

SONY®

VIDEO DELAY DISTRIBUTION BOARD

BKPF-L723

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、修理などを行うと感電や火災、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。

設置や保守、点検、修理などを行う前に、本体 (PFV-L1/L10) に付属のインストラクションマニュアルおよびオペレーションマニュアルの「安全のために」を必ずお読みください。

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 angegebenen 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.

INSTALLATION MANUAL

1st Edition (Revised 1)

Serial No. 10001 and Higher

Purpose of this manual

This manual is installation manual of Delayed Video Distribution Board BKPF-L723.

This manual is intended for use by trained system and service engineers, and describes information regarding installation.

Related manual

Besides this installation manual, the following manual is available for the BKPF-L723.

- Maintenance Manual (available on request)
This manual describes the information that premise the parts level service (adjustment, parts list, diagrams, etc.). If this manual is required, please contact your local Sony Sales Office/Service Center.

1. Installation

The BKPF-L723 is composed of the following items.

- Main board (VDA-52 board)
- Connector panel (CN-1872 board)
- Slot label
- Operation guide
- Installation manual

Before attaching BKPF-L723 to a interface unit

Set the setting switches (S2, S3, and COR1 on the main board). (Refer to next page for switches.)

Attaching BKPF-L723

The BKPF-L723 is designed to be installed and operated in the interface unit PFV-L1 or PFV-L10.

In accordance with Section 1-6 in the installation manual of the PFV-L1/L10, be sure to attaching the main board and connector panel of the BKPF-L723.

Adjusting BKPF-L723

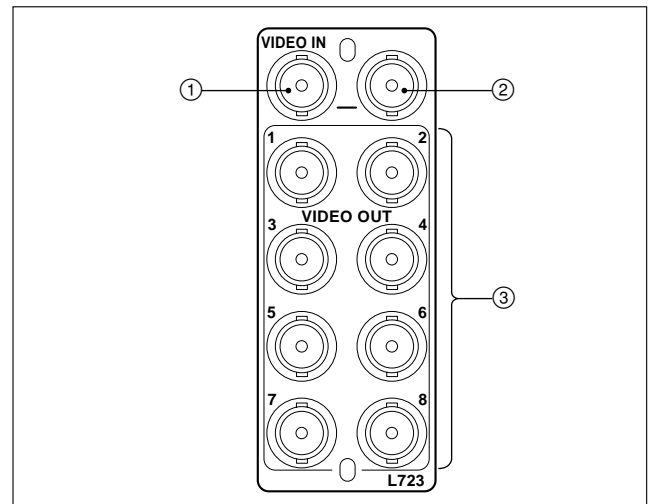
If necessary, perform the video characteristics adjustment on page 3 after attaching the BKPF-L723.

Matching connector/cable

When external cables are connected to the connectors on the connector panel, the hardware listed below (or equivalents) must be used.

- Matching connector: BNC 75 Ω / 1-569-370-12
Recommendable cable: BELDEN 8281 75 Ω coaxial cable
- Cable with loss of less than 25 dB/km (f = 10 MHz)

2. Name and Function of Connector



① VIDEO IN (Analog video signal input) connector

Accept an analog composite video signal.

② Loop-through output connector

Outputs the signal supplied to the VIDEO IN connector as is.

Note

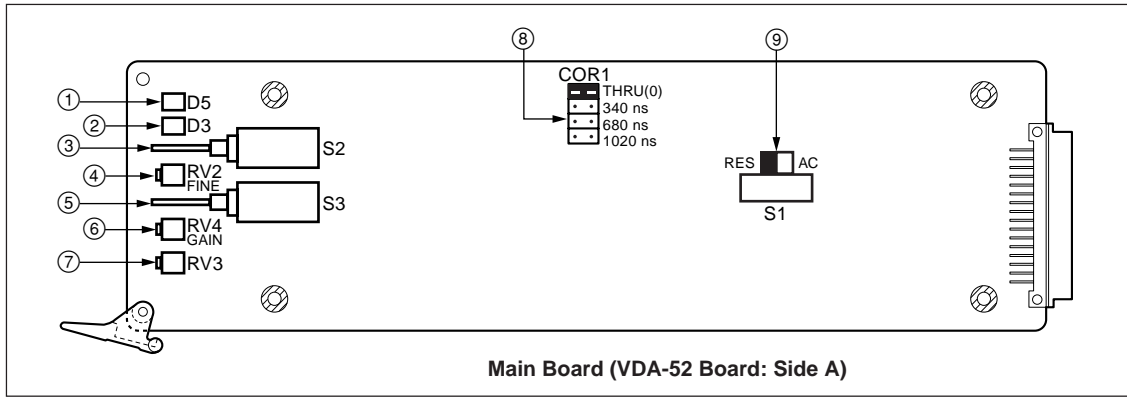
When the connector is not used, insert a 75 Ω terminator.

③ VIDEO OUT (Analog video signal output) connectors

Output the signal supplied to the VIDEO IN connector after it is distributed to eight outputs.

The eight connectors output the same signal.

3. Name and Function of Switch/Indicator/VR

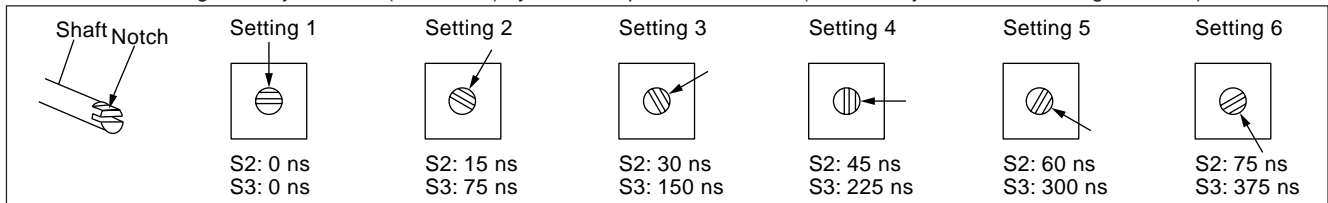


Switches, shorting plug, and VRs (Factory default settings are indicated by a ■ mark)

No.	Ref. No.	Name	Function
⑨	S1	DC RESTORE	<p>■ RES: Under normal operation (When a SYNC TIP signal is clamped to the signal input to the VIDEO IN connector)</p> <p>AC: AC coupling (When a signal containing no sync signal is input to the VIDEO IN connector)</p>
<p>Sets the delay time of an output signal for the input signal of a VIDEO IN connector by S2, S3, and COR1. The delay can be fine-adjusted in the range (Ⓐ) of 0 to 15 nsec by RV2. Total delay = (Sum of S2, S3, and COR1) + Ⓐ + (System delay: approx.40) [ns]</p>			
③	S2	DELAY (× 15)	<p>■ 1: 0 ns 2: 15 ns 3: 30 ns 4: 45 ns 5: 60 ns 6: 75 ns</p>
⑤	S3	DELAY (× 75)	<p>■ 1: 0 ns 2: 75 ns 3: 150 ns 4: 225 ns 5: 300 ns 6: 375 ns</p>
⑧	COR1	DELAY (× 340)	<p>■ THRU (0 ns) 340 ns 680 ns 1020 ns</p>
④	RV2	DELAY (FINE)	<p>■ Fully counterclockwise (0 ns) to Fully clockwise (15 ns)</p>
⑦	RV3	LEN	<p>Adjusts the frequency characteristics of the signal output from the VIDEO OUT connector. (Corrects the deterioration in the frequency characteristics of the video signal input to the VIDEO IN connector.)</p> <p>■ Fully counterclockwise (0 m)</p>
⑥	RV4	GAIN	<p>Adjusts the level of the signal output from the VIDEO OUT connector in the range of approx. ±2 dB. (Corrects the deterioration in the level of the video signal input to the VIDEO IN connector.)</p> <p>Note At the factory-out, RV4 was adjusted to 0 dB.</p>

Note

Determine the setting of rotary switches (S2 and S3) by the notch position of a shaft (indicated by the arrow in the figure below).



Indicators

No.	Ref. No.	Name	Color	Function
②	D3	VIDEO IN	Green/red	<p>Green: When an analog composite video signal is input to VIDEO IN connector</p> <p>Red: When no analog composite video signal is normally input to VIDEO IN connector (including the case where no signal is input)</p>
①	D5	-5 V WARNING	Green/red	<p>Green: A power supply of -5 V is normal</p> <p>Red: A power supply of -5 V is abnormal</p>

4. Video Characteristics Adjustment

When a long cable (more than 10 m) is connected to VIDEO IN connector, adjust video characteristics after attaching the BKPF-L723 to the interface unit PFV-L1 or PFV-L10.

Note

Check that S1 (DC RESTORE switch) of the main board is position RES.

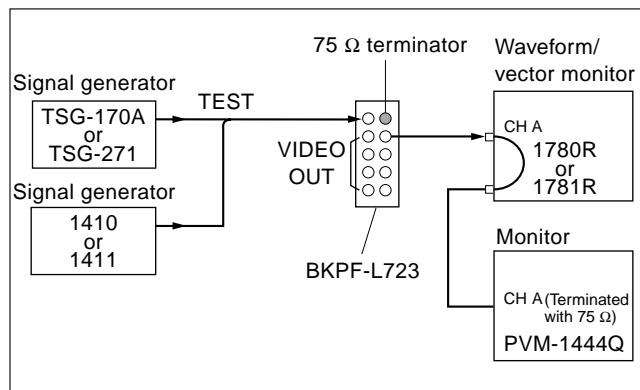
Required Equipment and Tools

Use the equipment listed below or the equivalent.

Item	Model
Signal generator*	Tektronix 1410 or 1411
Signal generator*	Tektronix TSG-170A or TSG-271
Waveform/vector monitor*	Tektronix 1780R or 1781R
Composite video monitor	Sony PVM-1444Q
Adjustment screwdriver (Insulation type)	
Terminator (BNC type, 75 Ω)	

*: Use the equipment after calibration has been completed.

Connection



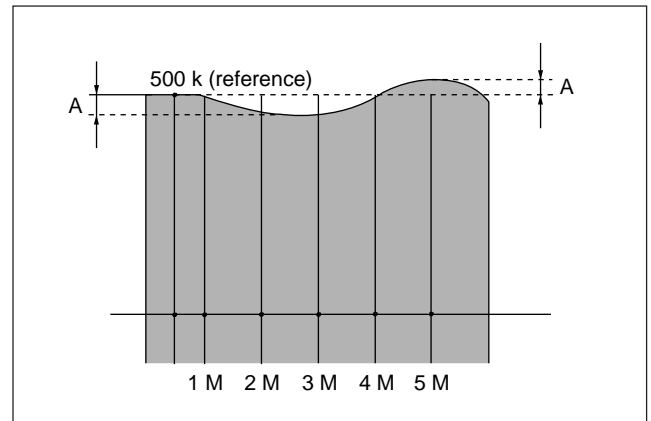
Notes

- To the loop-through output connector, be sure to insert a 75 Ω terminator.
- Use a cable (or cable with equal length) laid during installation between the signal generator and the VIDEO IN connector of BKPF-L723.
- Obtain the output signal of signal generator 1410/1411 from pin 6 of the MODULE OUTPUTS connector on the connector panel.

Procedure

(Frequency response compensation)

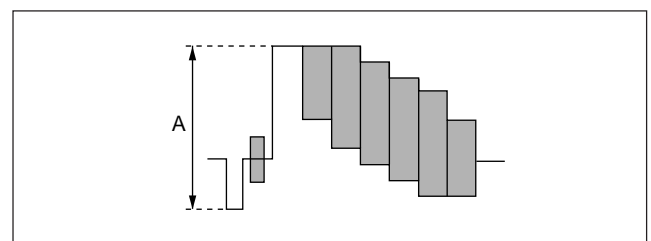
- Supply 6 MHz sweep signal from the signal generator (1410/1411) to VIDEO IN connector.
- Connect the waveform monitor to the VIDEO OUT 1 connector.
- Adjust an amplitude of 1 MHz to 5 MHz with an amplitude level of 500 kHz set as reference (100 %).
Adj. point: ●RV4/VDA-52 (GAIN VR)
Spec. $A = 0 \pm 3.5 \%$ ($0 \pm 0.3 \text{ dB}$)



- As in step 3, confirm the amplitude of output signals in VIDEO OUT 2 through 8 connectors, respectively.

(Signal level compensation)

- Supply 75 % color bars signal from the signal generator (TSG-170A/270) to the VIDEO IN connector.
- Connect the waveform monitor to the VIDEO OUT 1 connector.
- Adjust the level A on the waveform monitor.
Adj. point: ●RV3/VDA-52 (LEVEL VR)
Spec. $A = 1000 \pm 14 \text{ mV p-p}$



- As in step 7, confirm the amplitude of output signals in VIDEO OUT 2 through 8 connectors, respectively.

5. Specifications

General

Dimensions (w/h)	Main board: 267 × 77 mm Connector panel: 33 × 85 mm
Mass	Main board: approx. 170 g Connector panel: approx. 120 g
Power requirements	+5 V dc: 350 mA (supplied from the PFV-L1/L10)
Power consumption	approx. 1.8 W

Input/outputs

Video input	VIDEO IN connector (BNC type) (1)
Video outputs	Loop-through connector (BNC type) (1) VIDEO OUT connectors (BNC type) (8) 1 V p-p, 75 Ω

Video characteristics

Frequency response	DC to 5 MHz: ±0.5 dB 5 MHz to 8 MHz: +0.5/−2.5 dB
Gain adjustment range	±2 dB
Input/output return loss	40 dB or more (up to 8 MHz)
K factor	0.5 % or less
Signal-to-noise ratio	67 dB or more (10 kHz to 6 MHz)
DG (Differential gain)	0.5 % or less
DP (Differential phase)	0.5 ° or less
System delay	approx. 40 ns
Delay range	Coarse adjustable range: 0 to approx. +1470 ns Fine adjustable range: 0 to +15 ns
Cable compensation	300 m max. (When using a recommendation cable)

Design and specifications are subject to change without notice.

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