorded disc using the DVD Video Verifier and the File System Verifier at some items, which are nominated, in accordance with **Form 13V**.

NOTE 1: All operations regarding recording shall be nominated by the applicant. If blank rows to nominate the operations are insufficient, blank rows shall be made and nominated.

NOTE 2: All Check Items are basically optional functions, but it should be done as much as the Recorder supports the corresponding function.

NOTE 3: The nominated Check Items are judged from the results based on DVD Video Verifier. Therefore, after verified, the judgment is written on **Form 13V**.

NOTE 4: If the DVD Video Verifier put out message of incompatibility besides the nominated "Operation Nomination", the applicable function shall be nominated in **Form 13V**.

#### 3.2.5.2 Playback capability

##### a. Presentation data

- Playback the PAL Test Stream Disc: LVP00.06 and check the presentation data of MPEG1 Audio (low, medium and high average VBR, CBR, combined with AC-3), MPEG2 Audio (base, base & extension, 7 channel extension, low & high VBR, CBR), MPEG2 Video (low, medium and high VBR, CBR, 352×576, 704×576, Pan-scan, gaps, stills) and Audio LPCM syntax in accordance with **Form 17V**.
- Playback the PAL Multi-channel Test Disc: LVP08.01 and check the Stereo configuration, Configuration for 6 channel and 8 channels, CBR, VBR, Small extension frames, Extreme VBR, De-matrix procedures, Dynamic range control, High bit-rate 1 audio stream (7.1 ch), High bit-rate audio 8 streams (7.1 ch) and A/V synchronization in accordance with **Form 18V**.

**b. Navigation data structure**

- Playback the PAL Navigation Files Test Disc Vol. 1: DVD-NF200 and check the Sub-picture & highlights, Pan-scan, Sub-pictures, Audio selections, Simple seamless, Seamless multi-angle, Non-seamless multi-angle, Parental control, Still pictures, Linear Title play, Chapter search, Time search, Part of Title access, PGC playback control, Navigation between PG's, Cell still, Highlight, Linear Title control, Non-linear Title control, Title with branch structure, GPRM in register mode, Navi-commands & GPRM, Navigation timer and Command execution in accordance with **Form 19V**.
- Playback the PAL Navigation Files Test Disc Vol. 2: DVD-NF250 and check the UOP blocking, Highlight, Cell playback, Angle blocks, E-STD boundary, Parental, Navigation commands, Random/Shuffle and Domain transitions in accordance with **Form 20V**.

**3.2.6 ADP\_TY and ADP\_ID check for 525/60 TV system and/or 625/50 TV system**

The recorded disc described in **3.2.4.1** or **3.2.5.1** shall be used for the check of ADP\_TY and ADP\_ID.

- Check the ADP\_TY in CPR\_MAI in Data area using the ADP\_TY & ID Verifier in accordance with **Form 21V**.
- Check the ADP\_ID in VMGI\_MAT and VOBU\_ADP\_ID in every DSI\_GI using ADP\_TY & ID Verifier in accordance with **Form 21V**.

## Annex A

### List of Class-A Verification Labs

*This List is correct at the time of publication. However, when the Class-A Lab information contained here differs from such information cited in our website [www.dvdfllc.co.jp](http://www.dvdfllc.co.jp), the List with more current date prevails. Also, please refer to the website for the latest Verification Service of each Class-A Lab.*

#### **JVC KENWOOD Corporation**

DVD Verification Lab.

12, 3-chome, Moriya-cho, Kanagawa-ku, Yokohama, Kanagawa, 221-8528 Japan

Fax: +81-45-450-2425

#### **PIONEER CORPORATION**

Verification Laboratory

1-1 Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa, 212-0031 Japan

Fax: +81-44-580-4027

#### **SHARP CORPORATION**

DVD Verification Laboratory

174, Hayakawa-cho, Yaita-city, Tochigi, 329-2193 Japan

Tel: +81-287-44-3749 Fax: +81-287-43-6680

#### **Sony Corporation**

Verification Laboratory

2-10-1 Osaki, Shinagawa-ku, Tokyo, 141-8610 Japan

Fax: +81-50-3750-6608

## **Annex B**

### **Glossary of Terms used**

(May be defined in future.)



## Annex C

### Procedure for Class-A Verification Lab Product Submission

The procedure for submitting a product to a Class-A Verification Lab is as follows:

#### **Preliminary Application**

Applicant must complete **Form 1V** to provide preliminary information.

#### **Self Test**

Applicant must test the product in accordance with this Test Specification prior to submitting samples to a Class-A Verification Lab. Applicant must complete **Form 2V**, and **necessary Forms\*** to provide test results.

\*Note: The required **Forms** for each product are listed on the **Table 3.2-2**.

#### **Mutual Non-Disclosure Agreement (NDA)**

Applicant, in order to maintain the confidentiality of the applicant product and Verification Lab's information, must sign a Mutual Non-Disclosure Agreement.

#### **Application**

Applicant must submit 3 product samples along with said necessary Forms and the NDA.

#### **Test Result**

Upon completion of testing, Verification Lab will complete **Form 22V** to inform the applicant and DVD Format/Logo Licensing Corporation of the test results.

## Annex D

## Test Tool Contact Information

The Contact Information is correct at the time of publication. However, when the Class-A Lab information (marked <\*>) differs from such information cited in our website [www.dvdfllc.co.jp](http://www.dvdfllc.co.jp), the List with more current date prevails.

## Test Discs

(For 525/60 and 625/50 TV system)

<ul style="list-style-type: none"> <li>DVD-RW Standard Blank Test Disc (1x-speed) <b>RWBTD-011</b> (2x/4x-speed Class 1) <b>RWBTD-031</b></li> </ul>	<b>PIONEER CORPORATION&lt;*&gt;</b> Verification Laboratory 1-1 Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa, 212-0031 Japan Fax: +81-44-580-4027
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(For 525/60 TV system)

<ul style="list-style-type: none"> <li>DVD-RW Standard Signal Test Disc <b>RWSTD-101</b></li> </ul>	<b>PIONEER CORPORATION&lt;*&gt;</b>
<ul style="list-style-type: none"> <li>Test Stream Disc <b>TDL-0002</b></li> </ul>	<b>ALMEDIO INC. &lt;*&gt;</b> Testing Laboratory 32-13, Sakae-cho 2 chome, Higashimurayama-shi, Tokyo, 189-0013 Japan Fax: +81-42-397-1919 E-mail: testlab@almedio.co.jp
<ul style="list-style-type: none"> <li>Navigation Files Test Disc <b>Vol. 1; DVD-NF002</b> <b>Vol. 2; DVD-NF100</b> <b>Vol. 2; DVD-NF150</b></li> </ul>	<b>Panasonic Corporation&lt;*&gt;</b> Format Verification Laboratory 1-15, Matsuo-cho, Kadoma, Osaka, 571-8504 Japan Fax: +81-6-6909-5027 E-mail: fvl-info@ml.jp.panasonic.com URL: <a href="http://panasonic.co.jp/avc/fvl/en/index.html">http://panasonic.co.jp/avc/fvl/en/index.html</a>

(For 625/50 TV system)

<ul style="list-style-type: none"> <li>DVD-RW Standard Signal Test Disc <b>RWSTD-101P</b></li> </ul>	<b>PIONEER CORPORATION&lt;*&gt;</b>
<ul style="list-style-type: none"> <li>PAL Test Stream Disc <b>LVP00.06</b></li> </ul>	<b>OM&amp;T B.V.</b> Global Sales Order Desk
<ul style="list-style-type: none"> <li>PAL Multi-channel Test Disc <b>LVP08.01</b></li> </ul>	Building SFH, Glaslaan 2, 5616 LW Eindhoven, The Netherlands Fax: +31-40-2171-435 E-mail: orderdesk.td@om-t.net      URL: <a href="http://www.om-t.net">http://www.om-t.net</a>
<ul style="list-style-type: none"> <li>PAL Navigation Files Test Disc <b>Vol. 1; DVD-NF200</b> <b>Vol. 2; DVD-NF250</b></li> </ul>	<b>Panasonic Corporation&lt;*&gt;</b>

**Verifiers**

<ul style="list-style-type: none"> <li>Information Area Verifier <b>RMAV-001</b></li> <li>ADP_TY &amp; ID Verifier <b>ADPV-001</b></li> </ul>	<b>PIONEER CORPORATION&lt;*&gt;</b> Verification Laboratory 1-1 Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa, 212-0031 Japan Fax: +81-44-580-4027
<ul style="list-style-type: none"> <li>Audio/Video Verifier <b>DVD-AV02 Ver. 1.2</b></li> <li>DVD File System Verifier <b>DVD-FV20AV</b></li> </ul>	<b>Panasonic Corporation&lt;*&gt;</b> Format Verification Laboratory 1-15, Matsuo-cho, Kadoma, Osaka, 571-8504 Japan Fax: +81-6-6909-5027 E-mail: fvl-info@ml.jp.panasonic.com URL: <a href="http://panasonic.co.jp/avc/fvl/en/index.html">http://panasonic.co.jp/avc/fvl/en/index.html</a>
<b>TFSV03</b>	<i>Discontinued</i>

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