

# FILM-TECH

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**SONY**<sup>®</sup>

# **SDDS Player System**

DIGITAL FILM SOUND READER

**DFP-R3000**

**SDDS** Sony Dynamic  
Digital Sound<sup>®</sup>

INSTALLATION MANUAL

1st Edition

Serial No. 10001 and Higher

## ⚠ 警告

このマニュアルは、サービス専用です。  
お客様が、このマニュアルに記載された設置や保守、点検、修理など行うと感電や火災、人身事故につながる可能性があります。  
危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

## ⚠ WARNING

This manual is intended for qualified service personnel only.  
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

## ⚠ WARNUNG

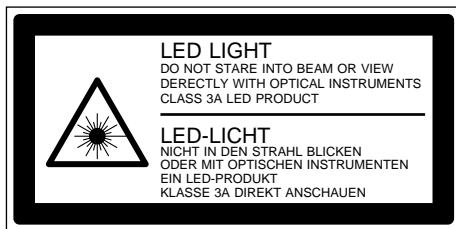
Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.  
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

## ⚠ AVERTISSEMENT

Ce manuel est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

### LED Properties

Material : InGaAIP  
Peak Wave length : 644 nm (Spectral Line Half Width  $\Delta\lambda$  18nm)  
Emission duration: Continuous  
LED output power: 2.41 mW (max)  
Beam divergence : (H) 60 ° (V) 10 °



This Digital Film Reader is classified as a CLASS 3A  
LED PRODUCT.  
Label is located on the top.

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# Manual Structure

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## Purpose of this manual

This manual is the Maintenance Manual of the Digital Film Sound Reader DFP-R3000.

This manual is intended for use by trained system and service engineers, describes the information when installing DFP-R3000.

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## Related manuals

- **DFP-R3000/DFP-D3000 Operation Manual (Supplied with the DFP-D3000)**

This manual is necessary for application and operation of the DFP-R3000.

- **DFP-R3000 Maintenance Manual (Prepared separately)**

This manual describes the information of the DFP-R3000 and the information that premise the service based on parts.

- **DFP-D3000 Maintenance Manual (Prepared separately)**

This manual describes the inspection of the DFP-D3000 and the information that premise the service based on parts.

### Note

Unless otherwise specified, all names of companies and products are trademarks or registered trademarks of the respective companies.



# Installation

## 1. Operating Environment

Operating temperature : 5 °C to 40 °C  
Operating humidity : 10 % to 90 % (relative humidity)  
Storage temperature : -20 °C to +60 °C  
Mass (weight) : 3.5 kg

### Locations to Avoid

Areas where the unit will be exposed to direct sunlight or any other strong lights.  
Dusty areas or areas where it is subject to vibration.  
Areas with strong electric or magnetic fields.  
Areas near heat sources.  
Areas subject to electrical or RF.  
Areas subject to static electricity noise.

## 2. Power Supply

Power supply voltage : DC +24 V (This power is supplied when connected to the DFP-D3000.)

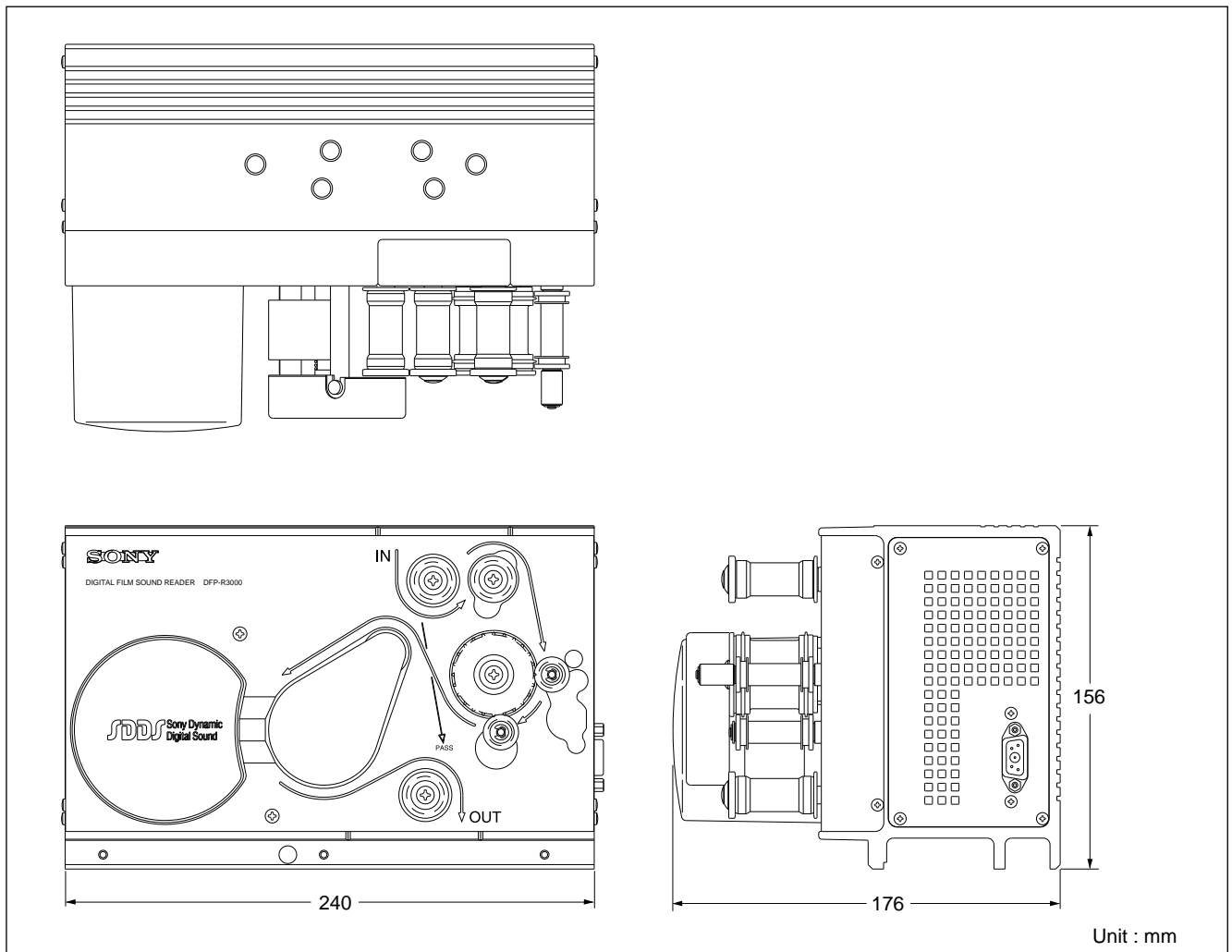
### Note

DFP-R3000 does not have POWER switch. Therefore, the power ON/OFF of the DFP-R3000 is switched at the DFP-D3000.

If the power of the DFP-R3000 needs to be turned OFF when fault occurs, turn OFF the power of the DFP-D3000.

Power consumption : 9.6 W

## 3. Dimensions

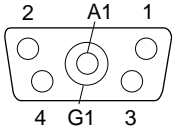




## 4. Input/Output Signals of Connector

SDDS I/F : DME 5W1S, female

Signal level ; SDI format digital audio signal



Pin No.	I/O	Signal	Description
1	I	+24 V	DC 24 V
2	—	NC	No connection
3	—	GND	Ground (DC 24 V)
4	—	CABLE SHIELD	Ground (Frame)
A1	O	DATA	SDDS data
G1	—	DATA GND	Ground (Data)

## 5. Installation

The following describes how to install the DFP-R3000 to the various projectors indicated below.

1. Strong International : Simplex 35/70  
Century JJ
2. Kinoton : Noleroco AA-II35/70
3. Cinemeccanica : V8, V5

Install the DFP-R3000 to a projector according to the following procedure.

### Installation Procedure

Installation to projector



Connecting to DFP-D3000



Checking and adjustment after installation

### Notes on Installation

- Use the adapter (A) supplied with the DFP-R3000 when installing the DFP-R3000.  
However, parts additional to adapter (A) will be required for some projectors.  
Checks the parts required in the procedure for installing to projectors in “5-2. Installation to the Projector”.
- Attach the adapter (A) using the special tool.

## 5-1. Use of DFP-R3000 for 70 mm Film

To use the DFP-R3000 for 70 mm film, the front panel, and roller guide need to be replaced, etc.

Replace according to the following “Procedure”.

### Required Parts

Front panel (70) assembly ;

1 (Sony part No. X-3168-037-1)

Front panel (70) R ;

1 (Sony part No. 3-200-455-01)

Optional guide assembly (70) ;

1 (Sony part No. X-3168-071-1)

Optional guide T assembly (70) ;

1 (Sony part No. X-3168-074-1)

Support ;

5 (Sony part No. 3-194-814-01)

Washer (SW4) ;

1 (Sony part No. 7-623-210-22)

Screw (B3 × 4) ;

6 (Sony part No. 7-682-545-04)

### Required Tools

Philips screwdriver

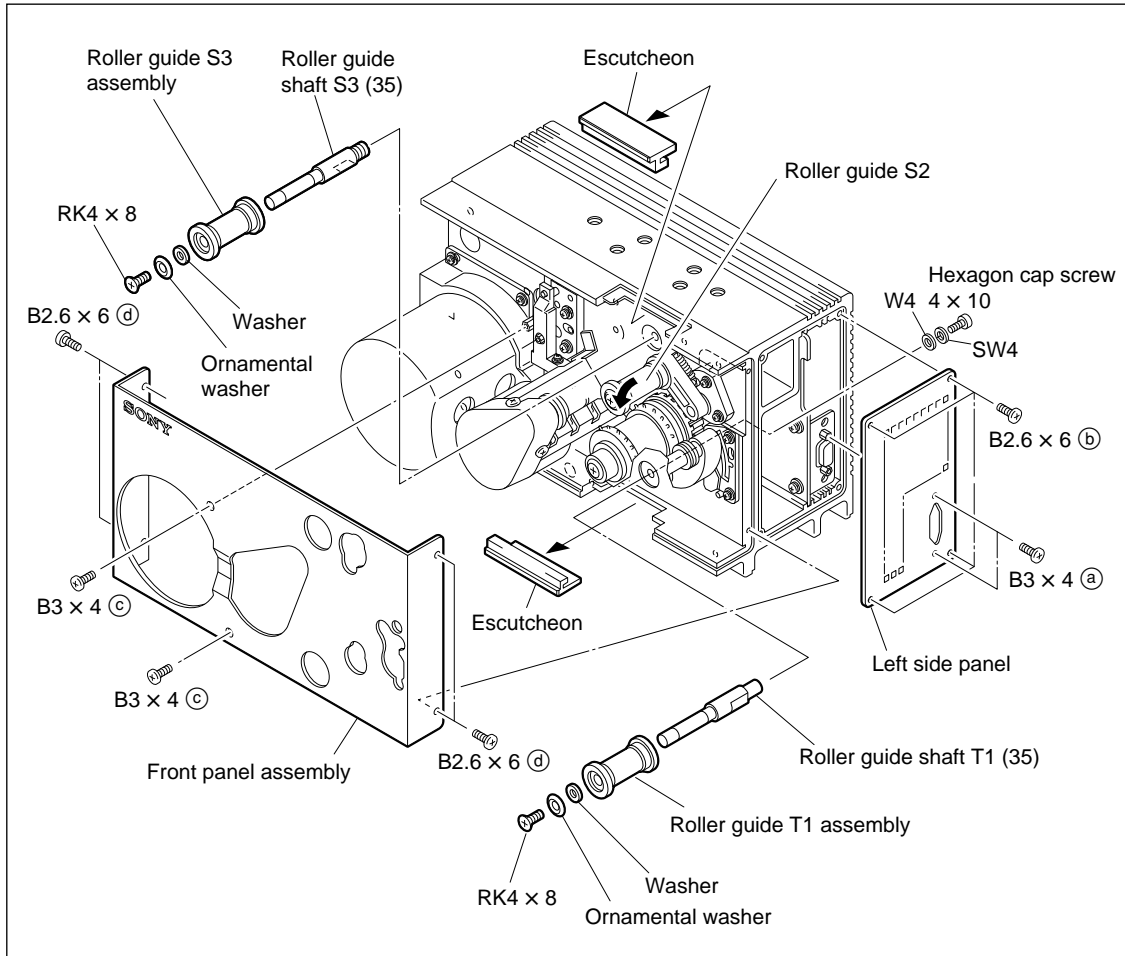
Nut driver (d = 5 mm)

Hex wrench screwdriver (across ; 3 mm)

## Procedure

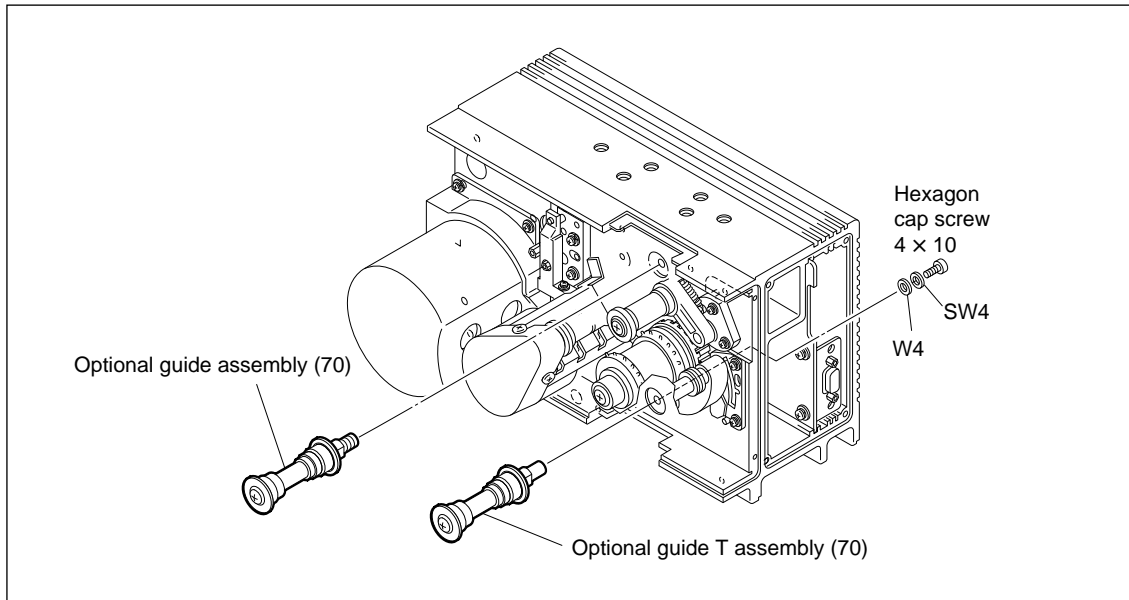
### Step 1. Removing the Front Panel, Guide Rollers S3 and T1 and etc.

1. Remove the two screws (B3 × 4) (a) and four screws (B2.6 × 6) (b) to remove the right side panel.
2. Remove the two screws (B3 × 4) (c) and four screws (B2.6 × 6) (d).
3. While holding the roller guide S2 to the direction of the arrow, remove the front panel assembly.
4. Remove the two escutcheons to the direction of the arrow.
5. Remove the one screw (RK4 × 8), ornamental washer and washer to take out the roller guide S3 assembly and roller guide shaft S3 (35).
6. Remove the one screw (RK4 × 8), ornamental washer and washer to take out the roller guide T1 assembly.
7. Remove the hexagon cap screw (4 × 10), washer (W4) and spring washer (SW4) from inside of the unit to take out the roller guide shaft T1 (35).



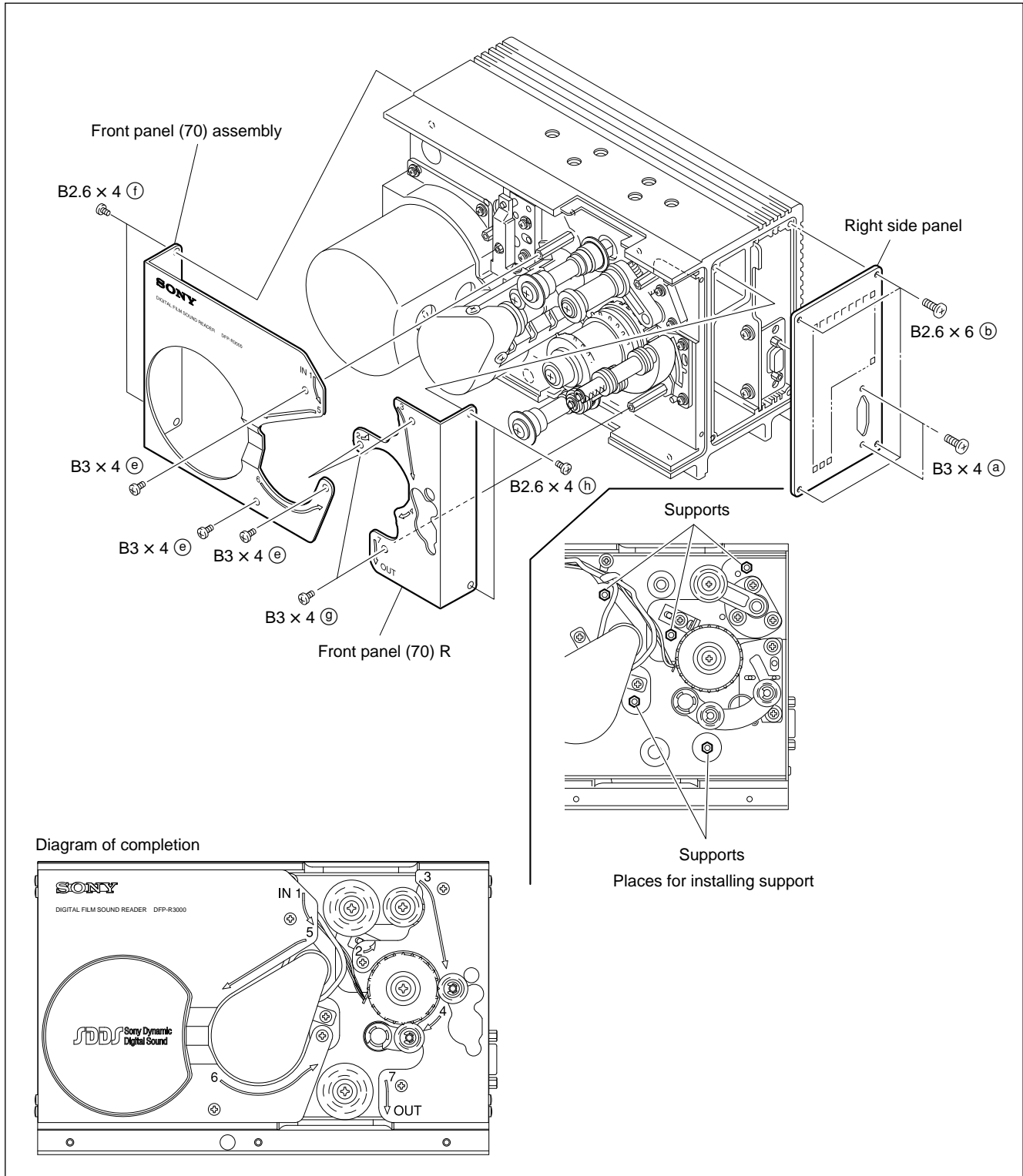
**Step 2. Attaching the Optional Guide Assembly (70) and Optional Guide T Assembly (70)**

1. Attach the optional guide assembly (70) to the position from which the roller guide shaft S3 (35) was removed.
2. Attach the optional guide T assembly (70) using hexagon cap screw (4 × 10), spring washer (SW4) and washer (W4) from inside of the unit to the position from which the roller guide shaft T1 (35) was removed.



### Step 3. Attaching the Front Panel (70) Assembly and Front Panel (70) R

1. Attach the five supports to the unit as shown in the figure.
2. Attach the front panel assembly (70) assembly to the unit using the three screws (B3 × 4) (e) and two screws (B2.6 × 4) (f).
3. Attach the front panel (70) R to the unit using the three screws (B3 × 4) (g) and two screws (B2.6 × 4) (h).
4. Attach the right side panel removed at the procedure 1 of Step 1 using the two screws (B3 × 4) (a) and four screws (B2.6 × 6) (b).



## 5-2. Installation to the Projector

### Notes on Installation

- Place the DFP-R3000 in the upright position (not sideways nor tilted) and position the reader (part of the drum where the LEDs are located) of the DFP-R3000 more than 24 frames but within 119 frames from the picture gate of the projector.  
However the film speed must be stable (within  $\pm 5\%$ ) when the first image frame passes by the reader of the DFP-R3000.
- The tension of the film that is supplied to the DFP-R3000 during film running is set to 0.5 to 59 N (50 to 600 fg).  
Adjust so that the tension is within the above range between the beginning and end of the supplied film.

### Required Tools

Path adjustment tool (Sony part No. J-6510-220-A)  
35 mm Film

Phillips screwdriver

Nut driver (d = 5 mm)

Hexagon screwdriver (across ; 3 mm)

## 5-2-1. Installing to CENTURY JJ (Strong International)

### Required Parts

Adapter (A) ; 1 (Supplied with DFP-R3000)  
Hexagon cap screw (3/8-16) ; 2 (Supplied with DFP-R3000)  
Wave washer ; 2 (Supplied with DFP-R3000)  
Screw (PSW4  $\times$  12) ; 4 (Supplied with DFP-R3000)

### Procedure

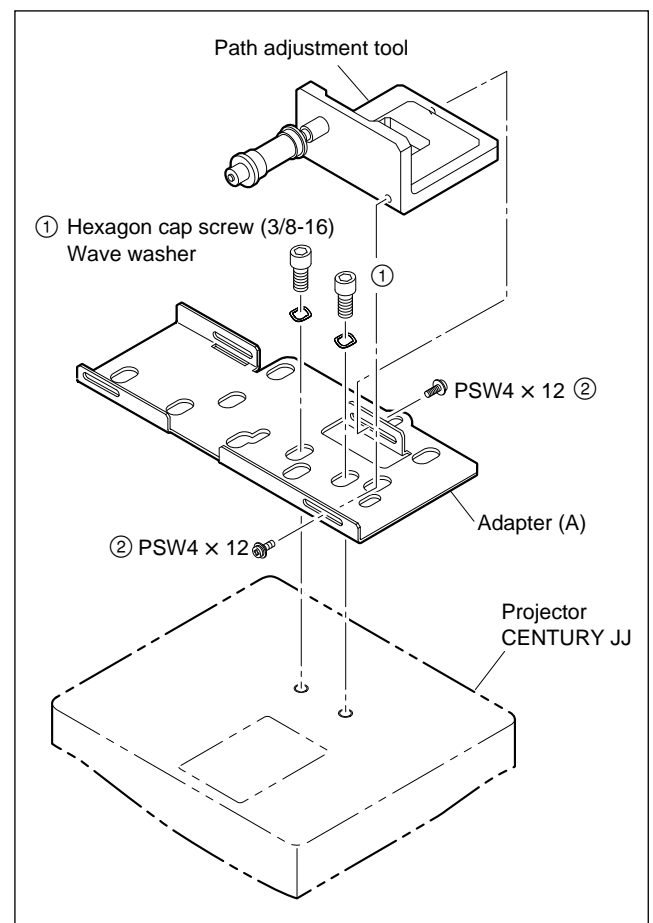
#### Step 1. Installing the Adapter (A) to the Projector

- Remove REEL ARM or platter guide roller of supply reel side of the projector.
- Attach the adapter (A) tentatively to the projector using the two hexagon cap screws (3/8-16) ① and wave washers.

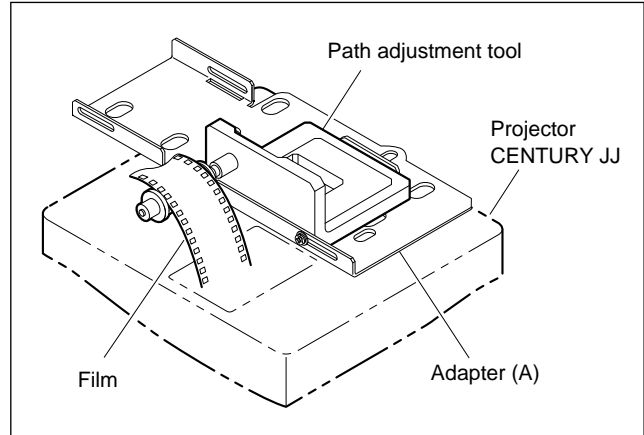
#### Note

Fixing hole of adapter (A) varies depending on the projector to be used. (See the figure below.)

- Attach the path adjustment tool tentatively to the adapter (A) with the screws (PSW4  $\times$  12) ② as shown in the figure.



4. Put a film on the path adjustment tool (roller) from the projector, and adjust the attaching position of the path adjustment tool so that the film is smoothly fed onto the projector.
5. After the adjustment has been completed, tighten the two screws (PSW4 × 12) ②.
6. Put a film on the path adjustment tool (roller) from the projector, and adjust the attaching position of the adapter (A) so that the film is smoothly fed onto the projector.  
Especially adjust so that the tension on both edges of the film is even.
7. After the adjustment has been completed, tighten the two hexagon cap screws (3/8-16) ①.
8. Remove the film from the path adjustment tool.
9. Remove the path adjustment tool from the adapter (A).



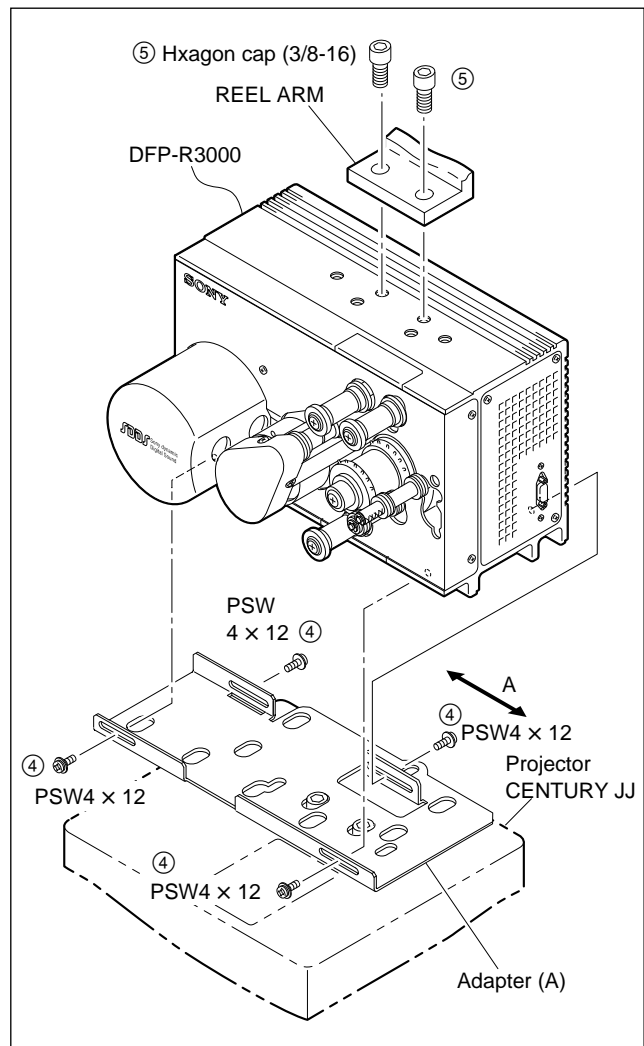
## Step 2. Installing the DFP-R3000 to the Projector

1. Install the DFP-R3000 tentatively in the adapter (A) with four screws (PSW4 × 12) ④.
2. Put the film on the projector from the DFP-R3000 and adjust the position (arrow direction A) of DFP-R3000 so that the film is smoothly fed onto the projector.
3. After the adjustment has been completed, tighten the four screws (PSW4 × 12) ④.
4. Reattach the REEL ARM of the projector tentatively to the DFP-R3000 with two hexagon cap screws (3/8-16) ⑤.

### Note

Fixing hole position of the DFP-R3000 varies depending on the REEL ARM to be used.

5. Set the film to the DFP-R3000 from the REEL ARM, and adjust the installation position of the REEL ARM so that the film runs smoothly and the tension on both edges of the film is even.
6. After the adjustment has been completed, tighten the two hexagon cap screws (3/8-16) ⑤.
7. Connect the DFP-R3000 to the DFP-D3000. (Refer to “5-3. Connection to the DFP-D3000”.)
8. After the connection is completed, perform “5-4. Checking and Adjustment After Installation”.



## 5-2-2. Installing to SIMPLEX 35/70 (Strong International)

### Required Parts

Adapter (A) ;	1 (Supplied with DFP-R3000)
Hexagon cap screw (3/8-16) ;	2 (Supplied with DFP-R3000)
Wave washer ;	2 (Supplied with DFP-R3000)
Screw (PSW4 × 12) ;	4 (Supplied with DFP-R3000)

### Installing to SIMPLEX 35

Optional guide (35 mm) ;	1 (Sony part No. X-3168-070-1)
Adapter (C) ;	1 (Sony part No. 3-200-390-01)
Hexagon cap screw (3/8-16) ;	2 (Sony part No. 3-185-981-01) For attaching adapter (C)
Washer ;	1 (Sony part No. 3-451-162-01) For attaching optional guide (35)
Hexagon cap screw (4 × 10) ;	1 (Sony part No. 7-683-420-04) For attaching optional guide (35)
Spring washer (SW4, TYPE2) ;	1 (Sony part No. 7-623-210-22) For attaching optional guide (35)

### Installing to SIMPLEX 70

Optional guide (70 mm) ;	1 (Sony part No. X-3618-071-1)
Adapter (C) ;	1 (Sony part No. 3-200-390-01)
Hexagon cap screw (3/8-16) ;	2 (Sony part No. 3-185-981-01) For attaching adapter (C)

## 1. Installing to SIMPLEX 35

### Procedure

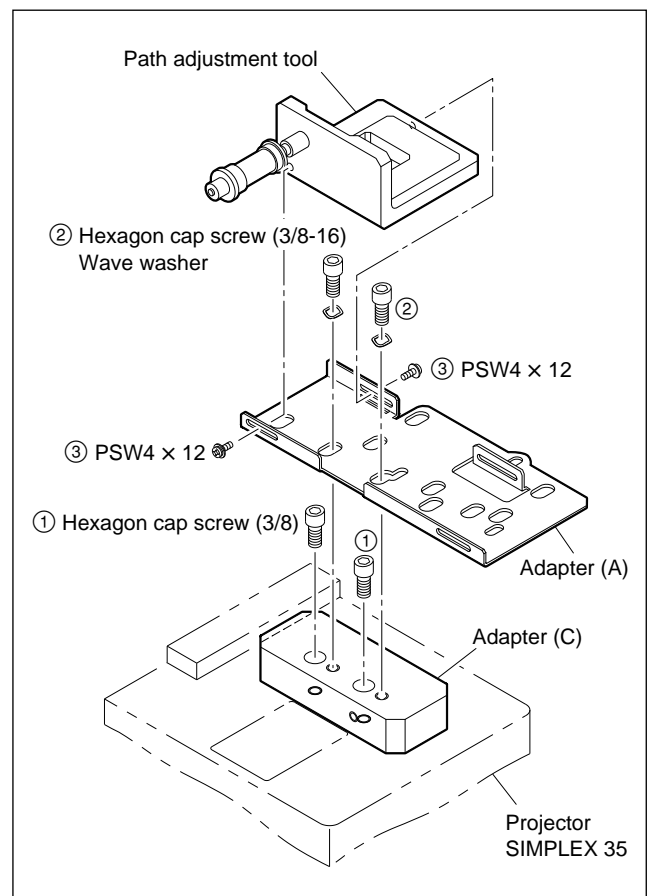
#### Step 1. Installing the Adapter (A) to the Projector

1. Remove REEL ARM or platter guide roller of supply reel side of the projector.
2. Attach the adapter (C) to the projector using the two hexagon cap screws (3/8-16) ①.
3. Attach the adapter (A) tentatively to the adapter (C) using the two hexagon cap screws (3/8-16) ② and wave washers.

#### Note

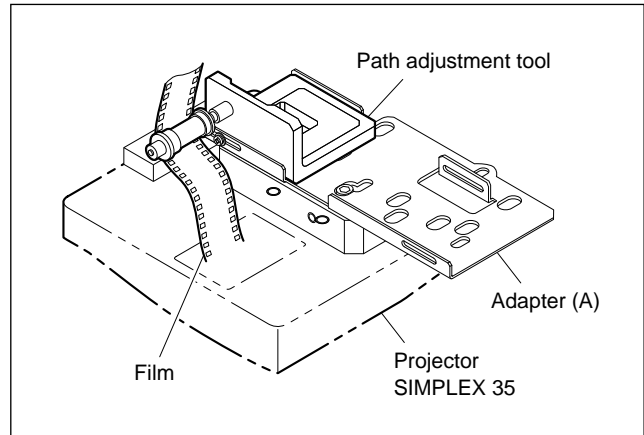
Fixing hole of adapter (A) varies depending on the projector to be used. (See the figure below.)

4. Attach the path adjustment tool tentatively to the adapter (A) with the screws (PSW4 × 12) ③ as shown in the figure.





5. Put a film on the path adjustment tool (roller) from the projector, and adjust the attaching position of the path adjustment tool so that the film is smoothly fed onto the projector.
6. After the adjustment has been completed, tighten the two screws (PSW4 × 12) ③.
7. Put a film on the path adjustment tool (roller) from the projector, and adjust the attaching position of the adapter (A) so that the film is smoothly fed onto the projector.  
Especially adjust so that the tension on both edges of the film is even.
8. After the adjustment has been completed, tighten the two hexagon cap screws (3/8-16) ②.
9. Remove the film from the path adjustment tool.
10. Remove the path adjustment tool from the adapter (A).



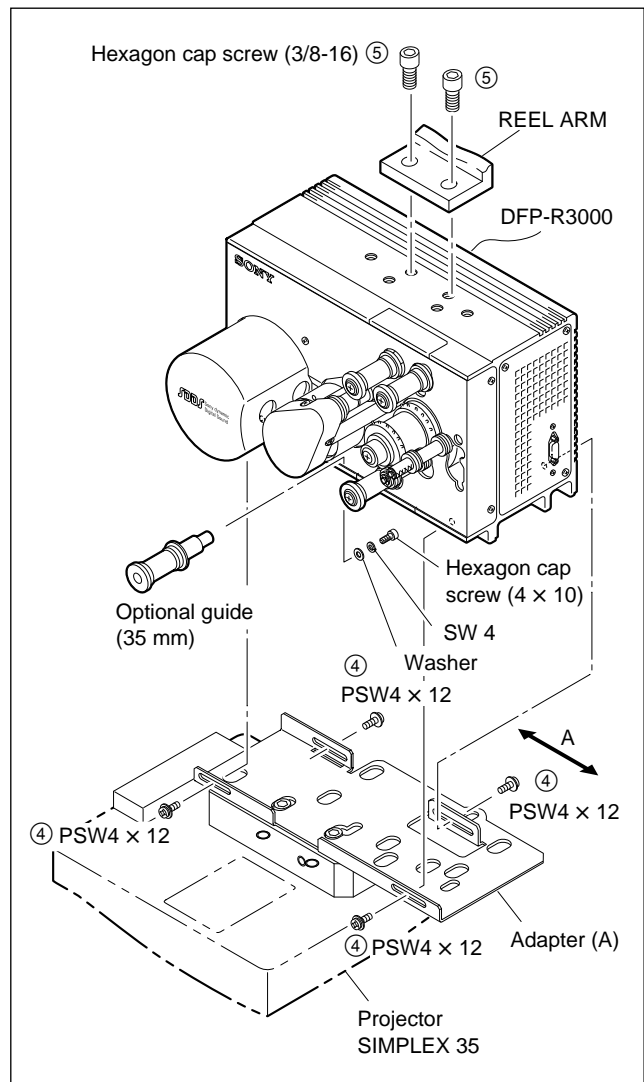
## Step 2. Installing the DFP-R3000 to the Projector

1. Attach the optional guide (35 mm) to the DFP-R3000 with hexagon cap screw (4 × 10), plane washer and spring washer (SW4).
2. Install the DFP-R3000 tentatively in the adapter(A) with four screws (PSW4 × 12) ④.
3. Put the film on the projector from the DFP-R3000 and adjust the position (arrow direction A) of DFP-R3000 so that the film is smoothly fed onto the projector.
4. After the adjustment has been completed, tighten the four screws (PSW4 × 12) ④.
5. Reattach the REEL ARM of the projector tentatively to the DFP-R3000 with two hexagon cap screws (3/8-16) ⑤.

### Note

Fixing hole position of the DFP-R3000 varies depending on the REEL ARM to be used.

6. Set the film to the DFP-R3000 from the REEL ARM, and adjust the installation position of the REEL ARM so that the film runs smoothly and the tension on both edges of the film is even.
7. After the adjustment has been completed, tighten the two hexagon cap screws (3/8-16) ⑥.
8. Connect the DFP-R3000 to the DFP-D3000.  
(Refer to “5-3. Connection to the DFP-D3000”.)
9. After the connection is completed, perform “5-4. Checking and Adjustment After Installation”.



## 2. Installing to SIMPLEX 70

### Procedure

#### Step 1. Installing the Adapter (A) to the Projector

1. Remove REEL ARM or platter guide roller of supply reel side of the projector.
2. Attach the optional guide (70 mm) to the adapter (C).
3. Attach the adapter (C) tentatively to the projector using the two hexagon cap screws (3/8-16) ①.
4. Put a film on the optional guide (70 mm) from the projector, and adjust the attaching position of the adapter (C) so that the film is smoothly fed onto the projector.

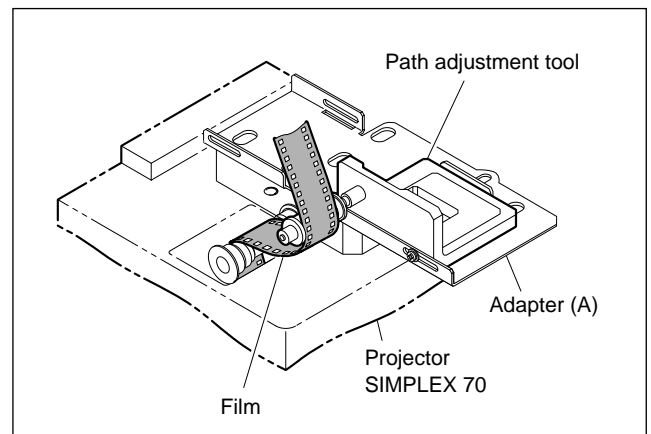
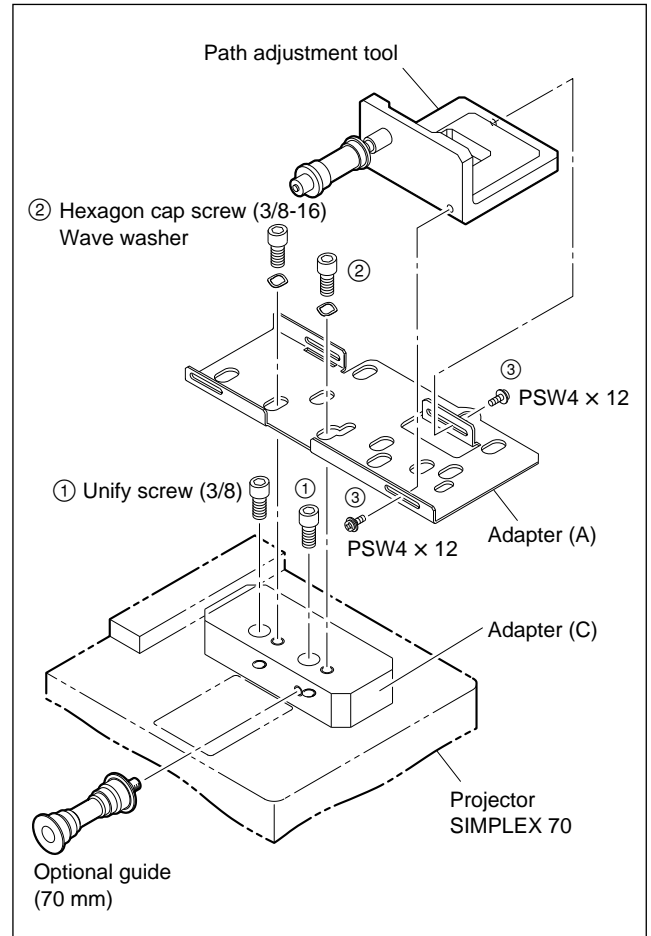
Especially adjust so that the tension on both edges of the film is even.

5. After the adjustment has been completed, tighten the two hexagon cap screws (3/8-16) ①.
6. Attach the adapter (A) tentatively to the adapter (C) using the two hexagon cap screws (3/8-16) ② and wave washers (d = 10).

#### Note

Fixing hole of adapter (A) varies depending on the projector to be used. (See the figure below.)

7. Attach the path adjustment tool tentatively to the adapter (A) with the two screws (PSW4 × 12) ③ as shown in the figure.
8. Put a film on the path adjustment tool (roller) from the projector, and adjust the attaching position of the path adjustment tool so that the film is smoothly fed onto the projector.
9. After the adjustment has been completed, tighten the two screws (PSW4 × 12) ③.
10. Put a film on the path adjustment tool (roller) from the projector, and adjust the attaching position of the adapter (A) so that the film is smoothly fed onto the projector.  
Especially adjust so that the tension on both edges of the film is even.
11. After the adjustment has been completed, tighten the two hexagon cap screws (3/8-16) ②.
12. Remove the film from the path adjustment tool.
13. Remove the path adjustment tool from the adapter (A).



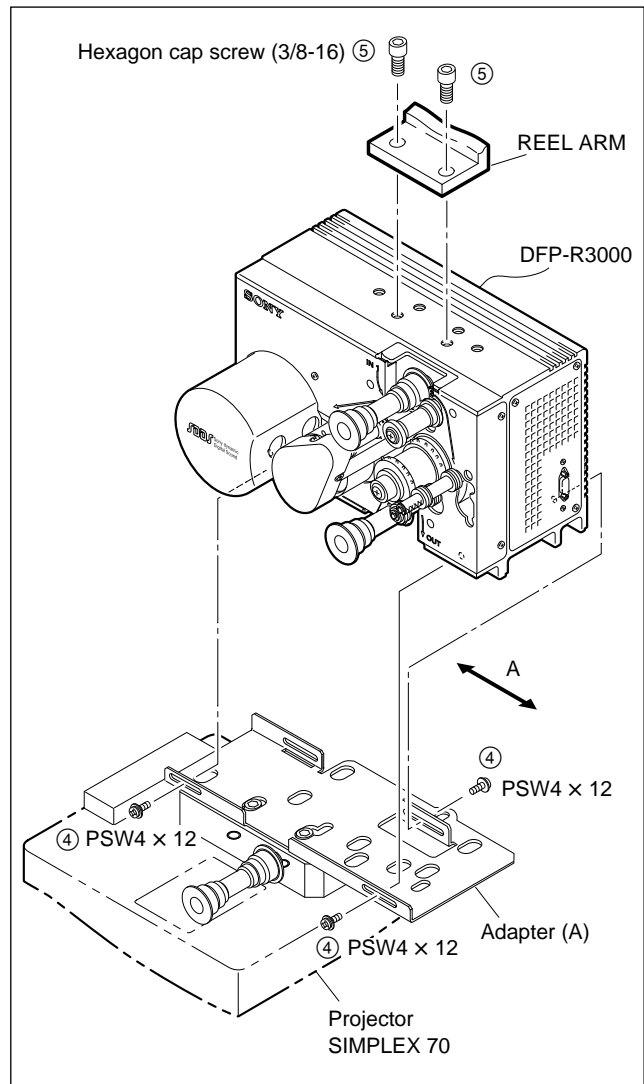
## Step 2. Installing the DFP-R3000 to the Projector

1. Install the DFP-R3000 tentatively in the adapter (A) with four screws (PSW4 × 12) ④.
2. Put the film on the projector from the DFP-R3000 and adjust the position (arrow direction A) of DFP-R3000 so that the film is smoothly fed onto the projector.
3. After the adjustment has been completed, tighten the four screws (PSW4 × 12) ④.
4. Reattach the REEL ARM of the projector tentatively to the DFP-R3000 with two hexagon cap screws (3/8-16) ⑤.

### Note

Fixing hole position of the DFP-R3000 varies depending on the REEL ARM to be used.

5. Set the film to the DFP-R3000 from the REEL ARM, and adjust the installation position of the REEL ARM so that the film runs smoothly and the tension on both edges of the film is even.
6. After the adjustment has been completed, tighten the two hexagon cap screws (3/8-16) ⑤.
7. Connect the DFP-R3000 to the DFP-D3000. (Refer to “5-3. Connection to the DFP-D3000”.)
8. After the connection is completed, perform “5-4. Checking and Adjustment After Installation”.



### 5-2-3. Installing to NORELCO AA-II 35/70 (Kinoton)

#### Required Parts

Adapter (A) ; 1 (Supplied with DFP-R3000)  
Hexagon cap screw (3/8-16) ; 3 (Supplied with DFP-R3000)  
Wave washer ; 3 (Supplied with DFP-R3000)  
Screw (PSW4 × 12) ; 4 (Supplied with DFP-R3000)

Adapter (B) ; 1 (Sony part No. 3-200-393-01)  
Screw (PSW4 × 12) ; 2 (Sony part No. 7-682-963-09)  
For attaching adapter (B)

#### Procedure

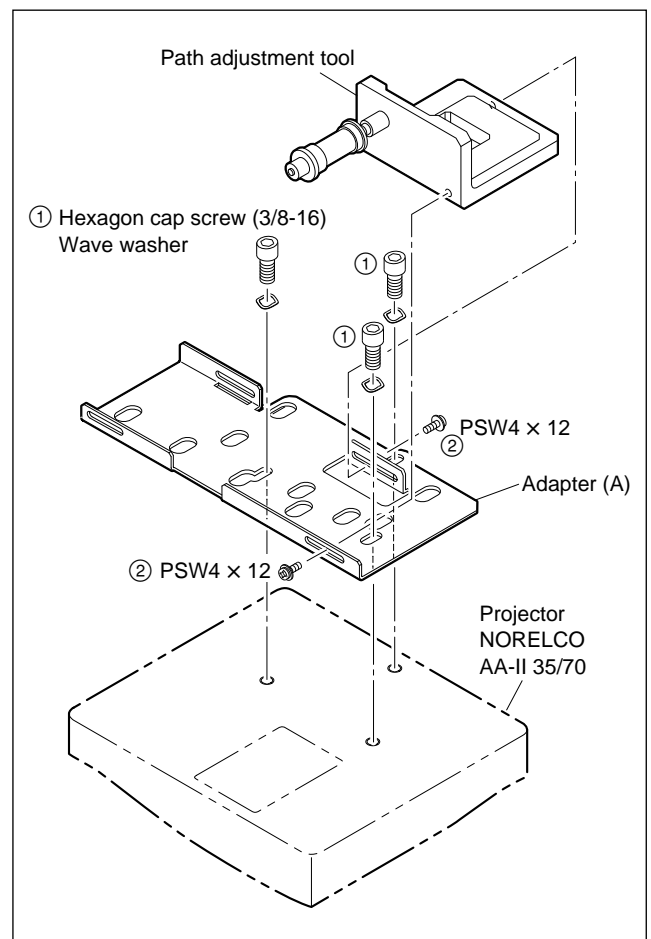
##### Step 1. Installing the Adapter (A) to the Projector

1. Remove REEL ARM or platter guide roller of supply reel side of the projector.
2. Attach the adapter (A) tentatively to the adapter (C) using the three hexagon cap screws (3/8-16) ① and wave washers.

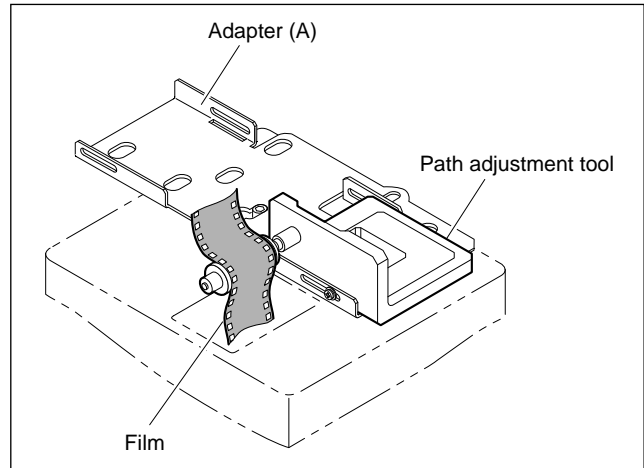
#### Note

Fixing hole of adapter (A) varies depending on the projector to be used. (See the figure below.)

3. Attach the path adjustment tool tentatively to the adapter (A) with the screws (PSW4 × 12) ② as shown in the figure.



4. Put a film on the path adjustment tool (roller) from the projector, and adjust the attaching position of the path adjustment tool so that the film is smoothly fed onto the projector.
5. After the adjustment has been completed, tighten the two screws (PSW4 × 12) ②.
6. Put a film on the path adjustment tool (roller) from the projector, and adjust the attaching position of the adapter (A) so that the film is smoothly fed onto the projector.  
Especially adjust so that the tension on both edges of the film is even.
7. After the adjustment has been completed, tighten the two hexagon cap screws (3/8-16) ①.
8. Remove the film from the path adjustment tool.
9. Remove the path adjustment tool from the adapter (A).



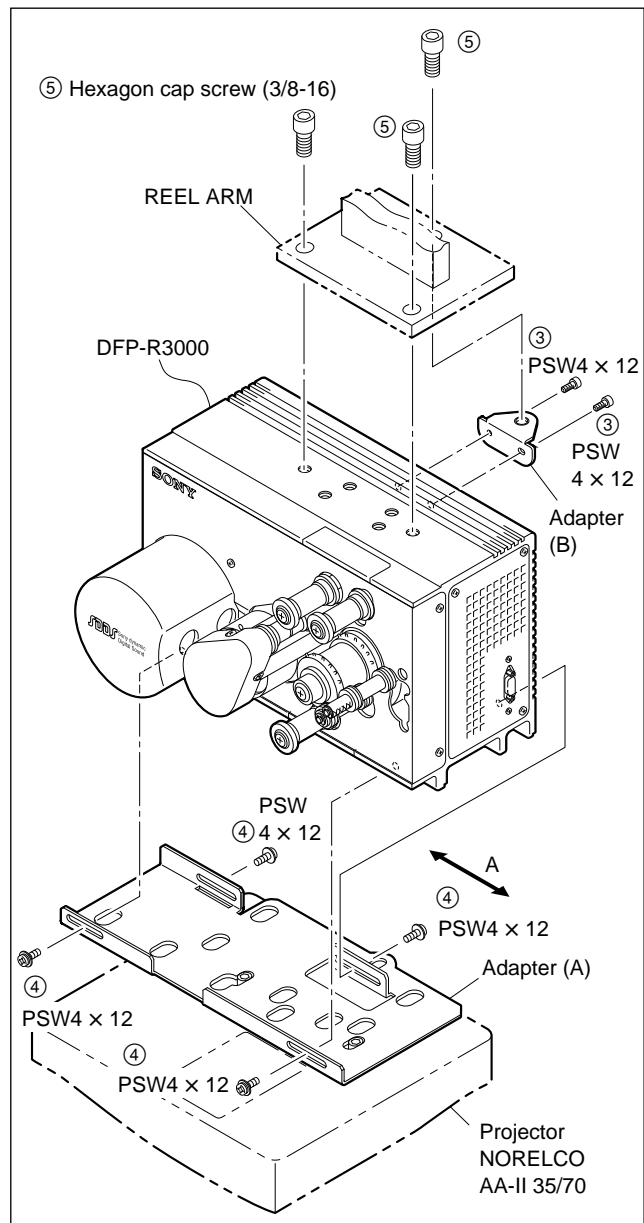
## Step 2. Installing the DFP-R3000 to the Projector

1. Attach the adapter (B) to the DFP-R3000 with two screws (PSW4 × 12) ③.
2. Install the DFP-R3000 tentatively in the adapter (A) with four screws (PSW4 × 12) ④.
3. Put the film on the projector from the DFP-R3000 and adjust the position (arrow direction A) of DFP-R3000 so that the film is smoothly fed onto the projector.
4. After the adjustment has been completed, tighten the four screws (PSW4 × 12) ④.
5. Reattach the REEL ARM of the projector tentatively to the DFP-R3000 with three hexagon cap screws (3/8-16) ⑤.

### Note

Fixing hole position of the DFP-R3000 varies depending on the REEL ARM to be used.

6. Set the film to the DFP-R3000 from the REEL ARM, and adjust the installation position of the REEL ARM so that the film runs smoothly and the tension on both edges of the film is even.
7. After the adjustment has been completed, tighten the three hexagon cap screws (3/8-16) ⑤.
8. Connect the DFP-R3000 to the DFP-D3000. (Refer to “5-3. Connection to the DFP-D3000”.)
9. After the connection is completed, perform “5-4. Checking and Adjustment After Installation”.



## 5-2-4. Installing to V5/V8 (CINEMECCANICA)

### Required Parts

Adapter (A) ; 1 (Supplied with DFP-R3000)  
Hexagon cap screw (3/8-16) ; 4 (Supplied with DFP-R3000)  
Wave washer ; 4 (Supplied with DFP-R3000)  
Screw (PSW4 × 12) ; 4 (Supplied with DFP-R3000)

Adapter (D) ; 1 (Sony part No. 2-200-394-01)  
Hexagon cap screw (3/8-16) ; 3 (Sony part No. 3-185-981-01)  
For attaching adapter (D)

### Procedure

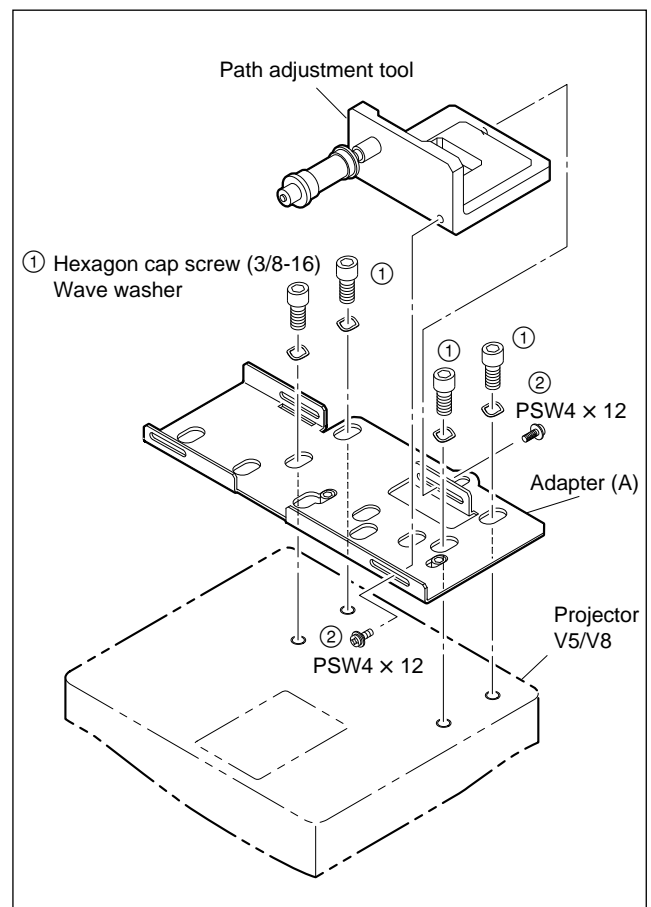
#### Step 1. Installing the Adapter (A) to the Projector

1. Remove REEL ARM or platter guide roller of supply reel side of the projector.
2. Attach the adapter (A) tentatively to the adapter (C) using the four hexagon cap screws (3/8-16) ① and washers.

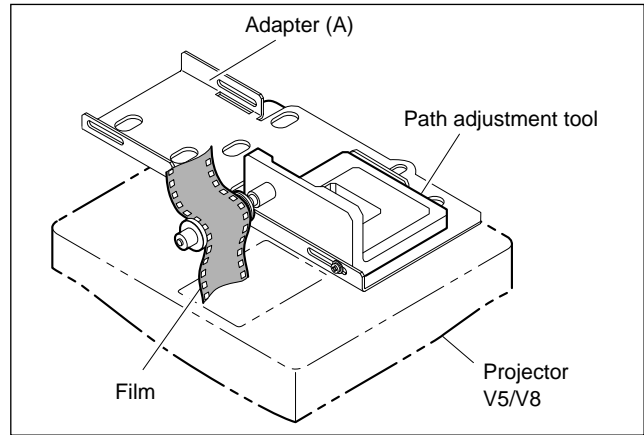
#### Note

Fixing hole of adapter (A) varies depending on the projector to be used. (See the figure below.)

3. Attach the path adjustment tool tentatively to the adapter (A) with the screws (PSW4 × 12) ② as shown in the figure.



4. Put a film on the path adjustment tool (roller) from the projector, and adjust the attaching position of the path adjustment tool so that the film is smoothly fed onto the projector.
5. After the adjustment has been completed, tighten the two screws (PSW4 × 12) ②.
6. Put a film on the path adjustment tool (roller) from the projector, and adjust the attaching position of the adapter (A) so that the film is smoothly fed onto the projector.  
Especially adjust so that the tension on both edges of the film is even.
7. After the adjustment has been completed, tighten the four hexagon cap screws (3/8-16) ①.
8. Remove the film from the path adjustment tool.
9. Remove the path adjustment tool from the adapter (A).



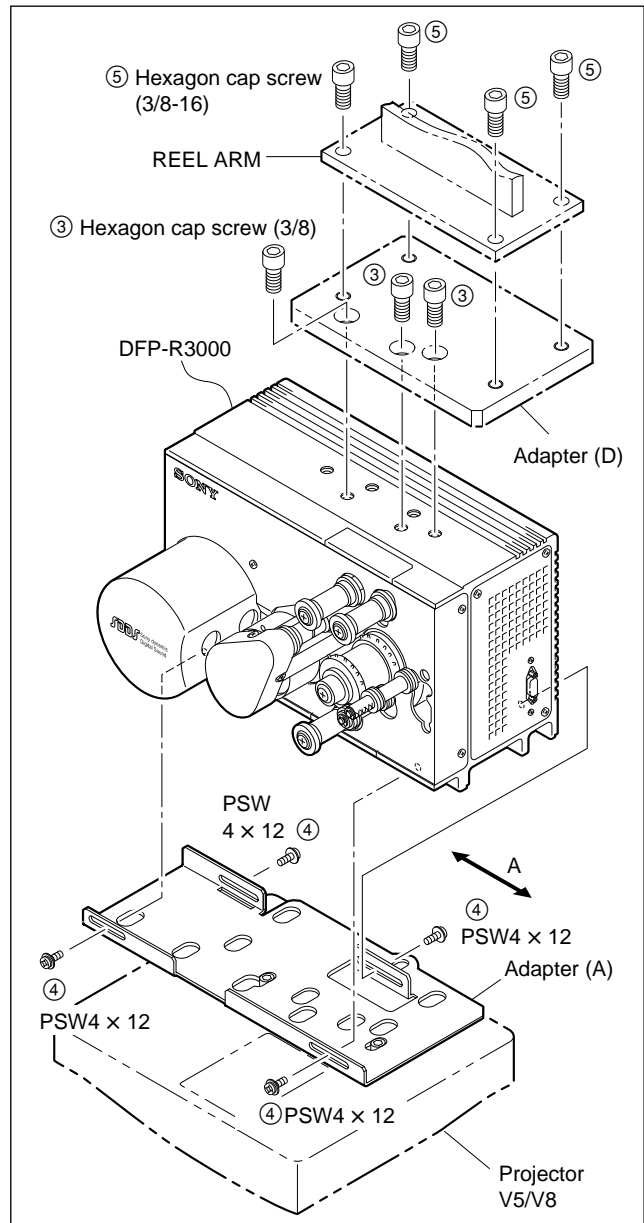
### Step 2. Installing the DFP-R3000 to the Projector

1. Attach the adapter (D) to the DFP-R3000 with three hexagon cap screws (3/8-16) ③.
2. Install the DFP-R3000 tentatively in the adapter (A) with four screws (PSW4 × 12) ④.
3. Put the film on the projector from the DFP-R3000 and adjust the position (arrow direction A) of DFP-R3000 so that the film is smoothly fed onto the projector.
4. After the adjustment has been completed, tighten the four screws (PSW4 × 12) ④.
5. Reattach the REEL ARM of the projector tentatively to the DFP-R3000 with four hexagon cap screws (3/8-16) ⑤.

#### Note

Fixing hole position of the DFP-R3000 varies depending on the REEL ARM to be used.

6. Set the film to the DFP-R3000 from the REEL ARM, and adjust the installation position of the REEL ARM so that the film runs smoothly and the tension on both edges of the film is even.
7. After the adjustment has been completed, tighten the four hexagon cap screws (3/8-16) ⑤.
8. Connect the DFP-R3000 to the DFP-D3000. (Refer to “5-3. Connection to the DFP-D3000”.)
9. After the connection is completed, perform “5-4. Checking and Adjustment After Installation”.







## 5-4. Checking and Adjustment After Installation

The following describes checks and adjustments required after installing the DFP-R3000 to projectors.

Perform the checks and adjustments with the DFP-R3000 connected to the DFP-D3000.

### Checking and Adjustment Items

5-4-1. Film Running Checking



5-4-2. Error Rate Checking



5-4-3. Lip Sync Adjustment

## 5-4-1. Film Running Checking

### Required Tools

SDDS signal recorded on 35 mm film

### Procedure

- (1) Load a film into the DFP-R3000 and projector, and then run the film and perform the following checking. For details about loading film, refer to DFP-D3000/R3000 Operation Manual.

### Checking

- Check that there is no gap between the upper/lower flanges of the roller guide S1 and edge of the film of the DFP-R3000.

If the movements of the roller guide S2 are too fast, adjust the position or tension of the supply side reel of the projector to minimize the changes in the tension of the roller guide S2.

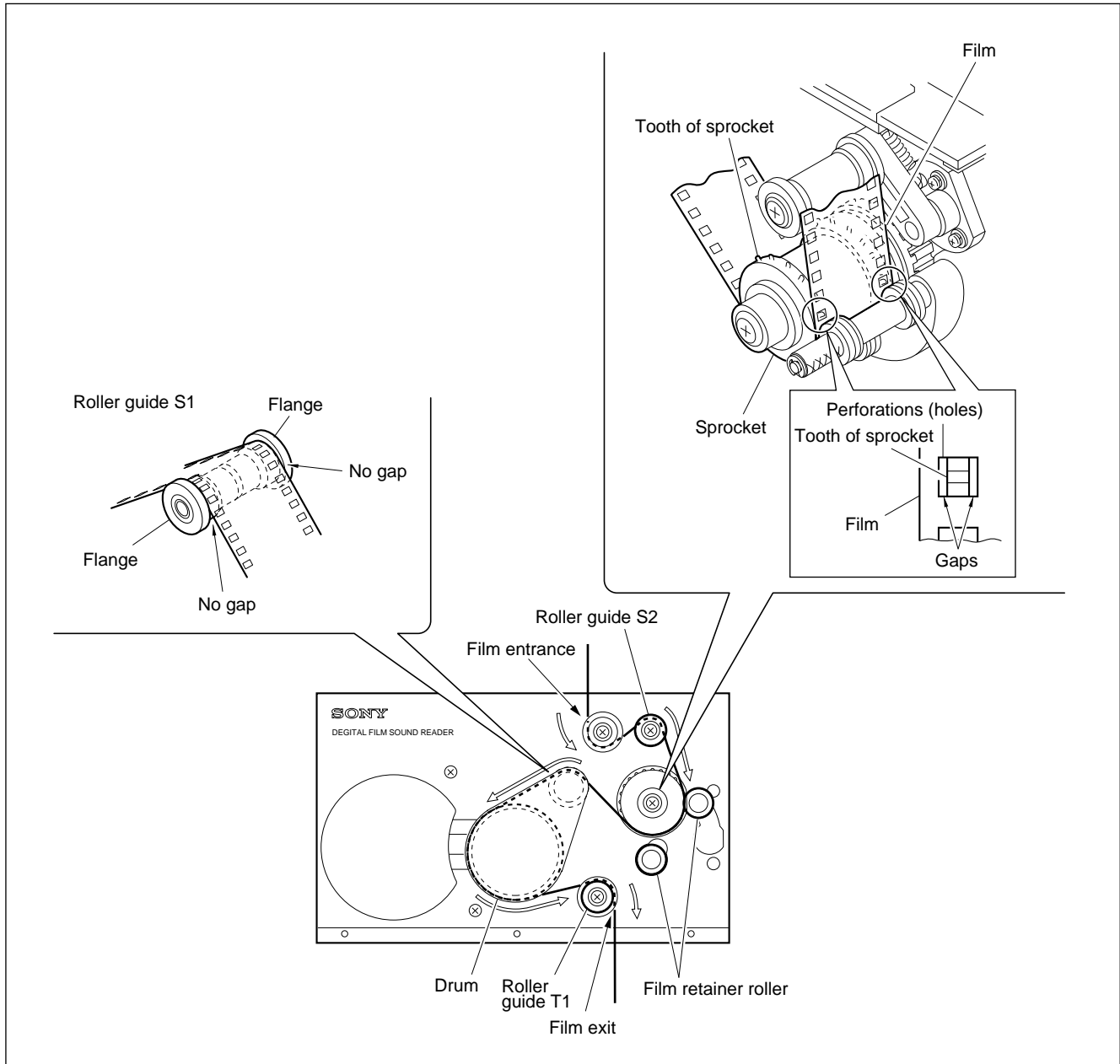
After adjusting, check that there is no gap in the above roller guide S1 again.

- (2) Stop the running of the film, and perform the following check.

### Checking

- Check that the tension at both edges of the film is even at the entrance of the film transport of DFP-R3000.
- Check that the tension at both edges of the film is even at the film exit of the film transport DFP-R3000.
- Check that the sprocket teeth are not touching the left and right sides of the film perforation (hole).

- (3) Load new film containing SDDS data, run it, and check that there are no severe scratches along the longitudinal direction on the S and P tracks of the taken up film.



## 5-4-2. Error Rate Checking

Check the error rate using the film for checking error rate.

### Required Equipment and Tools

Personal computer ; PC/AT compatible

(Operating system ; Microsoft Windows95)

Film for error rate checking

Installation reels (A) (part No. 9-936-836-01)

Installation reels (SR) (part No. 9-936-837-01)

SDDS Setup software

RS-232C Null modem cable

### Procedure

#### Step 1. Preparation

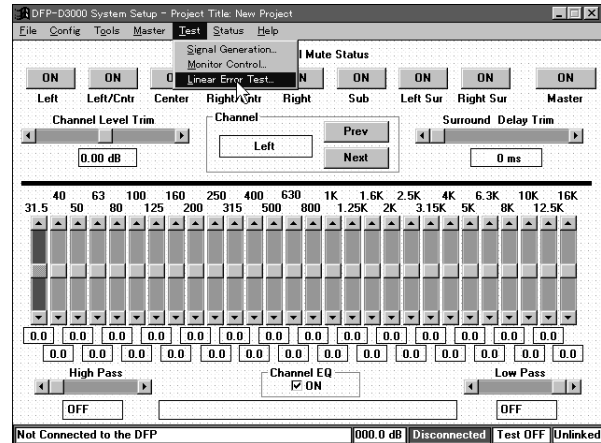
- (1) Connect the RS-232C connector of the DFP-D3000 and a serial port of PC (personal computer) using RS-232C Null modem cable.
- (2) Load the installation reels (A) or (SR) into the DFP-R3000 and projector.  
For details about loading film, refer to DFP-D3000/R3000 OPERATION MANUAL.

#### Step 2. Checking the Error Rate

- (1) Start up Windows95 in PC.
- (2) Insert SDDS Setup software disk into floppy disk drive on PC.
- (3) Open "3.5 inch FD" from "My Computer" of Windows95 and start up "Dfp.exe" of SDDS Setup software disk.
- (4) Run the installation reels.

- (5) Select the "Liner Error Test" command located under the "Test" menu of "DFP-D3000 System Setup" screen.

DFP-D3000 System Setup screen

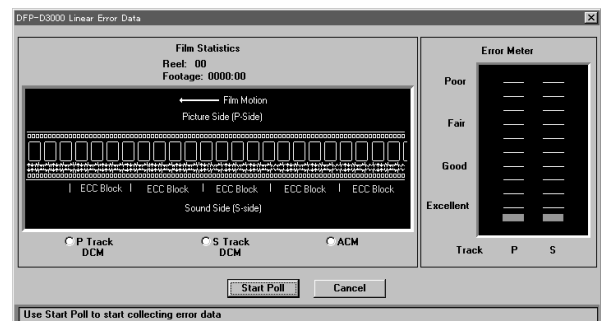


- (6) Select the error rate measurement track (P Track, S Track or ACM) on "DFP-D3000 Linear Error Data" dialog box.
- (7) Click Start Poll button, and measure the error rate when the film is running. (Run the film about five minutes.)

Check that only the "Excellent" (Green) and "Good" (Yellow) indicators of the Error Meter display of the "DFP-D3000 Linear Error Data" dialog box light up.

If the "Fair" and "Poor" indicators also light up, adjust the installing position of DEP-R3000 again to meet the error rate.

DFP-D3000 Linear Error Data screen



### 5-4-3. Lip Sync Adjustment

Adjust lip sync so that the SDDS digital sound of the film is synchronized with the analog sound.

Perform the COARSE DELAY for adjusting lip sync roughly (perform this adjust by frames (1 second = 24 frames)) and LIP SYNC DELAY (adjustment by 1 ms) for finely adjusting lip sync.

#### Required Equipment and Tools

Personal computer : IBM PC/AT compatible  
(Operating system ; Microsoft Windows95)

SDDS Setup software

Test film (SDDS SYNCHRONAIZATION) :  
Sony part No. 1-759-882-11

#### Procedure

- Press the PRESET button of the DFP-D3000 (at factory setting, button “8” is pressed), and select the preset SDDS play mode (LCD panel display : SDDS).
- Select “5” (LCD panel display : Lt + Rt/ SOURCE\_Cch) using the MONITOR SELECT switch of the DFP-D3000.

The output of the HEADPHONES is set as follows.

HEADPHONES Lch :

Signal output from the analog sound head of the projector  
(Input signal of DFP-D3000 OPTICAL connector)

HEADPHONES Rch :

Center channel (C ch) output signal of SDDS digital play signal

- Load the test film to the projector and the DFP-R3000, and run the film.

For details on loading the film, refer to the DFP-D3000/R3000 OPERATION MANUAL.

- Adjustment

#### • Adjustment Using DFP-D3000 LCD Panel

To adjust, open the “LIPSYNC” sub menu from the “CONFIG” menu of the LCD panel menu.

#### Note

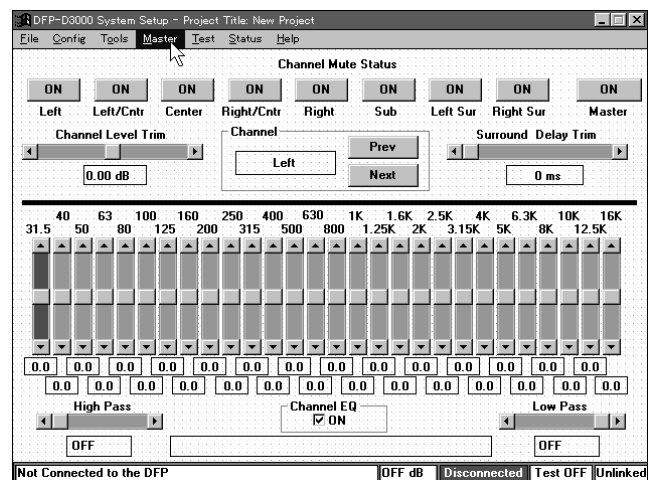
- To open the LIPSYNC sub menu, a password is required.  
(Password at factory setting : SDDS)
- For details of setting at the LCD panel menu, refer to the DFP-D3000/R3000 OPERATION MANUAL.

- At the “COARSE” item of the LIPSYNC sub menu, roughly adjust the delay amount (about 2 or 3 seconds) of the physical position of the DFP-R3000 installed to the projector in frames.
- While listening to the Lch and Rch signals of the HEADPHONES, set the “COARSE” item and “FINE” (LIP SYNC DELAY adjustment, adjust by 1 ms) item on the LIPSYNC sub menu, and adjust so that the Lch and Rch signals are synchronized.

#### • Adjustment by SDDS Setup Software

- Connect the RS-232C connector of DFP-D3000 and a serial port of personal computer (PC) using RS-232C Null modem cable.
- Start up Windows95 in PC.
- Insert SDDS System software disk into the floppy disk drive on PC, and start up “Dfp.exe” of SDDS Setup software disk on Windows95.
- Select the “Master Settings” command located under the “Master” menu of “DFP-D3000 System Setup” screen.

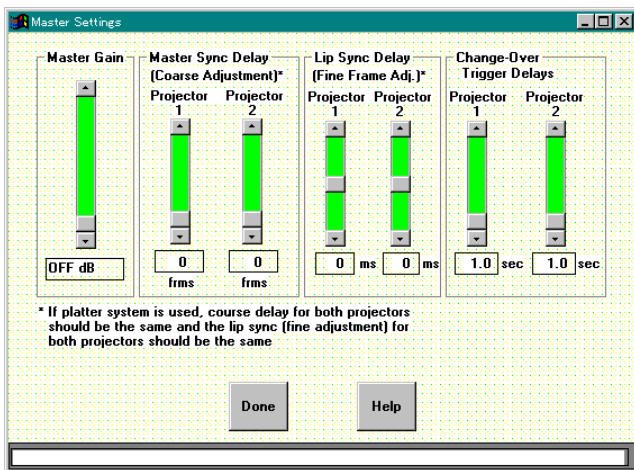
DFP-D3000 System Setup screen



- 5) At the Master Sync Delay (Coarse Adjustment) item at the Master Settings screen, roughly adjust the delay amount (about 2 or 3 seconds) of the physical position of the DFP-R3000 installed to the projector in frames.
- 6) While listening to the Lch and Rch signals of the HEADPHONES, set the Lip Sync Delay (Fine Frame Adj.) (by 1 ms) and Master Sync Delay (Coarse Adjustment), and adjust so that the Lch and Rch signals are synchronized.

For details on setting using the SDDS setup software, refer to the Help menu of the SDDS setup program (DFP-D3000 System Setup screen).

Master Settings screen



## 5-4-4. Setting Up

After connecting the system, set the required following parameters for SDDS system setup.

Set at the LCD panel menu of the DFP-D3000 or using the SDDS setup software.

For details on setting at the LCD panel menu, refer to the DFP-D3000/R3000 OPERATION MANUAL.

For details on setting using the SDDS setup software, refer to the setup software on-line manual.

### Setting Parameters

- Audio
  - Output level offset of each preset.
  - H.P.F. (High pass filter)
  - L.P.F. (Low pass filter)
  - Graphic EQ. (Graphic equalizer)
  - SW channel EQ. (Sub woofer channel equalizer)
  - Surround channel delay
  - Channel level control
  - Slit loss EQ. (Slit loss equalizer).
  - OPTICAL INPUT gain
  - NONSYNC INPUT level
  - AUX INPUT gain
  - MIC INPUT gain
  - Reference output level
- System
  - Coarse delay (Refer to “5-4-3. Lip Sync Adjustment”)
  - Lip sync delay (Refer to “5-4-3. Lip Sync Adjustment”)
  - Password setting
- Preset menu
  - Noise reduction
  - SW ch L.P.F. (Sub woofer channel low pass filter)
  - SP matrix mode (Speaker matrix mode)



