

**SONY®**

X-Y CONTROL UNIT

**BKS-R3240A**

**BKS-R3242A**

**BKS-R3248A**

OPERATION MANUAL English  
1st Edition

### **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.

### **AVERTISSEMENT**

Afin d'éviter tout risque d'incendie ou d'électrocution, ne pas exposer cet appareil à la pluie ou à l'humidité.

Afin d'écartier tout risque d'électrocution, garder le coffret fermé. Ne confier l'entretien de l'appareil qu'à un personnel qualifié.

### **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.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

### **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.

### **WARNING: THIS WARNING IS APPLICABLE FOR OTHER COUNTRIES.**

1. Use the approved Power Cord (3-core mains lead)/Appliance Connector/Plug with earthing-contacts that conforms to the safety regulations of each country if applicable.
2. Use the Power Cord (3-core mains lead)/Appliance Connector/Plug conforming to the proper ratings (Voltage, Ampere).

If you have questions on the use of the above Power Cord/ Appliance Connector/Plug, please consult a 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 (Stadtgebiet 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.

### AVERTISSEMENT

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

Lors de l'installation de l'appareil, incorporer un dispositif de coupure dans le câblage fixe ou brancher le cordon d'alimentation dans une prise murale proche de l'appareil et facilement accessible.

Dans le cas d'un problème lors du fonctionnement de l'appareil, enclencher le dispositif de coupure d'alimentation ou débrancher le cordon de la prise.

### WARNUNG

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.

### WARNING

**THIS APPARATUS MUST BE EARTHED.**

### AVERTISSEMENT

**CET APPAREIL DOIT ÊTRE RELIÉ À LA TERRE.**

### WARNUNG

**DIESES GERÄT MUSS GEERDET WERDEN.**

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# Overview

The BKS-R3240A/R3242A/R3248A X-Y Control Unit switches input/output signals to/from the routing switcher (such as an HDS-X3600) connected to the primary station of the S-BUS data link. The key configuration, functions, and operation methods except the form and the number of select keys are common among the three models.

The BKS-R3240A is of the full-rack size (1U in height) with 16 select keys.

The BKS-R3242A is of the half-rack size (2U in height) with 16 select keys.

The BKS-R3248A is of the full-rack size (2U in height) with 64 select keys.

## Features

### Compatibility with P1 and P2 S-BUS protocols

Both the P1 (matrix size of  $512 \times 512$  with 8 levels<sup>1)</sup>) and P2 (matrix size of  $1024 \times 512$  with 16 levels and matrix size of  $1024 \times 1024$  with 8 levels) S-BUS protocols are supported.

### Large select keys whose functions can be distinguished by color

Large select keys on the front panel are employed for easy operation. They light in green, red, or amber, giving status information or showing the available choices to the operator.

### Selection keys usable for selecting sources and/or destinations

All the selection keys on the front panel can be used as select keys for source, destination or both. Settings made from the control terminal or menus of this unit define their functions.

### Mode keys to set the personality of the unit

Using the mode keys in combination, you can set the personality of this unit, including source selection, destination selection, signal assignment to the selection keys, and level breakaways.

### Two 16-character displays for versatile data indications

Two independent 16-character displays indicate the current status and entry/preset information. The operation mode of each display can be set separately in the unit's Menu mode or from the control terminal.

### Four selection systems: Type + Number, BPS, Keypad, and Direct

The unit supports four selection systems: Type + Number selection system to select a signal with a type name and a number, the BPS selection system to select by pressing the corresponding selection key, the Keypad selection system to select with a description name, and the Direct selection system to select by specifying a connector number.

### General-purpose input/output interface ports

Eight optically isolated general-purpose ports can be used for source/destination operation and status display. Settings are made from the control terminal.

### Displaying a source or destination name on the keys

The source or destination name defined with the control terminal can be shown on a key label on a key. 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 a BKS-R3240A/R3242A/R3248A and multiple BKS-R3219<sup>2)</sup> Universal Control Units 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.

### Different sources for levels selectable (breakaway function)

You can select and display different sources for levels. This is called the breakaway function.

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#### 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.

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2) The BKS-R1617/R1618/R1621 can also be used.

## Overview

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### **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 key (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 key.

### **Connectable with a single cable**

The unit can be connected to the S-BUS data link of a digital routing switcher using a single 75-ohm coaxial cable, and can control the switcher.

### **Self-diagnostic functions**

When the power is turned on, the ROM, RAM, and S-BUS data link, are automatically checked as to whether they function correctly. The keys on the front panel light one after another to show that there is no problem in internal connections.

### **Operation on 100 V to 240 V AC without voltage selection**

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

## **Selection System and Key Functions**

The BKS-R3240A/R3242A/R3248A can select a source either with the Type + Number selection system, BPS selection system, Keypad selection system, or Direct selection system. The system to be used is set on the control terminal in advance or selected in the unit's Menu mode. The functions of the source/destination select keys vary depending on the system used.

*For details on making settings on the control terminal, see "Menu Settings" (page 29).*

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### **Type + Number selection system**

To select a source or destination, designate a type name such as VTR, FLM, and a number from 000 through 999. On the source/destination select keys, the type names should be assigned from the control terminal in advance.

With this system, the BKS-R3240A/R3242A/R3248A functions as a 1024-source/1024-destination selector. The sources and destinations that can be controlled with the BKS-R3240A/R3242A/R3248A can be limited from the control terminal when required.

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### **BPS (Butten Per Signal) selection system**

With the touch of a key, the signal(s) assigned to the key is(are) selected. When this system is used, signal names should be assigned to the source/destination select keys from the control terminal in advance.

This system operates either in Speed mode to execute switching by pressing the TAKE key after confirming the selected signal on the PRESET display or in Take mode to execute switching immediately when a select key is pressed.

### **When the BKS-R3240A/R3242A/R3248A is used as a standalone unit**

With this system, the BKS-R3248A functions as a 64-source/64-destination selector, and the BKS-R3240A/R3242A functions as a 16-source/16-destination selector,

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### **When the BKS-R3240A/R3242A/R3248A is used with BKS-R3219s**

The BKS-R3240A/R3242A/R3248A functions as the mother unit and the BKS-R3219s as daughter units. One switching system can have up to ten combinations of the BKS-R3240A/R3242A/R3248A and BKS-R3219s, and a maximum of 253 control units can be used in the system. The number of sources and destinations can be expanded depending on the number of the daughter units.

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### **Keypad selection system**

To select a source and destination, specify the description name using the keypad.

Four alphanumerics are assigned to each select key used for the keypad. All description names corresponding to the alphanumerics of the pressed keys are searched for.

With this system, the R3240A/R3242A/R3248A functions as a 1024-source/1024-destination selector. The sources and destinations that can be controlled with the BKS-R3240A/R3242A/R3248A can be limited from the control terminal when required.

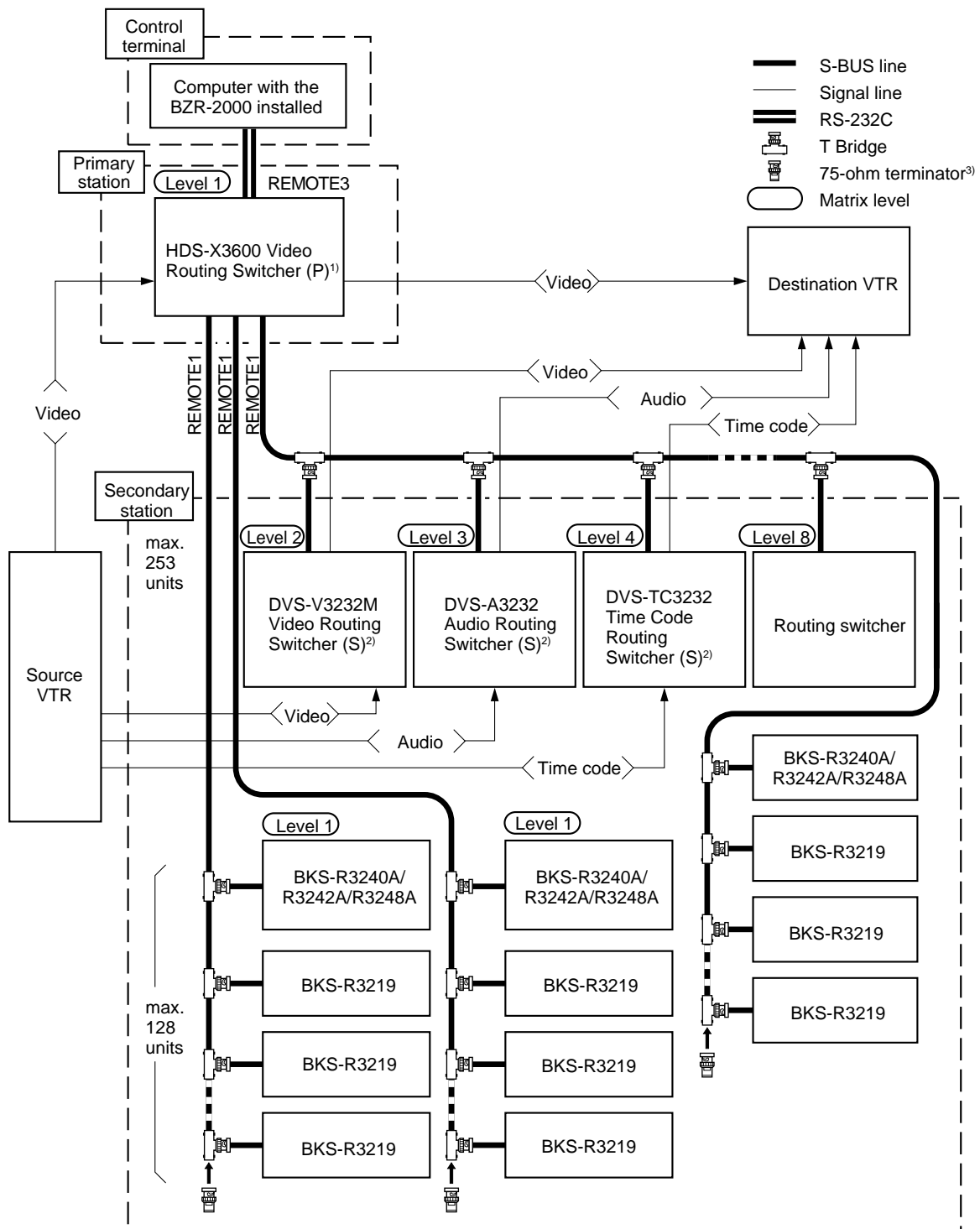
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### **Direct selection system**

To select a source and destination, directly enter the connector number (1 to 1024).

With this system, the R3240A/R3242A/R3248A functions as a 1024-source/1024-destination selector. The sources and destinations that can be controlled with the BKS-R3240A/R3242A/R3248A can be limited from the control terminal when required.

## 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.

## Breakaway Function

Different sources can be switched for levels. This is called the breakaway function.

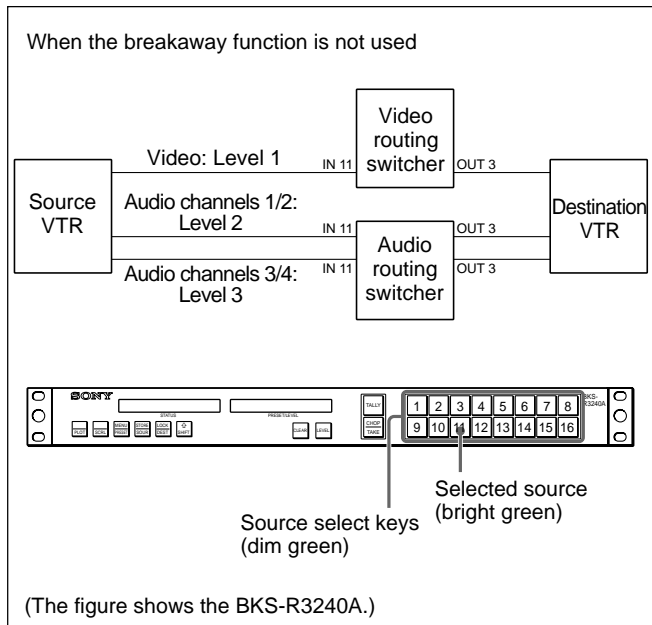
When the breakaway function is used, the display of the source/destination select keys is different from that when this function is not used.

Display examples are shown below.

### When the breakaway function is not used

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

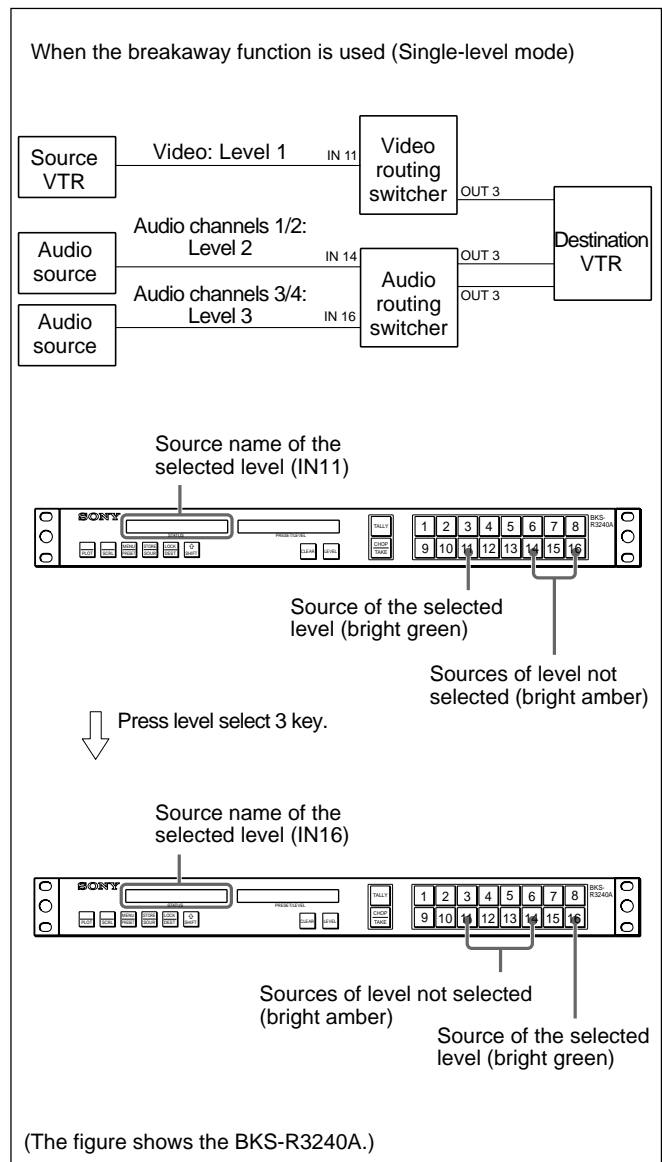
Level	Source	Destination
LEVEL 1	IN 11	OUT 3
LEVEL 2	IN 11	OUT 3
LEVEL 3	IN 11	OUT 3



### When the breakaway 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



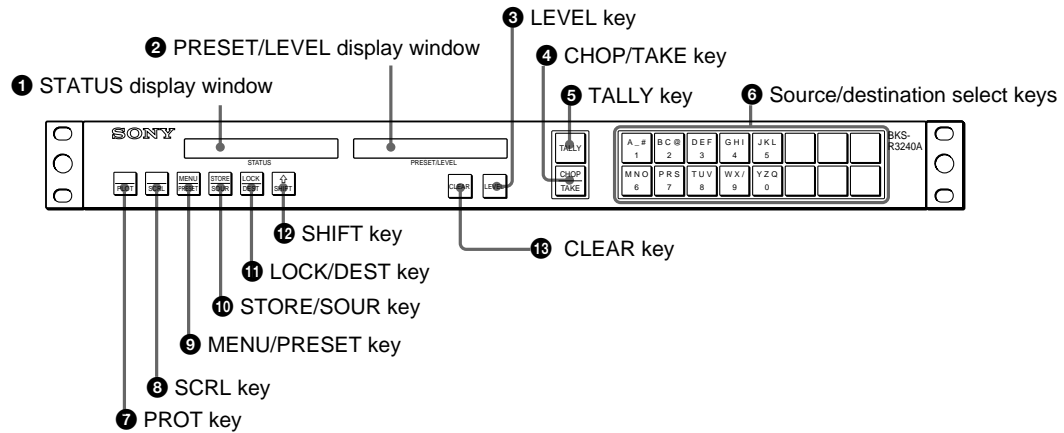
### Hint

You can confirm the SOURCE name for each broken-away level in the STATUS and PRESET/LEVEL display windows by pressing the SCRL key.

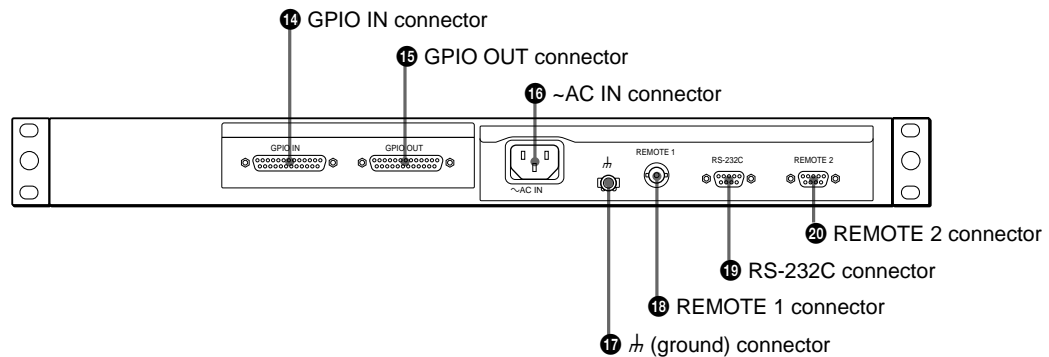
# Locations and Functions of Parts

## BKS-R3240A Parts

### Front Panel

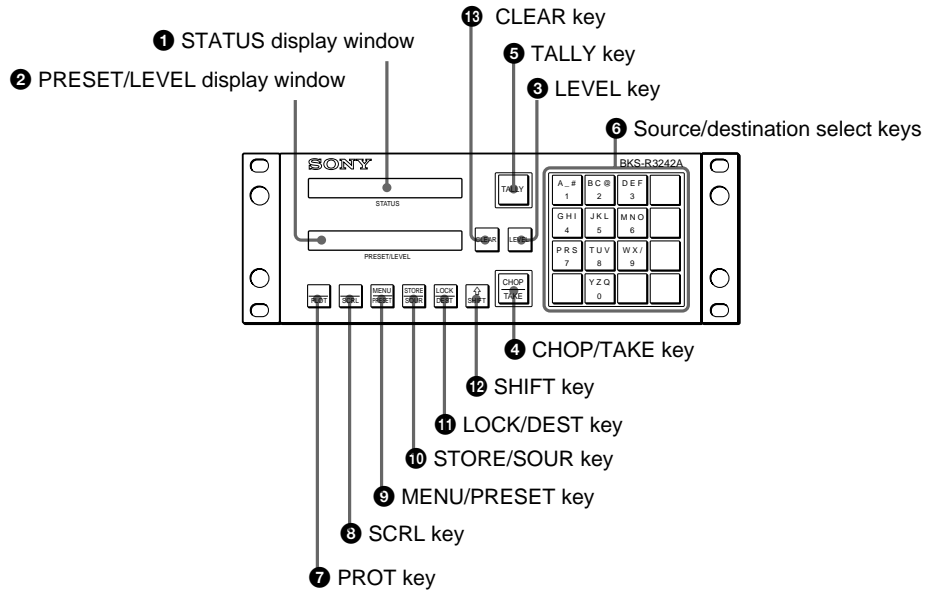


### Rear Panel

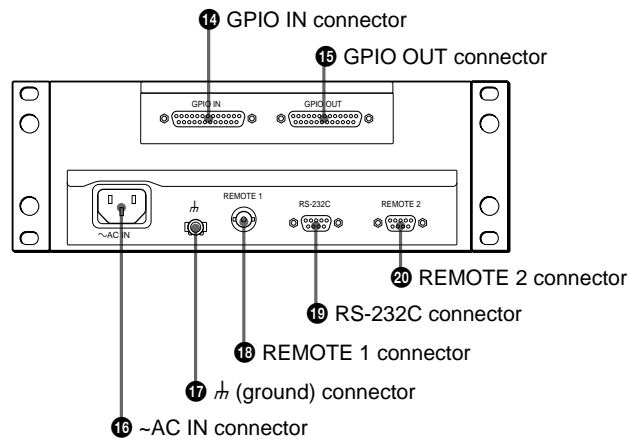


## BKS-R3242A Parts

### Front Panel

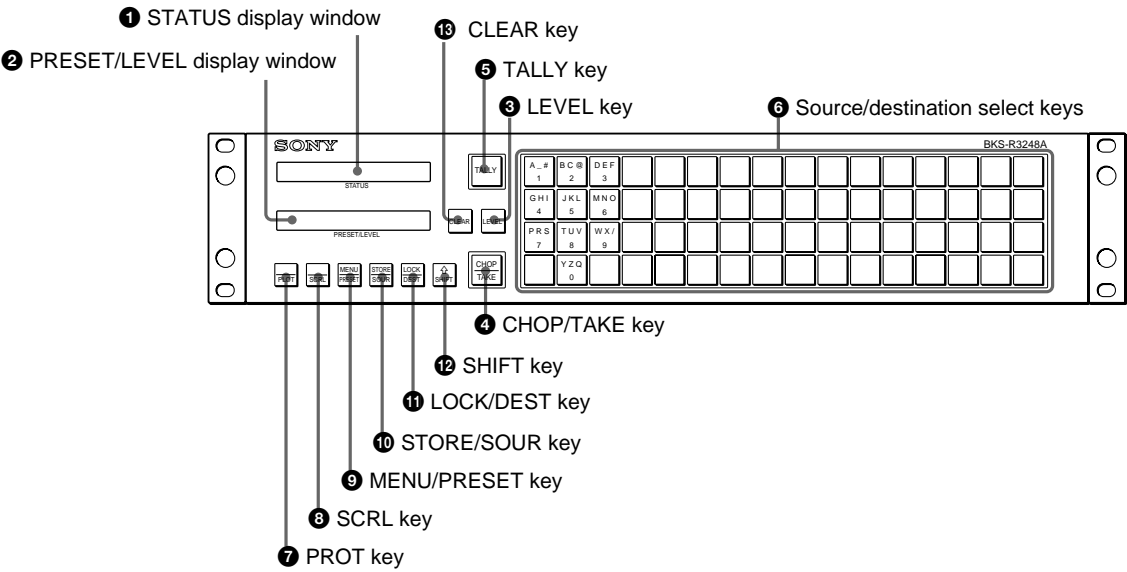


### Rear Panel

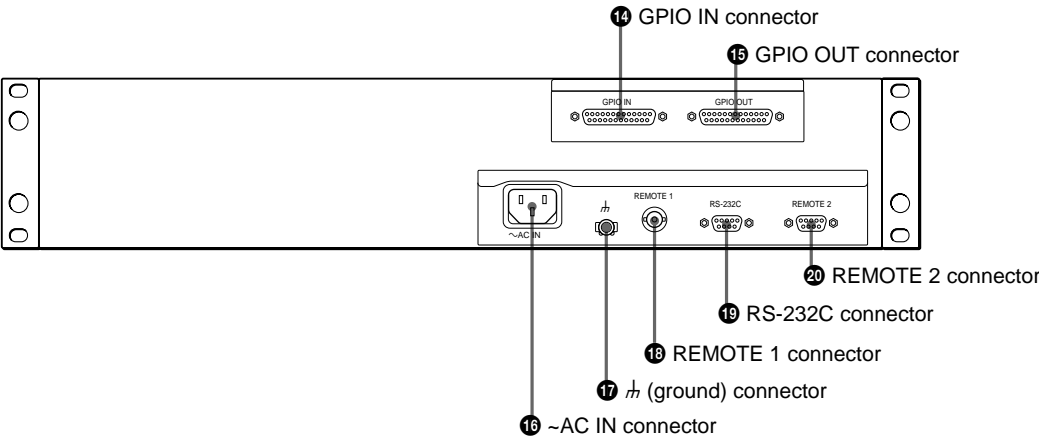


BKS-R3248A Parts

Front Panel



Rear Panel



## Functions of the Parts on the Front Panel

### ❶ STATUS display window

### ❷ PRESET/LEVEL display window

Each shows data of up to 16 characters according to the operation mode, selection system, and display format.

*The display format can be set independently for each window in the unit's Menu mode, from the control terminal, or using the BZR-2000 management software.*

*For the setting from the control terminal, see "Menu Y: SET DISPLAY MODE" (page 43).*

### In operation modes other than Level-Selection mode

The displayed contents vary depending on the display format as follows:

**TYPE+NUM (type name + number):** The type name and a number (total of 7 characters) of the destination and that of the source are displayed.

The STATUS display window shows the source in the left half and the destination in the right half.

The PRESET/LEVEL display window shows the source in Source-Selection mode or the destination in Destination-Setting mode in the left half and the level in the right half.

**DESC (description):** All 16 characters over two windows are used to show a description of a signal. The description name to be displayed depends on the operation mode of this unit, the source and the destination. For a signal for which no description has been specified, the "type + number" name is displayed.

**4CHAR DVS (four-character DVS):** The destination and source to be controlled are displayed using four characters among the descriptions of the corresponding signals. The abbreviation of a description is obtained according to the format of Sony-made production switchers, which uses the first two and last two characters of a description. The STATUS display window shows the source in the left half and the destination in the right half. The PRESET/LEVEL display window shows the source in Source-Selection mode or the destination in Destination-Setting mode in the left half and the level in the right half. The source displayed in the STATUS display window is that currently connected to the destination being controlled.

The PRESET/LEVEL display window shows the current entries, which will change to the latest source selected for the destination being controlled when you press the TAKE key.

**4CHAR DESC (four-character description):** The destination and source to be controlled are displayed using the first four characters of the descriptions of the corresponding signals. The STATUS display window shows the source in the left half and the destination in the right half. The PRESET/LEVEL display window shows the source in Source-Selection mode or the destination in Destination-Setting mode in the left half and the level in the right half.

The source displayed in the STATUS display window is that currently connected to the destination being controlled.

The PRESET/LEVEL display window shows the current entries, which will change to the latest source selected for the destination being controlled when you press the TAKE key.

**4CHAR ROUTER (four-character router):** The destination and source to be controlled are displayed using the four characters among the type name and the number of the corresponding signals. The abbreviation from the full seven characters to four characters is achieved by deleting "0" from the left of the number and padding with the type name. The STATUS display window shows the source in the left half and the destination in the right half. The PRESET/LEVEL display window shows the source in Source-Selection mode or the destination in Destination-Setting mode in the left half and the level in the right half.

The source displayed in the STATUS display window is that currently connected to the destination being controlled.

The PRESET/LEVEL display window shows the current entries, which will change to the latest source selected for the destination being controlled when you press the TAKE key.

### In Level-Selection mode

The signal statuses with each level of the destination to be controlled are displayed using both the STATUS and PRESET/LEVEL display windows. A window can display up to three levels at a time, which can be scrolled by pressing the SCRL key to show all the usable levels (max. 16 levels).

## Locations and Functions of Parts

### Note

Only the levels that can be controlled on this unit are displayed in sequence.

In order to display three levels on each display, only the first one character of the level name and four characters of the signal ID are displayed. An abbreviation of the signal ID is obtained according to the display format of the STATUS display set on the primary station.

When “Type+Num” has been selected on the primary station: Type name and a number  
When “DESCRIP.NAME” has been selected on the primary station: Description name

### Note

In Level-Selection mode, all of a source name and the first one character of a level name are displayed at a time. To easily distinguish the names, it is recommended to use lowercase letters for level names and uppercase letters for source names.

### ③ LEVEL key

When you press and light this key, the unit enters Level-Selection mode.

In Level-Selection mode, eight (in 8-Level mode) or sixteen (in 16-Level mode) select keys show the levels that can be controlled on this unit.

### ④ CHOP/TAKE key

This key operates as the TAKE key when the SHIFT key is unlit, and as the CHOP key when the SHIFT key is lit.

#### TAKE key

When the SHIFT key is unlit, press this key to execute a selection or register setting.

The operation may vary depending on the operating mode of this unit.

**In Level-Selection mode:** The level to be controlled from this unit is changed. After the change, Source-Selection mode is automatically restored.

**In Destination-Setting mode:** The destination to be controlled from this unit is switched.

If the destination specified is not valid, an error message “NotFound” appears in the right half of the PRESET/LEVEL display window.

If the destination specified is valid, switching to that destination is executed. After the switching, Source-Selection mode is automatically restored.

**In Source-Selection mode:** Source selection is executed. If the selection is valid, a switching request is sent to the routing switcher. If the selection is rejected, an error message “NotFound” appears in the left half of the PRESET/LEVEL display window.

If the destination specified is valid, switching to that destination is executed. When switched, the source indications in the STATUS and PRESET/LEVEL display windows are alternated.

If the currently selected destination is protected, a message “DEST PROTECTED” is displayed in the STATUS display window for about three seconds, and switching is not executed.

If the specified source is included in a phantom and the PRESET/LEVEL display window cannot enter the destination mode, a message “PHANTOM” appears in the right half of the PRESET/LEVEL display window.

Each time you press the TAKE key, the source displayed in the STATUS display window and that displayed in the PRESET/LEVEL display windows are toggled (flip-flop function).

**In Menu mode:** When a parameter is selected in Menu mode, you can change the page of displayed available values for that parameter by pressing the TAKE key. The setting becomes valid by selecting another parameter or quitting Menu mode when the desired value is displayed in the PRESET/LEVEL display window.

#### CHOP key

When you press this key when the SHIFT key is lit, the unit enters Chop mode.

In Chop mode, the source displayed in the STATUS display window and that displayed in the PRESET/LEVEL display windows are output alternately at a specified interval (chop time).

Chop mode is canceled when you press any key on the front panel.

The chop time can be set from the control terminal.

*For details on the chop time setting, see “CHOP TIME” (page 43) of “Menu Z: SET PANEL STATUS.”*

### ⑤ TALLY key

When the tally function is activated for one or more tally groups, the tally status of the source selected for the destination to be controlled is indicated.

*For details on the tally setting, see “Menu Y: SET DISPLAY MODES” (page 43).*

## ⑥ Source/destination-select keys

Used to enter the necessary data according to the operation mode and selection system.

The 16 keys of BKS-R3240A/R3242A and the left 16 keys of the BKS-3248A function as select keys depending on operation mode and selection system. The remaining 48 keys of the BKS-R3248A are used with the BPS selection system.

### Tips

With a selection system other than the BPS selection system, you may use keys that are not for specific use with that selection system as BPS select keys. This may be useful when you assign a signal to be used frequently, such as color-bar signal.

*The selection system can be set in the unit's Menu mode, from the control terminal, or using the BZR-2000 management software.*

*For the settings from the control terminal, see "PANEL LAYOUT" (page 41) of "Menu Z: SET PANEL STATUS."*

The differences in function of the select keys among the operation modes are as follows:

**In Level-Selection mode:** The keys indicate the levels that can be controlled from this unit.

*The levels to be controlled can be set in the unit's Menu mode, from the control terminal, or using the BZR-2000 management software.*

The key of the level being selected lights in bright green. Keys of controllable but unselected levels light in amber if the levels have been specified on the primary station. Keys of the levels that have not been specified on the primary station do not light.

The default level is displayed when the power is turned on, when the destination is changed, or when the current level is cleared. (If the default is "0," the display is achieved using the level table of the primary station.)

The default level can be set in Store mode with the following procedure:

1. Select the level to be set for the default.
2. Press and light the SHIFT key, then press the STORE key.

The STORE key flashes in bright green.

3. Press the LEVEL key.

The level selected in step 1 becomes the default level.

**In Destination-Setting mode:** The keys function as destination-select keys corresponding to the specified selection system.

When you press a key, the name of the selected destination is displayed in the right half of the STATUS display window.

**In Source-Selection mode:** The keys function as source-select keys corresponding to the specified selection system.

When you press a key, the name of the selected source is displayed in the left half of the STATUS display window.

**In Menu mode:** The upper-left 7 keys light in green. Menu operation can be made using these keys.

*For details on Menu mode, see "Menu Operation" on page 28.*

The differences in function of the select keys among the selection systems are as follows:

**In the Type + Number selection system:** Type numbers and/or numeric values are assigned to some select keys.

First select the type. You may select from among 16 or 32 types (16 or 32 depends on the setup). In 32-Type mode, you may select type 0 to F when the SHIFT key is unlit, and type G to V when the SHIFT key is lit.

For each type, a type name must have been assigned on the control terminal. For example, when you set the source type to "0=VTR," Type 0 is named "VTR."

After selecting the type, enter a number using the keys to which numeric values have been assigned. Finally, press the TAKE key.

*For the key numbers, see the illustrations on page 23.*

## Locations and Functions of Parts

Assignment of Type Numbers

Key	Type No.	
	with SHIFT unlit	with SHIFT lit
Key 1	Type 0	Type G
Key 2	Type 1	Type H
Key 3	Type 2	Type I
Key 4	Type 3	Type J
Key 5	Type 4	Type K
Key 6	Type 5	Type L
Key 7	Type 6	Type M
Key 8	Type 7	Type N
Key 9	Type 8	Type O
Key 10	Type 9	Type P
Key 11	Type A	Type Q
Key 12	Type B	Type R
Key 13	Type C	Type S
Key 14	Type D	Type T
Key 15	Type E	Type U
Key 16	Type F	Type V

Assignment of Numbers

BKS-R3240A	BKS-R3242A /R3248A	Numeric Values
Key 1	Key 1	1
Key 2	Key 2	2
Key 3	Key 3	3
Key 4	Key 5	4
Key 5	Key 6	5
Key 9	Key 7	6
Key 10	Key 9	7
Key 11	Key 10	8
Key 12	Key 11	9
Key 13	Key 14	0

You may specify a number of 3 digits at maximum. There is no need to enter “0” to pad a one- or two-digit number.

If an invalid type number is entered, the error message “NotFound” is displayed in the PRESET/LEVEL display window when you press the TAKE key to register your input.

**In the BPS selection system:** A source or a destination, or both assigned to a key is(are) selected by pressing the key.

*The assignment can be made in the unit’s Store mode, from the control terminal, or using the BZR-2000 management software.*

### Notes

- When you make a key assignment in Store mode, it is necessary to enable the keys for assignment using the BZR-2000 (or through the setup with keys, page 23) in advance. If the keys are disabled (=default), no signal can be assigned.
- Before setting the unit to Store mode, it is necessary to switch the selection system to Type + Number or Keypad. Once the unit enters Store mode, signal assignment to all the keys is enabled.

Once signal assignment is completed, the keys operate depending the assignment, which is maintained even when the power is turned off.

**Source Only (lit in green):** The key corresponding to the source selected for the current destination lights in bright green. The operation of a source-select key varies depending on the specified input mode (Speed or Take):  
When a source-select key of Speed mode is pressed, the corresponding source is once displayed on the PRESET/LEVEL display window, but switching is not executed until you press the TAKE key. When you press a source-select key of Take mode, switching is executed immediately

*The input mode can be specified from the control terminal, or using the BZR-2000 management software.*

**Destination Only (lit in amber):** The key corresponding to the current destination lights in bright amber. When you press a destination select key, the current destination is changed to the destination of the pressed key.

**Source + Destination (lit in red):** If the assignment to a key and the status of the corresponding crosspoint match, the key lights in bright red. You can immediately switch the source to the destination assigned to the key regardless of the currently selected source and destination.

**In the keypad selection system:** Four alphanumerics each are assigned to ten of keys. Using these keys, you can select a signal with the description name specified on the primary station.

*For the key numbers, see the illustrations on page 23.*

Assignment of Alphanumerics

BKS-R3240A	BKS-R3242A /R3248A	Alphanumerics
Key 1	Key 1	A, _, #, 1
Key 2	Key 2	B, C, @, 2
Key 3	Key 3	D, E, F, 3
Key 4	Key 5	G, H, I, 4
Key 5	Key 6	J, K, L, 5
Key 9	Key 7	M, N, O, 6
Key 10	Key 9	P, R, S, 7
Key 11	Key 10	T, U, V, 8
Key 12	Key 11	W, X, /, 9
Key 13	Key 14	Y, Z, Q, 0

When a key is pressed, all the descriptions which contain any of the four characters assigned to the pressed key become candidates. (The upper case and lower case are not distinguished. A slash and a space are regarded as the same.)

When there are two or more candidates, the key numbers of the first and second pressed keys are displayed in the PRESET/LEVEL display window. When you press the third key, a description name that corresponds to the combination of the characters assigned to the pressed three keys. If there are two or more description names of the same combination of keys, the first candidate (in the increment order of the key numbers) is displayed with “+” at the top of the name.

If no description corresponds to the combination of the pressed keys, an error message “NotFound” is displayed on the PRESET/LEVEL display window, and all the three entries are cancelled. Retry from the beginning.

The maximum entries permitted are 4 characters. When you press the 5th key, the preceding 4 entries are cleared, and the 5th entry is regarded as the first one.

When the desired description is displayed, signal switching is enabled.

#### Tips

When there are two or more candidates, press and light the SHIFT key, then press the PROT or SCRL key, which will start flashing, permitting you to display the candidates in sequence.

#### Note

With the keypad selection system, selection may be more flexible than with the Type + Number selection system, but a precise system planing is necessary.

For example, the description name “1B” and that “A2” is of the same combination of keys, but only “1B” can be selected directly with the keypad selection system.

**In the direct-selection system:** Only keys to which numbers are assigned are used. Using these keys, you can directly select a signal by entering the connector number. The assignment of numbers is the same as with the Type + Number selection system.

*See the table on the previous page.*

You can enter a number of 4 digits at maximum (1 to 1024).

There is no need to enter “0” to pad a one- or two-digit number.

If an invalid number is entered, an error message, such as “NotFound,” is displayed in the PRESET/LEVEL display window.

#### ⑦ PROT (protect) key

When you press and light this key in red, the currently selected destination (output) is protected. When a destination is protected, switching of sources for the destination is disabled. When you use multiple control units in combination, the PROT keys on all control units which select the same destination light, and source switching is disabled.

When the currently selected destination is protected on another unit, the key lights in red. When you press the key, the ID of the station on which the protection for the destination has been set is displayed.

#### To release protection

There are two methods as follows:

- Press the PROT key on the unit for which protection has been set, and the key goes out.
- Release protection on the control terminal connected to the primary station.

## Locations and Functions of Parts

### Tips

By changing the PROTECT MODE setting with Menu Z, the operation when the PROT key is pressed can be changed.

For details, see “PROTECT MODE” (page 39) in “Menu Z: SET PANEL STATUS.”

### ⑧ SCRL (scroll) key

When this unit is in Level-Selection mode (the LEVEL key lit) or the display format is set to “LEVEL,” each press of the SCRL key changes the displayed page of the sources specified for the currently selected destination by three or six levels in sequence in the display windows.

The scrolling range can be set to either three or six levels.

*The scrolling range can be selected in the unit's Menu mode, from the control terminal, or using the BZR-2000 management software.*

*For details on the settings from the control terminal, see “SCROLL LEVELS” (page 44) in “Menu Y: SET DISPLAY MODE.”*

### ⑨ MENU/PRESET key

This key functions as the PRESET key when the SHIFT key is unlit, and as the MENU key when the SHIFT key is lit.

#### PRESET key

A set of source and destination can be stored (preset). If preset, the key lights in bright green.

When you press the key, the preset source and destination are displayed in the PRESET/LEVEL display window. When you press the TAKE key, the displayed source and destination are selected.

If you press the PRESET key when it is dark, an error message “NotFound” is displayed.

### Note

The preset data are cleared when the power is turned off.

*For details on the presetting operation, see “2. Preset assignment” (page 26).*

### MENU key

When you press this key with the SHIFT key lit, the key flashes, and the unit enters to Menu mode. The software version and the station ID of this unit are displayed in the PRESET/LEVEL display window. Menu mode permits you to set various operating parameters of this unit using some select keys. When

you press one of the keys, the STATUS display window changes to the setting item display, and the PRESET/LEVEL display window changes to the current set value display, enabling the menu settings.

*For details on Menu mode, see “Menu Operation” (page 28).*

### ② STORE/SOUR (store/source) key

This key functions as the SOUR key when the SHIFT key is unlit, and as the STORE key when the SHIFT key is lit.

#### SOUR key

The key lights when the unit is in Source-Selection mode (default mode). From other mode, Source-Selection mode can be resumed by pressing this key when the SHIFT key is unlit,

#### STORE key

When you press this key when the SHIFT key is lit, the key flashes in bright green, and the unit enters Store mode. Store mode permits you to assign (register/clear) sources/destinations, or preset a set of source/destination, and assign levels to be controlled.

### ⑪ LOCK/DEST (lock/destination) key

This key functions as the DEST key when the SHIFT key is unlit, and as the LOCK key when the SHIFT key is lit.

#### DEST key

When you press this key when the SHIFT key is unlit, the key lights and the unit enters Destination-Setting mode. Destination-Setting mode permits you to set the destinations to be controlled from this unit and the select keys.

When a destination setting is completed, the unit automatically returns to Source-Selection mode.

#### LOCK key


When you press this key when the SHIFT key is lit, the key flashes and the unit enters Lock mode.

In Lock mode, the keys on the front panel other than this key and SHIFT key are disabled. This prevents switching by touching the select keys accidentally.

To exit Lock mode, press and light the SHIFT key, then press this key again.

## 12 SHIFT key

Press and light this key in the following cases:

- When using the function indicated above the vertical line of a key that has two functions separated with a vertical line, such as  (i.e. menu function in the case of the MENU/PRESET key.)
- When switching type names from 0 to F to type G to V (0 to F can be selected with the SHIFT key unlit, and G to V can be selected with the SHIFT key lit.)

## 13 CLEAR key

When you press this key during data entry, the entered data are cleared. Another press of this key restores the latest valid setting before you started data entry.

When you press the key in other operations, the source displayed in the PRESET/LEVEL display window returns to the last entered source. Another press of this key clears the display.

## Functions of the Parts on the Rear Panel

### 14 GPIO IN connector (D-sub 25-pin)

### 15 GPIO OUT connector (D-sub 25-pin)

For general-purpose input/output. Both the IN and OUT connector can support eight independent interface lines, as necessary.

*For the settings, see "Menu X: SET GPI I/O" (page 45).*

### 16 ~AC IN (AC power input) connector

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

### 17 (ground) connector

For signal grounding

### 18 REMOTE 1 connector (BNC type)

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

### 19 RS-232C connector (D-sub 9-pin)

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

### 20 REMOTE 2 connector (D-sub 9-pin)

For RS-422A remote control.

## 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, or using the BZR-2000 management software.

*For the settings using the BZR-2000, refer to the operation manual of the BZR-2000.*

- 1 Set the type names of sources, such as VTR, FLM, AUX, etc.

Up to 32 type names may be set.

- 2 Set the source names using a type name and number, such as FLM34.

The list of registered source names is called the source table.

- 3 Set the destination names using a type name and number, such as VTR089.

The list of registered destination names is called the destination table.

- 4 Set the level to be controlled for each destination.

- 5 Set the station number of this unit (see the next paragraph).

- 6 Set the specified station to an active unit.

### Note

If the station is not activated even when it is connected to an active S-BUS data link, switching of crosspoints cannot be made, while destination selection and crosspoint display are enabled.

- 7 Setup the global phantom, etc. as required.

## Preparations for the BKS-R3240A/R3242A/R3248A

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 keys 1 to 8. The station number is obtained by adding the binary place values of the keys that are lit.

Key No.	Input value	
	Unlit	Lit
Key 1	0	1
Key 2	0	2
Key 3	0	4
Key 4	0	8
Key 5	0	16
Key 6	0	32
Key 7	0	64
Key 8	0	128

### Example

If keys 1, 2 and 4 are lit, the station number is 11 ( $=1+2+8$ ).

*For the key numbers, see the illustrations on page 23.*

### Note

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

- 1 Press and hold the PROT key and LOCK key together for about five seconds to restart the unit (software reset).
- 2 During restarting (key-illumination test), press and hold the source/destination-select keys 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 keys so that the desired station number is obtained.
- 4** Press the TAKE key.

The station number is registered.

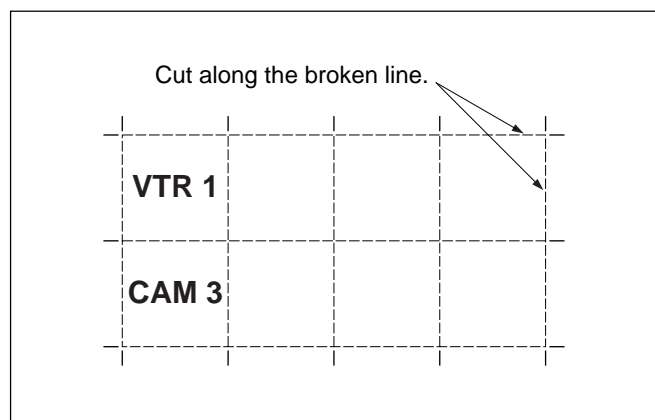
The registered station number is maintained even when the power is turned off.

### 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 keys. Then you can see at a glance what functions you have assigned to each key.

### Making a key label

- 1** Copy the key label guide shown on the next page onto a sheet of OHP paper.
- 2** Write the name on the copied paper.
- 3** Cut the paper to the key size as shown below.



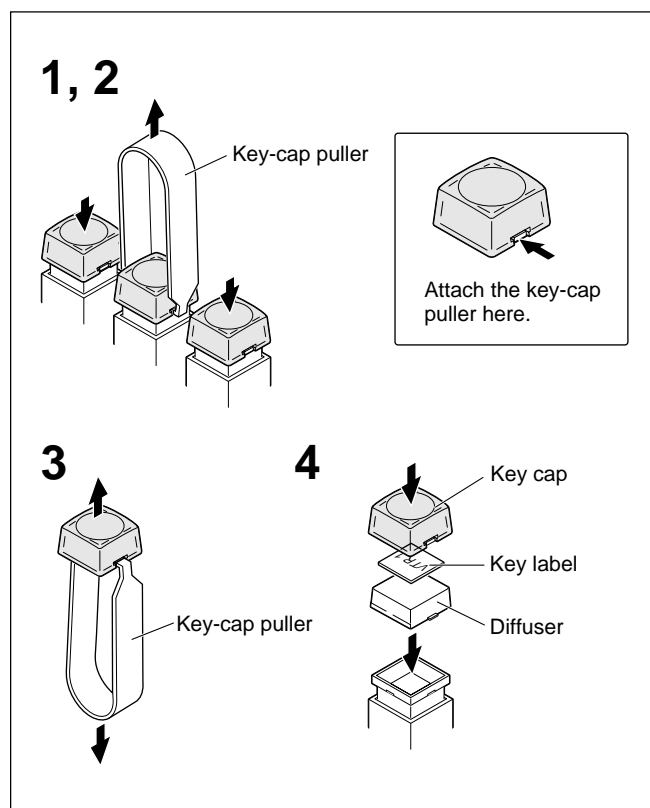
### Attaching a key label

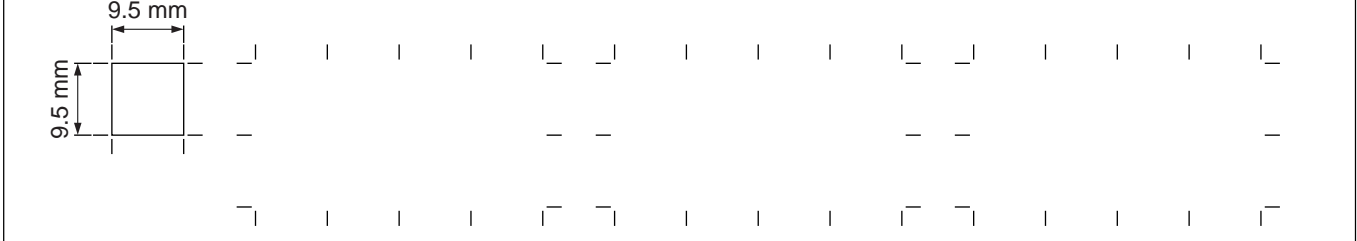
Attach the key labels to the keys with the following procedure.

*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 keys 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 key and replace them as they were.

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





## Making the Settings with Keys (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 this unit alone.

Turn the power on while holding down two or more select keys, or press the keys during restarting (key-illumination test) after a software reset.

### Tips

An operation by turning the power on while holding down some keys and an operation by pressing the keys during restarting triggered by pressing the PROT and LOCK key (software reset) lead to the same result. You may perform setup by either method.

### Numbers of the source/destination-select keys

BKS-R3240A

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

BKS-R3242A

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

BKS-R3248A

1	2	3	4	17	18	19	20	33	34	35	36	49	50	51	52
5	6	7	8	21	22	23	24	37	38	39	40	53	54	55	56
9	10	11	12	25	26	27	28	41	42	43	44	57	58	59	60
13	14	15	16	29	30	31	32	45	46	47	48	61	62	63	64

## Initialization

### To initialize the settings

While holding down keys 1 and 2, turn the power on. The unit is set to the following factory-set conditions:

- 1) Type + Number selection system
- 2) BKS-R3240A/BKS-R3242A: Keys 1 through 16 correspond to sources 1 through 16.  
BKS-R3248A: Keys 1 through 32 correspond to sources 1 through 32, and keys 33 through 64 correspond to destinations 1 through 32.
- 3) Single-Use (Standalone) mode
- 4) Single-Level mode

## Selecting the operation modes

### To enter Station Number Setting mode

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

The station number can be set using keys 1 through 8.

### To set the level-select keys to Multi-Level mode

BKS-R3240A/R3242A: While holding down keys 1 and 6, turn the power on.

BKS-R3248A: While holding down keys 1 and 18, turn the power on.

Level selection will be performed in Multi-Level mode.

### To set the level-select keys to Single-Level mode

BKS-R3240A/R3242A: While holding down keys 1 and 7, turn the power on.

BKS-R3248A: While holding down keys 1 and 19, turn the power on.

Level selection will be performed in Single-Level mode.

### To set to Single-Use mode (when this unit is to be used alone)

BKS-R3240A/R3242A: While holding down keys 5 and 8, turn the power on.

BKS-R3248A: While holding down keys 17 and 20, turn the power on.

## Preparations

---

### To specify the BKS-R3240A/R3242A/R3248A as the mother unit

BKS-R3240A/R3242A: While holding down keys 6 and 7, turn the power on.

BKS-R3248A: While holding down keys 18 and 19, turn the power on.

The unit then functions as the mother unit in combination use with other control units.

---

### Setting the selection system

#### To select the Type + Number selection system

BKS-R3240A/R3242A: While holding down keys 6, 7 and 8, turn the power on.

BKS-R3248A: While holding down keys 18, 19 and 20, turn the power on.

#### To select the BPS selection system

BKS-R3240A/R3242A: While holding down keys 7 and 8, turn the power on.

BKS-R3248A: While holding down keys 19 and 20, turn the power on.

#### To select the keypad selection system

BKS-R3240A/R3242A: While holding down keys 9 and 12, turn the power on.

BKS-R3248A: While holding down keys 33 and 36, turn the power on.

---

### Enabling/disabling BPS assignment

#### To enable BPS assignment to all the select keys

BKS-R3240A/R3242A: While holding down keys 15 and 16, turn the power on.

BKS-R3248A: While holding down keys 51 and 52, turn the power on.

#### To disable BPS assignment to all the select keys

BKS-R3240A/R3242A: While holding down keys 14 and 16, turn the power on.

BKS-R3248A: While holding down keys 50 and 52, turn the power on.

---

### List of setup operations

Settings	Keys to be pressed ( ): BKS-R3248A
To initialize the settings	1, 2
To enter Station Number Setting mode	1, 2, 3, 4
To set the level select keys to Multi-Level mode	1, 6 (1, 18)
To set the level select keys to Single-Level mode	1, 7 (1, 19)
To set Single-Use mode	5, 8 (17, 20)
To specify the BKS-R3240A/R3242A/R3248A as the mother unit	6, 7 (18, 19)
To select the Type + Number selection system	6, 7, 8 (18, 19, 20)
To select the BPS selection system	7, 8 (19, 20)
To select the keypad selection system	9, 12 (33, 36)
To enable BPS assignment to all the select keys	15, 16 (51, 52)
To disable BPS assignment to all the select keys	14, 16 (50, 52)

First select the destination, then the source. The level selection depends on the setting at the control terminal. Before starting operations, turn on this unit and other system equipment, and check that the PROT key is not lit.

## Selecting the Destination

- 1 Press the DEST key to set the unit to Destination-Setting mode.

With the BPS selection system, you can select a destination even in Source-Selection mode, and this step can be omitted.

### Note

If destination selection has been disabled, the destination cannot be changed.

See “DEST SELECTION” (page 41) of “Menu Z: SET PANEL STATUS.”

- 2 Select the destination according to the specified selection system.

### With the BPS selection system

Press a destination-select key to which the desired destination has been assigned.

### With the Type + Number selection system

Using the select keys to which the type number and numeric values are assigned, specify the type name and number of the desired destination.

### With the keypad selection system

Using the select keys to which alphanumerics are assigned, specify the description name of the desired destination.

### With the direct selection system

Using the select keys to which the numerics are assigned, specify the connector number.

The selected destination is displayed in the PRESET/LEVEL display window.

- 3 Press the TAKE key.

The destination displayed in the PRESET/LEVEL display window is a valid one, the destination change is performed, and the destination is displayed also in the STATUS display window.

If the selected destination is an invalid one, an error message, such as “NotFound,” is displayed in the PRESET/LEVEL display window.

## Selecting the Source

- 1 Check that the SOUR key is lit, indicating that the unit is in Source-Selection mode.  
If not, press the SOUR key to set the unit in Source-Selection mode.

With the BPS selection system, you can select the source even in Destination-Setting mode, and this step can be omitted.

- 2 Select the source according to the specified selection system.

### With the BPS selection system

Press a source select key to which the desired source has been assigned.

### With the Type + Number selection system

Using the select keys to which the type number and numeric values are assigned, specify the type name and number of the desired source.

### With the keypad selection system

Using the select keys to which alphanumerics are assigned, specify the description name of the desired source.

### With the direct selection system

Using the select keys to which the numerics are assigned, specify the connector number.

The selected source is displayed in the PRESET/LEVEL display window.

- 3 Press the TAKE key.

### Note

If the input mode has been set to TAKE with the BPS selection system, selection is executed when you press the select key, and this step is not required.

If your selection is not valid, an error message, such as “NotFound,” is displayed in the PRESET/LEVEL display window.

## Assignment

The STORE key enables three kinds of assignment.

### 1. BPS assignment

When using the unit with the BPS selection system, assign a source and/or a destination to each select key.

#### Note

Assignment is disabled at the factory. First enable it by a setup operation with keys or using the BZR-2000.

*For the setup operation with keys, see “Enabling/disabling BPS assignment” on page 24.*

#### To assign

- 1 Select a source or destination with a selection system other than the BPS selection system.

#### Note

Do not press the TAKE key in this step.

- 2 Press and light the SHIFT key.

The STORE/SOUR key functions as the STORE key.

- 3 Press the STORE key.

The unit enters Store mode, and the STORE key flashes in bright green.

- 4 Press the select key to which the source or destination selected in step 1 is to be assigned.

#### Notes

- You can perform assignment for all the select keys, including ones used to select a source or destination in step 1.
- To assign both a source and a destination to a single key, repeat steps 1 to 4 for that key.
- Using the BZR-2000 management software, you can limit the assignment.

#### To cancel the assignment

- 1 Press and light the SHIFT key, then press the STORE/SOUR key.
- 2 Press the CLEAR key.
- 3 Press the select key for which assignment is to be canceled.

#### Note

If both a source and a destination have been assigned, both are canceled simultaneously.

### 2. Preset assignment

A set of source and destination can be preset to the MENU/PRESET key.

#### Note

The preset is cleared when the power is turned off.

#### To assign

- 1 Select a source in Source-Selection mode.

#### Note

Do not press the TAKE key in this step.

- 2 Press the DEST key to set the unit to Destination-Setting mode, then select a destination.

#### Note

Do not press the TAKE key in this step.

The source and destination displayed in the PRESET/LEVEL display window at this stage are targets of preset.

- 3 Press and light the SHIFT key.

The STORE/SOUR key functions as the STORE key.

- 4 Press the STORE key.

The unit enters Store mode, and the STORE key flashes in bright green.

---

## 5 Press the MENU/PRESET key.

The source and destination displayed in the PRESET/LEVEL display window are stored in memory, and the MENU/PRESET key lights.

### To clear the preset source/destination

- 1 Press the CLEAR key to clear the PRESET/LEVEL display window.
- 2 Press and light the SHIFT key, then press the STORE key.

The STORE key flashes in bright green.

## 3 Press the MENU/PRESET key.

The preset data are cleared, and the MENU/PRESET key goes dark.

---

## 3. Level assignment

Normally, the level depends on the setting on the primary station, the following level assignment may permits the unit to be used exclusively for audio switching.

### To register the levels

- 1 Press the LEVEL key to set the unit to Level-Selection mode.
- 2 Using the select keys 1 to 16<sup>1)</sup>, select the desired levels.
- 3 Press and light the SHIFT key, then press the STORE/SOUR key.

## Breakaway

Different sources can be used with multiple levels.

*For details on the , see “Breakaway Function” (page 9).*

---

### Selecting the Breakaway

- 1 Press the LEVEL key.
- 2 Using the select keys 1 to 16<sup>1)</sup>, select the desired breakaway levels.
- 3 Press the TAKE key.
- 4 Select the source.

---

### Canceling the Breakaway

- 1 Press the LEVEL key to set the unit to Level-Selection mode.
- 2 Press the CLEAR key.
- 3 Press and light the SHIFT key, then press the STORE/SOUR key.

---

1) With the BKS-R3248A, use the select keys 1 to 8 and 17 to 24.

## Menu Operation

When you press the MENU/PRESET key with the SHIFT key lit, the MENU/PRESET key starts flashing, and the unit enters Menu mode.

When the unit enters menu mode, the software version and the station ID of this unit are displayed in the PRESET/LEVEL display window, and seven among the select keys light in green.

Using these select keys in menu mode, the following operation parameters can be set.

Parameter	Selections
Entry Mode (Selection system)	BPS Type+Number Keypad Direct
Status Display	Type+Number Description 4-character DVS 4-character description 4-character router Direct Level
Preset Display	Type+Number Description 4-character DVS 4-character description 4-character router Direct Level
Protect Mode	Normal Flexible On Air Flexible & On Air
Level Scroll	3 levels 6 levels
Chop Speed	High Medium Low
Serial Com.	Off PCNS Cart+ VTR control

### Note

Menu mode is automatically canceled after approx. 60 seconds.

*For details on the parameters, see Menu Y and Menu Z in the next section “Menu Settings.”*

# Menu Settings

You can set various operational parameters of this unit using the secondary station menu on the control terminal connected to the primary station.

The following settings are described on the assumption that the necessary settings, such as name setting, on the primary station are completed.

*For the settings of the primary station, refer to the instructions on the primary station.*

## Descriptions in this manual

The key operations on the control terminal are described as follows in this manual:

- (1) A box indicates a key on the keyboard for the control terminal (ex. **Ctrl**, **Enter**).
- (2) Keys **0** to **9** are generically called “numeric keys.”
- (3) Keys **A** to **Z** are generically called “alphabetic keys.”
- (4) Keys **↑**, **↓**, **←**, and **→** are generically called “cursor keys.”
- (5) A simultaneous press of two keys is indicated by connecting the names of keys with a hyphen (ex. **Ctrl-X**).

## Key functions in settings

Character keys: To insert the corresponding characters to the cursor position.

**BS**: To delete a character in front of the cursor

**DEL**: To delete a character at the cursor position

**Ctrl-F**: To cancel an entered character string and restore the previous condition.

**Enter** (or **Return** on some keyboards.): To execute the entered command or register the entered data

## Calling the Setting Displays

The settings are made on the corresponding setting displays.

To call a setting display, proceed as follows.

If this unit is connected to the S-BUS under the BZR-IF310 or equivalent, first call the main menu of that device, then follow the same procedure.

- 1 From the system status display (display after power-on), press **Ctrl-X** to display the primary station menu.

- 2 Press **R** to select “R: CALL SECONDARY STATION” from the primary station menu.

You can also select it by moving the cursor to it with the cursor keys and pressing **Enter**.

- 3 Enter the station ID (in decimal) of this unit at the prompt “CALL STATION NUMBER?,” then press **Enter**.

The selection display of the secondary-station menu appears.

### Setup menu select display

SONY ROUTING SYSTEM SETUP MENU	BKS-R3248 V1.01	STATION NUMBER 6
MODIFICATION COMMAND		
H: SET PHANTOM TABLE		
N: SET PANEL TABLE		
O: SET AVAILABLE SOURCE/DESTINATION		
R: SET ROUTE		
L: COPY TABLE DATA FROM		
X: SET GPI I/O		
Y: SET DISPLAY MODES		
Z: SET PANEL STATUS		
S: DISPLAY DESCRIPTION NAME		
Ctrl-D: RETURN		

The menu item “S: DISPLAY DESCRIPTION NAME” is displayed only when the primary-station menu item “J: NAME STYLE” has been set to DESCRIP.NAME (Description mode).

Pressing **Ctrl-D** resumes the primary-station menu display.

## Menu Settings

- 4** Enter the letter (H, N, O, R, L, X, Y, or Z) of the menu item to be set.

The corresponding setting display appears.

Pressing **[Ctrl]-[E]** on each setting display restores the selection display of Setup menu.

### Display and Entry Method for Names

The display mode for names of sources and destinations automatically switches depending on whether the primary-station menu item “J: NAME STYLE” is set to Type+Num or DESCRIP.NAME. The correspondence between the Type+Num name and the description name can be confirmed using “S: DISPLAY DESCRIPTION NAME.”

#### In Type+Num (type and number) mode

- The name of a source or destination is displayed with a name composed of a type name and a number.
- To set or change the name, select a type name from the list in the lower area of the display, then enter a number using the numeric keys.

#### In DESCRIP.NAME (description name) mode

- The name of a source or destination is displayed with a description name.
- Setting or changing the name can be performed in the same manner as in Type + Num mode (default). Pressing **[Ctrl]-[N]** enables you to directly enter the description name using the alphabetic and numeric keys.

When not specially mentioned, the setting displays in Type + Num mode are shown as examples in this manual.

#### Note

To use the descriptions, the description data must be sent to the unit from the control terminal in advance. The sent description data can be checked using menu item S.

## Menu H: SET PHANTOM TABLE

### Purposes

Menu item H enables you to specify a phantom function to switch multiple crosspoints at a time using a source-select key on the remote control unit.

### Types and functions of phantom

This control unit can use three phantom functions; “global phantom” registered in the primary station, “local phantom” registered in each control unit, and “destination-offset local phantom” to use a substitute for destination selection.

#### Global phantom

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

#### Note

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

#### Local phantom

The local phantom allows you to switch multiple crosspoints by pressing a single key, or to switch crosspoints independently from destinations controlled on the unit. Up to 80 crosspoints can be set on the unit.

#### Destination-offset local phantom

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

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

*Examples of use of this phantom function are given on page 33.*



# Menu Settings

## To return to the selection display of Setup menu

Press **[Ctrl]-[E]**.

## To return to the primary-station menu

Press **[Ctrl]-[D]**.

## Executing a phantom

When a phantom is executed from a remote control panel, operation is performed according to the phantom table set on this menu.

You can specify a certain level for switching, or turn each level ON(1)/OFF(0) independently.

When all the levels are set to “0,” the level value will follow the level setting for the destination name set in the phantom table. (This setting is made with the primary-station menu item “E: SET LEVEL TABLE.”)

The display windows show the following:

Phantom name: Output connector name < Input connector name - Level 1-8

If there is a protected destination in the phantom, the operation may vary depending on the setting of “PHANTOM PROTECT” (page 39) of “Menu Z: SET PANEL STATUS.”

**When set to PART PROT:** Switching of the protected destination in the phantom data is not executed. The concept of the protect function is directly applied to the phantom switching.

**When set to FULL PROT:** None of the crosspoints are switched if any destination in the phantom is protected.

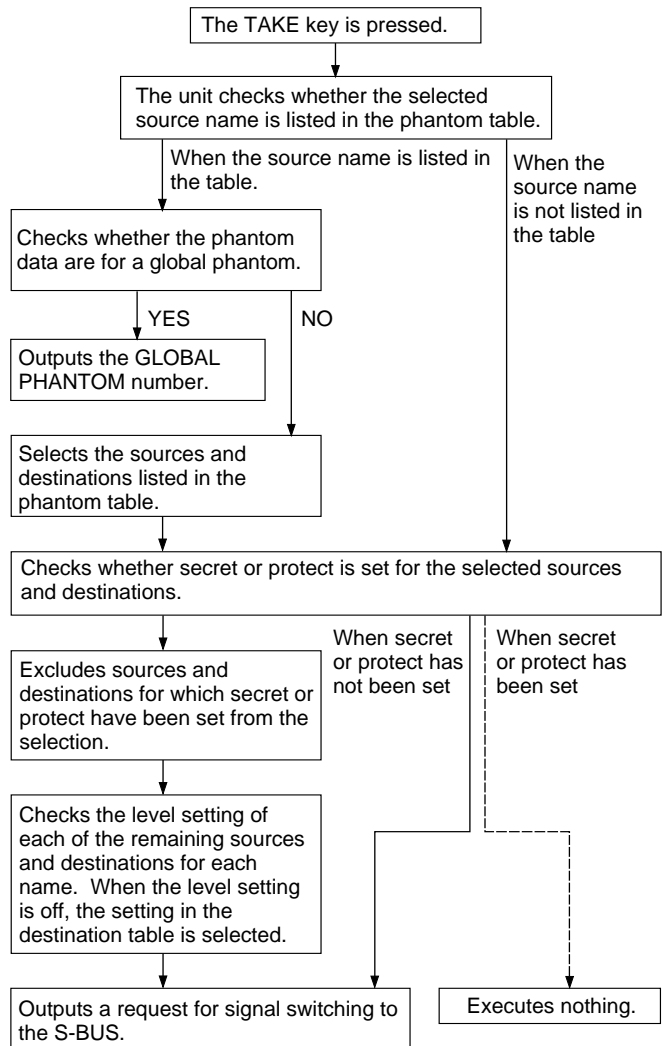
This mode regards the phantom as a single switching operation and does not execute if any part cannot be switched.

**When set to BUTTON LINK:** When the PROT key on the unit is lit, none of the crosspoints are switched.

This mode regards the protect function as panel protection, and no switching can be executed from the panel if its PROT key is lit.

## Processing when the TAKE key is pressed

When you press the TAKE key in Source-Selection mode, this unit carries out the following processing:



## Examples of a destination offset local phantom

When there are multiple destination keys, or when you want always select a specific source in the same pattern, even the destination is changed from an X-Y control panel.

### Example 1

To assign a source (audio source AUD007 for example) of a level to multiple sources of another level (video source IN001 and IN004 for example)

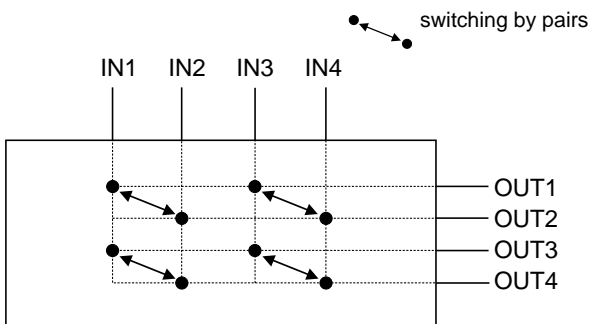
Source name for each level			Setting of destination-offset local phantom	
Source name	LEVEL1	LEVEL2		
IN001	IN001	AUD007	IN001: DST+000<IN001	-10000000
			IN001: DST+000<AUD007-01000000	
IN004	IN004	AUD007	IN004: DST+000<IN004	-10000000
			IN004: DST+000<AUD007-01000000	

### Example 2

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

#### Setting of Destination Offset Phantom

IN001: DST+000<IN001-10000000  
 IN001: DST+001<IN002-10000000  
 IN003: DST+000<IN003-10000000  
 IN003: DST+001<IN004-10000000



## Menu N: SET PANEL TABLE

### Purposes

Menu item N enables you to set which source or destination is to be selected with which source/destination select key.

For a key to be used for phantom, enter the phantom name on the source side.

You can also assign the monitor function, VTR control function, or level select function on the source side.

#### Note

The functions other than select keys can be used only in Source mode.

### Calling the setting display of menu item N

Press **[N]** on the Setup menu selection display to select menu item N.

The setting display of menu item N appears.

#### Setting display (example)

SONY ROUTING SYSTEM SETUP MENU				BKS-R3248 V1.01	STATION NUMBER 6
SET PANEL TABLE(SOURCE)				CONTROL DESTINATION = DST001	
01 KEY=SRC001	T	02 KEY=SRC002	T	03 KEY=SRC003	T
05 KEY=SRC009	T	06 KEY=SRC010	T	07 KEY=SRC011	T
09 KEY=SRC017	T	10 KEY=SRC018	T	11 KEY=SRC019	T
13 KEY=SRC025	S	14 KEY=SRC026	S	15 KEY=SRC027	S
17 KEY=REC	T	18 KEY=PLAY	T	19 KEY=REW	T
21 KEY=LUL1	T	22 KEY=L2-8	T	23 KEY=MONI	T
25 KEY=.....	T	26 KEY=.....	T	27 KEY=.....	T
29 KEY=.....	T	30 KEY=.....	T	31 KEY=.....	T
SET PANEL TABLE(DESTINATION)					
01 KEY=.....	02 KEY=.....	03 KEY=.....	04 KEY=.....	05 KEY=.....	06 KEY=.....
09 KEY=.....	10 KEY=.....	11 KEY=.....	12 KEY=.....	13 KEY=.....	14 KEY=.....
17 KEY=.....	18 KEY=.....	19 KEY=.....	20 KEY=.....	21 KEY=.....	22 KEY=.....
25 KEY=DST001	26 KEY=DST002	27 KEY=DST003	28 KEY=DST004	29 KEY=DST005	30 KEY=DST006
31 KEY=DST007	32 KEY=DST008	0=SRC	1=DST	2=...	3=...
4=...	5=...	6=...	7=...	8=...	9=...
A=...	B=...	C=...	D=...	E=...	F=...
G=...	H=...	I=...	J=...	K=...	L=...
M=...	N=...	O=...	P=...	Q=...	R=...
S=...	T=...	U=...	V=...	W=...	X=...
Ctrl-E:MENU Ctrl-D:RETURN Ctrl-N:DESCRIP.NAME T:TAKE M:MONI U:VTR E:LEVEL					

The subsequent operation depends on the function to be set.

#### To return to the selection display of Setup menu

Press **[Ctrl]-[E]**.

#### To return to the primary-station menu

Press **[Ctrl]-[D]**.

# Menu Settings

---

## Settings for select keys (assigning sources/destinations to be selected)

For a key to be used as a select key, assign a source and/or a destination to be selected when you press the key.

To use a key as a phantom, set the phantom name on the source side.

**1** Using the cursor keys, select the number of the key to be set as a select key.

**2** Press **[Enter]**.

The unit enters Name Input mode.

If you press **[Enter]** again before entering a name, the current setting is erased.

Pressing **[Ctrl]-[F]** cancels an entry and restores the original function of the key.

- 3** a) When the setting of primary-station menu item “J: NAME STYLE” is “Type+Num”:  
Enter the source name and destination name, and source name with the type name (select one from the list in the lower area of the display using **[0]** to **[V]**) and a number in this sequence.
- b) When the setting of primary-station menu “J: NAME STYLE” is “DESCRIP.NAME”:  
Each time you press **[Ctrl]-[N]**, Description Input mode and Type+Number Input mode is switched.
- Description Input mode:  
Directly enter the first 7 characters of the description name using the alphabetic keys and numeric keys.
  - Type+Number Input mode:  
Enter in the same manner as **a)** above.

**4** Press **[Enter]**.

The entered name is registered.

### Note

When a description name has been specified for the connector, priority is given to the description name for display even if you enter a Type+Num name.

**5** Press **[S]** for Speed mode or **[T]** for Take mode, then **[Enter]**.  
If no change is necessary, press **[Enter]** only.

In Speed mode, switching is not executed when the source-select key is pressed. Instead, the selected source is once displayed in the PRESET/LEVEL display window. You can execute switching by pressing the TAKE key after confirming the displayed source name.

In Take mode, switching is executed immediately when you press the source-select key.

### Notes

- With the cursor in the CONTROL DESTINATION column, set the destination to be used as the default when the power is turned on. To use this unit as a single-destination panel, enter the name of the destination to be used in this column.
- To specify that the key specified for a phantom it to light when you execute the phantom, enter the same name on the source side as that of the source selected for the destination set in that phantom that corresponds to a destination that can be controlled from this unit.

---

## Setting for a monitor key

A key to turn on/off the monitor function can be specified.

### What's the monitor function?

This is a function to observe the status of a destination specified with “MONITOR DESTINATION” of menu Z, and always select the same source as that for the destination.

*For the method to specify the destination, see “MONITOR DESTINATION” (page 42) of “Menu Z: SET PANEL STATUS.”*

### Setting procedure

**1** Using the cursor keys, select the number of the key to be set as the monitor key.

**2** Press **[M]**.

“MONI” is displayed, and the key selected in step **1** is specified as the monitor key.

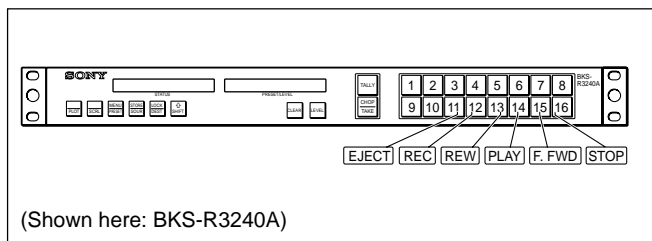
## Settings for the VTR control keys

### What are the VTR control functions?

You can control a VTR connected to this unit with as RS-422 interface via an RS-422 routing switcher when the VTR is selected for a crosspoint.

Assign tape-transport functions (EJECT, STOP, PLAY, REW, F FWD, REC) to the desired source/destination-select keys.

### Example:



### Note

To activate the VTR control keys you specify, set “SERIAL COM” of menu Z to “VTR.”

See “SERIAL COM” (page 43) of “Menu Z: SET PANEL STATUS.”

### Setting procedure

**1** Using the cursor keys, select the number of a key to be set for a VTR control key.

**2** Press **[V]**.

The unit enters VTR Control Setting mode, and the type name list in the lower area of the display changes to the VTR control function list.

### Example

0=EJECT	1=REC	2=REW	3=PLAY	4=F FWD	5=STOP	6=...	7=...
8=...	9=...	A=...	B=...	C=...	D=...	E=...	F=...
G=...	H=...	I=...	J=...	K=...	L=...	M=...	N=...
O=...	P=...	Q=...	R=...	S=...	T=...	U=...	V=...

**3** Using **[0]** to **[5]**, select a VTR control function to be assigned.

The function selected in step **3** is assigned for the key selected in step **1**.

## Settings for the level control keys

### What's the level control function?

It is the same function as that of the LEVEL key. Use the function when you require keys exclusive for level selection, which enables you to quickly switch the source of different levels from a single panel.

### Setting procedure

**1** Using the cursor keys, select the number of a key to be set for a level control key.

**2** Press **[E]**.

The unit enters Level-Control Setting mode, and the type name list in the lower area of the display changes to the level list.

### Example

0=LUL1	1=LUL2	2=LUL3	3=LUL4	4=LUL5	5=LUL6	6=LUL7	7=LUL8	8=L1-2
9=L1-3	A=L1-4	B=L1-5	C=L1-6	D=L1-7	E=L1-8	F=L2-3	G=L2-4	H=L2-5
I=L2-6	J=L2-7	K=L2-8	L=L3-4	M=L3-5	N=L3-6	O=L3-7	P=L3-8	Q=L4-5
R=L4-6	S=L4-7	T=L4-8	U=L5-6	V=L5-7	W=L5-8	X=L6-7	Y=L6-8	Z=L7-8

**3** Using **[0]** to **[Z]**, select a level (levels) to be assigned.

The control function for the level(s) selected in step **3** is assigned for the key selected in step **1**. Keys **[0]** to **[7]** select a single level, and **[8]** to **[Z]** select multiple levels as a range.

### Note

The operation of level-control keys vary depending on whether “LEVEL MODE” of menu Z (page 41) is set to “SINGLE” or “MULTI.”

**When set to “SINGLE” (Single-Level mode):** Only the last pressed key lights in green, and the level(s) assigned to the key can be controlled.

**When set to “MULTI” (Multiple-Level mode):** You can controls multiple levels in combination. Each time you press a level-control key it cyclically turns on and off independently from the other keys. The levels assigned to all the lit keys can be controlled. The key for the level selected on the primary station lights in amber even when its control is not enabled on this unit.

To restore the default level, press the CLEAR key.

## Menu O: SET AVAILABLE SOURCE/DESTINATION

### Purposes

Menu item O enables you to set the sources and destinations to be selected from this unit.

By deactivating unused connectors panel by panel, you can use each panel exclusively for their selected specific signals, eliminating unnecessary switching. In a search operation, deactivated signals are skipped, preventing any undesired signals from being selected erroneously.

If you try to select a signal you deactivated with this menu, an error message “NotAvail” is displayed, and the signal cannot be selected.

All the connectors are activated at the factory.

When you want to use the same settings for multiple panels, press **[L]** on the display of menu O and call menu L to duplicate the menu O settings only.

### Setting procedure

- 1 Press **[O]** on the Setup menu selection display to select menu item O.

The setting display of menu item O appears. Pressing **[Ctrl]-[F]** toggles the Destination selection display and Source selection display.

#### Setting display (example 1): Destination selection

SONY ROUTING SYSTEM SETUP MENU		BKS-R3248 V1.01	STATION NUMBER 45
SELECT DESTINATION NAME			
0001=OUT001	0002=OUT002	0003=OUT003	0004=OUT004
0005=OUT005	0006=OUT006	0007=OUT007	0008=OUT008
0009=OUT009	0010=OUT010	0011=OUT011	0012=OUT012
0013=OUT013	0014=OUT014	0015=OUT015	0016=OUT016
0017=OUT017	0018=OUT018	0019=OUT019	0020=OUT020
0021=OUT021	0022=OUT022	0023=OUT023	0024=OUT024
0025=OUT025	0026=OUT026	0027=OUT027	0028=OUT028
0029=OUT029	0030=OUT030	0031=OUT031	0032=OUT032
0033=OUT033	0034=OUT034	0035=OUT035	0036=OUT036
0037=OUT037	0038=OUT038	0039=OUT039	0040=OUT040
0041=OUT041	0042=OUT042	0043=OUT043	0044=OUT044
0045=OUT045	0046=OUT046	0047=OUT047	0048=OUT048
0049=OUT049	0050=OUT050	0051=OUT051	0052=OUT052
0053=OUT053	0054=OUT054	0055=OUT055	0056=OUT056
0057=OUT057	0058=OUT058	0059=OUT059	0060=OUT060
0061=OUT061	0062=OUT062	0063=OUT063	0064=OUT064

Ctrl-E:MENU Ctrl-D:RETURN Ctrl-F:SELECT SOURCE

#### Setting display (example 2): Source selection

SONY ROUTING SYSTEM SETUP MENU		BKS-R3248 V1.01	STATION NUMBER 45
SELECT SOURCE NAME			
0001=IN001	0002=IN002	0003=IN003	0004=IN004
0005=IN005	0006=IN006	0007=IN007	0008=IN008
0009=IN009	0010=IN010	0011=IN011	0012=IN012
0013=IN013	0014=IN014	0015=IN015	0016=IN016
0017=IN017	0018=IN018	0019=IN019	0020=IN020
0021=IN021	0022=IN022	0023=IN023	0024=IN024
0025=IN025	0026=IN026	0027=IN027	0028=IN028
0029=IN029	0030=IN030	0031=IN031	0032=IN032
0033=IN033	0034=IN034	0035=IN035	0036=IN036
0037=IN037	0038=IN038	0039=IN039	0040=IN040
0041=IN041	0042=IN042	0043=IN043	0044=IN044
0045=IN045	0046=IN046	0047=IN047	0048=IN048
0049=IN049	0050=IN050	0051=IN051	0052=IN052
0053=IN053	0054=IN054	0055=IN055	0056=IN056
0057=IN057	0058=IN058	0059=IN059	0060=IN060
0061=IN061	0062=IN062	0063=IN063	0064=IN064

Ctrl-E:MENU Ctrl-D:RETURN Ctrl-F:SELECT DESTINATION

- 2 Using the cursor keys, select the number of the connector to be set.

Pressing **[↓]** at the lower-right end switches to the next connector list. The connector numbers range from 001 to 1024.

To return to the previous list, press **[↑]** at the upper-left end.

- 3 Press **[Enter]**.

The active/inactive status of the source or destination of the connector selected in step 2 changes.

#### To return to the selection display of Setup menu

Press **[Ctrl]-[E]**.

#### To return to the primary-station menu

Press **[Ctrl]-[D]**.

## Menu R: SET ROUTE

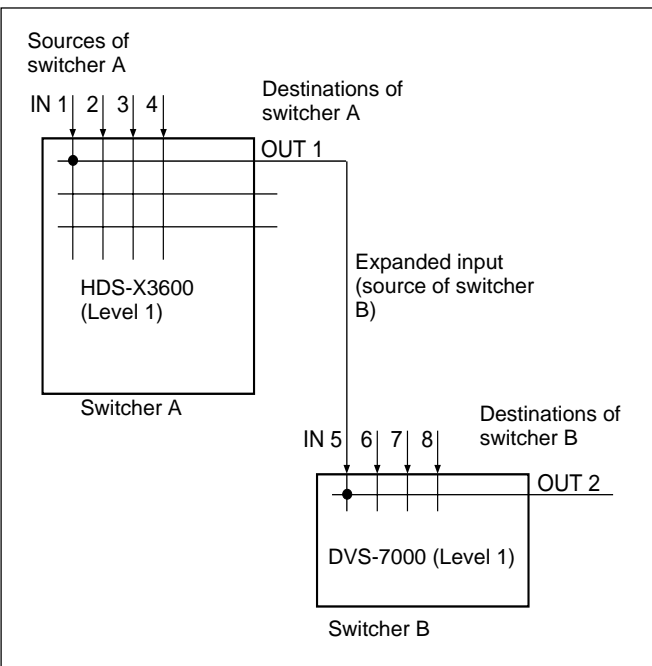
## Purposes

Menu item R enables you to set the route function.

## What's the routing function?

If you cannot expand the number of inputs by cascading, you may connect sources of a switcher to destinations of another switcher to achieve expansion. In such condition, you may set a function to display the source selected for the destination connected to an extended input when you select an input to the extend device, and support the required switching operation. Such a function that enables input expansion with a device without cascading capability is called a “routing function.”

By using the route function, you can simply operate sources used for multiple destinations as if switching sources for a single destination.



Even when such input expansion is repeated 4 times at maximum, the routing function enables you to search for destinations tracing back via the expanded inputs and obtain a display of the appropriate source. To display the actually selected source name, you must set the routing function with the control terminal.

Then when you select a crosspoint set for the routing 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, normally IN5 appears as the source name. If the routing function has been set, the source name selected on switcher A appears.

To activate the routing function, set the destination of switcher A, destination and source of switcher B, and level, in that order.

In the case of the figure at left, set “OUT1:OUT2 <IN5 100000000.”

When you use the routing 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 in advance. If the route has been set with a phantom, IN1-OUT2 is displayed.

## Setting procedure

- 1** Press **[R]** on the Setup menu selection display to select menu item R.

The setting display of menu item R appears.

### Setting display (example)

[illegible]

(Continued)

# Menu Settings

2 Using the cursor keys, select the items (ROUTE, DEST, SOURCE, LEVEL).

3 Press **[Enter]**.

The unit enters Route setting mode.  
Pressing **[Enter]** before entering data clears the current settings.  
For LEVEL 1-8, each press of **[Enter]** cyclically switches between “0” and “1.”

4 Enter a Type+Num name or description name in the ROUTE, DEST and SOURCE columns.  
You can enter **[1]**(ON) or **[0]**(OFF) independently for each level in the LEVEL column.  
(The setting method is the same as for the Phantom table. Note however that the destination name for switcher A to which the sources of switcher B are connected must be entered in place of the phantom name.)

See “Menu H: SET PHANTOM TABLE” (page 30).

5 Press **[Enter]**.

The setting is registered.

## To return to the selection display of Setup menu

Press **[Ctrl]-[E]**.

## To return to the primary-station menu

Press **[Ctrl]-[D]**.

### Tips

The same as the phantom data, the route function can be set using a destination offset. The destination offset route is effective when you use the same route for multiple destinations (there are multiple units as switcher B) from a single panel. When setting a phantom for expanded input switching, both switching at the extension device (switcher A) and phantom of expanded inputs (switcher B) must be set, and the destination offset must also be used for phantom. In this case, both the route and phantom are “DST+000.” With the example on the previous page, “DST+000” must be always set for OUT002. Normally, the offset value for a route is “0.” If another signal is being controlled in parallel and you want to display the name of that signal, use an offset.

## To add an offset to the selected destination

- 1 Enter **[+]** before pressing **[Enter]** at the DEST column.  
“DST+” appears.
- 2 Enter the offset value (0 to 1023).
- 3 Press **[Enter]** to register the setting.

# Menu Z: SET PANEL STATUS

## Purposes

Menu item Z enables you to set various modes of the panel, such as the display format, switching mother/daughter assignment, serial input/output.

## Setting procedure

- 1 Press **[Z]** on the Setup menu selection display to select menu item Z.

The setting display of menu item Z appears.

## Setting display (example)

SONY ROUTING SYSTEM SETUP MENU		BKS-R3248 V1.01	STATION NUMBER 45
SET PANEL STATUS			
DISPLAY MODE	= 1	1:STATUS	2:PROMPT
PROTECT MODE	= 2	1:ON AIR	2:NORMAL
PHANTOM PROTECT	= 1	1:PART PROT	2:FULL PROT
PANEL MODE	= 2	1:STAND ALONE	2:MOTHER
PANEL LAYOUT	= 2	1:BPS	2:TYPE + NUM.
LEVEL MODE	= 1	1:SINGLE	2:MULTI
DEST SELECTION	= 1	1:DISABLE	2:ENABLE
ILLUMINATION LEVEL	= 8	1-8:MIN-MAX	
MONITOR DESTINATION	= VIDEO		
SOURCE OFFSET	= 0000		
CONTROL LEVELS	=		
CHOP TIME	= 2	1:FAST=005	2:MED=255
SERIAL COM	= 1	1:DISABLE	2:PCNS
SET BLOCK NUMBER	= 1		
BLOCK & MOTHER STATION LIST			
BLOCK 1 = STATION 045 ; BLOCK 6 = .....			
BLOCK 2 = ..... ; BLOCK 7 = .....			
BLOCK 3 = ..... ; BLOCK 8 = .....			
BLOCK 4 = ..... ; BLOCK 9 = .....			
BLOCK 5 = ..... ; BLOCK10 = .....			
Ctrl-E:MENU Ctrl-D:RETURN			

- 2 Using the cursor keys, select the item to be set and press **[Enter]**.

The unit enters the setting mode for the selected item.

- 
- 3** Enter the corresponding number, selecting from among the available choices listed to the right, or directly enter a value.

*For details, see the paragraph for each item.*

- 4** Press **[Enter]** to register the setting.

#### **To return to the selection display of Setup menu**

Press **[Ctrl]-[E]**.

#### **To return to the primary-station menu**

Press **[Ctrl]-[D]**.

---

### **DISPLAY MODE**

Set the mode for the panel display.  
Normally use STATUS mode.

#### **1: STATUS**

Checking the latest crosspoint information, the unit turns on the key that corresponds to the currently selected source. In this mode, the current status can be displayed by key illumination even if switching is made from another panel. Normally use this mode.

#### **2: PROMPT**

A key lights when you press it.  
Use this mode, for example, when you want to light keys set for phantom regardless of crosspoint information.

---

### **PROTECT MODE**

Specify the operation in Protect mode for each panel.  
Normally use NORMAL mode.  
The mode selected here has no affect on the PROT key illuminating condition.

#### **1: ON AIR**

Switching can be executed even in Protect mode.  
When the panel to be used as a selector during on-the-air status is set to ON AIR mode, and other panels are set to NORMAL mode, you can execute switching at your will from the panel in ON AIR mode while eliminating inadvertent switching from other panels by setting the panels to Protect mode during on-the-air status.

Using the LOCK key in combination, you may disable switching also from the panel in ON AIR mode when required.

#### **2: NORMAL**

Switching cannot be executed even in Protect mode.  
Normally use this mode.

#### **3: FLEXIBLE**

Protection of other stations can be canceled.  
Normally, protection that was activated from another station can only be canceled from the primary station. By setting a panel to this mode, you can cancel protection of another panel.  
If you forgot to cancel protection or protection was unconsciously activated, you must first find the panel where protection was activated. However, if there is a panel in FLEXIBLE mode, you can cancel such protection using this panel as a master panel.

#### **4: FLEX & OA**

A mode combining FLEXIBLE mode and ON AIR mode.

---

### **PHANTOM PROTECT**

Specify one of these operation modes for phantom switching when there is a protected destination.  
Normally use PART PROT mode.

#### **1: PART PROT**

Only unprotected signals are switched. Switching to the protected destination is not executed.  
Normally use this mode.

#### **2: FULL PROT**

No switching operations are executed if any destination in the phantom is protected.  
Use this mode when there is no meaning if any one signal remains unswitched.

#### **3: BUTTON LINK**

When the PROT key on the panel is lit, no switching operations are executed.  
Regarding phantom switching the same as normal source switching, you can know whether all switching operations specified for the phantom are possible or not by checking whether the PROT key is lit (protect on).

PANEL MODE

Set whether this unit is to be used alone or as the mother unit among multiple units.

1: STAND ALONE

To use as a stand-alone unit. Normally use this setting.

2: MOTHER

To use as the mother unit.

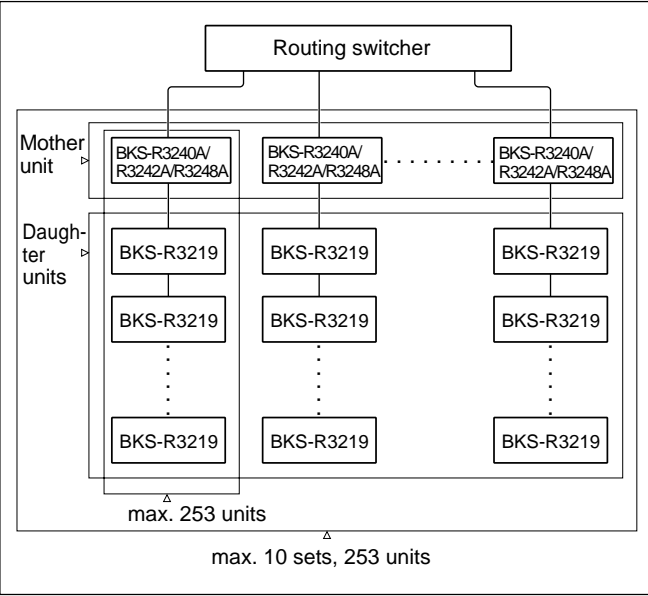
If you set this unit as the mother unit, the number of select keys can be increased by as many as those on all the daughter units.

Using one unit as the mother unit in one combination, your system can have up to ten mother units

Use of multiple control units:

When you control the routing switcher using the BKS-R3240A/R3242A/R3248A, the number of controllable sources and destinations can be expanded by using one BKS-R3240A/R3242A/R3248A (mother unit) and multiple BKS-R1618/R1617/R1621/R3219 units (daughter 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 maximum number of control units used in ten sets within one switching system is also 253.



Tips

The maximum number 253 can be further expanded by using the BZR-IF310.

For details, consult your Sony dealer.

Notes

- The BKS-R3240A/R3242A/R3248A cannot be used as a daughter unit.
- You cannot set multiple mother units in one combination. Specify one unit as the mother unit and all other units as daughter units.

Setting procedure:

First set the mother unit, then daughter units. To specify the unit as the mother unit, proceed as follows:

For details on setting of a daughter unit, refer to the installation manual supplied with the routing switcher. (Normally, first select Daughter mode, then enter the station ID of the mother unit for “SET MOTHER ID.”)

1 Set to “PANEL MODE=2” (MOTHER).

The following lines appear.

```
SET BLOCK NUMBER = *
BLOCK & MOTHER STATION LIST
BLOCK 1 = ..... | BLOCK 6 = .....
BLOCK 2 = ..... | BLOCK 7 = .....
BLOCK 3 = ..... | BLOCK 8 = .....
BLOCK 4 = ..... | BLOCK 9 = .....
BLOCK 5 = ..... | BLOCK10 = .....
```

2 Using the numeric keys, enter a vacant BLOCK number in the BLOCK & MOTHER STATION LIST area.

(When you enter the number in use, it is overwritten.)

The “\*” on the “SET BLOCK NUMBER =\*” line changes to the entered number.

3 Press **Enter**.

The setting is registered.

---

## PANEL LAYOUT

Set the selection system to be used.

*For details on the selection method in each selection system, see the description in “⑥ Source/destination select keys” (pages 15 to 17) in “Locations and Functions of Parts.”*

### 1: BPS

The BPS selection system is selected. With the touch of a key, a source or a destination assigned to the key is selected.

With the BPS selection system, you can select Speed mode or Take mode.

In Speed mode, switching is not executed when a source select key is pressed. Instead, the selected source is once displayed on the PRESET/LEVEL display window. Execute switching by pressing the TAKE key after confirming the displayed source name.

In Take mode, switching is executed immediately when you press a source-select key.

Speed or Take mode can be selected independently for each key.

*For signal assignment and Speed/Take mode selection, see “Menu N; SET PANEL TABLE” (page 33).*

### 2: TYPE + NUM

The Type + Number selection system is selected.

With this system, 16 select keys are used. To select a type from among Type G to Type V when using 32 types, press and light the SHIFT key, then select it using 16 select keys.

### 3: KEYPAD

The keypad selection system is selected.

Using ten keys to which alphanumerics are assigned, a signal can be selected by designating the description name set on the primary station.

#### Note

For keypad selection, the description data must be sent from the control terminal. A signal whose description name has not been sent cannot be selected with the keypad.

### 4: DIRECT

The direct selection system is selected. Switching is performed with the connector numbers.

---

## LEVEL MODE

Select the operation methods of the level-control keys.

### 1: SINGLE

The single-level mode is selected. In this mode, signals on the level(s) of the last pressed key are searched for.

To restore the previous level setting, press the CLEAR key or select another destination.

### 2: MULTI

The multiple-level mode is selected. In this mode, each time you press a level-control key it cyclically turns on (selected) or off (unselected) independently. Use this mode when you want to search for signals of levels of multiple keys.

If you set all the levels to the unselected status, the previous level is automatically restored. This is the same result as that when you press the CLEAR key or select another destination.

---

## DEST SELECTION

Enable/disable destination change from the unit.

### 1: DISABLE

A destination change other than one with BPS selection is disabled. When the unit is mainly used for source selection, and the destination need not be changed, select “DISABLE.” This prevents the destination from being erroneously changed.

### 2: ENABLE

A destination change is enabled.

---

## ILLUMINATION LEVEL

The brightness of key illumination can be changed in 8 levels (1 to 8). Select an appropriate setting for the ambient condition.

The higher the value, the brighter the illumination.

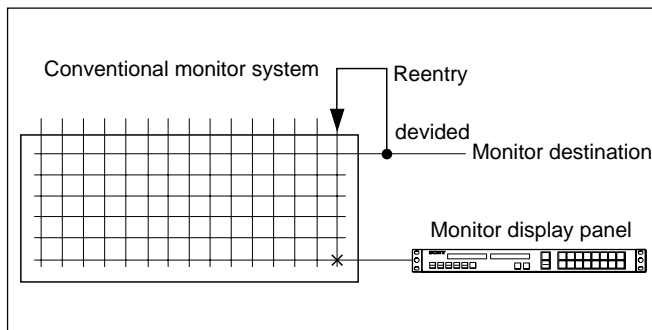
# Menu Settings

## MONITOR DESTINATION

When the destination to be monitored has been specified at the terminal, the monitor display panel automatically selects the source for that destination when the monitor function is ON.

With the conventional monitor system, the output to be monitored is divided to return to an input (reentry), as shown below.

The monitor function of this unit enables monitoring on a software basis without using any physical crosspoint.



To use the monitor function, it is necessary to set a monitor key using menu item N.

For details on the monitor key, see “Menu N: SET PANEL TABLE” (page 33).

### Setting method:

Enter the destination name to be monitored.

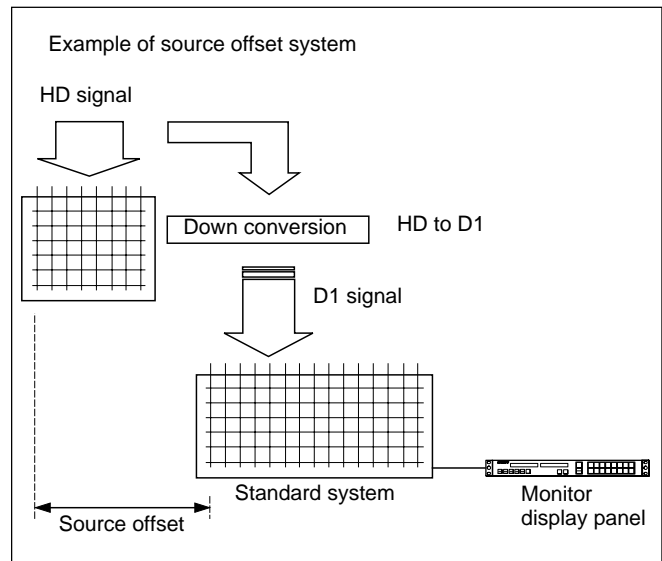
In the same manner as for menu item N, entry can be made either with its “Type+Num” name or “description” name.

## SOURCE OFFSET

When the monitor function is on, monitoring is possible while adding an offset specified in this item to the number of the source to be monitored. Normally use “0.”

### Example of use: Monitoring an HD source on a standard system

To monitor an HD source on a standard system, it is necessary to down-convert HD signals. These down-converted signals can be monitored by adding a certain offset.



### Setting method

Using the numeric keys, enter an offset value.

**0:** To take the same source as that for the destination to be monitored

**1 to 1023:** To take a source by adding the specified offset

## CONTROL LEVELS

Normally use all in the “–” state.

In this condition, the levels activated on the primary station are used for each destination.

To use the unit for example as an audio-only panel, set only the required levels to ON.

### Setting method

To use a certain level from the remote control unit, set the cursor to the position of the level (e.g. the third “–” from the left for level 3) and press **[Enter]**.

The activated level is indicated by its number.

Each time you press **[Enter]**, ON (the level number indicated) and OFF (“–” indicated) are toggled.

When all levels are set to “–,” switching is achieved according to the levels set on the primary station.

The levels specified here can be selected regardless of the LEVEL MODE setting (previous page).

---

## CHOP TIME

Set the cycle of toggling sources in Chop mode.

### What's Chop mode?

The source indicated on the STATUS display window and that indicated on the PRESET/LEVEL display window are automatically switched alternately. Use this mode e.g. for signal level adjustment.

### Setting method

Select the chop time (in the unit of frames) from among three steps (FAST, MED, SLOW). The default frames of these steps are as follows:

- 1: **FAST:** 015 frames
- 2: **MED:** 030 frames
- 3: **SLOW:** 060 frames

These default frames can be changed in the range of 5 to 255.

Move the cursor to the number, press **[Enter]**, then enter a value using the numeric keys.

---

## SERIAL COM

Select the function of the REMOTE 2 connector on the rear of the unit.

The REMOTE 2 connector supports three transport formats for RS-422A. Select one appropriate for your system. When the connector is not used, select "DISABLE."

### 1: DISABLE

Not to use the REMOTE 2 connector.

### 2: PCNS

To use the REMOTE 2 connector for connection with a PCNS system.

PCNS enables remote control of various processors (max. 2000 units) from a single control and adjustments, e.g. signal level adjustment.

Use this setting when you want to select video and audio signals for a display monitor or WFM on this unit and adjust them on the PCNS system controller.

*For details, consult your Sony dealer.*

### 3: Cart+

Conversion between Cart+ protocol and S-BUS protocol is enabled, permitting switching from a external RS-422A control.

## 4: VTR

To control a VTR from this unit.

When the DVS-RS1616 is used in combination, various VTR operations can be controlled from this unit.

The functions EJECT, STOP, PLAY, REW, F FWD, and REC are to be assigned to keys using Menu N: SET PANEL TABLE.

*For details, see "Setting for VTR control keys" (page 35).*

---

## Menu Y: SET DISPLAY MODES

---

### Purposes

Menu item Y enables you to set various conditions for panel displays.

---

### Setting procedure

- 1 Press **[Y]** on the Setup menu selection display to select menu item Y.

The setting display of menu item Y appears.

### Setting display (example)

```
SONY ROUTING SYSTEM SETUP MENU      BKS-R3248 V1.01      STATION NUMBER 45
SET DISPLAY MODES

STATUS DISPLAY MODE = 1      1:TYPE+NUM  2:DESC.  3:4CHAR DUS  4:4CHAR DESC.
PRESET DISPLAY MODE = 1      5:4CHAR ROUTER  6:DIRECT  7:LEVEL
TALLY GROUP          = 1234
TALLY SEND           = 5      1-4:GROUP ID 5:NONE
SCROLL LEVELS        = 3      3:BY THREE  6:BY SIX

Ctrl-E:MENU Ctrl-D:RETURN
```

- 2 Using the cursor keys, select the item to be set, then press **[Enter]**.

The unit enters the setting mode of the selected item.

- 3 Enter the corresponding number, selecting from among the available choices listed to the right, or directly enter a value.

*For details, see the paragraph for each item.*

*(Continued)*

## Menu Settings

---

**4** Press **[Enter]** to register the setting.

### To return to the selection display of Setup menu

Press **[Ctrl]**-**[E]**.

### To return to the primary-station menu

Press **[Ctrl]**-**[D]**.

---

## STATUS DISPLAY MODE, PRESET DISPLAY MODE

The display formats of the STATUS display window and PRESET/LEVEL display window can be changed according to your system.

*For details on the display contents, see “**①** STATUS display window/**②** PRESET/LEVEL display window” of “Locations and Functions of Parts.”*

### 1: TYPE+NUM

To display “Type+Number” names

### 2: DESC

To display “Description” names

### 3: 4CHAR DVS

To display the first two and last two characters of each “Description” name

### 4: 4CHAR DESC

To display the first four characters of each “Description” name

### 5: 4CHAR ROUTER

To display the four-character abbreviation of each “Description” name

### 6: DIRECT

To display connector numbers

### 7: LEVEL

To display the sources available for the selected destination with three levels

## Compatibility with the selection systems

The selectable display modes depend on the selection system.

Type+Num selection system: TYPE+NUM

BPS selection system: TYPE+NUM, DESC, 4CHAR DVS, 4CHAR DESC, 4CHAR ROUTER

Keypad selection system: DESC, 4CHAR DVS, 4CHAR DESC

Direct selection system: DIRECT

---

## TALLY GROUP

When ON, the unit monitors tally data and lights the TALLY key.

Set the group (1 to 4) whose tally data are to be monitored to ON.

When two or more groups are set to ON, data of these groups are added for display.

When RED TALLY and GREEN TALLY are turned on at the same time, RED TALLY has priority for display.

### Setting method

Set the cursor to the position of the group (e.g. the second “-” from the left for group 2) to be set and press **[Enter]**.

Each time you press **[Enter]**, ON (the group number indicated) and OFF (“-” indicated) are toggled.

---

## TALLY SEND

Not used at present (fixed to “5”).

---

## SCROLL LEVELS

When you press and light the LEVEL key in red to set the unit to Level-Selection mode, the source data of six levels are displayed in the STATUS and PRESET/LEVEL display windows. Pressing the SCRL key scrolls the data by the specified number of levels, which can be changed as desired.

### 3: BY THREE

To scroll by three levels

### 6: BY SIX

To scroll by six levels

## Menu X: SET GPI I/O

### Purposes

Menu item X is provided for GPI-related settings, which may enable parallel control switching and crosspoint data display using GPI inputs/outputs.

### Setting procedure

- 1 Press **[X]** on the Setup menu selection display to select menu item X.

The setting display of menu item X appears.

#### Setting display (example)

SONY ROUTING SYSTEM SETUP MENU		BKS-R324B V1.01	STATION NUMBER 45
GPI I/O CONFIGURATION			
	MODE	SOURCE	DESTINATION
GP101	D	IN001	.....
GP102	D	IN002	.....
GP103	D	.....	OUT001
GP104	D	IN003	OUT002
GP105	S	IN001	.....
GP106	S	IN002	.....
GP107	S	.....	OUT001
GP108	S	IN003	OUT002
MODES D=DEST S=SWITCH			
0=IN	1=OUT	2=UTR	3=CAM
4=CG	5=AIR	6=BS	7=CS
8=AUX	9=BARS	A=NEWS	B=WEB
C=...	D=...	E=...	F=...
G=...	H=...	I=...	J=...
K=...	L=...	M=...	N=...
O=...	P=...	Q=...	R=...
S=...	T=...	U=...	V=...
Ctrl-E:MENU Ctrl-I-D:RETURN Ctrl-I-N:DESCRIP.NAME			

- 2 Using the cursor keys, set the cursor to an item (MODE, SOURCE, or DESTINATION) of the GPI port to be set, and press **[Enter]**.

The unit enters the setting mode for the selected GPI port.

- 3 Set the items.

#### To set MODE

Press **[Enter]** to switch between D (DEST) and S (SWITCH).

#### DEST:

**When only the source is specified:** A signal is output to the corresponding port when the currently selected destination takes the specified source.

**When only the destination is specified:** A signal is output to the corresponding port when the currently selected destination is the same as the specified destination.

**When both the source and destination are specified:** A signal is output to the corresponding port when the specified destination takes the specified destination.

#### SWITCH:

**When only the source is specified:** When there is a signal input via the corresponding port, a request to take the specified source for the currently selected destination is issued. This is the same operation as that of a select key to which only a source has been assigned.

**When only the destination is specified:** When there is a signal input via the corresponding port, a request to change the currently selected destination to the specified destination is issued. This is the same operation as that of a select key to which only a destination has been assigned.

**When both the source and destination are specified:** When there is a signal input via the corresponding port, a request to execute switching with the specified source and destination is issued. This is the same operation as that of a select key to which both the source and destination have been assigned.

#### To set SOURCE and DESTINATION

In the same manner as with menu item N, enter a Type+Num name or Description name for each.

- 4 Press **[Enter]** to register the setting.

#### To return to the selection display of Setup menu

Press **[Ctrl]-[E]**.

#### To return to the primary-station menu

Press **[Ctrl]-[D]**.

# Menu Settings

## Menu L: COPY TABLE DATA FROM

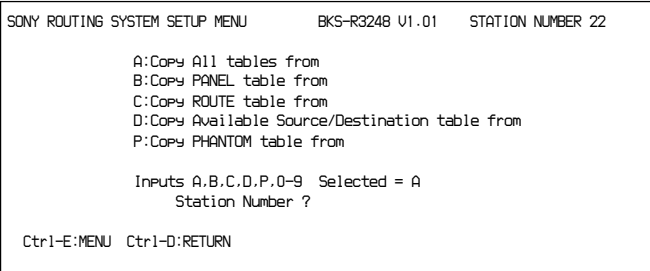
### Purpose

Menu item L is used to copy the table data from another remote control unit.  
Menu L can be called not only from the menu select display but also from some setting displays by pressing **[L]**.

### Setting procedure

**1** Press **[L]**.

Menu L appears.



**2** Enter the station ID of the source remote control unit.

**3** Using the alphabetic keys, select the table to be copied.

- A:** To copy all the setting data
- B:** To copy the data set in “SET PANEL TABLE”
- C:** To copy the data set in “SET ROUTE”
- D:** To copy the data set in “SET AVAILABLE SOURCE/DESTINATION”
- P:** To copy the data set in “SET PHANTOM TABLE”

**4** Press **[Enter]**

Copying is executed, and the previous display is restored.

To return to the selection display of Setup menu

Press **[Ctrl]-[E]**.

To return to the primary-station menu

Press **[Ctrl]-[D]**.

# Error Messages

When trouble occurs with this unit, the following error messages appear in the display window. The displayed message will automatically disappear after a few seconds. Pressing the CLEAR key also makes the displayed message disappear.

Error messages	Contents	Remarks
Pac Err	Reception error on the S-BUS data link	If this occurs only once every several minutes, it is not a problem. Power source noise or an S-BUS remote cable longer than 500 m using BELDEN cable or equivalent may be the cause. If the same errors still occurs with this unit when used under conditions without the above causes, the trouble may be in this unit.
Reset-P	The primary station has been reset.	This occurs when the primary station is turned on, or when some trouble occurs in the S-BUS data link.
Secret	A source set as secret is to be selected.	A source set as secret cannot be selected on a unit other than the primary station.
S BUS Comm Error <sup>a)</sup>	Communication error of the S-BUS data link	This may occur when the communication period is too long. The primary station may be turned off, or the remote cable may be disconnected.
Dest Protected	The destination is protected.	The protected destination cannot be switched. In the preset display window, the ID of a station which that set protection for the destination, is displayed.
Not Found	The name cannot be found.	The designated type name for Type+Number selection does not exist in the table.
Lvl Err	All levels are not controllable.	All levels are set not to be controlled.
No Dest	The destination has not been set.	The designated destination has not been set. Change the selection or setting.
Not Avail	The source is out of the available sources.	The source to be switched is not found within the range of the available sources. The source cannot be changed.

a) "S BUS Comm Error" remains until the normal communication is restored.

# Specifications

REMOTE 1	BNC type × 1, S-BUS Data transfer method: BI-PHASE SPACE Data transfer rate: 312.5 kbps/ 1250 kbps	Dimensions (w/h/d)	BKS-R3240A: 440 × 44 × 120 mm (17 <sup>3</sup> / <sub>8</sub> × 1 <sup>3</sup> / <sub>4</sub> × 4 <sup>3</sup> / <sub>4</sub> inches) BKS-R3242A: 216 × 88 × 116 mm (8 <sup>5</sup> / <sub>8</sub> × 3 <sup>1</sup> / <sub>2</sub> × 4 <sup>5</sup> / <sub>8</sub> inches) BKS-R3248A: 440 × 88 × 120 mm (17 <sup>3</sup> / <sub>8</sub> × 3 <sup>1</sup> / <sub>2</sub> × 4 <sup>3</sup> / <sub>4</sub> inches)
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 bits, No parity, No check Data transfer rate: 38.4 kbps	Mass	BKS-R3240A: Approx. 1.5 kg (3 lb 5 oz) BKS-R3242A: Approx. 1.5 kg (3 lb 5 oz) BKS-R3248A: Approx. 2.1 kg (4 lb 10 oz)
GPIO IN	D-sub 25-pin male, 8 inputs		
GPIO OUT	D-sub 25-pin female, 8 outputs		
Signal transfer distance	500 m (1640 feet) (75-ohm coaxial cable, BELDEN 8281 or equivalent)	Accessories supplied	Operation Guide (1) T bridge (1)
Operating temperature	0°C to 45°C (32°F to 113°F)	Design and specifications are subject to change without notice.	
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	BKS-R3240A: 0.25 A BKS-R3242A: 0.25 A BKS-R3248A: 0.35 A		
Peak inrush current	(1) Power ON, current probe method: 30 A (240 V), 22 A (100 V) (2) Hot switching inrush current, measured in accordance with European standard EN55103-1: 8 A (230 V)		
Appel de courant de crête	(1) Mise sous tension (ON), méthode de sondage du courant: 30 A (240 V), 22 A (100 V) (2) Mesuré conformément à la norme européenne EN55103-1: 8 A (230 V)		
Spitzenstrom	(1) Einschaltstrom, Stromsonde: 30 A (240 V), 22 A (100 V) (2) Gemessen in EN55103-1: 8 A (230 V)		

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# Sony Corporation

Communication System Solutions Network Company

BKS-R3240A/R3242A/

R3248A (WW)

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