



DVD-R Drive (3.95 Gbytes)

TEST SPECIFICATION

Version 1.01

June 2005

Amendment for DVD-R Drive (3.95 Gbytes) TS Version 1.0₁ (June 2005)

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

- **Minor amendment (July 2, 2009)**

| Page | Location | Amendment |
|---------|----------------|---|
| Page 7 | Annex A | <ul style="list-style-type: none">• Class-A Lab information of "Industrial Technology Research Institute" and "PIONEER CORPORATION" was updated. |
| Page 10 | Annex D | <ul style="list-style-type: none">• A note regarding Class-A Lab information was added.• Class-A Lab information of "PIONEER CORPORATION" was updated. |

- **Minor amendment (January 2010)**

| Page | Location | Amendment |
|---------|----------------|---|
| Page 7 | Annex A | <ul style="list-style-type: none">• Class-A Lab information of "PIONEER CORPORATION" was updated. |
| Page 10 | Annex D | <ul style="list-style-type: none">• Class-A Lab information of "PIONEER CORPORATION" was updated. |

- **Amendment 1 (June 2012)**

| Page | Location | Amendment |
|--------|----------------|---|
| Page 7 | Annex A | <ul style="list-style-type: none">• "Industrial Technology Research Institute" was deleted from the Class-A Lab list. |

Conditions for Publication

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- Hitachi Consumer Electronics Co., Ltd. (Tokyo, Japan)
- Industrial Technology Research Institute. (Hsinchu , Taiwan)
- JVC KENWOOD Corporation (Yokohama, Japan)
- Panasonic Corporation (Osaka, Japan)
- PIONEER CORPORATION (Tokyo, Japan)

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 URL: <http://www.dvdflc.co.jp>

Revision History

- July 22, 1999
Version 1.0 (draft) was agreed by Verification Task Force members.
- June 2005
Version 1.0₁ updated Annex D (Test Tool Contact Information), and was edited as electronic files.

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Forms for DVD Format verification

Form 1G

Preliminary Information for DVD Format Verification F1

Form 2G

Test Information of DVD Format Verification F2

Form 3G

Test results of the Recorded Disc (1) Optical parameters, Recording parameters F3

Form 4G

Test results of the Recorded Disc (2) Operational signals F4

Form 5G

Test results of the contents of Recorded Data Format F6

Form 6G

Test result of "Signal Disc" readability F7

Form 7G

Confirmation of DVD Format Verification F8

1. General

1.1 Scope

The scope of this Test Specification is for the purpose of testing DVD-R Drives for compliance with **DVD Specifications for Recordable Disc Part 1: Version 1.0** and **Part 2: Version 1.0**. The test procedure described herein could be used by Class-A Verification Labs, Class-B Verification Labs and Quality Assurance Departments of DVD-R Drive Licensees.

The scope of this Test Specification is limited to product's compliance to DVD Specifications for Recordable Disc and not to evaluate performance of products.

1.2 Normative References

DVD Specifications for Recordable Disc

Part 1: Physical Specifications Version 1.0

Part 2: File System Specifications Version 1.0

1.3 Scope of Products Covered

A. DVD-R Drive (3.95 Gbytes)

B. DVD-R (3.95 Gbytes) Disc Recording and Playback functions of integrated systems

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

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, at 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**:

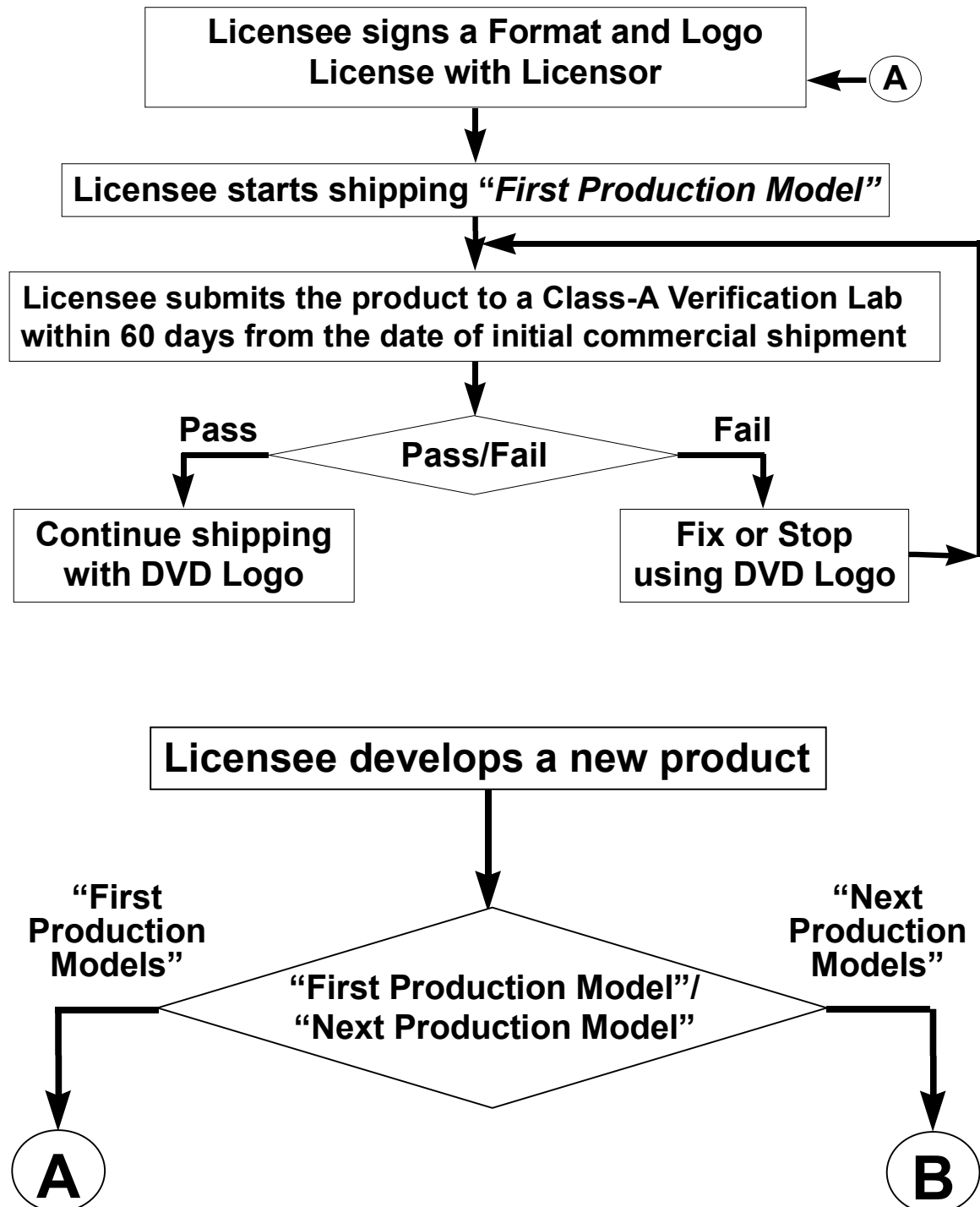
- DVD Specifications Version n.x changing to n.x+1
- DVD format related significant changes at Licensees discretion to Pickup head, LSI and firmware

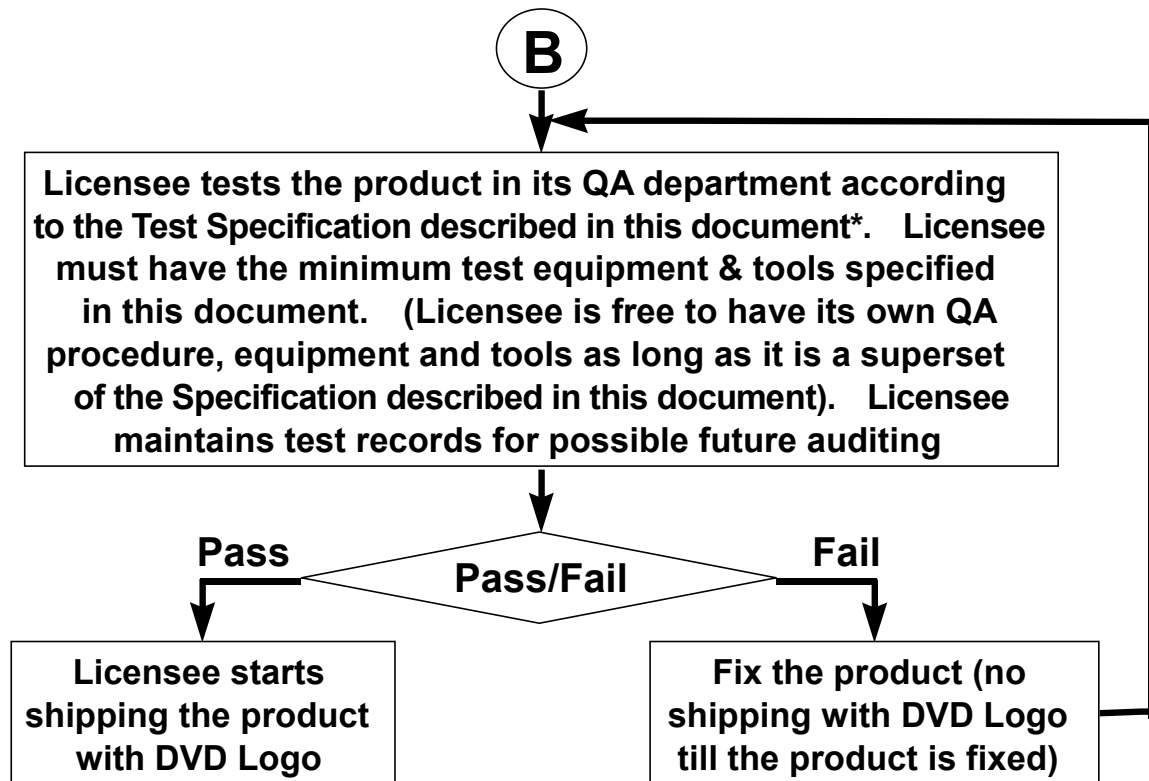
Class-A Verification Labs - Class-A Verification Labs are experts in DVD technology and provide independent expert assessment of Licensee's product compliance with respect to DVD Specifications. Class-A Labs also provide additional services such as interpretation of DVD Specifications, Test Tool development,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

Class-B Verification Labs - DVD-R Drive Class-B Verification Labs provide DVD-R Drive testing strictly according to the **DVD-R Drive Test Specification** as described in this document (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 from a **DVD-R Drive Class-B Verification Lab**.

3. Test Tools and Test Specifications

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

3.1 Test Tools

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

- Standard Blank Test Disc for the recording (RSTD-1)
- Standard Signal Test Disc for the playback (RSTD-2)
- DVD-R Disc Evaluation System or equivalent system

3.2 Test Specifications

The following sections describe the test procedures required for the DVD-R Drive.

3.2.1 Recording Characteristics

"00h" signal shall be written in the user area of RSTD-1 by the DVD-R Drive.

The variation of Write Strategy (refer to Annex K of DVD Specifications for Recordable Disc Part 1: Ver. 1.0) can be used for recording.

And measure the characteristic of the recording layer by using DVD-R Disc Evaluation System or equivalent system in accordance with **Form 3G and 4G**.

3.2.2 Recorded Data Format

Check the recorded format of Lead in, PCA and RMA. If the signals are written correctly, please mark OK in the **Form 5G**.

3.2.3 Read Characteristics

RSTD-2 shall be read by using the DVD-R Drive. If the signal can be read properly, please mark OK in the **Form 6G**.

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, the List with more current date prevails. Also, please refer to the website for the latest Verification Service of each Class-A Lab.

PIONEER CORPORATION

Verification Laboratory

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

Fax: +81-44-580-4027

Annex B

Glossary of Terms Used

(may be defined)

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 1G** to provide preliminary information.

Self Test

Applicant must test the product in accordance with this Test Specification prior to submitting it to a Class-A Verification Lab. Applicant must complete **Form 2G to 6G** to provide test results.

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 **Form 2G to 6G** and the NDA.

Test Result

Upon completion of testing, Verification Lab will complete **Form 7G** 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, the List with more current date prevails.*

Standard Blank Test Disc (RSTD-1) and Standard Signal Test Disc (RSTD-2) shall be delivered by:

PIONEER CORPORATION<*>

Verification Laboratory

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

Fax: +81-44-580-4027