

# SONY®

## ANALOG VIDEO DISTRIBUTOR

# BKPF-L703

### 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 Analog Video Distributor BKPF-L703.

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 manuals are available for the BKPF-L703.

- 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-L703 is composed of the following items.

- Main board (VDA-47 board)
- Connector panel (CN-1567B board : S/N 10001 to 11020/CN-1872A board : S/N 12001 and higher)
- Slot label
- Installation guide
- Installation manual

### Before attaching BKPF-L703 to an interface unit

Set the setting switches (S1 on the main board). (Refer to next page for switches.)

### Attaching BKPF-L703

The BKPF-L703 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 attach the main board and connector panel of the BKPF-L703.

### Adjusting BKPF-L703

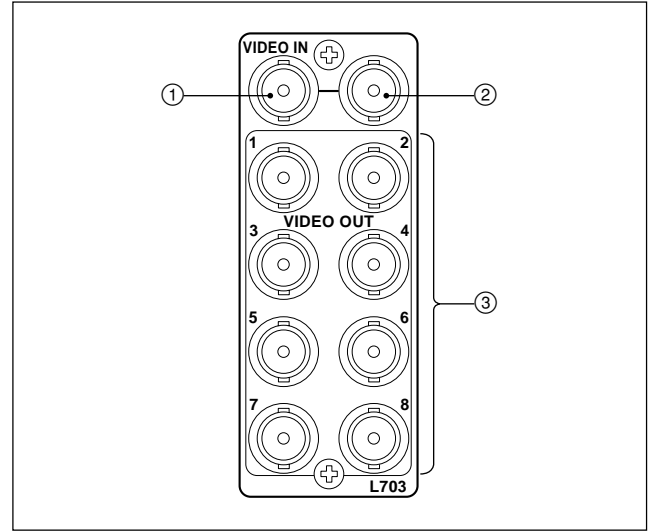
If necessary, perform the video characteristics adjustment on page 3 after attaching the BKPF-L703.

### 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  $\Omega$  / 1-569-370-12  
Recommendable cable : BELDEN 8281 75  $\Omega$  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 : BNC type

Accept an analog composite video signal.

### ② Loop-through output connector : BNC type

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

#### Note

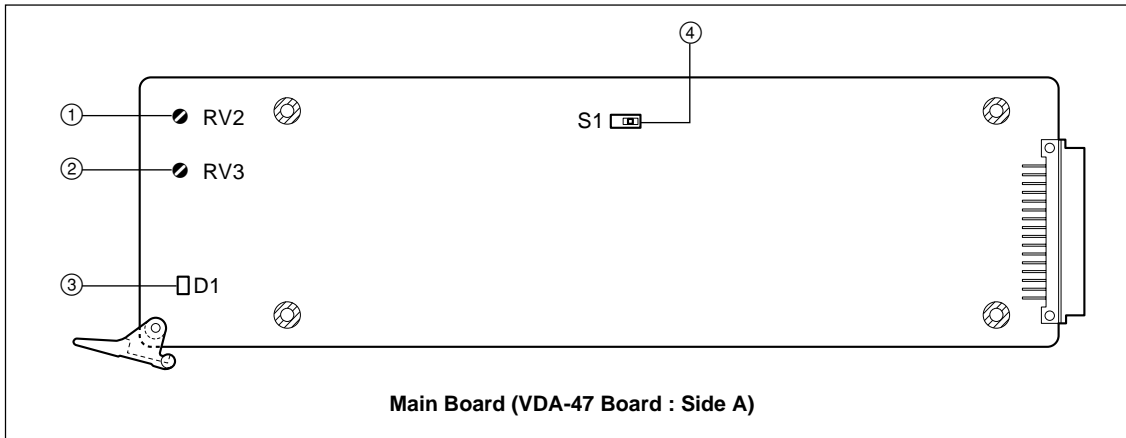
When the connector is not used, insert a 75  $\Omega$  terminator.

### ③ VIDEO OUT (Analog video signal output) connectors : BNC type

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



#### Switches and VRs (Factory default settings are indicated by a ■ mark)

No.	Ref. No.	Name	Function
①	RV2	Freq.CHR.Adj.	Corrects the deterioration in the frequency characteristics of the video signal input to the VIDEO IN connector.
②	RV3	Level Adj.	Corrects the deterioration in the level of the video signal input to the VIDEO IN connector.
*④	S1	CLAMP switch	<b>■ ON :</b> Under normal operation <b>OFF :</b> When a signal containing no sync signal is input to the VIDEO IN connector

\* : When the VTR output or KEY signal without sync is input, be sure to set the CLAMP switch S1 to OFF.  
 The VIDEO IN indicator may not light while inputting such a signal due to inability to detect sync.

#### Indicator

No.	Ref. No.	Name	Color	Function
③	D1	VIDEO IN	Green/red	Green : When an analog composite video signal is input to VIDEO IN connector Red : When no analog composite video signal is normally input to VIDEO IN connector (including the case where no signal is input)

## 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-L703 to the interface unit PFV-L1 or PFV-L10.

### Note

Check that S1 (CLAMP switch) of the main board is position ON.

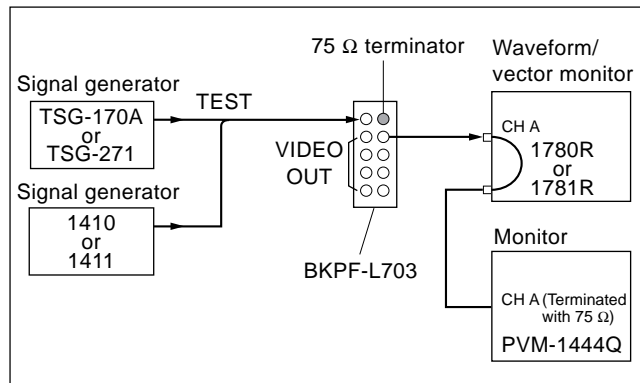
### Required Equipment and Tools

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 $\Omega$ )	

\* : Use the equipment after calibration has been completed.

### Connection



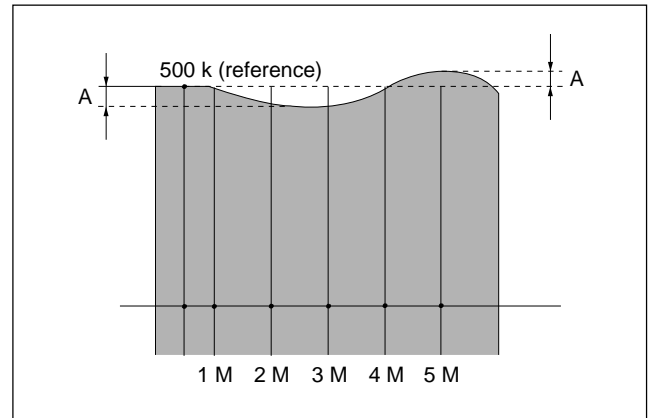
### Notes

- To the loop-through output connector, be sure to insert a 75  $\Omega$  terminator.
- Use a cable (or cable with equal length) laid during installation between the signal generator and the VIDEO IN connector of BKPF-L703.
- 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)

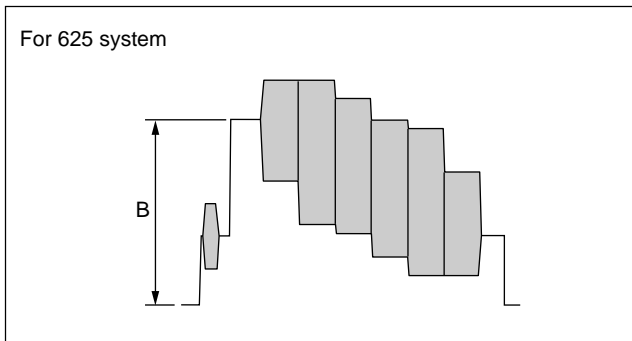
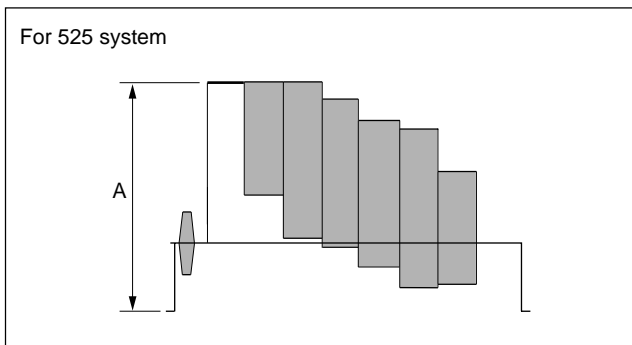
- Supply 6 MHz sweep signal from the signal generator (1410/1411) to VIDEO IN connector.
- Connect the waveform monitor to the VIDEO OUT 1 connector.
- Adjust an amplitude of 1 MHz to 5 MHz with an amplitude level of 500 kHz set as reference (100 %).  
Adj. point :  $\odot$ RV2 (A-1)/VDA-47  
Spec.  $A = 0 \pm 3.5 \% (0 \pm 0.3 \text{ dB})$



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

(Signal level compensation)

5. Supply a signal from the signal generator (TSG-170A/270) to the VIDEO IN connector.  
For 525 system : 75% color bars signal  
For 625 system : 100% color bars signal
6. Connect the waveform monitor to the VIDEO OUT 1 connector.
7. Adjust the level A on the waveform monitor.  
Adj. point :  $\odot$ RV3 (A-2)/VDA-47  
Spec. For 525 system :  $A = 140 \pm 2$  IRE  
( $1000 \pm 14$  mV p-p)  
For 625 system :  $B = 1000 \pm 14$  mV p-p



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

## 5. Specifications

### General

Operating temperature	5 °C to 40 °C (41 °F to 104 °F)
Storage temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Operating humidity	10% to 90% (no condensation)
Dimensions (w/h)	Board : 267 × 77 mm (w/h) (10 <sup>5</sup> / <sub>8</sub> × 3 <sup>1</sup> / <sub>8</sub> inches) Connector panel : 33 × 85 mm (1 <sup>5</sup> / <sub>16</sub> × 3 <sup>3</sup> / <sub>8</sub> inches)
Mass	Board : approx. 110 g (4 oz) Connector panel : approx. 110 g (4 oz)
Power requirements	+5 V DC : 250 mA (supplied from the PFV-L1/L10)
Power consumption	1250 mW

### Input/outputs

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

### Video characteristics

Frequency response	5 MHz (±0.3 dB) 30 MHz (+0/-3 dB)
Input return loss	40 dB or more (8 MHz or less)
K factor	1 % or less
DG	0.5 % or less
DP	0.5 ° or less
Signal-to-noise ratio	70 dB or more (using FLAT FIELD)
Cable compensation	continuously adjustable up to 300 m (when using BELDEN 8281 75 Ω coaxial cable)



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