

SONY®

UNIVERSAL CONTROL UNIT

BKS-R3219

OPERATION MANUAL
1st Edition

English

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

VORSICHT

Um Feuergefahr und die Gefahr eines elektrischen Schlages zu vermeiden, darf das Gerät weder Regen noch Feuchtigkeit ausgesetzt werden.

Um einen elektrischen Schlag zu vermeiden, darf das Gehäuse nicht geöffnet werden. Überlassen Sie Wartungsarbeiten stets nur qualifiziertem Fachpersonal.

For the customers in the USA

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

WARNING: THIS WARNING IS APPLICABLE FOR USA ONLY.

If used in USA, use the UL LISTED power cord specified below.

DO NOT USE ANY OTHER POWER CORD.

Plug Cap	Parallel blade with ground pin (NEMA 5-15P Configuration)
Cord	Type SJT, three 16 or 18 AWG wires
Length	Less than 2.5 m (8 ft. 3 in.)
Rating	Minimum 10 A, 125 V

Using this unit at a voltage other than 120V may require the use of a different line cord or attachment plug, or both. To reduce the risk of fire or electric shock, refer servicing to qualified service personnel.

For the customers in Europe

This product with the CE marking complies with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European standards:

- EN60950: Product Safety
- EN55103-1: Electromagnetic Interference (Emission)
- EN55103-2: Electromagnetic Susceptibility (Immunity)

This product is intended for use in the following Electromagnetic Environment(s):

E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors) and E4 (controlled EMC environment, ex. TV studio).

Pour les clients européens

Ce produit portant la marque CE est conforme à la fois à la Directive sur la compatibilité électromagnétique (EMC) (89/336/CEE) et à la Directive sur les basses tensions (73/23/CEE) émises par la Commission de la Communauté Européenne.

La conformité à ces directives implique la conformité aux normes européennes suivantes:

- EN60950: Sécurité des produits
- EN55103-1: Interférences électromagnétiques (émission)
- EN55103-2: Sensibilité électromagnétique (immunité)

Ce produit est prévu pour être utilisé dans les environnements électromagnétiques suivants: E1 (résidentiel), E2 (commercial et industrie légère), E3 (urbain extérieur) et E4 (environnement EMC contrôlé ex. studio de télévision).

Für Kunden in Europa

Dieses Produkt besitzt die CE-Kennzeichnung und erfüllt sowohl die EMV-Direktive (89/336/EEC) als auch die Direktive Niederspannung (73/23/EEC) der EG-Kommission. Die Erfüllung dieser Direktiven bedeutet Konformität für die folgenden Europäischen Normen:

- EN60950: Produktsicherheit
- EN55103-1: Elektromagnetische Interferenz (Emission)
- EN55103-2: Elektromagnetische Empfindlichkeit (Immunität)

Dieses Produkt ist für den Einsatz unter folgenden elektromagnetischen Bedingungen ausgelegt:

E1 (Wohnbereich), E2 (kommerzieller und in beschränktem Maße industrieller Bereich), E3 (Stadtbereich im Freien) und E4 (kontrollierter EMV-Bereich, z.B. Fernsehstudio).

WARNING

This unit has no power switch.

When installing the unit, incorporate a readily accessible disconnect device in the fixed wiring, or connect the power cord to socket-outlet which must be provided near the unit and easily accessible.

If a fault should occur during operation of the unit, operate the disconnect device to switch the power supply off, or disconnect the power cord.

WARNING

Dieses Gerät hat keinen Netzschalter.

Beim Einbau des Geräts ist daher im Festkabel ein leicht zugänglicher Unterbrecher einzufügen, oder das Netzkabel muß mit in der Nähe des Geräts befindlichen, leicht zugänglichen Wandsteckdose verbunden werden. Wenn während des Betriebs eine Funktionsstörung auftritt, ist der Unterbrecher zu betätigen bzw. das Netzkabel abzuziehen, damit die Stromversorgung zum Gerät unterbrochen wird.

AVERTISSEMENT

Cet appareil n'a pas d'interrupteur d'alimentation.

Quand vous installez l'appareil, branchez un interrupteur d'alimentation facile d'accès sur le câble fixe ou raccordez le cordon d'alimentation à une prise proche de l'appareil et facile d'accès.

En cas de problème en cours d'utilisation, déconnectez l'appareil par l'interrupteur d'alimentation ou débranchez le cordon d'alimentation.

WARNING

THIS APPARATUS MUST BE EARTHED.

WARNING

DIESES GERÄT MUSS GEERDET WERDEN.

AVERTISSEMENT

CET APPAREIL DOIT ÊTRE RELIÉ À LA TERRE.

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The BKS-R3219 Universal Control Unit switches the signals fed to one of the switchers such as a DVS-V6464M/DVS-128 Video Routing Switcher, a DVS-A3232 Audio Routing Switcher, a DVS-TC3232 Time Code Routing Switcher, etc. (called a source), connected to the S-BUS data link, and supplies the selected signal to the designated output (called a destination). When you wish to monitor the input and output signals of the DVS-V3232M or DVS-V6464M with a BKDS-V3292B Monitor Board installed or of the DVS-128, you may switch the monitor signals using the BKS-R3219. Source, destination, and monitor switching is performed with the select buttons whose functions you define with the control terminal connected to the primary station of the S-BUS data link.

Features

Large select buttons displaying their functions with different colors

The large select buttons on the front panel are designed for easy operation. They light in green or amber, dimly or brightly to show their functions and the currently selected source and destination.

Buttons to select sources and destinations

All select buttons on the front panel can be used as source select buttons or destination select buttons. Your setting on the control terminal defines their functions. The defined function for a button is indicated by the color, green for source and amber for destination.

Displaying a source or destination name on each button

The source and destination name defined with the control terminal can be shown on a key label on a button. You can easily replace the key label so that an updated indication can follow any setting change on the control terminal.

Expanding the number of controllable sources and destinations

You can use multiple units of the BKS-R1617/R3219/R3216 in combination so as to work as one unit to expand the number of sources and destinations to be controlled. One switching system can have up to ten sets of combinations like this, and up to 253 control units can be used in one set. The maximum number of control units that can be used in one switching system is also 253.

Route function to show the expanded sources

If a switcher does not have a cascade function, and you need to expand the number of sources, the route function makes it possible to detect a crosspoint in the expanded switcher, and to have the selected source name displayed in the display window.

Controllable up to eight levels¹⁾

Up to eight-level control is possible when assigned on the control terminal.

Different sources for levels selectable (break-away function)

You can select and display different sources for levels. This is called the break-away function.

Monitor function to watch the selection for the other destination

When a destination you wish to monitor is set as a monitor destination, the same source as the signal for the monitor destination is automatically obtained when the monitor function is set to ON.

Chop function to switch two sources alternately

Two sources are switched alternately in a specific interval automatically.

Several crosspoints switchable with the touch of a button (phantom function or sarvo function)

When multiple crosspoints have been set as a phantom on the control terminal, all the crosspoints defined with a phantom name can be switched by pressing one button.

1) Levels

To handle different kinds of signals simultaneously, it is necessary to use a routing switcher for each type of signal, and these types are called "levels." For example, a

recording to be made on a VTR requires the use of five signal levels: video, audio 1, audio 2, time code and remote-control signals.

Connectable with a single cable

The unit can be connected to the Sony routing switchers using a single 75-ohm coaxial cable, and can control the switchers.

Self-diagnostic function

When the power is turned on, the unit automatically checks communication on the S-BUS data link, and the buttons on the front panel, which light in succession. The results appear in the display window.

Operation on various voltages

The unit can operate on voltage between 100 V and 240 V AC without voltage adaptation.

Example of Setting the Select Button Functions

The select buttons can be used as either source select buttons or destination select buttons. The control terminal or the setup function of this unit allows you to define the function of each button. The settings are made for each button.

For details on making settings on the control terminal, refer to the Installation Manual supplied with the routing switcher.

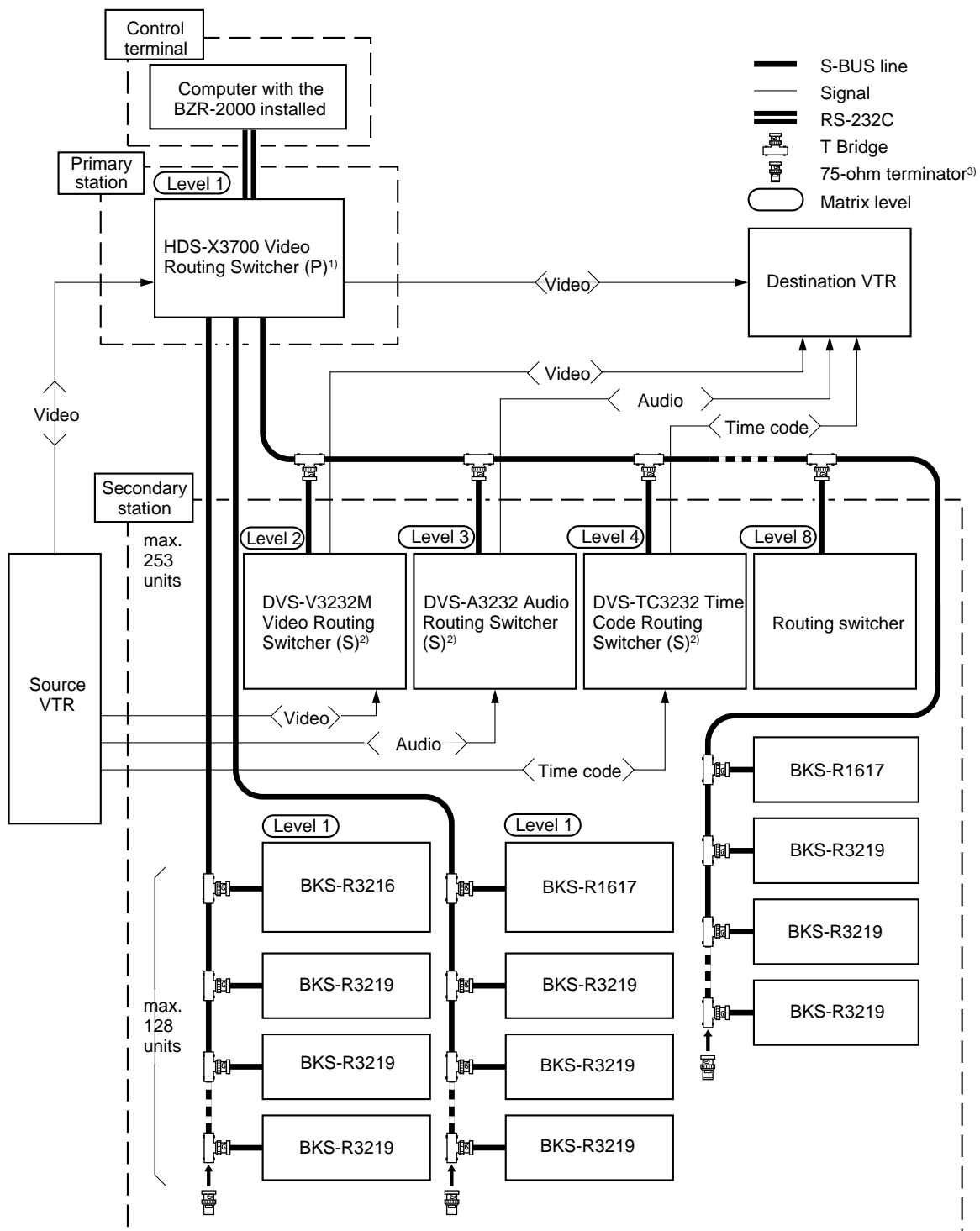
Expanding the number of sources and destinations

You may expand the controllable number of sources and destinations using two or more control units as a block. When you use multiple control units in combination, define one of them as the mother unit, and the others as the daughter units in a block. A switching system can include up to 10 blocks and up to 253 remote control units in total. The controllable number of sources and destinations depends on the number of control units used in a system.

Note

If you control only a single destination, it is not necessary to define a mother unit and daughter units.

System Connection Example



Only one of the REMOTE 1 connectors on a routing switcher used as a secondary station will be active.

1) (P): The P/S select switch on the CPU board of the routing switcher is set to P.

2) (S): The P/S select switch on the CPU board of the routing switcher is set to S.

3) Connect 75-ohm terminators to the T-bridge connected to the last unit of the S-BUS data link and to the unused REMOTE 1 connectors.

Break-away Function

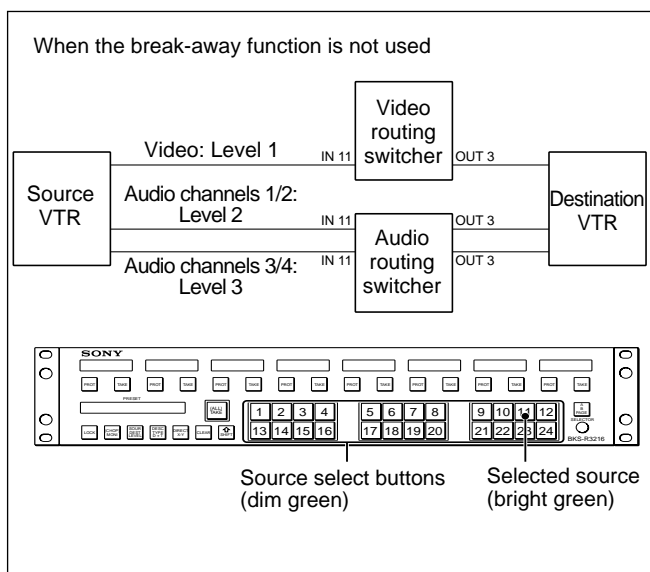
When the BKS-R3216 is used in combination with the BKS-R3216, different sources can be switched for levels. This is called the break-away function.

When the break-away function is used, the display of the source/destination select buttons is different from that when this function is not used. Display examples are shown below.

When the break-away function is not used

A single source is used for all the levels to be controlled.

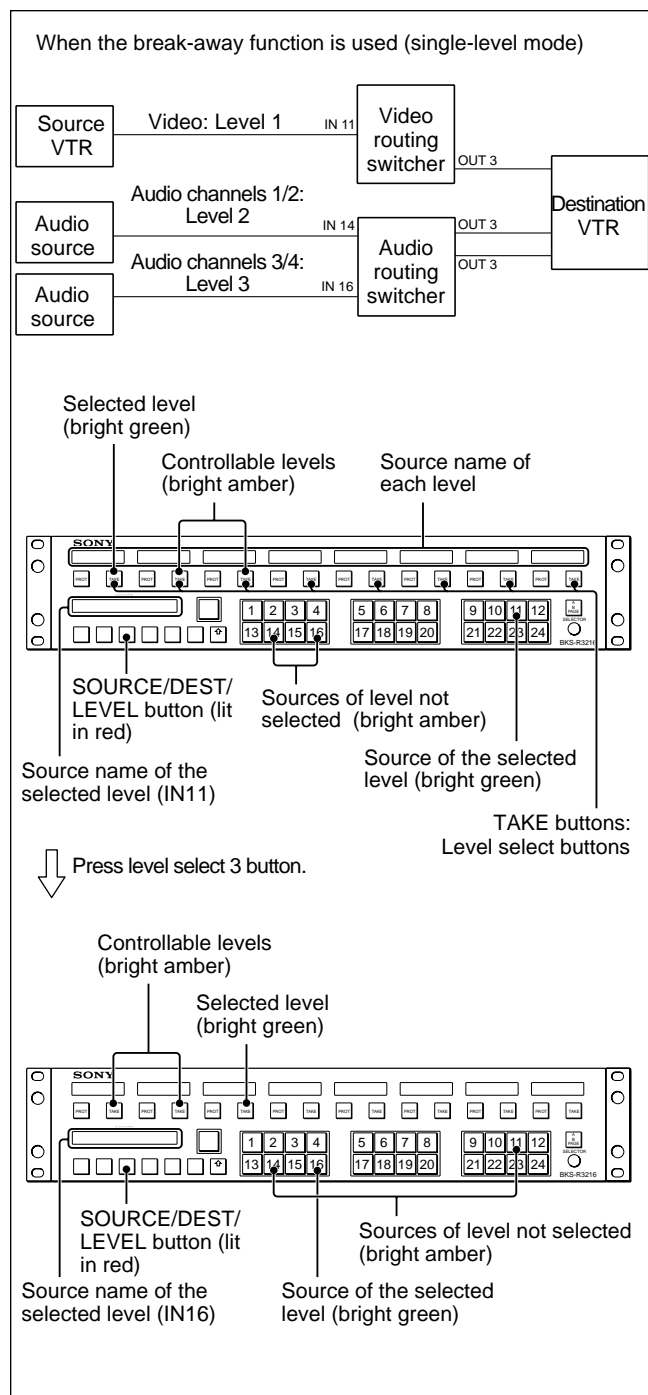
Level	Source	Destination
LEVEL 1	IN 11	OUT 3
LEVEL 2	IN 11	OUT 3
LEVEL 3	IN 11	OUT 3



When the break-away function is used

Different sources are used for each level.

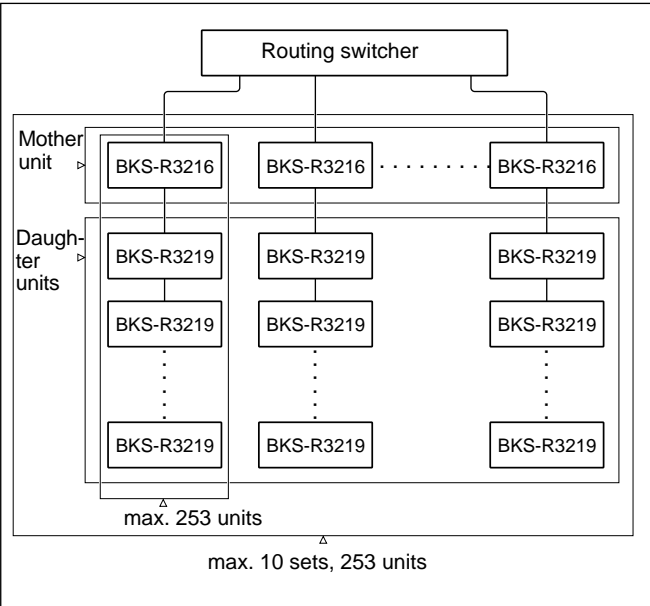
Level	Source	Destination
LEVEL 1	IN 11	OUT 3
LEVEL 2	IN 14	OUT 3
LEVEL 3	IN 16	OUT 3



Use of Multiple Control Units

When you control the routing switcher using the control unit, the number of controllable sources and destinations can be expanded by using multiple BKS-R1617/R3219/R3216 units in combination. One switching system can have up to ten sets of multiple control units, and in one set, up to 253 control units can be used. The total number of control units used in ten sets within one switching system is also 253. When using multiple control units in combination, one is to be set as the mother unit and the others as daughters on the control terminal. In one combination, only one unit can be used as the mother unit.

For details on setting a unit as the mother unit or a daughter unit, refer to the installation manual supplied with the routing switcher.



Route Function

When you use a switcher B having no cascade function such as a DVS-7000 and expand the number of sources by connecting another switcher A, the source name of switcher B is displayed as a selected source, and not the source name selected on switcher A. To display the actually selected source name, you must set the route function with the control terminal. Then when you select the crosspoint set on the route function, the source on switcher A is searched for, and the name is displayed. For example, when a crosspoint is switched on switcher A in the figure below, normally IN5 appears as the source name. If the route function has been set, the source name selected on switcher A appears.

To activate the route function, set the destination of switcher A, destination and source of switcher B, and level. In the case of the figure below, set "OUT1:OUT2 <IN5 10000000."

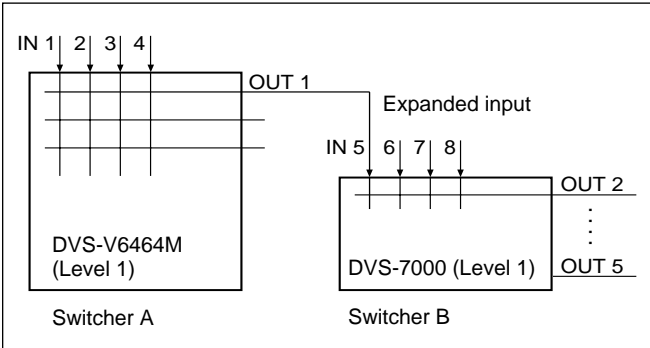
When you use the route function, switching is possible with simple settings. For example, if you select a source (IN1) for a destination (OUT1) on switcher A, the crosspoint on switcher B (IN5-OUT2) is automatically switched.

However, when you select a source (IN1) for a destination (OUT2) on switcher A, you have to set a phantom including IN1-OUT1 and IN5-OUT2 previously. Then IN1-OUT2 is displayed if the route has been set.

For details on setting the route function, refer to the installation manual supplied with the routing switcher.

Destination offset route

The destination offset route sets the destination to a substitute parameter such as "(DST + *)," where "*" is an offset value of the connector number of the destination. "DST" is automatically substituted with the destination selected with this unit. This function makes it possible to use expanded input for multiple destinations.



Phantom Function

This control unit has three phantom functions; global phantom, local phantom, and destination offset local phantom. The phantom functions have the following features.

Global phantom

The global phantom allows you to switch up to 2,800 crosspoints by pressing a single button. This function may be used to switch crosspoints defined for a phantom name with two or more control units.

Note

The global phantom is set on the primary station, so the route function does not work in combination with it. To activate the route display function in conjunction with the global phantom function, all crosspoints to be switched must be set on the phantom.

Local phantom

The local phantom allows you to switch multiple crosspoints by pressing a single button, or to switch crosspoints independently from destinations controlled on the unit. Up to 64 crosspoints can be set for a phantom name.

Destination offset local phantom

The destination offset local phantom sets the destination of the local phantom to a substitute parameter such as “(DST + *),” where “*” is an offset value of the connector number of the destination. “DST” is automatically substituted with the connector number of the destination selected when phantom-switching. For example, if the destination is OUT005, the connector number of the destination is 015, and the offset value is 2 (* = 2), the destination 017 is switched.

To execute the destination offset local phantom, first select and check the destination.

Examples of this Phantom are given below.

Example 1

Assign a source (audio source AUD007 for example) of a level to multiple sources of another level (video source IN001 and IN005 for example)

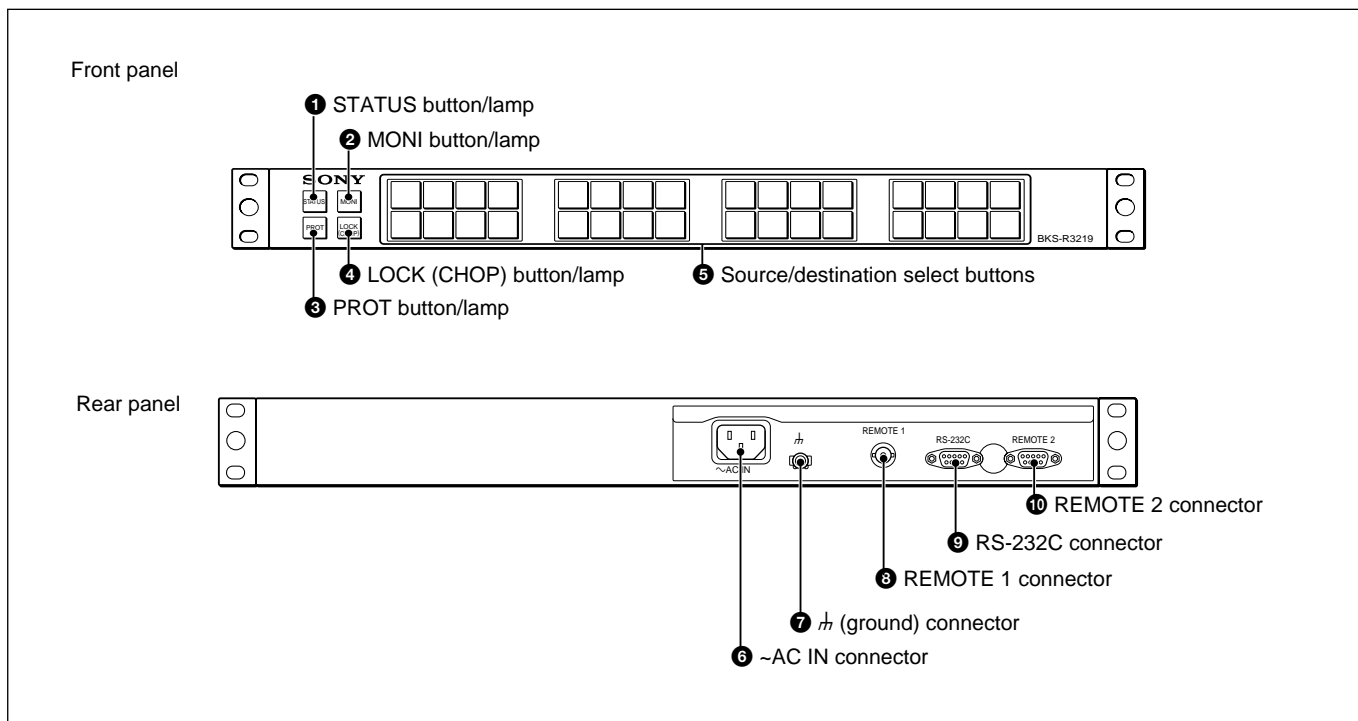
Source name for each level			Setting of destination	
Source name	LEVEL	LEVEL2	offset	local phantom
IN001	IN001	AUD007	IN001: DST+0<IN001-	10000000
			IN001: DST+0<AUD007-	01000000
IN005	IN005	AUD007	IN005: DST+0<IN005-	10000000
			IN005: DST+0<AUD007-	01000000

Example 2

To set a pair of crosspoints (multiple audio channels, video key signal for example)

Setting of Destination Offset Phantom	
IN001: DST + 0<IN001-	10000000
IN001: DST + 1<IN002-	10000000
IN003: DST + 0<IN003-	10000000
IN003: DST + 1<IN004-	10000000

Locations and Functions of Parts



1 STATUS button/lamp

The button lights in red when some trouble occurs with the unit.

2 MONI (monitor) button/lamp

When you press and light the button, the destination set on the control terminal is monitored, and the source selected for the destination or the source that the offset value is added is automatically selected.

For details on setting the monitor, refer to the installation manual supplied with the routing switcher.

3 PROT (protect) button/lamp

This button has two functions: to set and release protection for the output connector (destination) and to indicate whether the currently selected destination is protected or not.

Protection indication function

When the currently selected destination is protected, the lamp is lit, and the source select buttons are disabled. When the protection is set on this unit, the lamp is lit in green, while it is lit in red when the protection is set on another unit.

Protection function

When you press this button, the button lights and the currently selected destination (output) is protected. When a destination is protected, switching of sources for the destination is disabled.

To release protection, press the PROT button so that the lamp goes out.

Note

If the protection has been set to ON AIR mode at the control terminal, switching is enabled independently of the protection setting. Normally set the protection to NORMAL mode.

4 LOCK (CHOP) button/lamp

This button has two functions: lock function and chop function.

Lock function

Press and light this button in red, and the buttons on the front panel other than this button are disabled. This prevents switching by touching the select buttons accidentally.

If you press a select button while the LOCK lamp is lit in red, the STATUS button blinks in red.

Chop function

When you hold the button pressed for about three seconds while the button is not lit, the button lights in green, and the chop mode is obtained. In chop mode, a source before the chop mode and a source selected in chop mode are switched alternately at a specific interval.

⑤ Source/destination select buttons

These buttons can be used as source select buttons or destination select buttons. The control terminal or the setup function of this unit defines the function of these buttons.

The source select buttons normally light in dim green, and the destination select buttons normally light in dim amber. When you press one of the buttons, the pressed button lights in bright green or amber to show that it is selected.

Note

When the source select button is lit in bright amber, the source has been selected on another level in the break-away function.

For details on defining the button functions, refer to the Installation Manual supplied with the routing switcher.

Source selection function (lit in green)

When you press a button, the signal fed to the switcher (source) corresponding to the pressed button is selected and is supplied to the output connector (destination). If the phantom function has been set, the sources set for the button are selected.

If prompt lamp-light mode has been set, the pressed button lights in bright green to show the selected source. If status display mode has been set, the system checks that the selected crosspoint has been switched, and the button lights in bright green.

For details, see page 14.

Note

When the PROT lamp is lit, source switching is disabled.

Destination selection function (lit in amber)

When you press a button, the output connector of the switcher (destination) corresponding to the pressed button is selected. The pressed button lights in bright amber to show the selected destination.

⑥ ~AC IN (AC power input) connector

Connect to an AC power source using the designated AC power cord.

⑦ \perp (ground) connector

For signal grounding

⑧ REMOTE 1 connector (BNC connector)

Connect to the S-BUS line using the T bridge (supplied) and 75-ohm coaxial cable (BELDEN 8281 or equivalent).

⑨ RS-232C connector (D-sub 9-pin)

For servicing. Connect to a computer for downloading software or monitoring communication status.

⑩ REMOTE 2 connector (D-sub 9-pin)

To connect an RS-422 communication line

Preparations

Settings on the Control Terminal

Before switching signals with this unit, the following preparations should be made on the control terminal connected to the primary station of the S-BUS data link.

For details on making the settings, refer to the Installation Manual supplied with the routing switcher.

- 1** Set the type of the input and output connector name to either the type name and number mode or the description name mode.
- 2** Set the type names of sources, such as VTR, FLM, AUX, etc.
Up to 32 type names may be set.
- 3** Set the source names using a type name and number from 001 to 999, such as FLM034.
A list of the registered source names is called the source table.
- 4** Set the destination names using a type name and number from 001 to 999, such as VTR089.
A list of the registered destination names is called the destination table.
- 5** Set the phantom names.
A list of the registered phantom names is called the phantom table.
- 6** Assign the source and destination select buttons.
- 7** Set the level to be controlled.
- 8** Set the mother unit and daughter units if multiple control units are to be used in combination as follows:
For the mother unit
 PANEL mode: MOTHER
 SET BLOCK NUMBER: Block number used (1 through 10)
For daughter units
 PANEL mode: DAUGHTER
 MOTHER STATION ID: Station ID of the mother unit
Note
 Set the mother unit first.
- 9** Make the route setting if the route function is to be used.

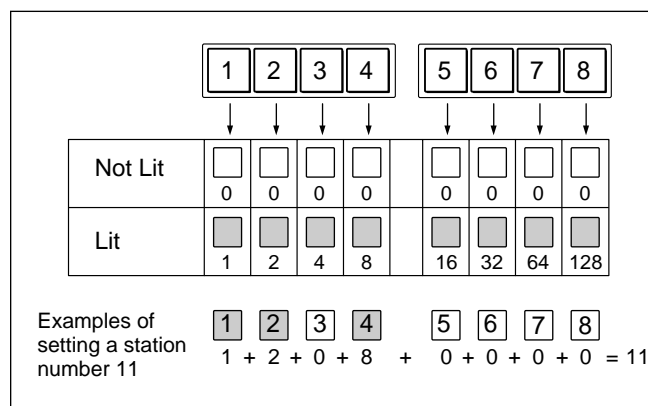
Preparation for the BKS-R3219

You may use up to 253 control units, including this unit, in combination to expand the number of sources and destinations, or use this unit alone. The required settings may differ depending on whether it is used alone or in combination. Make the necessary settings shown below to suit your system.

When multiple units are used in combination, define one as the mother unit and the others as daughter units.

Setting the station number

Set the station number using the source/destination select button 1 to 8. The station number is obtained by adding the binary place values of the buttons that are lit. For example, if the buttons 1, 2 and 4 are lit as shown below, the station number is 11 (=1+2+8).



Note

Do not assign the same number to more than one unit in a routing system.

- 1** Press and hold the LOCK and PROT buttons and source/destination select button 1 for about five seconds to reset the software.
- 2** Press and hold the source/destination select buttons 1, 2, 3, and 4 to enter station number setting mode.

Note

When the power is turned ON for the first time, station number setting mode is automatically set, and steps 1 and 2 are not required.

- 3** Press the appropriate source/destination select buttons so that the desired station number is obtained.

- 4** Press the LOCK button.
The set station number is registered

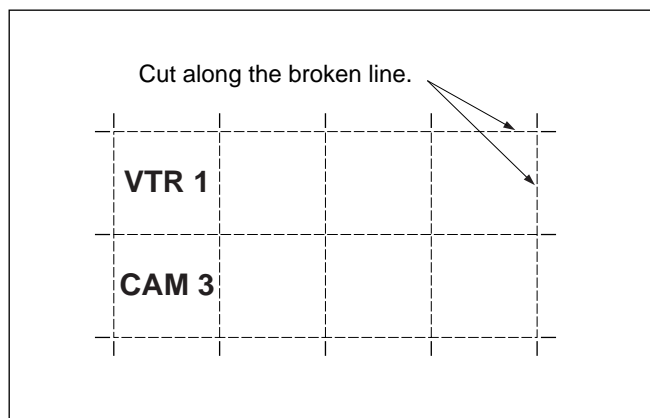
Key label indications

It is recommended to write the source, destination or level name on the labels (these are called key labels), and attach them on the source/destination select buttons. Then you can see at a glance what functions you have assigned to each button.

Making a key label

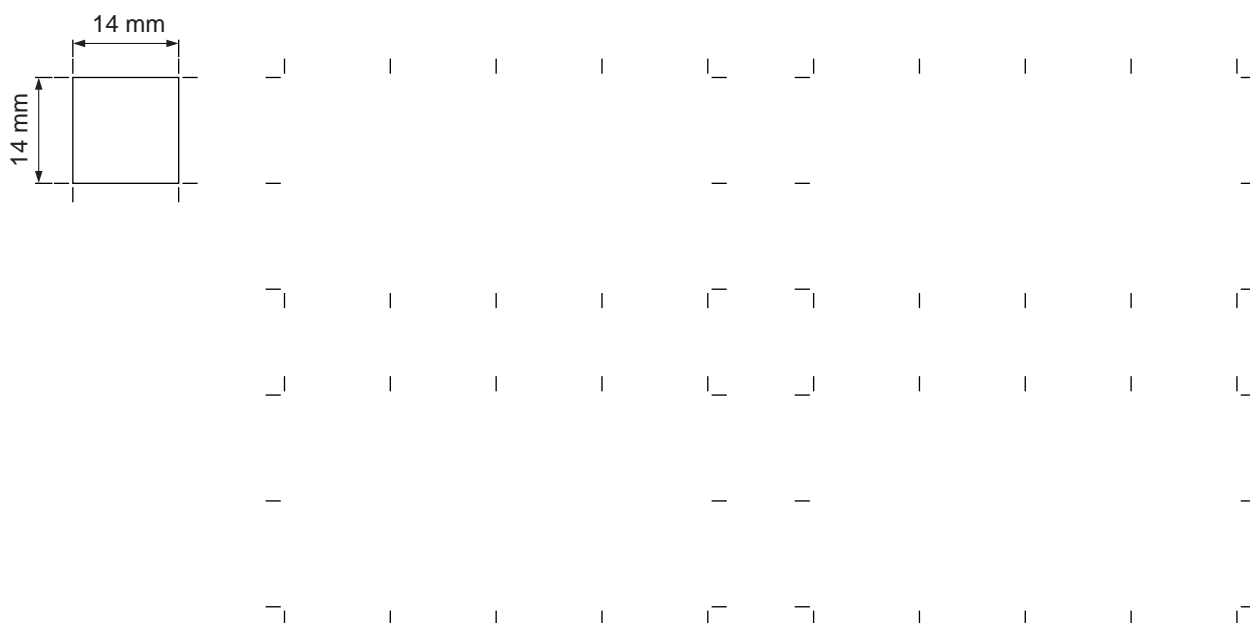
- 1** Copy the key label guide shown below onto a sheet of OHP paper.

- 2** Write the name on the copied paper.
- 3** Cut the paper to the button size as shown below.



Key label guide

For a large button (14 × 14 mm)



For a small button (9.5 × 9.5 mm)



Preparations

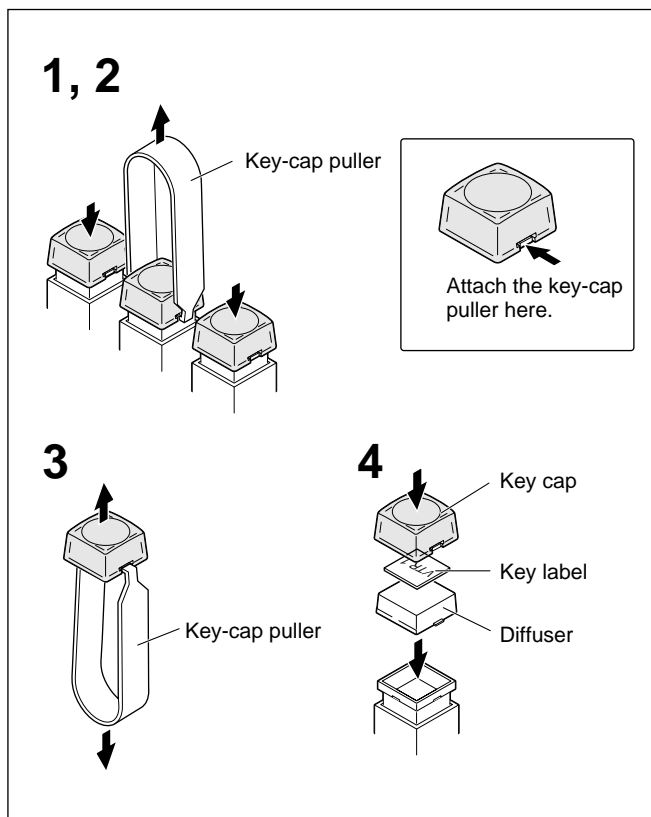
Attaching a key label

Attach the key labels to the buttons with the following procedure.

For details on the key label, refer to the Installation Manual.

- 1 Attach the key-cap puller to the indentations of the sides of the key cap.
You can easily attach the puller if you press the buttons on both sides.
- 2 Remove the key cap by pulling the key-cap puller.
- 3 Rotate the key-cap puller downwards while pinching the key-cap, and pull it down to separate the key cap, key label and diffuser.
- 4 Put the key cap, key label with the name written, and diffuser on the button and replace them as they were.

As for the key-cap puller (part number: 3-179-054-01), consult your Sony personnel.



Settings by Using the Buttons (Setup Function)

With the S-BUS system, the necessary items are normally set at the control terminal connected to the primary station. However, the following items may be set on the unit by turning the power on while holding down the two or more select buttons, as described below.

Number of the source/destination select buttons

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Initializing the settings

While holding down buttons 1 and 2, turn the power on.

The following items are set to the factory-set conditions.

- 1) Status display mode
- 2) Single-use mode
- 3) Phantom partial-protect mode

Note

Press buttons until the lamp check on the panel is completed

Setting single-use mode

While holding down buttons 5 and 8, turn the power on.

Use this mode when this unit is to be used alone.

Setting prompt lamp-light mode

While holding down buttons 1 and 3, turn the power on.

When you press a source select button, the lamp of the pressed button promptly lights.

Setting status display mode

While holding down buttons 1, 2 and 3, turn the power on.

When you press a source select button, the system checks that the designated crosspoint has been switched, then the button lights according to the crosspoint status.

Setting to 32-source select mode

While holding down buttons 1 and 4, turn the power on.

All the source/destination select buttons work as source select buttons.

Setting to 16-source/16-destination select mode 1

While holding down buttons 5 and 6, turn the power on.

Select buttons 1 through 8 and 17 through 24 function as source select buttons, and select buttons 9 through 16 and 25 through 32 function as destination select buttons.

Setting to 16-source/16-destination select mode 2

While holding down buttons 5 and 7, turn the power on.

Upper select buttons 1 through 16 function as source select buttons, and lower select buttons 17 through 32 function as destination select buttons.

Setting to phantom full-protect mode

While holding down buttons 9 and 11, turn the power on.

If one of the crosspoints set for a phantom is protected, switching of all the crosspoints of the phantom is prohibited.

Setting to phantom partial-protect mode

While holding down buttons 9, 10 and 11, turn the power on.

If one of the destinations set on a phantom is protected, switching of the crosspoints, including the protected destination, is prohibited, but the other crosspoints are switched.

Entering station number setting mode

While holding down buttons 1, 2, 3 and 4, turn the power on.

The station number can be set with binary coding using buttons 1 through 8.

Resetting the software

Press and hold the LOCK and PROT buttons and source/destination select button 1 for five seconds. Then the software is reset, and the same status as the power is turned on is obtained.

List of setup operations

Settings	Buttons to be pressed
Initialization	1, 2
Single-use mode	5, 8
Prompt lamp-light mode	1, 3
Status display lamp-light mode	1, 2, 3
32-source select mode	1, 4
16 source/16 destination select mode 1	5, 6
16 source/16 destination select mode 2	5, 7
Phantom full-protect mode	9, 11
Phantom partial-protect mode	9, 10, 11
Station number setting mode	1, 2, 3, 4

Select the destination first, then the source, following the procedure below.

Before starting operation, turn the power to the unit and the system on. Then check that the PROT button is not lit.

Selecting a destination and source

- 1** Press one of the destination select buttons to select a destination.
The pressed button lights in bright amber.
If no destination select function has been set on this unit, this step is not necessary (the destination set at the control terminal is automatically selected).
- 2** Press one of the source select buttons to select a source.
The pressed button lights in bright green, and the crosspoint, including the selected source, is switched.

Conditions of the source select buttons when a destination is selected

In status display lamp-light mode, a source selected for the destination that is currently selected is always displayed.

When there is a source button selected for the destination on the panel

The source button selected for the destination is lit in bright green.

When there is no source button selected for the destination on the panel

All the source buttons are lit in dim green.

Selecting when the unit is connected to the monitor S-BUS data link

When you wish to monitor the input and output signals of the DVS-V3232M/V6464M Video Routing Switcher with an optional BKDS-V3292B Monitor Board installed or the DVS-128, you may switch the monitor signals using the BKS-R3219. Before switching signals with this unit, you should make the signal settings at the control terminal.

For details on making the settings, refer to the Installation Manual supplied with the routing switcher.

Lighting status of the source/destination select buttons

The source select buttons are normally lit in dim green, and the destination select buttons are lit in dim amber. When you press a button for selecting a signal to be monitored, the pressed source or destination button lights in bright green.

Error indication

When trouble occurs with this unit, the STATUS button blinks in red.

Specifications

REMOTE 1	BNC type ×1 S-BUS Data transfer method: BI-PHASE SPACE Data transfer rate: 312.5 kbps/1250 kbps
REMOTE 2	D-sub 9-pin ×1 RS-422 Data transfer method: conforming to the EIA RS-422A Data transfer rate: 38.4 kbps
RS-232C	D-sub 9-pin ×1 Data transfer method: 8-bit, No parity, No check Data transfer rate: 19.2 kbps
Signal transfer distance	500 m (1640 feet) (75-ohm coaxial cable, BELDEN 8281 or equivalent)
Operating temperature	0°C to 45°C (32°F to 113°F)
Power requirements	100 to 120 V AC (for the U.S.A. and Canada) 100 to 240 V AC (for the other countries) 50/60 Hz
Current consumption	0.25 A
Peak inrush current	(1) Power ON, current probe method: 1A (240 V) (2) Hot switching inrush current, measured in accordance with European standard EN55103-1: 1A (230 A)
Dimensions (w/h/d)	440 × 44 × 120 mm (17 3/8 × 1 3/4 × 4 3/4 inches)
Mass	1.5 kg (3 lb 5 oz)
Accessories supplied	Operation Manual (1) T bridge (1)

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