

SONY®

ANALOG VIDEO DISTRIBUTION BOARD

BKPF-L703A

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-L10/L02)に付属のインストレー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

Serial No. 10001 and Higher

Purpose of this manual

This manual is an installation manual of Analog Video Distribution Board BKPF-L703A.

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

Related manuals

Besides this installation manual, the following manuals are available for the BKPF-L703A.

- 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.

- “Semiconductor Pin Assignments” CD-ROM (available on request)

This “Semiconductor Pin Assignments” CD-ROM allows you to search for semiconductors used in Communication System Solutions Network Company equipment.

Part number: 9-968-546-XX

1. Installation

The BKPF-L703A is composed of the following items.

- Main board (VDA-56 board)
- Connector panel (CN-1982 board)
- Slot label
- Installation guide
- Installation manual

Before attaching BKPF-L703A to an interface unit

Set the switches (S101 and COR101) on the main board of this unit. (Refer to next page for switch.)

Attaching BKPF-L703A

The BKPF-L703A is designed to be installed and operated in the interface unit PFV-L10 or PFV-L02.

In accordance with the installation manual of the PFV-L10 or PFV-L02, be sure to attach the main board and connector panel of the BKPF-L703A.

Matching connector/cable

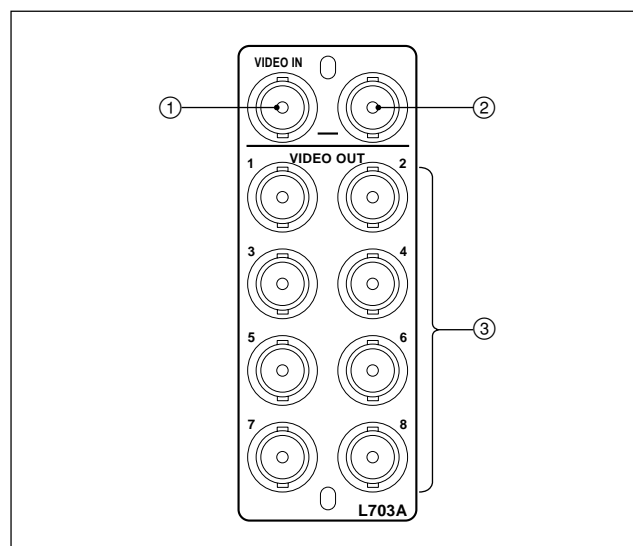
When external cables are connected to the connectors on the connector panel, the hardware listed below (or equivalents) must be used.

Matching connector: BNC 75 Ω / 1-569-370-12

Recommendable cable: Belden 8281 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

Accepts an analog composite video signal.

To input a differential signal, set COR101 on the VDA-56 board to DIFFERENTIAL and input a differential signal to the core and shielding sections of a BNC connector.

② Loop-through output connector : BNC type

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

Note

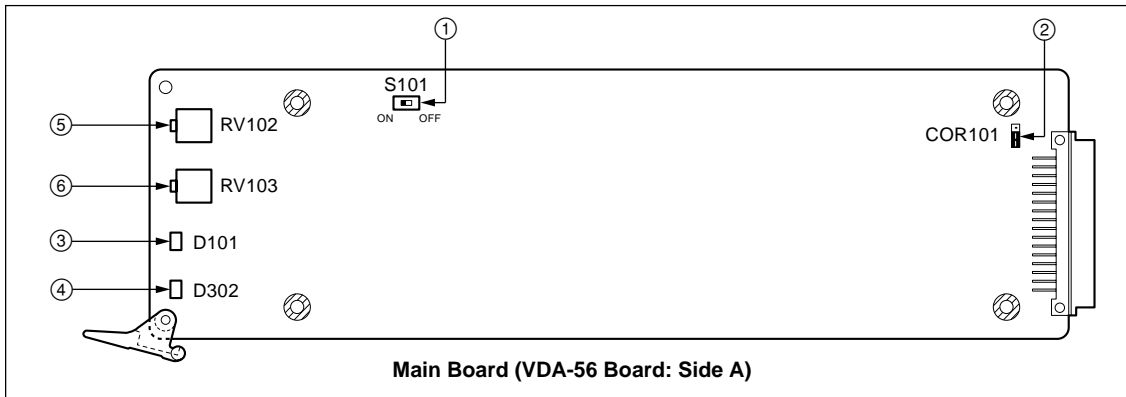
When the connector is not used, insert a 75 Ω terminator.

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

Outputs the signal supplied to the VIDEO IN connector, cable-compensated, and divided to the eight lines.

The eight connectors output the same signal.

3. Name and Function of Switch/Indicator



Switches/Shorting plug (Factory default settings are indicated by a ■ mark)

No.	Ref. No.	Name	Function
①	S101	CLAMP	■ ON: Under normal operation OFF: When a signal containing no sync signal is input to the VIDEO IN connector
②	COR101	SINGLE/DIFFERENTIAL	■ SINGLE: Under normal operation DIFFERENTIAL: When a differential signal is input to the VIDEO IN connector

Indicators

No.	Ref.No.	Name	Function
③	D101	VIDEO IN	Lights in green: When an analog video signal is input to the VIDEO IN connector Lights in red: When a signal is not input to the VIDEO IN connector
④	D302	-5 V	Lights in green: A power supply of -5 V is normal Lights in red: A power supply of -5 V is abnormal

Volumes

No.	Ref.No.	Name	Function
⑤	RV102	EQ	Corrects and adjusts the deterioration in the frequency characteristics of the video signal input to the VIDEO IN connector
⑥	RV103	GAIN	Corrects and adjusts the deterioration in the level of the video signal input to the VIDEO IN connector

4. Video Characteristics Adjustment

When a long cable (more than 10 m) is connected to the VIDEO IN connector, adjust video characteristics after attaching the BKPF-L703A to the interface unit PFV-L10 or PFV-L02.

Note

Check that S101 (CLAMP switch) of the main board is position ON.

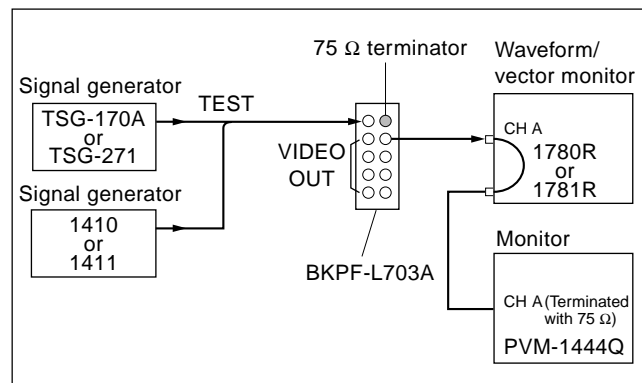
Required Equipment and Tools

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 Ω)	

* : Use the equipment after calibration has been completed.

Connection



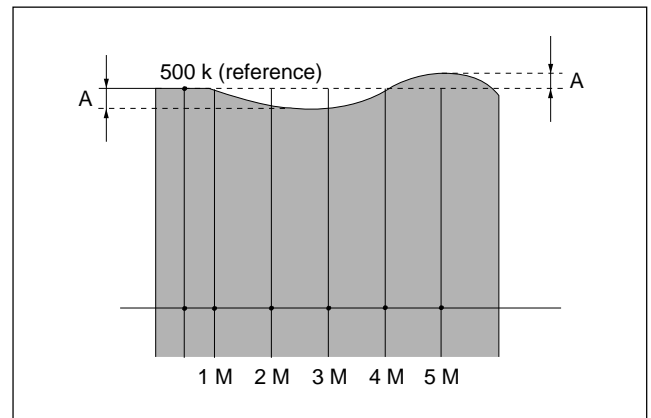
Notes

- 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-L703A.
- 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 the 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 RV102 (A-1)/VDA-56
Spec. $A = 0 \pm 3.5\%$ (0 ± 0.3 dB)



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

(Signal level compensation)

- Supply a signal from the signal generator (TSG-170A/271) to the VIDEO IN connector.

For 525 system : 75% color bars signal

For 625 system : 100% color bars signal

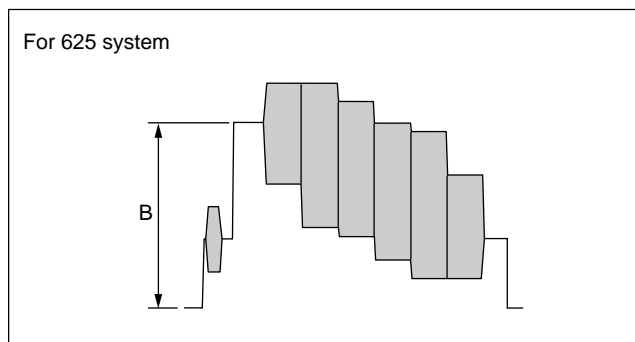
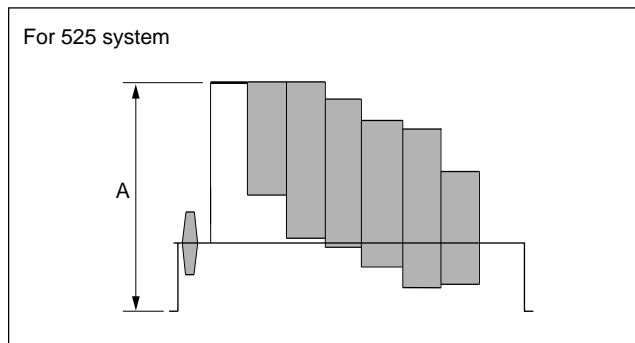
- Connect the waveform monitor to the VIDEO OUT 1 connector.

- Adjust the level A on the waveform monitor.

Adj. point : ●RV103 (A-2)/VDA-56

Spec. For 525 system : $A = 140 \pm 2$ IRE
(1000 ± 14 mV p-p)

For 625 system : $B = 1000 \pm 14$ mV p-p



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

5. Specifications

General

Operating temperature	5 °C to 40 °C
Performance guaranteed temperature	10 °C to 35 °C
Storage temperature	-20 °C to +60 °C
Operating humidity	10% to 90% (Non-condensing)
Dimensions (w/h)	Main board: 267 × 77 mm Connector panel: 33 × 85 mm
Mass	Main board: Approx.110 g Connector panel: Approx.110 g
Power requirements	+5 V dc: 300 mA (supplied from the PFV-L10/PFV-L02)
Power consumption	Approx. 1.5 W

Input/Output connectors

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	± 0.3 dB (5 MHz)
Input/output return loss	40 dB or more (6 MHz or less)
K factor	1% or less
DG (Differential gain)	0.5% or less
DP (Differential phase)	0.5 ° or less
Signal-to-noise ratio	70 dB or more (using FLAT FIELD)
Cable compensation	300 m (When using a recommended cable)
Common-mode rejection ratio (CMRR)	70 dB or more (60 Hz)

Design and specifications are subject to change without notice.

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