

## Disc Identification Method

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## 1. Scope

The Disc Identification Code is applicable to CD-R discs.

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## 2. Object

This Method defines as to obtain interchangeability between discs and writers for high speed recording.

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## 3. Disc Identification Code

The Disc Identification Code consists of the Manufacturer code and Type code.

### 3-1. Manufacture code (M code)

#### 3-1-1. General

M code indicates a manufacturer of a disc. With reading this code, CD-R writers can identify a manufacturer of a disc.

#### 3-1-2. Configuration

Digits are assigned to each disc manufacturers, which are digits of minute, digits of second and first digit of frame of the Lead-in Start Time in ATIP special information (referred to section 4 in chapter 4 of the Orange Book).

Those digits are used for a writer to identify a disc manufacturer. Two codes are prepared for a manufacturer. A disc manufacturer can use whichever code for adapting any constant linear velocity. Overlap of this code is prohibited.

Example of M code

<b>Manufacturer</b>	<b>1st Code</b>	<b>2nd Code</b>
<b>A</b>	97m14s30f ~ 97m14s39f	97m40s20f ~ 97m40s29f
<b>B</b>	97m14s40f ~ 97m14s49f	97m41s20f ~ 97m41s29f
<b>C</b>	97m15s10f ~ 97m15s19f	97m40s50f ~ 97m40s59f

## 3-2. Type code (T code)

### 3-2-1. General

T code indicates a recording characteristics of a disc. With reading this code, CD-R writers can identify a recording characteristics of a disc.

### 3-2-2. Configuration

The second digit of frame of the Lead-in Start Time in ATIP special information is assigned for each disc type. A disc type is defined according to disc recording characteristics. Discs are divided into the following two groups by their recording characteristics.

Second digit of frame Characteristics

0~4 : Long Strategy Type

(I3 deviation of RF of a disc which is written in Alternative media testing condition described in the chapter 2 of the Orange Book is small, when a length of the I3 write pulse is long. ex. Cyanine type media)

(0~4: free for each manufacturers)

5~9 : Short Strategy Type

(I3 deviation of RF of a disc which is written in Alternative media testing condition described in the chapter 2 of the Orange Book is small, when a length of the I3 write pulse is short. ex. Phthalocyanine type media)

(5~9: free for each manufacturers)

Note) In case of a low speed (1x or 2x) writer having only two sets of the recording parameters (Write strategy, Asymmetry, etc.), it is recommended that the writer handles the codes of 0~4 as one recording parameter set and does the codes of 5~9 as the other recording parameter set.

Note 2) A consistency with the current available discs in the market should be taken into consideration in implementation of the T code to a writer. It is prohibited to use Lead-in Start Time listed in the section 9-3 as T code, because they have been used for the discs which have been sold or are sold in the market.

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## **4. Liability**

### **4-1. Responsibility of the usage**

All the members of the Supporting Corporations (see Chapter 8) and the OSJ (Orange Study group of Japan) is responsible for the usage of the Disc Identification Code.

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## **5. Disc Identification Code**

### **5-1. Manufacturer code**

A tentative code and a permanent code are provided for the M code.

#### **5-1-1. Issue of a tentative code**

A tentative code is issued by the secretariat (Manufacturer Code management secretariat : see Chapter 6) according to an application by a disc manufacturer. It is issued within a month after the application and is effective for six months after the issue. A number (mm:ss:fx) of a tentative code is assigned according to a request from a disc manufacturer, however, in case that the number conflicts with any existing M code, a tentative code is not issued until that conflict is solved

#### **5-1-2. Registration and distribution of a tentative code**

An issued tentative code is registered on a tentative code list by the secretariat. The registration must be made within a month after an application by a disc manufacturer.

The tentative code list is distributed to the members of the OSJ with the permanent code list by the secretariat. Anybody, including non OSJ member, can obtain the list freely via the ftp server and http server.

#### **5-1-3. Invalidation of a tentative code**

In a case that a manufacturer doesn't ship a disc into a market with the assigned tentative code within six months after its issue date, such assigned code becomes invalid and it is deleted from the tentative code list.

## **5-1-4. Issue of a permanent code**

A permanent code will be issued within a month after a manufacturer's report to the secretariat that he has put a disc with the assigned tentative code on the market within the term of validity of the tentative code. A number of the permanent code is same with the tentative code.

## **5-1-5. Registration and distribution of a permanent code**

An issued permanent code is registered on a permanent code list by the secretariat. The registration must be made within a month after a report of shipment of the disc with the tentative code by a disc manufacturer. The permanent code list is distributed to the members of the OSJ with then current tentative code list by the secretariat. Anybody, including non OSJ member, can obtain the list freely via the ftp server and http server. Permanent code is valid perpetually.

## **5-1-6. Invalidation of a permanent code**

A permanent code issued once shall not become invalid.

## **5-2. Type code**

Each manufacturer controls a type code. That is, each disc manufacturer defines characteristics of their own disc.

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# **6. Manufacturer Code management secretariat**

## **6-1. Outline and role**

A Disc Identification management secretariat is established to manage clerical work of administrating the codes.

The secretariat's role is to accept an application from a disc manufacturer, issue a Disc Identification Code according to the procedures provided in the above 5-2, distribute an updated code information to the members and make it public via the ftp server and http server. In case the assigned secretariat cannot pursue the procedures defined hereunder, the secretariat of the OSJ acts for the Disc Identification Code management secretariat immediately.

The secretariat also has a role to accept an offer of admission to or secession from the member of the Supporting Corporations and maintain a directory of the Supporting Corporations.

The secretariat shall not liable for the Disc Identification Code itself and its usage.

## **6-2. Term of service of the secretariat and transfer**

The term of service of the secretariat is one year starting from April.

Address and phone number (and E-mail address) of the secretariat should be made public in the same manner with the way of publishing M code.

The corporation who is assigned as the secretariat should transfer the roles to the next secretariat corporation in advance before the expiration of his responsibility as the secretariat.

The new secretariat should be made public the address and the phone number in the same manner with the way of publishing M code immediately.

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## **7. Amendment**

Amendment is made with an agreement by all the members of the Supporting Corporations. When the Method is amended, the previous and the new Method are made public in the same manner with the way of publishing M code.

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## **8. Supporting Corporations**

### **8-1. Qualification of the member**

The members of the Supporting Corporations are limited to whom belongs to the OSJ and agrees to this Method.

No compensation is given as the members of the Supporting Corporations.

### **8-2. Admission, secession**

Any corporation can admit to and secede from the Supporting Corporations by offering to the Manufacturer Code management secretariat which would not be rejected unreasonably.

### **8-3. Obligation**

The obligation of the membership of Supporting Corporations is to accept to be a secretariat.

The secretariat is assigned according to the Alphabetical order of the member's list of the Supporting Corporations.

A new member is added to the last of the member's list.

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## 9. Code list

### 9-1. Tentative code list

<b>Manufacturer</b>	<b>1st Code</b>	<b>2nd Code</b>
<b>Woongjin Media corp.</b>	97m22s00f ~ 97m22s09f	
<b>INFODISC Technology Co., Ltd.</b>	97m25s30f ~ 97m25s39f	97m51s20f ~ 97m51s29f
<b>UNITECH JAPAN INC.</b>	97m24s30f ~ 97m24s39f	97m45s10f ~ 97m45s19f
<b>AMS Technology Inc.</b>	97m25s50f ~ 97m25s59f	
<b>Vanguard Disc Inc.</b>	97m29s10f ~ 97m29s19f	97m50s10f ~ 97m50s19f
<b>Grand Advance Technology Ltd.</b>	97m31s30f ~ 97m31s39f	97m51s10f ~ 97m51s19f
<b>Taeil Media Co.,Ltd.</b>	97m29s00f ~ 97m29s09f	
<b>King Pro Mediatek Inc.</b>	97m28s40f ~ 97m28s49f	97m49s20f ~ 97m49s29f
<b>DIGITAL STORAGE TECHNOLOGY CO.,LTD</b>	97m27s01f ~ 97m27s09f	97m48s40f ~ 97m48s49f
<b>Matsushita Electric Industrial Co., Ltd.</b>	97m23s00f ~ 97m23s09f	97m49s60f ~ 97m49s69f
<b>CDA Datenträger Albrechts GmbH</b>	97m30s10f ~ 97m30s19f	97m50s30f ~ 97m50s39f
<b>Prodisc Technology Inc.</b>		97m47s60f ~ 97m47s69f
<b>POSTECH Corporation</b>	97m26s10f ~ 97m26s19f	97m47s40f ~ 97m47s49f
<b>OPTICAL DISC CORPRATION</b>	97m26s30f ~ 97m26s39f	

<b>SONY Corporation</b>	97m24s10f ~ 97m24s19f	97m46s10f ~ 97m46s19f
<b>CIS Technology Inc.</b>	97m22s40f ~ 97m22s49f	97m45s40f ~ 97m45s49f
<b>Computer Support Italy s.r.l.</b>	97m24s20f ~ 97m24s29f	97m46s30f ~ 97m46s39f

## 9-2. Permanent code list

<b>Manufacturer</b>	<b>1st Code</b>	<b>2nd Code</b>
<b>Doremi Media Co.,Ltd.</b>	97m23s10f ~ 97m23s19f	
<b>Xcitek Inc.</b>	97m25s60f ~ 97m25s69f	97m45s60f ~ 97m45s69f
<b>Lead Data Inc.</b>	97m26s50f ~ 97m26s59f	97m48s60f ~ 97m48s69f
<b>FUJI Photo Film Co., Ltd.</b>		97m46s40f ~ 97m46s49f
<b>Hitachi Maxell, Ltd.</b>	97m25s20f ~ 97m25s29f	97m47s10f ~ 97m47s19f
<b>Kodak Japan Limited</b>	97m27s40f ~ 97m27s49f	97m48s10f ~ 97m48s19f
<b>Mitsui Chemicals, Inc.</b>	97m27s50f ~ 97m27s59f	97m48s50f ~ 97m48s59f
<b>Pioneer Video Corporation</b>	97m27s30f ~ 97m27s39f	97m48s30f ~ 97m48s39f
<b>Plasmon Data systems Ltd.</b>	97m27s10f ~ 97m27s19f	97m48s20f ~ 97m48s29f
<b>Princo Corporation</b>	97m27s20f ~ 97m27s29f	97m47s20f ~ 97m47s29f
<b>Ricoh Company Limited</b>	97m27s60f ~ 97m27s69f	97m48s00f ~ 97m48s09f
<b>SKC Co., Ltd.</b>	97m26s20f ~ 97m26s29f	
<b>Taiyo Yuden Company Limited</b>	97m24s00f ~ 97m24s09f	97m46s00f ~ 97m46s09f
<b>TDK Corporation</b>	97m32s00f ~ 97m32s09f	97m49s00f ~ 97m49s09f
<b>Mitsubishi Chemical Corporation</b>	97m34s20f ~ 97m34s29f	97m50s20f ~ 97m50s29f
<b>Auvistar Industry Co.,Ltd.</b>	97m28s30f ~ 97m28s39f	97m46s50f ~ 97m46s59f

<b>GIGASTORAGE CORPORATION</b>	97m28s10f ~ 97m28s19f	97m49s10f ~ 97m49s19f
<b>FORNET INTERNATIONAL PTE LTD.</b>	97m26s00f ~ 97m26s09f	97m45s00f ~ 97m45s09f
<b>FUJI Photo Film Co., Ltd.</b>	97m26s40f ~ 97m26s49f	
<b>CMC Magnetics Corporation</b>	97m26s60f ~ 97m26s69f	97m46s60f ~ 97m46s69f
<b>Optical Disc Manufacturing Equipment</b>	97m21s40f ~ 97m21s49f	
<b>Ritek Co.</b>	97m31s00f ~ 97m31s09f	97m47s50f ~ 97m47s59f
<b>Multi Media Masters &amp; Machinery SA</b>	97m28s20f ~ 97m28s29f	97m46s20f ~ 97m46s29f
<b>Prodisc Technology Inc.</b>	97m32s10f ~ 97m32s19f	

### 9-3. List of the Lead-in Start Time that cannot be used as a T code

97m 25s 00f
97m 25s 15f
97m 27s 00f
97m 27s 25f
97m 30s 00f
97m 33s 00f
97m 35s 44f
97m 39s 00f
97m 45s 36f
97m 47s 00f
97m 47s 30f
97m 48s 14f
97m 48s 33f
97m 49s 00f
97m 54s 00f
97m 55s 06f
97m 57s 00f

## **10. Address and phone number of Manufacture Code management secretariat for April 1999 through March 2000**

MICHIO OHSAWA

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