

SONY®

TRINITRON® COLOR VIDEO MONITOR

BVM-20G1U/20G1E/20G1A

BVM-14G1U/14G1E/14G1A

BVM-14G5U/14G5E/14G5A



OPERATION MANUAL English

1st Edition (Revised 4)

Serial No. 2000001 and Higher

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

WARNUNG

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 einem Fachmann.

ADVERTENCIA

Para evitar incendios o el riesgo de electrocución, no exponga la unidad a la lluvia ni a la humedad.

Para evitar descargas eléctricas, no abra la unidad. En caso de avería, solicite los servicios de personal cualificado.

ATTENZIONE

Per evitare incendi o cortocircuiti, l'apparecchio non deve essere esposto alla pioggia o all'umidità.

Per evitare scosse elettriche, non aprite l'apparecchio. Per le riparazioni rivolgetevi solo a personale qualificato.

CAUTION:

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

ATTENTION

Il y a un risque d'explosion si la pile est mal insérée. Remplacer la pile uniquement par une pile de même type ou de type équivalent recommandé par le fabricant. Jeter les piles usées conformément aux instructions du fabricant.

VORSICHT:

Es besteht Explosionsgefahr, wenn die Batterie inkorrekt eingelegt wird.

Es darf nur eine identische oder eine vom Hersteller empfohlene Batterie des gleichen Typs eingesetzt werden. Entladene Batterien sind nach den Anweisungen des Herstellers zu entsorgen.

PRECAUCION

Peligro de explosión en caso de haberse instalado incorrectamente la batería.

Cambie sólo por una del mismo tipo o especificaciones equivalentes, de entre las recomendadas por el fabricante. Las baterías viejas se deben eliminar siguiendo las instrucciones del fabricante.

ATTENZIONE:

Pericolo di esplosione se la pila viene sostituita scorrettamente.

Sostituirla solo con un'altra uguale o di un tipo equivalente consigliato dal fabbricante. Gettare via le pile usate secondo le istruzioni del fabbricante.

Note

The socket-outlet should be installed near the equipment and be easily accessible.

Remarque

La prise doit être près de l'appareil et facile d'accès.

Hinweis

Zur Trennung vom Netz ist der Netzstecker aus der Steckdose zu ziehen, welche sich in der Nähe des Gerätes befinden muß und leicht zugänglich sein soll.

Nota

La toma mural debe estar instalada cerca del equipo y debe accederse a ésta con facilidad.

Nota

La presa di corrente deve essere situata vicino all'apparecchio e deve essere facilmente accessibile.

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 SVT, three 16 or 18 AWG wires
Length	Less than 2.5 m (8 ft 3 in)
Rating	Minimum 10 A, 125 V

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

For 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.

Voor de klanten in Nederland



- Dit apparaat bevat een vast ingebouwde batterij die niet vervangen hoeft te worden tijdens de levensduur van het apparaat.
- Raadpleeg uw leverancier indien de batterij toch vervangen moet worden.
De batterij mag alleen vervangen worden door vakbekwaam servicepersoneel.
- Gooi de batterij niet weg maar lever deze in als klein chemisch afval (KCA).
- Lever het apparaat aan het einde van de levensduur in voor recycling, de batterij zal dan op correcte wijze verwerkt worden.

Note

Be sure to use the supplied power cord for this monitor, or this monitor may not conform with the FCC Rules or EEC Directive 89/336/EEC.

Remarque

Utiliser le cordon d'alimentation fourni pour ce moniteur, sinon il pourrait ne pas être conforme aux règles FCC ou à la directive CEE 89/336/EEC.

Hinweis

Dieser Monitor darf ausschließlich mit dem mitgelieferten Netzkabel betrieben werden, weil anderenfalls der Monitor nicht mehr die FCC-Vorschriften oder die EG-Richtlinie 89/336/EEG erfüllt.

Nota

Utilice sin falta el cable eléctrico que viene con este monitor; de lo contrario el monitor puede no cumplir con los reglamentos de la FCC o de la directiva 89/336/EEC de la Comunidad Europea.

Nota

Assicurarsi di usare il cavo di alimentazione in dotazione per questo monitor, altrimenti il monitor può non essere conforme alle norme FCC o alla Direttiva CEE/89/336.

For the customers in Europe

(BVM-20G1E/20G1A, BVM-14G1E/14G1A, BVM-14G5E/14G5A)

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

(BVM-20G1E/20G1A, BVM-14G1E/14G1A, BVM-14G5E/14G5A)

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

(BVM-20G1E/20G1A, BVM-14G1E/14G1A, BVM-14G5E/14G5A)

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

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

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

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

ATTENTION - When the product is installed in a rack:

a) Elevated operating ambient temperature

If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (T_{mra}: 0°C to 35°C (32°F to 95°F)).

b) Reduced air flow

Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

c) Mechanical loading

Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

d) Circuit overloading

Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring.

Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

e) Reliable earthing

Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

f) Gap keeping

Upper and lower gap of rack-mounted equipment should be kept 44 mm (1 3/4 inches).

For the customers in the United Kingdom

WARNING

THIS APPARATUS MUST BE EARTHED

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol \perp or coloured green or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Ensure that your equipment is connected correctly - if you are in any doubt consult a qualified electrician.

Achtung - bei Installation des Geräts in einem Gestell:

a) Erhöhte Umgebungstemperatur bei Betrieb

Wird das Gerät in einem geschlossenen Gestell oder einem Gestell mit mehreren anderen Geräten installiert, kann die Umgebungstemperatur um das Gestell höher sein als die normale Umgebungstemperatur im Raum. Achten Sie daher bitte besonders darauf, das Gerät in einer Umgebung zu installieren, in der die Temperatur nicht über die vom Hersteller angegebene Umgebungstemperatur von 0 bis 35 °C (32 °F bis 95 °F) ansteigt (T_{mra}).

b) Reduzierte Belüftung

Das Gerät muß so im Gestell installiert werden, daß eine Belüftung gewährleistet ist, die für den sicheren Betrieb des Geräts erforderlich ist.

c) Mechanische Belastung

Das Gerät muß so im Gestell installiert werden, daß nicht durch eine ungleichmäßige mechanische Belastung Unfallgefahr entsteht.

d) Überlastung der Stromkreise

Der Anschluß des Geräts an das Versorgungsnetz erfordert sorgfältige Planung. Bitte beachten Sie insbesondere die Auswirkungen, die eine Überlastung der Stromkreise im Hinblick auf den Überspannungsschutz und die physischen Komponenten des Versorgungsnetzes haben kann. Beachten Sie in diesem Zusammenhang unbedingt die Angaben auf dem Typenschild am Gerät.

e) Zuverlässige Erdung

Geräte, die in einem Gestell installiert werden, benötigen eine zuverlässige Erdung. Achten Sie insbesondere auf Anschlüsse an das Versorgungsnetz, die nicht direkt an einen Abzweigstromkreis, sondern indirekt, zum Beispiel über Verlängerungskabel, erfolgen.

f) Erforderliche Abstände

Halten Sie zur Ober- und Unterseite eines in einem Gestell installierten Geräts einen Abstand von 44 mm (1 3/4 inches) ein.

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On safety

- Operate the unit only with a power source as specified in “Specifications” section.
- The nameplate indicating operating voltage, power consumption, etc., is located at the rear.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Do not drop or place heavy objects on the power cord. If the power cord is damaged, turn off the power immediately. It is dangerous to use the unit with a damaged power cord.
- Unplug the unit from the wall outlet if it is not to be used for several days or more.
- Disconnect the power cord from the AC outlet by grasping the plug, not by pulling the cord.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.

On installation

- Allow adequate air circulation to prevent internal heat build-up.
Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

On cleaning

To keep the unit looking brand-new, periodically clean it with a mild detergent solution. Never use strong solvents such as thinner or benzine, or abrasive cleansers since they will damage the cabinet. As a safety precaution, unplug the unit before cleaning it.

On repacking

Do not throw away the carton and packing materials. They make an ideal container which to transport the unit. When shipping the unit to another location, repack it as illustrated on the carton.

If you have any questions about this unit, contact your authorized Sony dealer.

On magnetism

- Do not place the unit near any objects or pieces of equipment which generate magnetism, such as magnets, speakers, electric clocks, toys using magnets, health appliances, etc. Magnetism will cause picture bounce, oscillations or picture discoloration.
- Also, the picture may become fuzzy or the colors may not reproduce correctly due to earth magnetism. This depends on direction that the unit is installed. This is not equipment failure. In such a case, simply degauss the unit.

On the CRT

- Dust accumulates on the CRT easily. Clean the CRT when necessary with a soft cloth.
The surface of the CRT is easily scratched; therefore, do not rub or touch the surface of the CRT unnecessarily since this may result in a scratched picture tube.
- If you touch the surface of the CRT, you may feel a weak electrical shock. This is simply static electricity that is generated on the surface of the CRT. It will not affect the human body.

The BVM-20G1U/20G1E/20G1A are 20 -inch Trinitron[®] Color Monitors. The BVM-14G1U/14G1E/14G1A/14G5U/14G5E/14G5A are 14-inch Trinitron[®] Color Monitors. They are suitable for television stations or video production houses, where precise image reproduction is required.

Features

High resolution picture tube

The HR Trinitron picture tube produces a clear, high resolution image.

Model	Aperture grille pitch	Resolution at the center of the picture
BV-20G1U/20G1E/20G1A	0.3 mm	800 TV lines
BV-14G1U/14G1E/14G1A/14G5U/14G5E/14G5A	0.25 mm	800 TV lines

Separate control unit (BVM-20G1U/20G1E/20G1A/14G1U/14G1E/14G1A only)

The BVM-20G1U/20G1E/20G1A/14G1U/14G1E/14G1A are controlled by a separate control unit, such as an optional BKM-10R/11R Monitor Control unit. Using a separate control unit reduces the space needed for the equipment. The BVM-20G1U/20G1E/20G1A can be connected to the BKM-10R via an optional BKM-32H Monitor Control Unit Attachment Kit.

Controlling monitor groups

Up to 32 monitors can be controlled from this monitor. First, using the monitor menus, assign a monitor address number to each monitor, divide the monitors into groups, and assign a group number to each group. Then you can use this monitor to control individual monitors or monitor groups simply by entering monitor address or group numbers. You can also execute the same operation on all connected monitors, or use this monitor to put all connected monitors into the same setup and adjustment state.

Setup and adjustment with the Monitor Memory Card

You can use an optional BKM-12Y Monitor Memory Card to save and load monitor setup and adjustment data. If your system includes more than one monitor, you can use the monitor memory cards to exchange data between monitors. This makes it easy to put all monitors in your system into the same setup and adjustment state.

Standard auto alignment system

Decoder chroma and phase adjustment, as well as color temperature control, may be performed with the auto alignment system. This makes it possible to coordinate settings among multiple monitors.

Expandable input capability

The input connector configuration may be easily modified by simply sliding optional decoder adaptor or the input expansion adaptor into input option slot at the rear of the monitor.

4:3/16:9 dual aspect ratio design

This monitor can be changed to either 4:3 or 16:9 aspect ratio with just a simple switching operation. The screen can be also changed to 4:3 or 16:9 display by the replacement of a mask (no tools required).

Stable color temperature

The internal beam current feedback circuit maintains a constant color temperature over long periods of time.

Blue-only mode convenient for monitoring noise

All three CRT cathodes can be driven with a blue signal, producing a monochrome display. This mode is convenient for chroma and phase adjustment, and for monitoring VTR noise.

Menu operation

The monitor's various functions and operating conditions can be set with on-screen menus.

1) Trinitron[®] is a registered trademark of Sony Corporation.

Other features

- Compatible with the ISR (Interactive Status Reporting) system.
- Has both RS-485 serial remote and relay contact parallel remote control connectors.
- Built-in safe area display and test signal generator for crosshatch, 100% white signal, 20% gray signal, gray scale, and PLUGE (Picture Line Up Generating Equipment).
- Built-in Caption Vision decoder.
- Pulse cross function for simultaneous checking of the horizontal and vertical synchronization signals. VITS (Vertical Interval Test Signal) checking is also possible.
- Auto and manual degaussing.
- Built-in CRT protection circuit.
- This monitor may be mounted in an EIA-standard 19-inch rack, using an optional BKM-30E20/30E14/31E14 Rack Mount Kit.
- Controllable from the optional BKM-10R/11R Monitor Control Unit. (For details about connection and operation, refer to the BKM-10R/11R Operation Manual).

Options

For external control

BKM-10R Monitor Control Unit

A controller for BVM-20G1U/20G1E/20G1A and BVM-14G1U/14G1E/14G1A video monitors, allowing you to control multiple monitors from one control unit.

BKM-11R Monitor Control Unit

A controller for BVM-20G1U/20G1E/20G1A, BVM-14G1U/14G1E/14G1A and BVM-14G5U/14G5E/14G5A video monitors, allowing you to control multiple monitors from one control unit.

BKM-12Y Monitor Memory Card

Memory cards which can be read and written by the BVM-14G5U/14G5E/14G5A or BKM-10R/11R.

BKM-14L Auto Setup Probe

This probe allows automatic adjustment of this monitor's color temperature.

For screen

BKM-33H20 Monitor 16:9 Mask

Adapts the BVM-20G1U/20G1E/20G1A screen for 16:9 aspect ratio display.

BKM-33H14 Monitor 16:9 Mask

Adapts the BVM-14G1U/14G1E/14G1A/14G5U/14G5E/14G5A screen for 16:9 aspect ratio display.

For installation

BKM-30E20 Rack Mount Kit

Rack mount kit for mounting the BVM-20G1U/20G1E/20G1A in an EIA standard 19-inch rack.

BKM-30E14 Rack Mount Kit

Rack mount kit for mounting the BVM-14G5U/14G5E/14G5A in an EIA standard 19-inch rack.

BKM-31E14 Rack Mount Kit

Rack mount kit for mounting the BVM-14G1U/14G1E/14G1A in an EIA standard 19-inch rack.

BKM-32H Monitor Control Unit Attachment Kit

Assembly kit for attaching a BKM-10R Monitor Control Unit to the BVM-20G1U/20G1E/20G1A.

Decoder and input expansion adaptors

The input connector panel is configured by sliding optional decoder adaptor or input expansion adaptor into the input option slot at the rear of the monitor.

Note

When installing the adaptor, be sure to perform the necessary input signal setup with the INPUT CONFIGURATION menu. If the setup is not performed, the adaptors may not function correctly.

For information about the INPUT CONFIGURATION menu, see "Setting the Input Configuration (SET UP 1)—INPUT CONFIGURATION Menu" on page 32.

BKM-20D SDI 4:2:2 Decoder Adaptor

Includes decoders for serial digital component signals (525/625). Input/output connectors for three serial digital channels (component inputs only) and three analog channels. The input signal type for each connector is set with the INPUT CONFIGURATION menu, in accordance with the configuration of the connector panel.

BKM-21D SDI Multi Decoder Adaptor

Includes decoders for serial digital signals (525/625 component and NTSC/PAL composite) and analog composite signals (NTSC and PAL). Input/output connectors for three serial digital channels and three analog channels are equipped. The input signal type for each connector is set with the INPUT CONFIGURATION menu, in accordance with the configuration of the connector panel.

BKM-24N NTSC Decoder Adaptor

Includes decoders for analog composite NTSC signals and input/output connectors for six analog channels. The input signal type for each connector is set with the INPUT CONFIGURATION menu, in accordance with the configuration of the connector panel.

BKM-25P PAL Decoder Adaptor

Includes decoders for analog composite PAL signals and input/output connectors for six analog channels. The input signal type for each connector is set with the INPUT CONFIGURATION menu, in accordance with the configuration of the connector panel.

BKM-26M PAL-M Decoder Adaptor

Includes decoders for analog composite PAL-M signals and input/output connectors for six analog channels. The input signal type for each connector is set with the INPUT CONFIGURATION menu, in accordance with the configuration of the connector panel.

BKM-27T Tri-Standard Decoder Adaptor

Includes decoders for analog composite NTSC, PAL, and SECAM signals and input/output connectors for six analog channels. The input signal type for each connector is set with the INPUT CONFIGURATION menu, in accordance with the configuration of the connector panel.

BKM-28X Analog Input Expansion Adaptor

Increases the number of input/output channels. Includes input/output connectors for six analog channels. The input signal type for each connector is set with the INPUT CONFIGURATION menu, in accordance with the configuration of the connector panel.

BKM-48X HD Analog Input Expansion Adaptor

Increases the number of input/output channels. Includes input/output connectors for six analog channels. For each input output connector, either floating or ground can be selected by the switch inside the board. The input signal type for each connector is set with the INPUT CONFIGURATION menu, in accordance with the configuration of the connector panel.

Connector Panel Configuration

The unit comes standard with connectors for one channel of Y/R–Y/B–Y or RGB. By adding optional decoder adaptor or input expansion adaptors, the input/output connector panel can be assembled in a wide variety of configurations. The signals that each of the adaptors' connectors supports are given in the table below. The type of signal to be applied to each input/output connector is set with the INPUT CONFIGURATION menu.

Notes

The BKM-20D and BKM-21D can not provide proper active-through outputs if a signal whose format is not selected in the INPUT CONFIGURATION menu is input. (If AUTO is selected, input a signal which has the same format with the signal monitored last.)

For information about the INPUT CONFIGURATION menu, see "Setting the Input Configuration (SET UP 1) — INPUT CONFIGURATION Menu" on page 32.

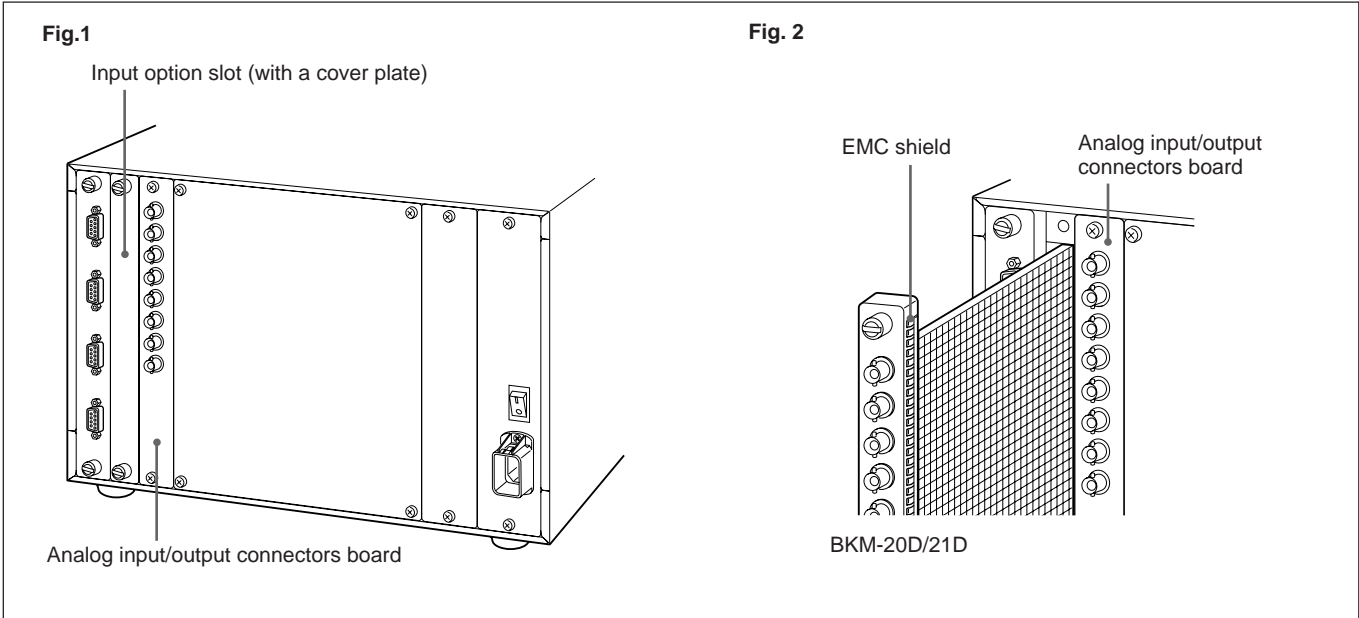
		Adaptor name							
		BKM-20D SDI 4:2:2 Decoder Adaptor	BKM-21D SDI Multi Decoder Adaptor	BKM-24N NTSC Decoder Adaptor	BKM-25P PAL Decoder Adaptor	BKM-26M PAL-M Decoder Adaptor	BKM-27T Tri- Standard Decoder Adaptor	BKM-28X Analog Input Expansion Adaptor	BKM-48X ¹⁾ HD Analog Input Expansion Adaptor
Serial digital input	Component 525/625	○	○						
	Composite NTSC		○						
	Composite PAL		○						
Analog input	Composite NTSC		○	○			○		
	Composite PAL		○		○		○		
	Composite PAL-M					○			
	Composite SECAM						○		
	Y/R–Y/B–Y 525/625	○	○	○	○	○	○	○	○
	RGB 525/625	○	○	○	○	○	○	○	○
	Y/C NTSC			○			○		
	Y/C PAL				○		○		
	Y/C PAL-M					○			
Number of digital inputs		3	3	–	–	–	–	–	–
Number of analog input		3	3	6	6	6	6	6	6

○: Signal can be reproduced with this adaptor.

1) Equipped with floating/non-floating ground mode selector for hum reduction.

Note on using the BKM-20D/21D

When the input option slot on the rear of the monitor has a BKM-20D/21D SDI Decoder Adaptor (option) installed, if you remove and insert the analog input/output connectors board, the EMC shield (see Fig. 2) of the BKM-20D/21D may be damaged or detached.

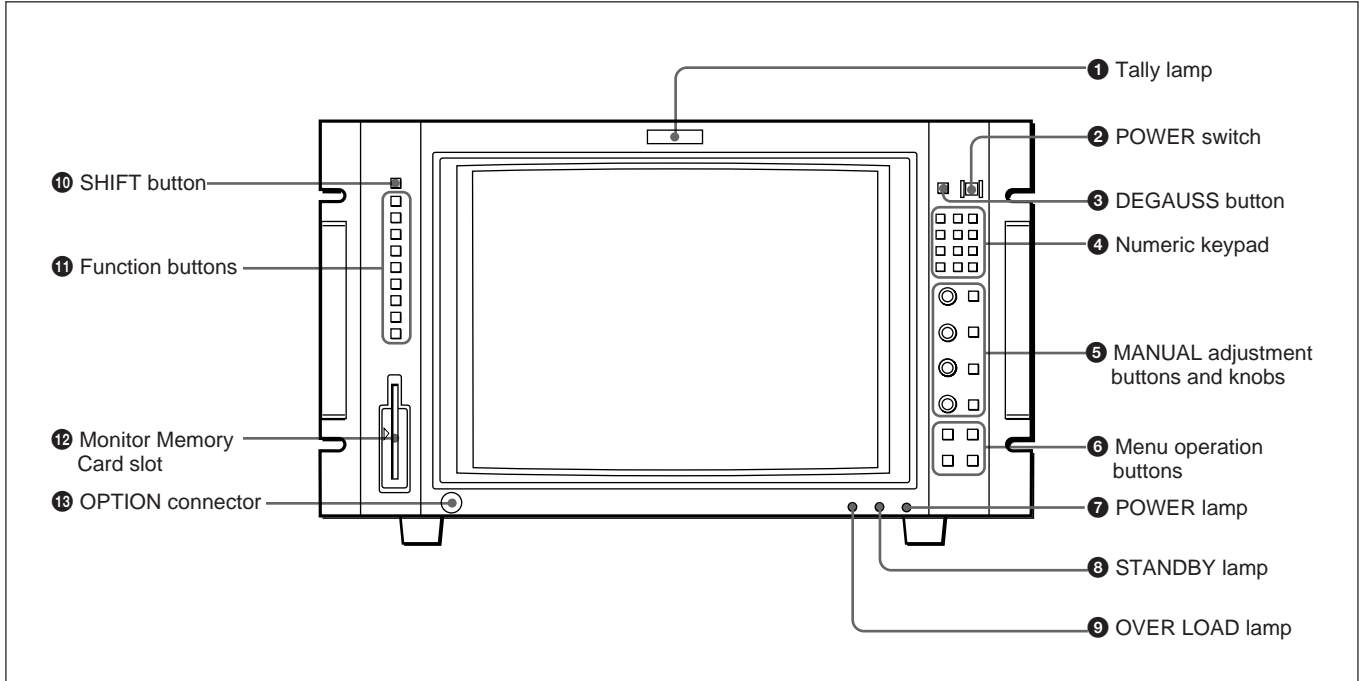


When installing the analog input/output connectors board again, remove the BKM-20D/21D temporarily while carrying out the other operations, then reinstall it.

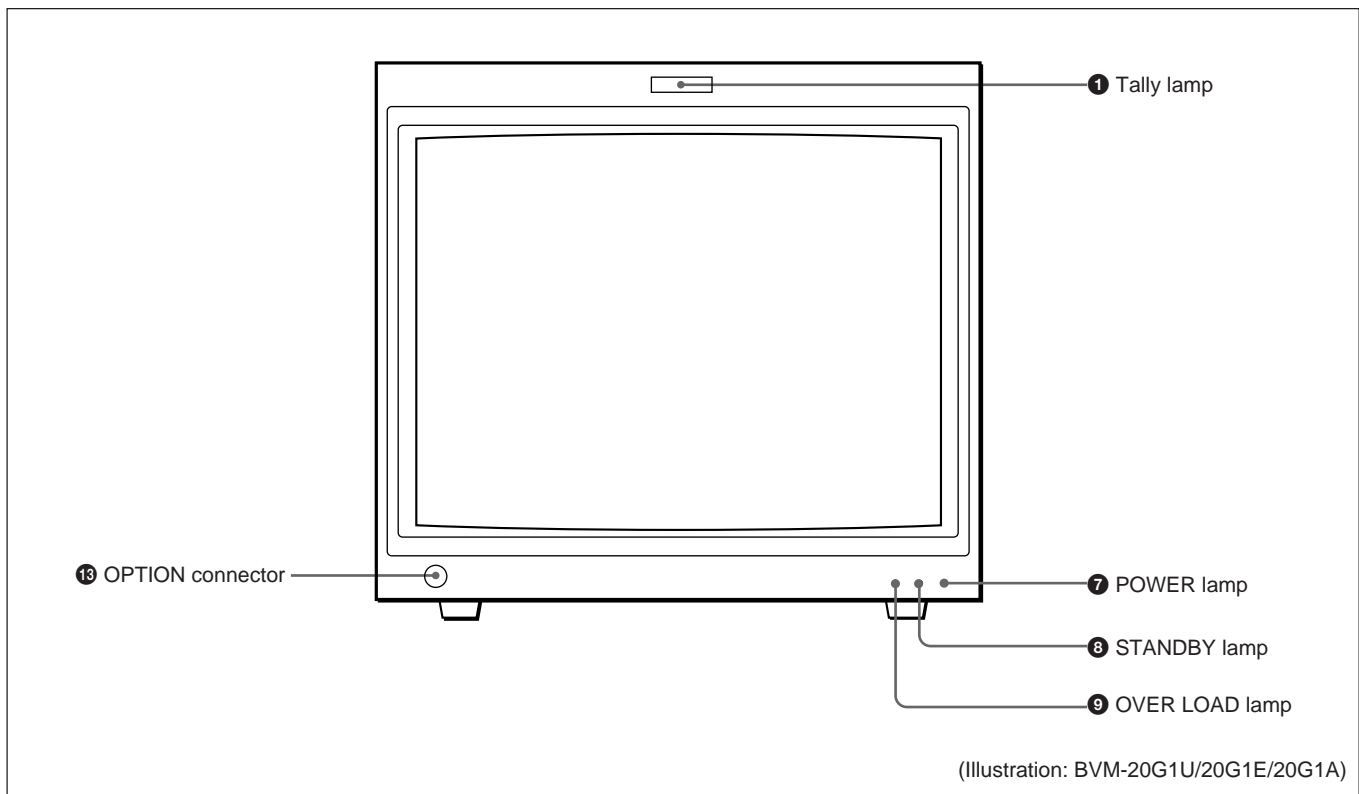
Location and Function of Parts

Front Panel

BVM-14G5U/14G5E/14G5A



BVM-20G1U/20G1E/20G1A/14G1U/14G1E/14G1A



Location and Function of Parts

This manual explains the location and function of parts and controls using the control panel of the BVM-14G5U/14G5E/14G5A. The explanation applies to BVM-14G1U/14G1E/14G1A/20G1U/20G1E/20G1A with the BKM-10R/11R Monitor Control Unit.

1 Tally lamp

With factory settings, the Tally lamp lights when pins No. 8 and No. 9 of the REMOTE 2 connector on the rear panel are shorted. By changing the setting in the REMOTE menu, different pins on the remote connector can be used to control the tally lamp.

For information about the REMOTE menu, see “Assigning the Remote Control Functions (SET UP 2)—REMOTE Menu” on page 35.

2 POWER switch

Press to turn on/off the monitor. By setting with the ADDRESS menu, it is possible to turn on/off the power of the specified monitors only, or of all monitors at the same time.

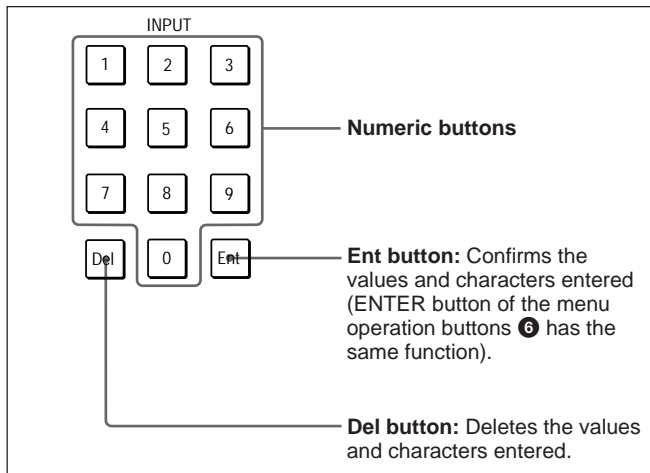
For information about the ADDRESS menu, see “Selecting the Monitor to Control - ADDRESS Menu” on page 49.

3 DEGAUSS button

Press to degauss the CRT (every time the monitor is turned on, the CRT is degaussed automatically). To degauss again, wait for more than five minutes.

4 Numeric keypad

Use to designate the channel number for the input signal to be monitored, or to enter the setting values with the menus.



Channel number entry method:

(In the explanation below, x represents any digit between 1 and 9, and y represents any digit between 0 and 9.)

When selecting a channel number from 1 to 9, press the x button to display channel x. When selecting a channel number from 10 to 99, press the 0, x, and y buttons to display channel xy (a two-digit channel number).

5 MANUAL adjustment buttons and knobs

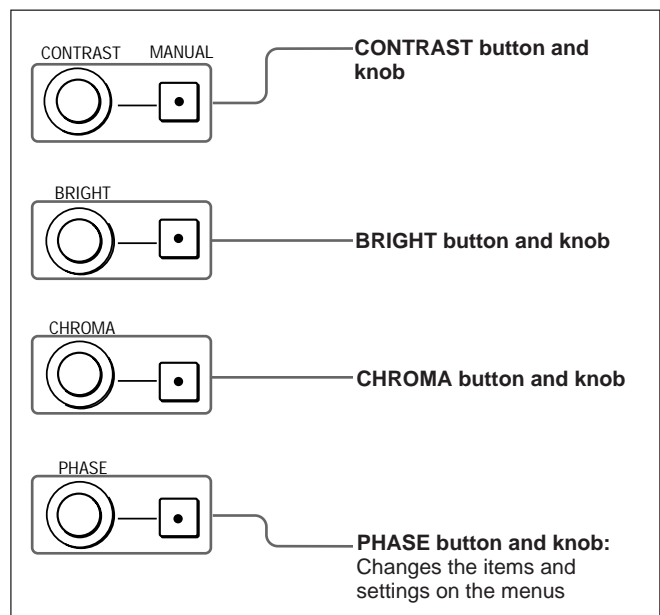
Each press of one of these buttons turns the button's green LED on or off. When the corresponding button is on (lit), it is possible to manually adjust the contrast, brightness, chroma and phase by turning the corresponding knobs. They are also used to enter the setting values with the menus. It is possible to set the preset value for each adjusting item with the CONTROL PRESET ADJ menu.

For Information about the CONTROL PRESET ADJ menu, see “Preset Adjustment of the Picture Level Control Knobs - CONTROL PRESET ADJ menu” on page 25.

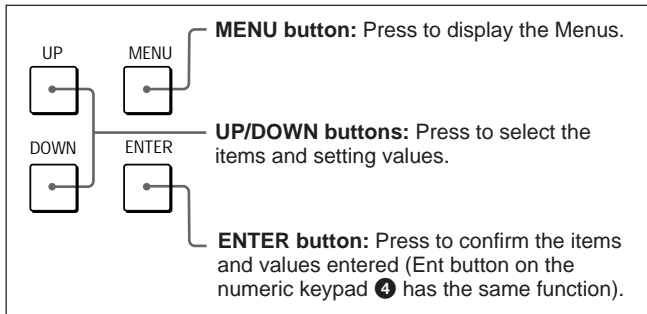
Notes

When using the composite SECAM, composite PAL D, component or SDI (component or composite serial digital interface) format, note the following.

- The signal phase cannot be adjusted.
- The phase and chroma of RGB signals cannot be adjusted.



6 Menu operation buttons



For more information about menu operation, see “Basic Menu Operations” on page 22.

7 POWER lamp

Lights when the monitor is put into operation mode from standby mode (see STANDBY lamp **8**) by pressing the POWER switch **2**.

Note

When the STANDBY lamp **8** is blinking, the monitor cannot be put into operation mode (internal data initialization is taking place). Wait until the STANDBY lamp **8** is steadily lit.

8 STANDBY lamp

Lights when the monitor is in standby mode. The monitor will be in standby mode under the following conditions:

- The MAIN POWER switch (on the rear panel) is turned on (the STANDBY lamp will blink for a few moments after the switch is turned on, then will light).
- The monitor is changed from operation mode to standby mode by external control.

9 OVER LOAD lamp

Lights to warn of CRT overload.

Location and Function of Parts

10 SHIFT button

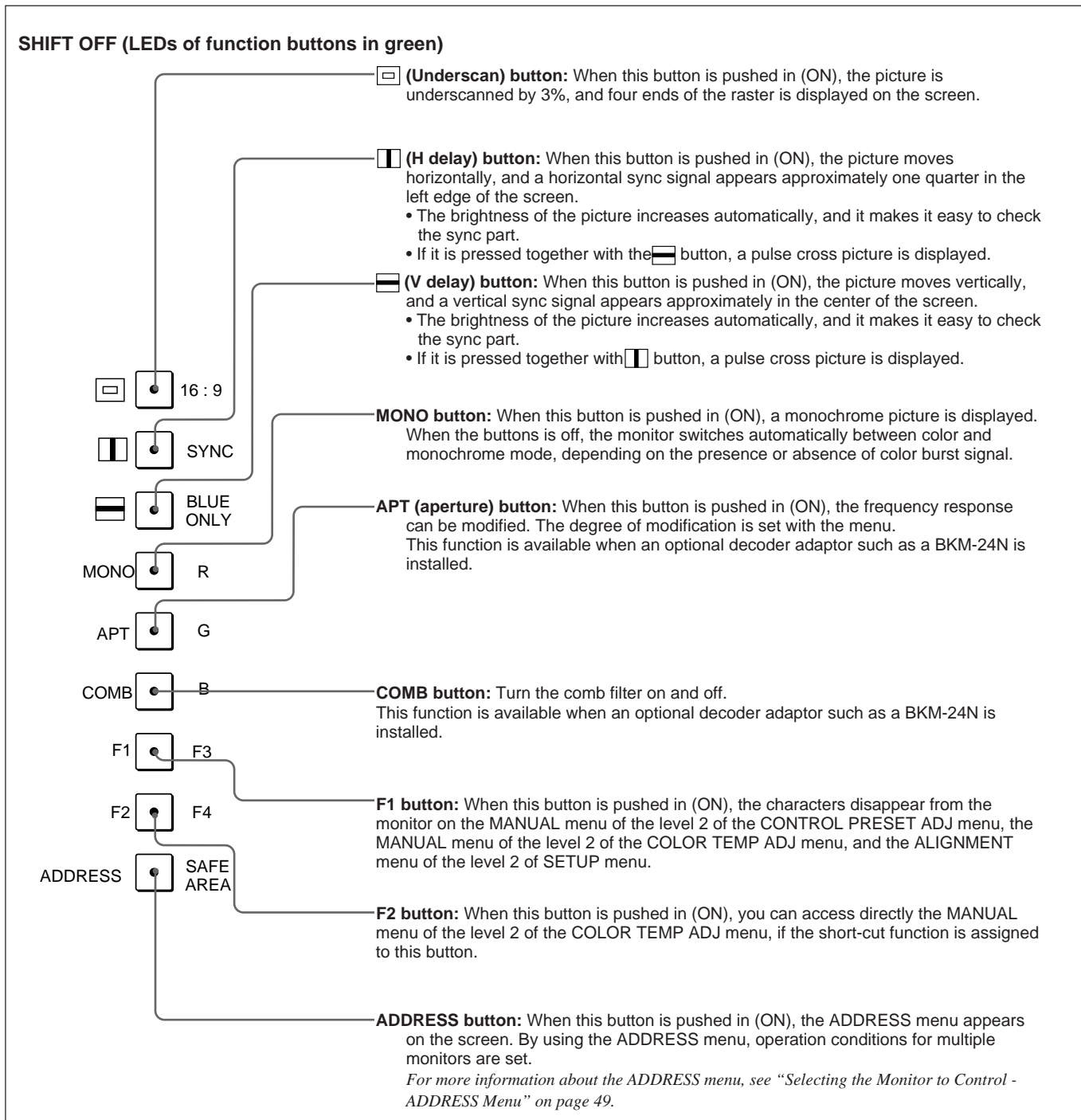
Press to select one of the two functions designated to the function buttons 11. Each time the SHIFT button is pressed, the LED turns on (SHIFT ON: lit in orange) and off (SHIFT OFF: lit in green).

SHIFT OFF: The functions indicated on the left side of the function buttons can be used.

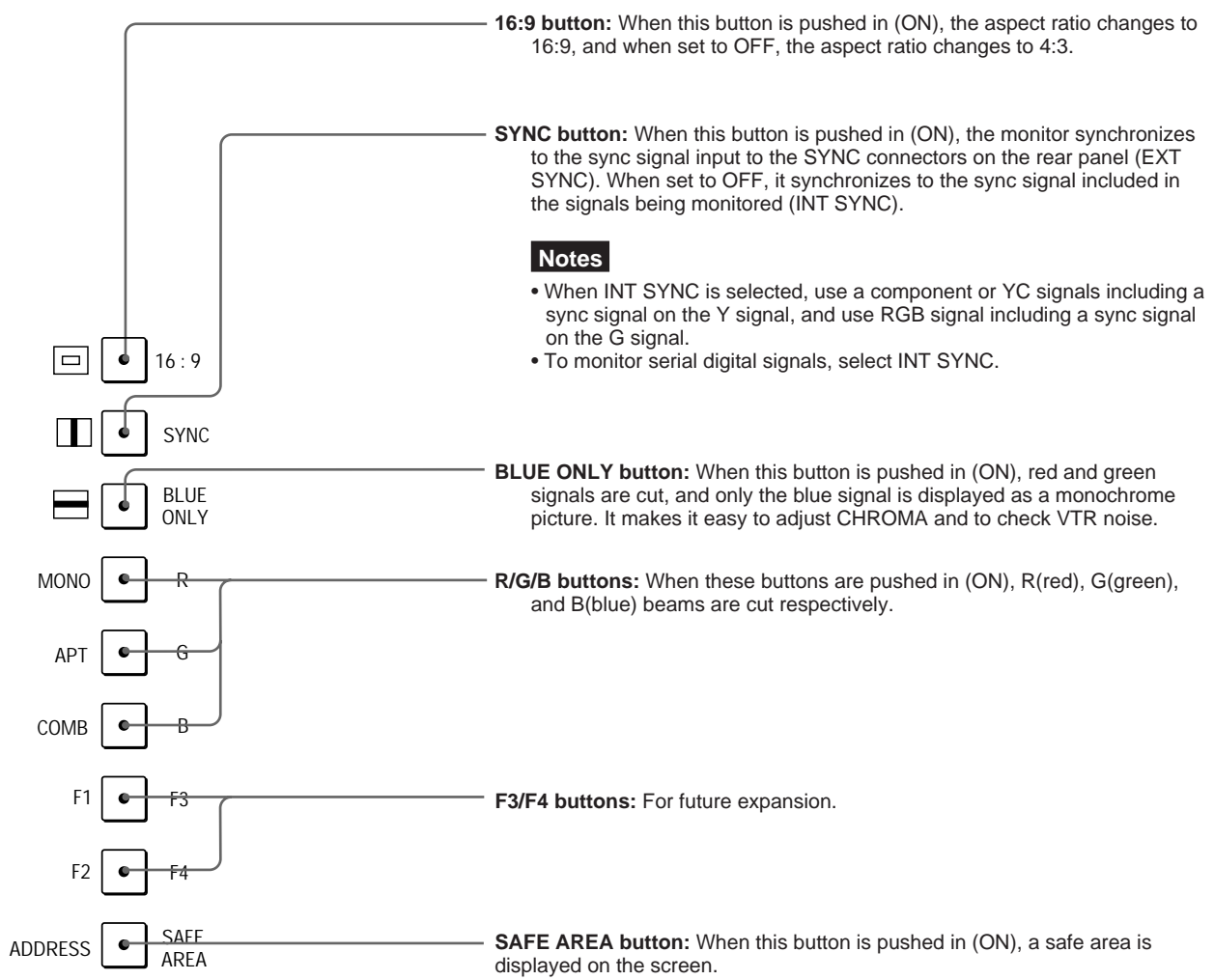
SHIFT ON: The functions indicated on the right side of the function buttons can be used.

11 Function buttons

Change the operation conditions for the monitor. Each time the button is pressed, the LED turns on and turns off, and the operation conditions are changed. Each button has two functions. Select one of the two functions by pressing the SHIFT button 10. When the SHIFT button is set to ON, the LED lights in orange, and when the SHIFT button is set to OFF, the LED of each button lights in green.



SHIFT ON (LEDs of function buttons in orange)



Notes

- When INT SYNC is selected, use a component or YC signals including a sync signal on the Y signal, and use RGB signal including a sync signal on the G signal.
- To monitor serial digital signals, select INT SYNC.

Note

When EXT SYNC is selected, the safe area display possibly may not be shown in the correct position.

Location and Function of Parts

12 Monitor Memory Card slot

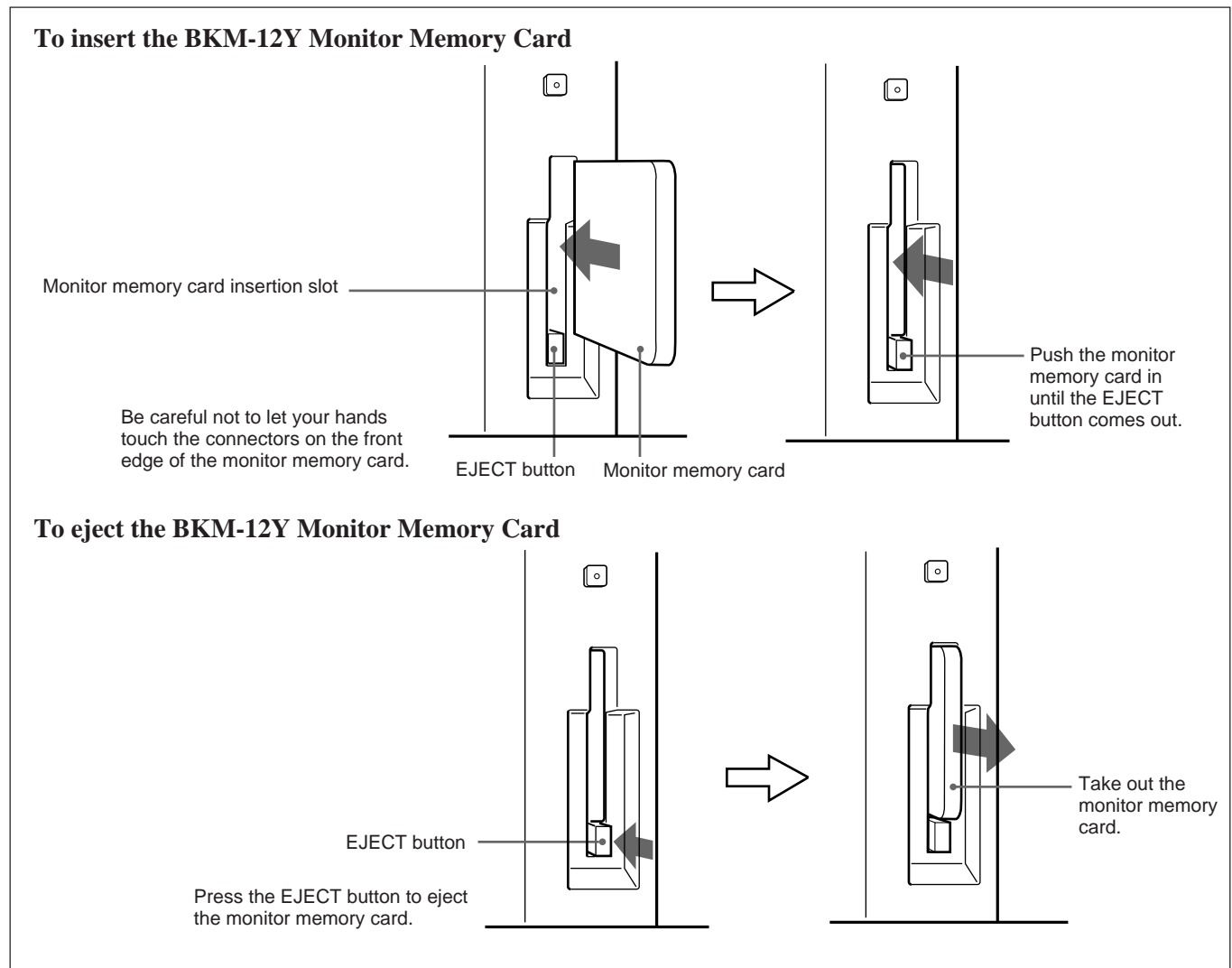
Insert the BKM-12Y Monitor Memory Card (optional).

For information about operations on monitor memory card data, see “Monitor Memory Card Data Operations — MEMORY CARD menu” on page 46.

Proceed as illustrated to insert and eject the BKM-12Y Monitor Memory Card.

Note

Do not eject the monitor memory card while data is being saved or loaded.

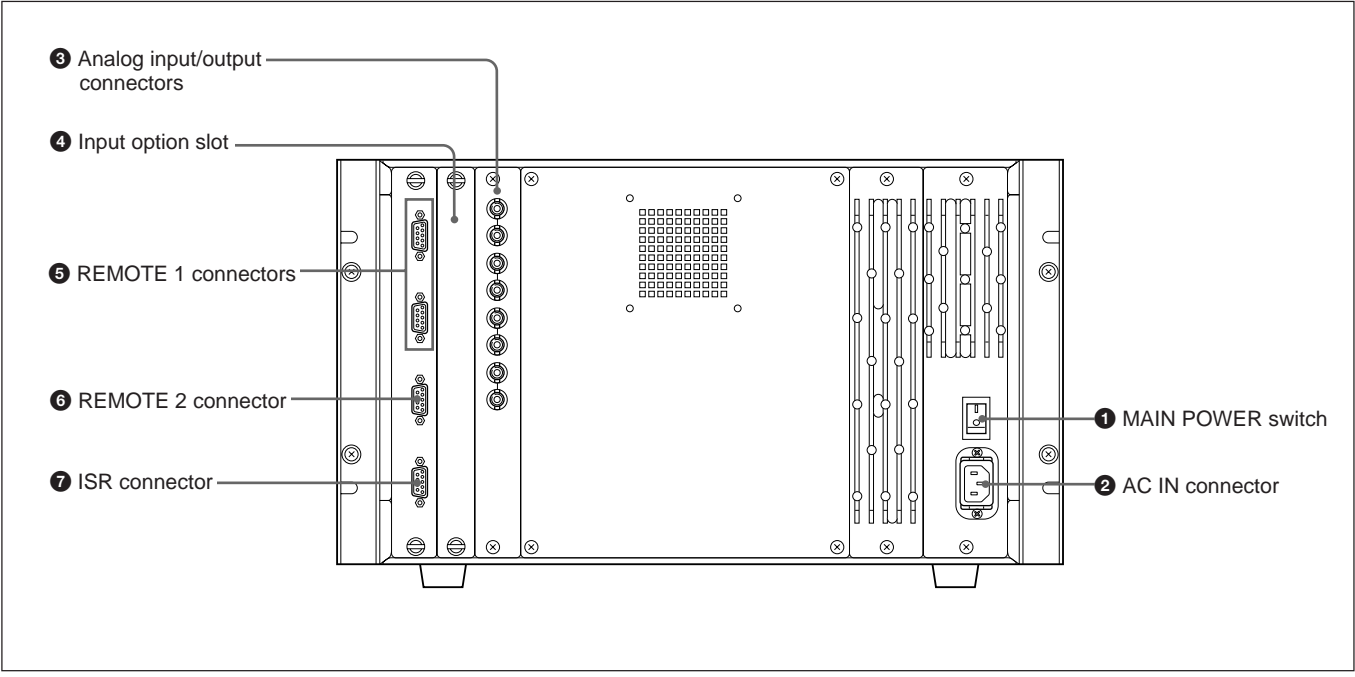


13 OPTION connector

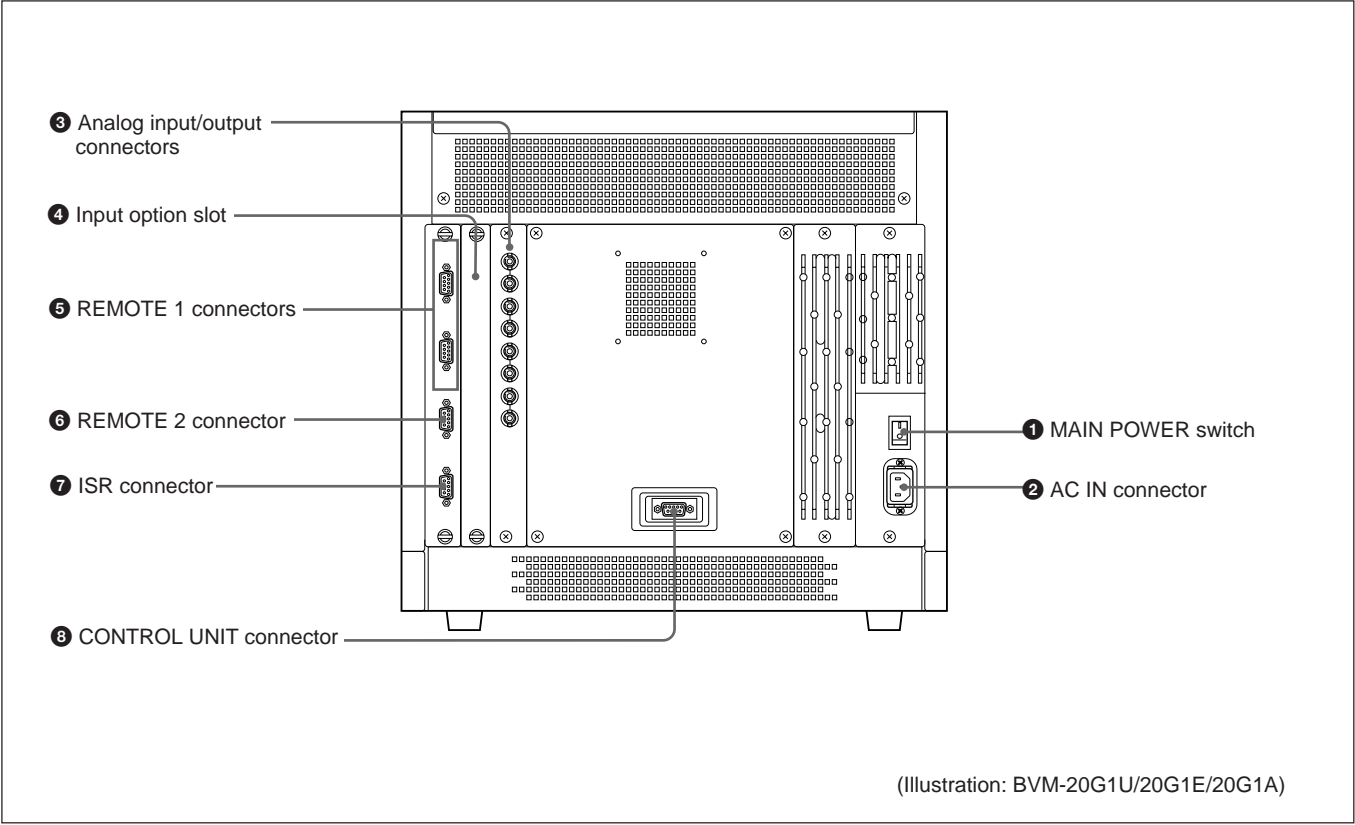
Used to connect the BKM-11R Monitor Control Unit or BKM-14L Auto Setup Probe.

Rear Panel

BVM-14G5U/14G5E/14G5A



BVM-20G1U/20G1E/20G1A/14G1U/14G1E/14G1A



Location and Function of Parts

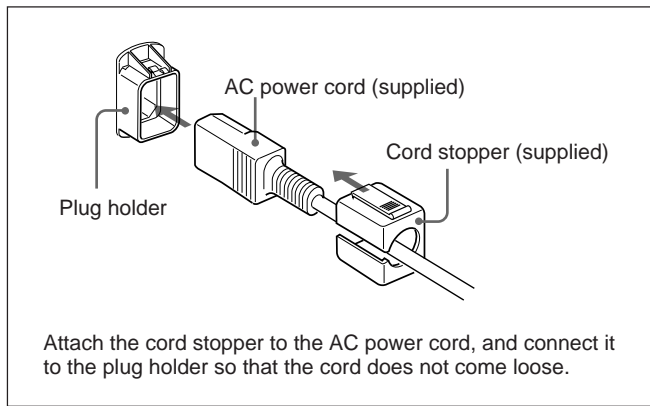
1 MAIN POWER switch

When turned on, the monitor enters standby mode. By setting in the SYSTEM CONFIGURATION menu, the monitor can also be set to enter operation mode when the MAIN POWER switch is turned on.

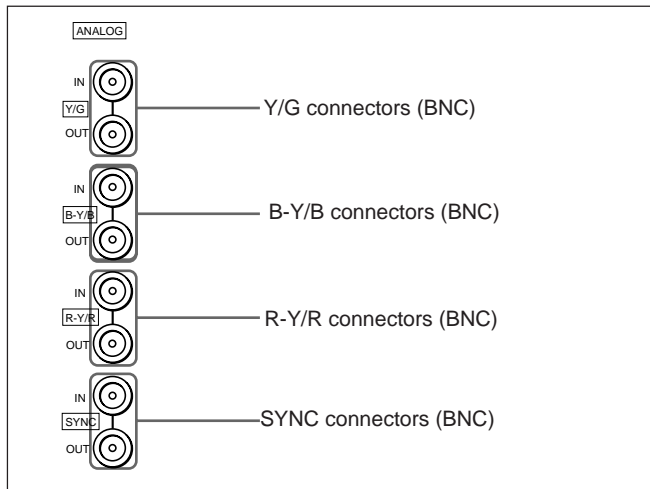
For information about the SYSTEM CONFIGURATION menu, see “Setting Power-Up Conditions and Decoder (SET UP 4)—SYSTEM CONFIGURATION Menu” on page 39.

2 AC IN connector (3-pin)

Connects the monitor to an AC power source, via the supplied AC power cord.



3 Analog input/output connectors



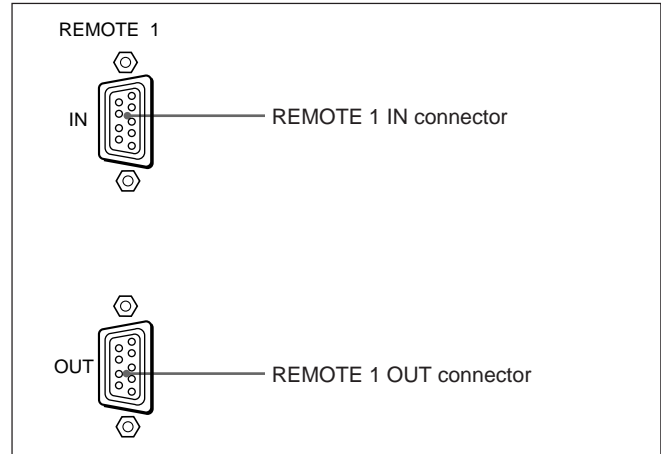
RGB signals, component signals (Y/R-Y/B-Y), or composite sync signals can be fed in the IN connectors. The type of signal applied to each connector is set with the INPUT CONFIGURATION menu. The OUT connectors are used for loop-through output of the input signal. When not using loop-through, connect a 75-ohm terminator (not supplied) to the OUT connectors.

For information about the INPUT CONFIGURATION menu, see “Setting the Input Configuration (SET UP 1)—INPUT CONFIGURATION Menu” on page 32.

4 Input option slot

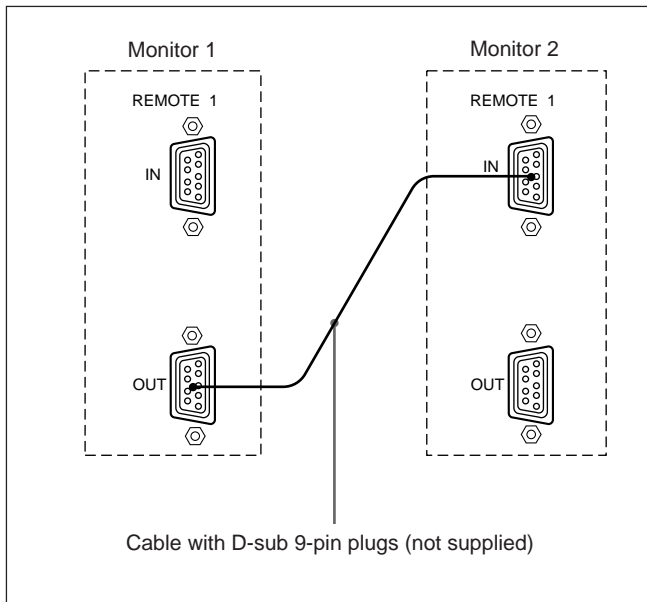
One optional decoder adaptor or input expansion adaptor can be installed into this option slot.

5 REMOTE 1 connectors (female, D-sub 9-pin)



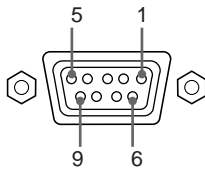
These are RS-485 serial interface connectors, used for connecting two or more BVM/HDM-series monitors. The IN and OUT connectors form a loop-through connection.

Connect two monitors using a cable with D-sub 9-pin plugs such as an RCC-5G (not supplied) as shown in the figure on the next page.



6 REMOTE 2 connector (female, D-sub 9-pin)

Forms a parallel switch and controls the monitor externally. The pin assignment and factory setting function assigned to each pin are given below.



Pin number	Function
1	Set input signal channel 1 (numeric keypad function)
2	Set input signal channel 2 (numeric keypad function)
3	Select sync signal (SYNC button function)
4	Set the screen to monochrome, or set for automatic switching based on the input signal (MONO MODE button function)
5	Safe area on/off (SAFE AREA button function)
6, 7	Not connected
8	Tally lamp on/off
9	Ground

All pin function assignments can be changed with the REMOTE menu.

For information about the REMOTE menu, see “Assigning the Remote Control Functions (SET UP 2)—REMOTE Menu” on page 35.

To switch each function between on and off or between enable and disable, change pin connections in the following way.

ON or enabled: Short each pin and pin 9 together.

OFF or disabled: Leave each pin open.

7 ISR (Interactive Status Reporting) connector (female, D-sub 9-pin)

Connect to the ISR system.

8 CONTROL UNIT connector (female, D-sub 9-pin)

Connects a monitor control unit such as the BKM-10R using a cable with D-sub 9-pin plugs such as an RCC-5G (not supplied).

Menu Structure

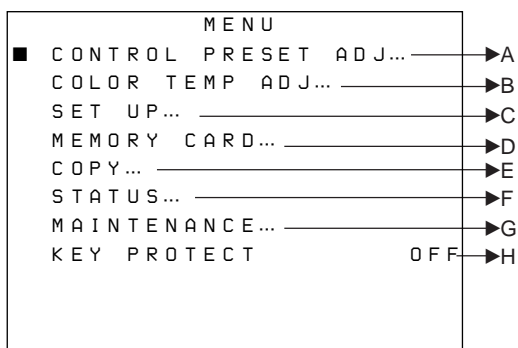
The various functions and operating conditions of the monitor can be set with on-screen menus. Menus consist of multiple levels of sub menus. The overview of the menu tree is described in “Menu Directories” on pages 20 and 21.

Detailed information on the levels of menus is described at the top of explanation of each menu.

Displaying the Menus

Press the MENU button.

The menu list is displayed on the screen.



Menu List

When you select one item on the main menu, the level 1 menu corresponding to the selected item on the main menu appears.

The adjustments and settings which can be made with the menus are described below.

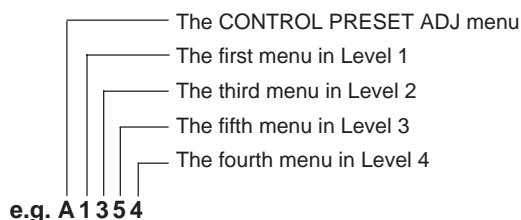
Note

On this monitor, menu settings displayed in blue cannot be changed.

Display of the main menu level	Functions
A CONTROL PRESET ADJ menu	Sets the preset values for the input signal contrast, brightness, chroma, and phase.
B COLOR TEMP ADJ menu	Sets the color temperature.
C SET UP menus	A menu group for performing monitor setup, consisting of the following. <ul style="list-style-type: none"> • INPUT CONFIGURATION menu: Sets the input channel. • REMOTE menu: Sets the remote control functionality. • PASSWORD menu: Sets passwords for menus. • SYSTEM CONFIGURATION menu: Sets power-up conditions and decoder. • ON SCREEN SET menu: Sets data about the screen display. • ALIGNMENT menu: Used to adjust the screen convergence and geometry. • EXTEND menu: Loads the factory default data for the board installed. Reads and writes setting and adjustment data from/into the memory card.
D MEMORY CARD menu	Operates on data in the memory card.
E COPY menu	Copies set-up data from other connected monitors.
F STATUS menu	Displays the information about the monitor or options installed in the monitor.
G MAINTENANCE menu	Menu for maintenance (typically not used).
H KEY PROTECT	When set to ON, function buttons on the control unit (with the exception of menu operation buttons) will be disabled. When set to OFF, key protection is removed.

About menu numbers

For purposes of explanation in this manual, each menu is preceded by menu numbers. The alphabet determines the classification of Menus on the Menu list (Main Menu), and the numbers determine the level and the order. These menu numbers are not shown on the screen.



Only the menus which require explanation are preceded by menu numbers. Thus, the menu number is counted without menus which do not require explanation.

ADDRESS Menu

In addition to the menus listed in the table, the ADDRESS menu is provided. This ADDRESS menu is used to select the monitor or the monitor group, so that when several monitors are connected together via serial remote ports, the control panel can select which monitor to control.

To display or exit the ADDRESS menu, press the ADDRESS button. The method of choosing menu items and changing settings is the same as with the other menus.

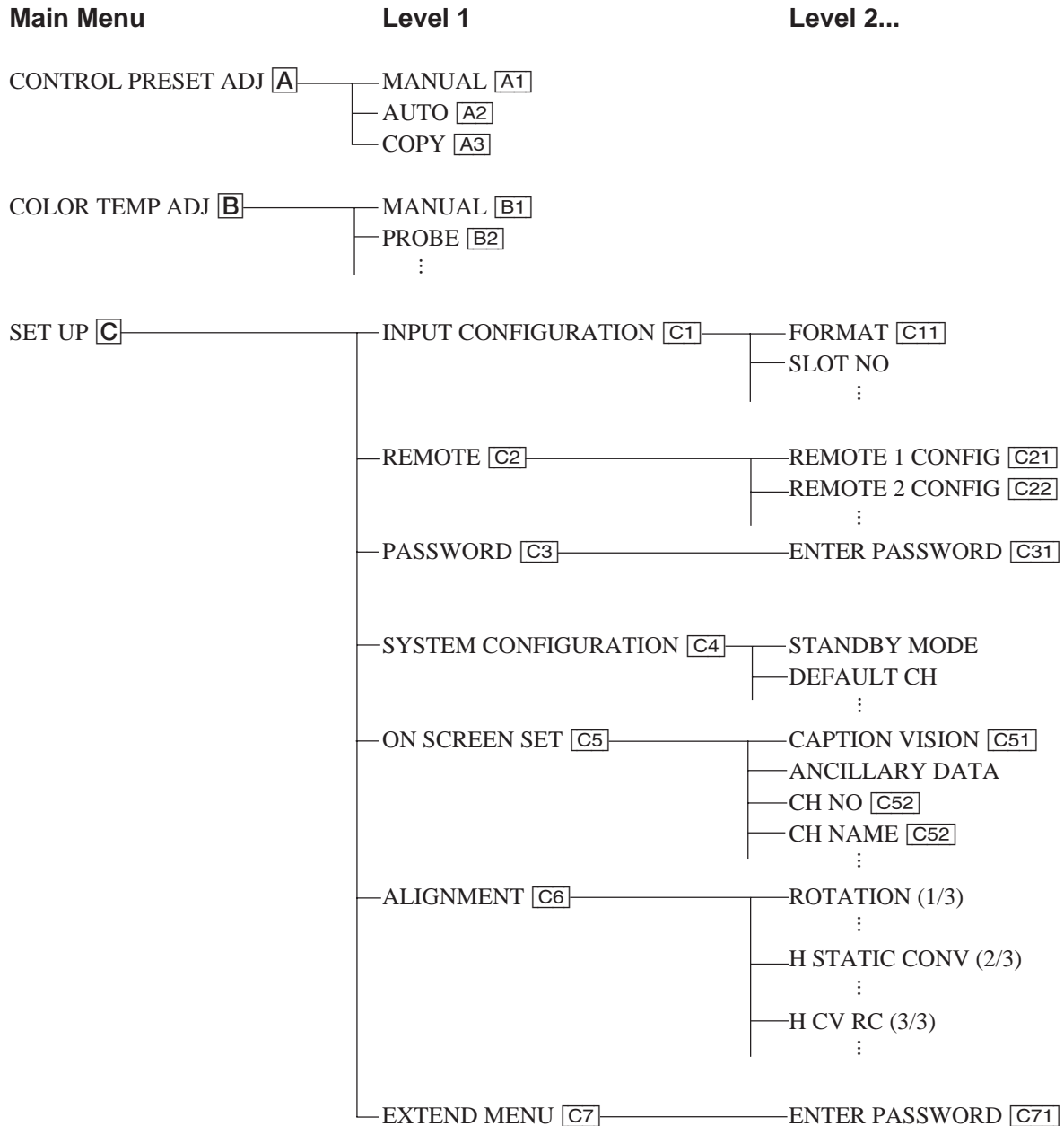
For information about the ADDRESS menu, see “Selecting the Monitor to Control —ADDRESS Menu” on page 49.

Menu Structure

Menu Directories

Menus consist of three to five levels. The Main Menu displayed on the Menu List and Levels 1 and 2 are shown below.

All menus including those in lower levels are shown at the top of the explanation of each Main Menu.

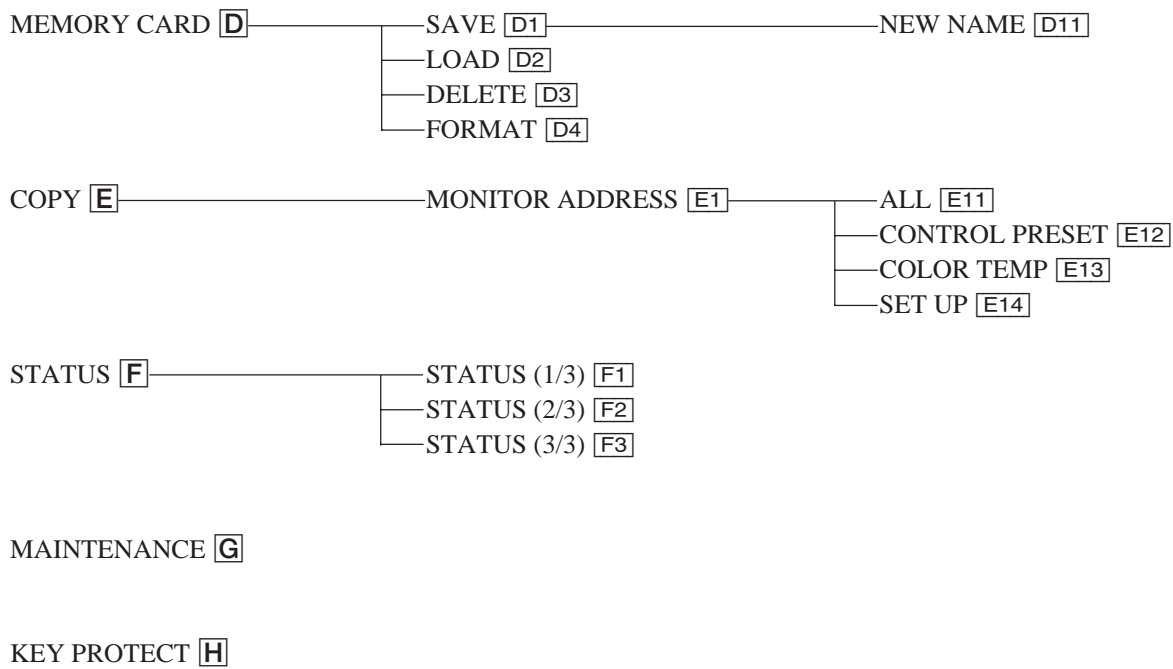




Main Menu

Level 1

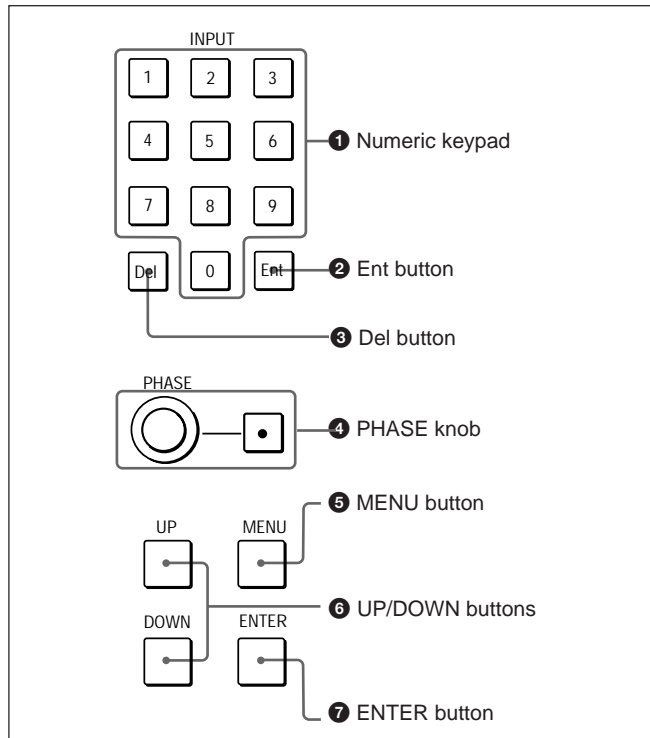
Level 2...



Basic Menu Operations

Menu Operation Buttons

The menus are operated using the menu operation buttons on the front panel.



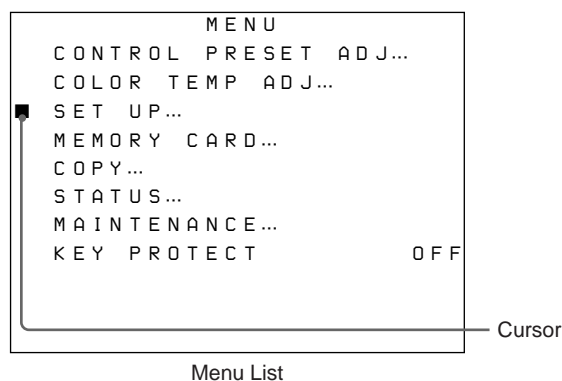
The functions of the menu operation buttons are described below.

Button	Function
5 MENU button	Displays the Menus. Goes back to the menu of the upper level (on the Main Menu, goes back to the normal picture).
6 UP button	Moves the cursor upward. In setting mode, increases the setting and adjustment values.
6 DOWN button	Moves the cursor downward. In setting mode, decreases the setting and adjustment values.
4 PHASE knob	By turning this knob clockwise, the cursor moves upward. In setting mode, increases the setting and adjustment values (has the same function as UP button). By turning this knob counterclockwise, the cursor moves downward. In setting mode, decreases the setting and adjustment values (has the same function as DOWN button).
2 Ent button 7 ENTER button	Executes the items selected and settings.
3 Del button	Deletes the values and characters entered.
1 Numeric keypad	Enters the numerical values.

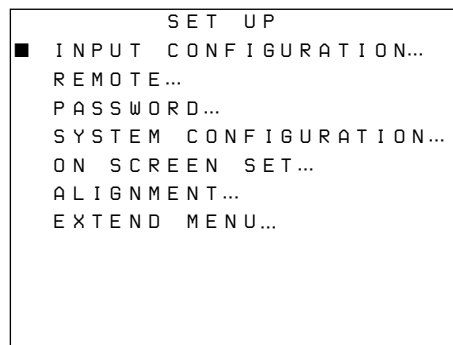
Menu Operation

Follow the steps described below to display the menu and perform the adjustment or setup you wish.

- 1 Press the MENU button 5.
The Menu List is displayed.
- 2 Using the UP/DOWN buttons 6 or PHASE knob 4, move the cursor to the desired item. (Example: select the SET UP menu by pressing the DOWN button.)



- 3 Press the ENTER button 7.
The Level 1 of the selected menu is displayed.



- 4** Repeat steps **2** and **3** until the desired menu is displayed.

For more information about setting and adjustments, see the next page.

INPUT CONFIGURATION ↑↓	
01CH	
■ FORMAT ...	NTSC-7.5
SLOT NO	2
INPUT NO	1
YC SEP	3 LINES COMB
SYNC MODE	INT
SCREEN MODE ...	4:3-NORM
SAFE AREA	OFF
SCALE ...	80%
APERTURE	OFF
VALUE	100

[↓] indicates that the menu continues onto next page.

[↑] indicates that the menu is continued from previous page.

Selects from various options.

Indicates that this item has sub-list. Thus, you can go to the lower level.

Enters numerical values.

To abort menu operation

Press the MENU button. The menu of the upper level is displayed.

The setting or adjustment being performed is canceled, and data loading or saving is aborted.

If “NG” or “ERROR” appears during menu operation

Press the MENU button to return to the menu in use.

Choosing one of two or more selections

Selecting in yellow text

- 1** Using the UP/DOWN buttons or PHASE knob, move the cursor to the desired item and press the ENTER or Ent button.
The selected item is displayed in yellow text and set to setting mode.

INPUT CONFIGURATION ↑↓	
01CH	
FORMAT ...	NTSC-7.5
SLOT NO	2
INPUT NO	1
YC SEP	3 LINES COMB
■ SYNC MODE	INT
SCREEN MODE ...	4:3-NORM
SAFE AREA	OFF
SCALE ...	80%
APERTURE	OFF
VALUE	100

- 2** Using the UP/DOWN buttons or PHASE knob, change the setting.

- 3** Press the ENTER or Ent button.
The setting is confirmed (The item is displayed in white text again).

Selecting from the setting list

- 1** Using the UP/DOWN buttons or PHASE knob, move the cursor to the desired item in the setting list.

SCREEN MODE	
■ 4:3-NORM	
4:3-UNDR	
16:9-NORM	
16:9-UNDR	

- 2** Press the ENTER button.
The display returns to the menu of the upper level, and the selected setting is executed.

Entering a numerical value

- 1** Using the UP/DOWN buttons or PHASE knob, move the cursor to the desired item and press the ENTER or Ent button.
The selected item is displayed in yellow text and set to setting mode.

INPUT CONFIGURATION ↑↓	
01CH	
FORMAT ...	NTSC-7.5
SLOT NO	2
INPUT NO	1
YC SEP	3 LINES COMB
SYNC MODE	INT
SCREEN MODE ...	4:3-NORM
SAFE AREA	OFF
SCALE ...	80%
APERTURE	OFF
■ VALUE	085

(Continued)

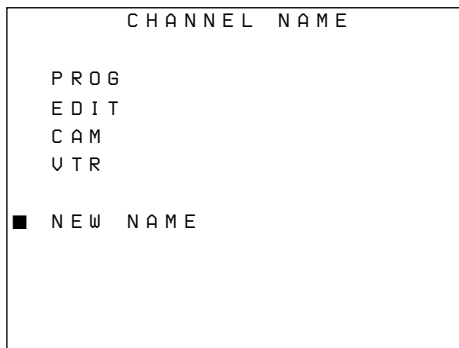
Basic Menu Operations

- 2** Set the value in one of the following three ways:
- Enter the value directly using the numeric keypad
 - Select the value using the UP/DOWN buttons
 - Select the value using the PHASE knob

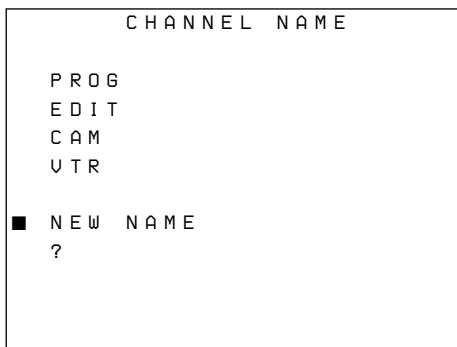
- 3** Press the ENTER button.
The setting is confirmed (The item is displayed in white text again).

Entering characters

- 1** Display the setting menu and set the cursor to NEW NAME using the UP/DOWN buttons or PHASE knob.



- 2** Press the ENTER button.
“?” is displayed in yellow. The “?” indicates the position where character input is possible.

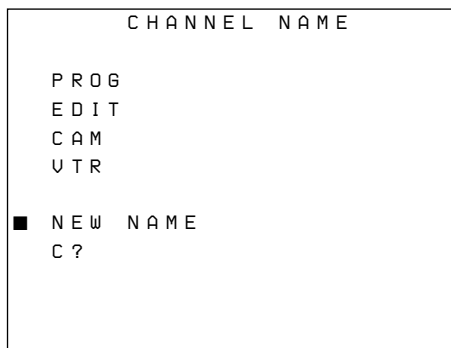


- 3** Select the character you wish to enter using the UP/DOWN buttons or PHASE knob. When you press the UP button, or turn the PHASE knob clockwise, the characters and symbols appear in the order shown below.

A, B,Y, Z, 0, 1,8, 9, (,), :, ;, ..
-, +, /, &, CH, (space), ?

If you press the UP/DOWN button or turn the PHASE knob, the characters and symbols appear in the reverse order described above.

- 4** Press the ENTER button.
The selected character is entered.



- 5** Repeat steps **3** and **4** until all the characters are entered, then press the ENTER button.
The selected characters are confirmed, and the display returns to the menu of the previous level.

To correct the entered character

Press the Del button on the numeric keypad. The character on the left side of the “?”(in yellow) is deleted.

Preset Adjustment of the Picture Level Control Knobs — CONTROL PRESET ADJ Menu

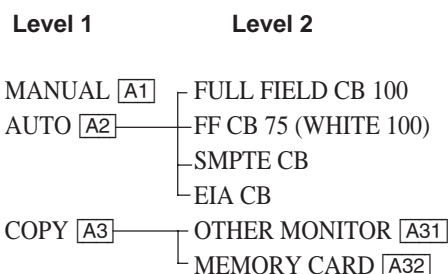
Overview

The preliminary adjustment of contrast, brightness, chroma, and phase are carried out with the CONTROL PRESET ADJ menu to set the preset values to the knobs for the above-mentioned adjustments.

Preset values can be set in the following ways:

- Adjustment with the MANUAL knobs
- Automatic adjustment (An external color bar signal is necessary.)
- Copying data from other BVM-series monitors that have been connected via the serial remote connector, or from data stored in monitor memory cards.

Structure of the CONTROL PRESET ADJ Menu A



Setting Lists in the CONTROL PRESET ADJ Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
For more information about the menu number, see “About menu numbers” on page 19.
- The arrow mark (⇒) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

A CONTROL PRESET ADJ menu

Select the setting method.

MANUAL: Set with the MANUAL knobs. ⇒ A1

AUTO: Set by automatic adjustment. ⇒ A2

COPY: Copy data from elsewhere. ⇒ A3

A1 MANUAL menu

Adjust values by turning the CHROMA, BRIGHT, CONTRAST and/or PHASE knobs. After the adjustment, press the ENTER button to confirm the adjusted values.

PHASE: xxxx

CHROMA: xxxx

BRIGHT: xxxx

CONTRAST: xxxx

When you want to erase characters from the screen while adjusting manually

Press the F1 button. The characters disappear. To display characters, press the F1 button again.

To reset the setting to the default

Press the corresponding MANUAL button. The adjusted value is reset to 1000 (default).

Preset Adjustment of the Picture Level Control Knobs — CONTROL PRESET ADJ Menu

A2 AUTO menu

Select the color bar signal to be used for automatic adjustment. ⇒ Adjustment is carried out.

FULL FIELD CB 100: 100% full-field color bar

FF CB 75 (WHITE 100): 75% full-field color bar
(with 100 % white signal)

SMPTE CB: SMPTE standard color bar

EIA CB: EIA standard color bar

Note

When you execute the AUTO menu, SYNC button should be set to OFF (INT SYNC). EXT SYNC will cause an error abortion of auto adjustment procedure.

A3 COPY menu

Select the source to be copied from.

OTHER MONITOR: Copy data from another monitor. ⇒ **A31**

MEMORY CARD: Copy data from a memory card.
⇒ **A32**

A31 OTHER MONITOR menu

Input the address of the monitor from which the data will be copied. ⇒ Copy is carried out.

MONITOR ADDRESS: Input the address.

A32 MEMORY CARD menu

Select the file name. ⇒ Copy is carried out.

FILE NAME: Select the file name.

Adjusting the Color Temperature — COLOR TEMP ADJ Menu

Overview

The color temperature is adjusted with the COLOR TEMP ADJ menu. The color temperature can be set to one of STD, COL1 or COL 2 for each channel. Use the factory setting value or the adjusted value as an original values to shorten the adjustment time.

Color temperature adjustment can be made in the following three ways:

- **Knob adjustment**
Adjust the color temperature with the bias and gain knobs manually.
- **Automatic adjustment using a probe**
You can use the following probes for automatic adjustment of color temperature. Except for the Sony BKM-14L, a cable is required to connect the color analyzer to the monitor.

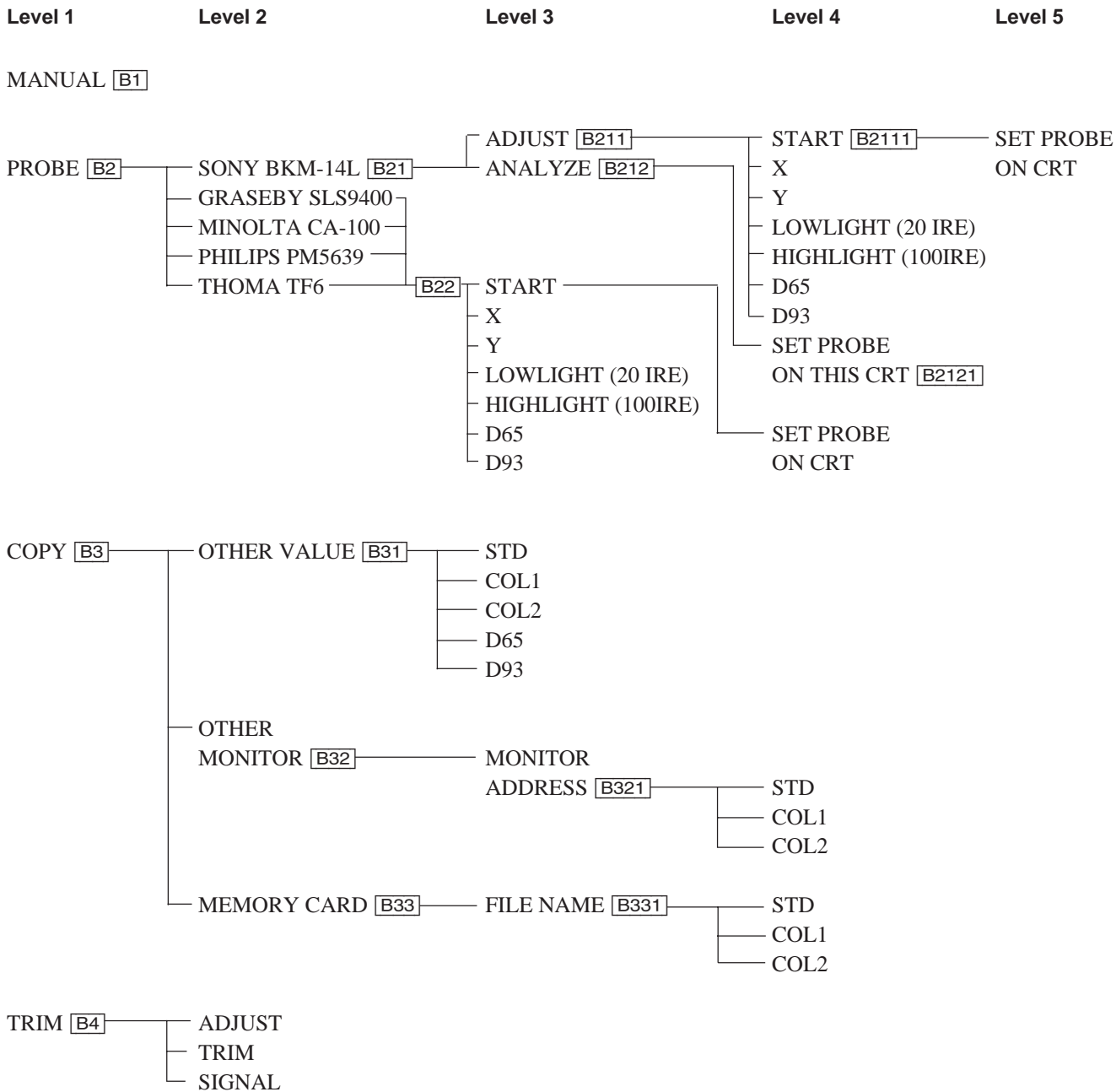
Manufacturer	Probe Model Name
SONY	BKM-14L (no cable required)
GRASEBY	SLS 9400
MINOLTA	CA-100
PHILIPS	PM 5639
THOMA	TF6

For more information about the cable specification required and about the connection, see “Connection Cable Specifications for Color Temperature Probes” on page 54.

- **Copying other data**
Copying data from other BVM-series monitors that have been connected via the serial remote connector, or from data stored in monitor memory cards.

Adjusting the Color Temperature — COLOR TEMP ADJ Menu

Structure of the COLOR TEMP ADJ Menu B



Setting Lists in the COLOR TEMP ADJ Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
For more information about the menu number, see “About menu numbers” on page 19.
- The arrow mark (⇒) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

B COLOR TEMP ADJ menu (STD/COL1/ COL2)

Select the adjustment method.

MANUAL: Set with the MANUAL knob. ⇒ **B1**

PROBE: Set using a probe. ⇒ **B2**

COPY: Copy data from elsewhere. ⇒ **B3**

TRIM: Perform fine adjustments after setting the color temperature. ⇒ **B4**

B1 MANUAL menu (STD/COL1/COL2)

Adjust the gain and bias manually.

ADJUST: Adjust the gain and bias. To shift between gain adjustment and bias adjustment, press UP/DOWN buttons. Use appropriate knobs in each adjustment as described below. After the adjustment, press the ENTER button to confirm the adjusted values.

RED: CONTRAST knob (Adjust the R gain or bias with the CONTRAST knob.)

GREEN: BRIGHT knob (Adjust the G gain or bias with the BRIGHT knob.)

BLUE: CHROMA knob (Adjust the B gain or bias with the CHROMA knob.)

LUMINANCE: PHASE knob (Adjust luminance with the PHASE knob.)

To reset RED/GREEN/BLUE to the value before adjustment

When you are adjusting the gain or bias using the MANUAL adjustment knobs, you can reset the setting to the one before adjustment by pressing the corresponding MANUAL button.

To reset all of settings at the same time, press the PHASE button.

Note

You cannot reset the setting after you press the ENTER button.

ORIGINAL VALUE: Set the initial value.

STD: Use common data (factory setting: D65).

COL1: Use common data (factory setting: D93).

COL2: Use common data (factory setting: D56/D65¹⁾).

SIGNAL: Select the white signal to be used for adjustment.

INT: Use an internal signal. Simultaneously with the adjustment of the gain and bias, the 100 IRE and 20 IRE signals are automatically switched.

EXT: Use an external input signal. When adjusting the gain and bias, input the proper signal.

To access the MANUAL menu directly

When the **F2** button is assigned as the short-cut key to the MANUAL menu, you can directly access the MANUAL menu that corresponds to the color temperature setting set to the image on the screen.

For details of how to assign the short-cut key, see “Setting the Power-Up Conditions (SET UP 4) - SYSTEM CONFIGURATION Menu” on page 39.

B2 PROBE menu(STD/COL1/COL2)

Select the probe for color temperature adjustment.

SONY BKM-14L...: Use the BKM-14L.
⇒ **B21**

GRASEBY SLS 9400...: Use the SLS 9400.
⇒ **B22**

MINOLTA CA-100...: Use the CA-100. ⇒ **B22**

PHILIPS PM 5639...: Use the PM 5639.
⇒ **B22**

THOMA TF6...: Use the TF6. ⇒ **B22**

- If you cannot execute an ADJUST or ANALYZE menu operation when using the Sony BKM-14L probe, try again after disconnecting and reconnecting the probe.
- When using the Thoma TF6 probe, set the TF6 PRINT menu to off.

.....
1) D56: BVM-20G1U/14G1U/14G5U
D65: BVM-20G1E/20G1A/14G1E/14G1A/14G5E/14G5A

Adjusting the Color Temperature — COLOR TEMP ADJ Menu

[B3] COPY menu (STD/COL1/COL2)

Select the adjustment method and the source to be copied from.

OTHER VALUE: Copy data from one of STD, COL 1 or COL 2. ⇨ **[B31]**

OTHER MONITOR: Copy data from another monitor. ⇨ **[B32]**

MEMORY CARD: Copy data from a memory card. ⇨ **[B33]**

[B4] TRIM menu (STD/COL1/COL2)

Trim the original setting by selecting ADJUST.

ADJUST: Adjust the gain and bias. To shift between gain adjustment and bias adjustment, press UP/DOWN buttons. Use appropriate knobs in each adjustment as described below. After the adjustment, press the ENTER button to confirm the adjusted values.

RED: CONTRAST knob (Adjust the R gain or bias with the CONTRAST knob.)

GREEN: BRIGHT knob (Adjust the G gain or bias with the BRIGHT knob.)

BLUE: CHROMA knob (Adjust the B gain or bias with the CHROMA knob.)

LUMINANCE: PHASE knob (Adjust luminance with the PHASE knob.)

To reset RED/GREEN/BLUE to the value before adjustment

When you are adjusting the gain or bias using the MANUAL adjustment knobs, you can reset the setting to the one before adjustment by pressing the corresponding MANUAL button.

To reset all of settings at the same time, press the PHASE button.

TRIM: Select whether to add the fine adjustment to the original setting (gain and bias set in MANUAL menu **[B1]**).

APPLY: Adds the fine adjustment to the original setting.

When APPLY is selected, “XX/TRIM” (XX: the selected color temperature among STD, COL 1 or COL 2) appears on the left top on the COLOR TEMP ADJ menu.

NOT APPLY: Reset the setting to the original setting (gain and bias set in MANUAL menu **[B1]**).

SIGNAL: Select the white signal to be used for adjustment.

INT: Use an internal signal. Simultaneously with the adjustment of the gain and bias, the 100 IRE and 20 IRE signals are automatically switched.

EXT: Use an external input signal. When adjusting the gain and bias, input the proper signal.

Note

Even if NOT APPLY of the TRIM item is selected, pressing the ENTER button to confirm the adjusted values results in that APPLY will be selected.

[B21] PROBE menu (STD/COL1/COL2)

Select the BKM-14L operation.

ADJUST: Perform automatic color temperature adjustment. ⇨ **[B211]**

ANALYZE: Display readout values on the screen. ⇨ **[B212]**

[B22] PROBE menu (STD/COL1/COL2)

The lower levels of GRASEBY SLS9400, MINOLTA CA-100, PHILIPS PM5639 and THOMA TF6 are the same as **[B211]** in level 3 and lower than that.

[B31] OTHER VALUE menu (STD/COL1/ COL2)

Select STD, COL1, or COL2. ⇨ Copy is carried out.

STD: Copy common data (factory setting: D65).

COL1: Copy common data (factory setting: D93).

COL2: Copy common data (factory setting: D56/ D65¹⁾).

D65: Copy the color temperature of D65.

D93: Copy the color temperature of D93.

[B32] OTHER MONITOR menu (STD/COL1/ COL2)

Specify the address number of the monitor.

MONITOR ADDRESS: Input the address number of the monitor from which the data will be copied.

⇨ **[B321]**

[B33] MEMORY CARD menu

Select the file name. ⇨ **[B331]**

FILE NAME: Select the file name.

1) D56: BVM-20G1U/14G1U/14G5U
D65: BVM-20G1E/20G1A/14G1E/14G1A/14G5E/14G5A

[B211] ADJUST menu (STD/COL1/COL2)

To start adjustment, proceed as follows.

When you use the previously adjusted values for adjustment, you can make start adjustment by selecting START without perform operations step (1) and step (2).

- (1) Select either D65 or D93.
Rather than selecting D65 or D93, you may instead enter the values of the CIE 1931 color system x and y coordinates.
- (2) Enter values for LOWLIGHT and HIGHLIGHT.
- (3) Select START.

START: Start adjustment. ⇒ [B2111]

X: Enter the x coordinate.

Y: Enter the y coordinate.

LOW LIGHT (20IRE): Enter the luminance (cd/m²) for low light.

HIGH LIGHT (100IRE): Enter the luminance (cd/m²) for high light.

D65: Use D65 setting.

D93: Use D93 setting.

[B212] ANALYZE menu (STD/COL1/COL2)

The following message appears. Perform operation according to the message to enable the BKM-14L to read the color system and luminance value.

**SET PROBE ON THIS CRT
PRESS ENTER**

Attach the BKM-14L on the center of the CRT and press the ENTER button. ⇒ [B2121]

Once the BKM-14L has carried out calibration, the BKM-14L can start analyze the monitor's performance.

[B321] MONITOR ADDRESS menu (STD/COL1/COL2)

Select STD, COL1 or COL2. ⇒ Copy is carried out.

STD: Copy common data (factory setting: D65).

COL1: Copy common data (factory setting: D93).

COL2: Copy common data (factory setting: D56/D65¹⁾).

[B331] FILE NAME menu (STD/COL1/COL2)

Select STD, COL1, or COL2 of the memory card data.
⇒ Copy is carried out.

STD: Copy common data (factory setting: D65).

COL1: Copy common data (factory setting: D93).

COL2: Copy common data (factory setting: D56/D65¹⁾).

[B2111] COLOR TEMP ADJ menu (STD/COL1/COL2)

The following message appears. Perform operation according to the message to start adjustment.

**SET PROBE ON CRT
PRESS ENTER**

Adjustment starts when the probe is placed against the center of the screen and the ENTER button is pressed.

[B2121] ANALYZE menu (STD/COL1/COL2)

Display color temperature and luminance readout values from the BKM-14L.

X: xxxx: Display the x coordinate of the color system.

Y: xxxx: Display the y coordinate of the color system.

L: xxxx: Display the luminance value.

.....
1) D56: BVM-20G1U/14G1U/14G5U
D65: BVM-20G1E/20G1A/14G1E/14G1A/14G5E/14G5A

Setting the Input Configuration (SET UP 1) — INPUT CONFIGURATION Menu

Overview

Data pertaining to the input signals are set with the INPUT CONFIGURATION menu.

When a channel number (1 to 90) is entered with the numeric keypad, it is then possible to set which input connector on the rear panel will be assigned to that channel number, and select the type of signal that will be connected. The channel numbers from 91 to 99 are assigned to internal signals.

- 091: PLUGE signal (Picture Line Up Generating Equipment)
- 092: 20% gray signal
- 093: 100% white signal
- 094: five-step gray scale signal
- 095: cross hatch signal
- 096: cross hatch signal
- 097: dot signal
- 098: cross hatch signal
- 099: 0% black signal

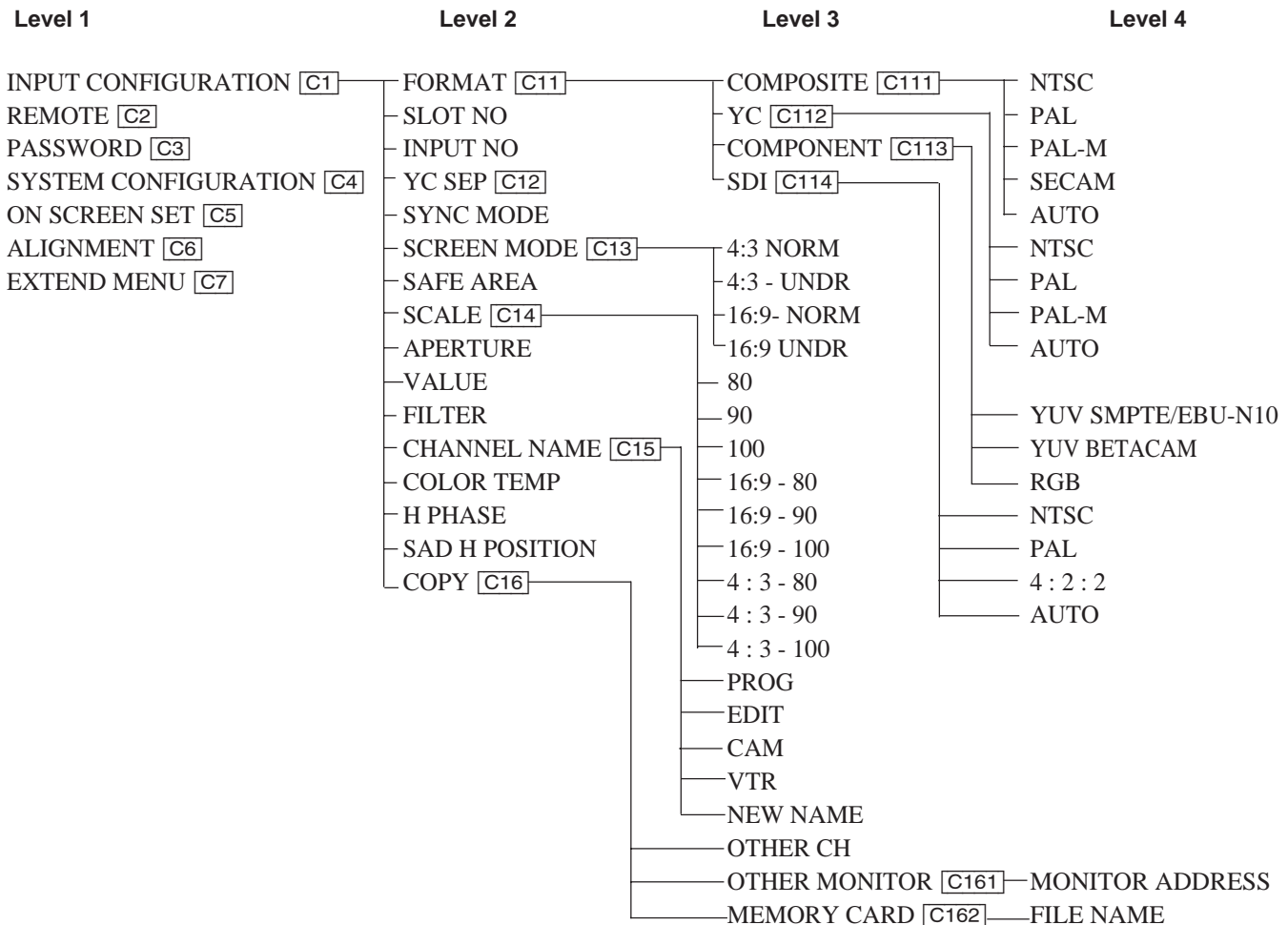
Assigning slot and connector numbers

Set which input connector on which slot will be assigned to the current channel. The slots are numbered from the left, as seen when facing the rear panel, with the REMOTE connectors slot being number 1, the input option slots number 2, and the analog input connectors slot being number 6. The connectors are numbered 1 to 6 (from the top) for the slot.

Assigning the signal type and format

The signal type and format which can be assigned to each channel number vary, depending on what adaptors (not supplied) are installed in the rear panel.

Structure of the INPUT CONFIGURATION Menu [C1]



Setting Lists in the INPUT CONFIGURATION Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
For more information about the menu number, see "About menu numbers" on page 19.
- The arrow mark (⇒) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

C1 INPUT CONFIGURATION menu (1/2)

Set input signal data for each channel.

xxCH: Current channel is indicated. To change the channel, enter a channel number with the numeric keypad. The settings below will be stored as information about the signal to be connected to this channel.

FORMAT: Select the input signal type. ⇒ **C11**

SLOT NO: Enter the slot number.

INPUT NO: Enter the input connector number.

YC SEP: Select Y/C separation filter. ⇒ **C12**

SYNC MODE: Select the sync signal.

INT: Use an internal sync signal.

EXT: Use an external sync signal.

SCREEN MODE: Select the scan size. ⇒ **C13**

SAFE AREA: Choose whether or not to display the safe area (OFF or ON).

SAFE AREA SCALE: Select the modes for safe area. ⇒ **C14**

APERTURE: Choose whether to use aperture adjustment or not (OFF or ON).

APERTURE VALUE: Enter the aperture adjustment value (0 to 200).

C1 INPUT CONFIGURATION menu (2/2)

Set input signal data for each channel.

xxCH: Current channel is indicated. To change the channel, enter a channel number with the numeric keypad. The settings below will be stored as information about the signal to be connected to this channel.

FILTER: Switch the filter operation (OFF or ON) when the monochrome display is selected.

CHANNEL NAME: Give the channel a name.

⇒ **C15**

COLOR TEMP: Set the color temperature. Select STD, COL1 or COL2.

STD: Use common data (factory setting: D65).

COL1: Use common data (factory setting: D93).

COL2: Use common data (factory setting: D56/D65¹⁾).

H PHASE: Set the horizontal picture position (–128 to +127).

SAD H POSITION: Adjust the horizontal display position of the safety area (–128 to +127).

COPY: Select a method for copying data from elsewhere. ⇒ **C16**

Note

For H PHASE and SAD H POSITION data, if values above or below the allowable range are entered, the monitor will not operate correctly.

C11 FORMAT menu (xxCH)

Select the signal format.

COMPOSITE: Composite signal ⇒ **C111**

YC: Y/C signal ⇒ **C112**

COMPONENT: Component or RGB signal ⇒ **C113**

SDI: Serial digital signal ⇒ **C114**

Note

If there is no input connector or decoder corresponding to a format, that format will not be selectable (the cursor will skip over that item).

C12 YC SEP menu

Select a Y/C separation filter.

TRAP/BPF: Select TRAP/BPF filter.

2 LINES COMB: Select 2 LINES COMB filter.

3 LINES COMB: Select 3 LINES COMB filter.

C13 SCREEN MODE menu (xxCH)

Select the scan size.

4:3-NORM: Overscanned 4:3 aspect ratio. (when not using 16:9 mask)

4:3-UNDR: Underscanned 4:3 aspect ratio. (when not using 16:9 mask)

16:9-NORM: Overscanned 16:9 aspect ratio.

16:9-UNDR: Underscanned 16:9 aspect ratio.

C14 SAFE AREA SCALE

Select the setting for each items of SAFE AREA setting list.

80: Displays a 80% safe area in 4:3 screen.

90: Displays a 90% safe area in 4:3 screen.

100: Displays an 100% safe area in 4:3 screen.

16:9-80: Displays a 80% of 16:9 aspect ratio safe area in 4:3 screen.

-
- 1) D56: BVM-20G1U/14G1U/14G5U
D65: BVM-20G1E/20G1A/14G1E/14G1A/14G5E/14G5A

Setting the Input Configuration (SET UP 1) — INPUT CONFIGURATION Menu

16:9-90: Displays a 90% s16:9 aspect ratio safe area in 4:3 screen.

16:9-100: Displays an 100% 16:9 aspect ratio safe area in 4:3 screen.

4:3-80: Displays a 80% 4:3 aspect ratio safe area in 16:9 screen.

4:3-90: Displays a 90% 4:3 aspect ratio safe area in 16:9 screen.

4:3-100: Displays an 100% 4:3 aspect ratio safe area in 16:9 screen.

[C15] CHANNEL NAME menu (xxCH)

Give the channel a name. Select a preset name, or enter a new one.

PROG: Program signal.

EDIT: Signal from an editor.

CAM: Camera signal.

VTR: Signal from a VTR.

NEW NAME: Enter a new name. (Up to 20 characters can be entered and up to six characters from the head of the name are displayed in the INPUT CONFIGURATION menu.)

[C16] COPY menu (xxCH)

Select the source to be copied from.

OTHER CH: Copy data from another channel. Enter the channel number.

When the input channel number is deleted with the Del button, the number “1” appears instead.

Restore the previous setting by pressing the MENU button, then re-enter the channel number. (Setting with the UP/DOWN buttons or PHASE knob is possible.)

OTHER MONITOR: Copy data from another monitor. ⇒ **[C161]**

MEMORY CARD: Copy data from a memory card. ⇒ **[C162]**

[C111] COMPOSITE menu (xxCH)

Select the format of a composite signal.

NTSC: SETUP 7.5 or 0.

PAL: S (simple) or D (delay)

PAL-M: S (simple) or D (delay)

SECAM

AUTO: The format of the input signal is detected and switched automatically. ¹⁾

1) It will take a few seconds to detect the format of an input signal when AUTO is selected. It is recommended that a particular format be selected if it is determined.

Notes

- Even when selecting AUTO, also select the NTSC, PAL, or PAL-M format.

- If there is no input connector or decoder corresponding to a format, that format will not be selectable (the cursor will skip over that entry).

[C112] Y/C menu (xxCH)

Select the format of a Y/C signal.

NTSC: SETUP 7.5 or 0.

PAL: S (simple) or D (delay)

PAL-M: S (simple) or D (delay)

AUTO: The format of the input signal is detected and switched automatically. ¹⁾

1) It will take a few seconds to detect the format of an input signal when AUTO is selected. It is recommended that a particular format be selected if it is determined.

Notes

- Even when selecting AUTO, also select the NTSC, PAL, or PAL-M format.
- If there is no input connector or decoder corresponding to a format, that format will not be selectable (the cursor will skip over that entry).

[C113] COMPONENT menu (xxCH)

Select the component signal format, or RGB.

YUV SMPTE/EBU-N10

YUV BETACAM: SETUP 7.5 or 0.

RGB

[C114] SDI menu (xxCH)

Select the format of the serial digital signal ¹⁾.

NTSC: SETUP 7.5 or 0.

PAL: S (simple) or D (delay)

4:2:2

AUTO: The format of the input signal is detected and switched automatically. ¹⁾

- 1) • It will take a few seconds to detect the format of an input signal when AUTO is selected. It is recommended that a particular format be selected if it is determined.
- If the serial digital signal is not properly displayed in SDI AUTO mode, re-enter the channel number.

[C161] OTHER MONITOR menu (xxCH)

Enter the address number of the source monitor.

⇒ Copy is carried out.

MONITOR ADDRESS: Enter the address number of the monitor from which to copy data.

[C162] MEMORY CARD menu (xx CH)

Select the file name. ⇒ Copy is carried out.

FILE NAME: Select the file name.

Assigning the Remote Control Functions (SET UP 2) — REMOTE Menu

Overview

The remote control functions are set with the REMOTE menu. With this monitor, both serial remote control (REMOTE 1) and parallel remote control (REMOTE 2) are possible. It is possible to simultaneously use the REMOTE 1, and REMOTE 2 for control, but commands from REMOTE 2 have priority. Therefore, it is impossible for the control panel or REMOTE 1 to change items set by REMOTE 2.

There is no priority order between commands from REMOTE 1 and the BKM-10R/11R control panel; it is possible to set APERTURE to ON from REMOTE 1 and then set it to OFF with a control panel operation.

About monitor address and group numbers

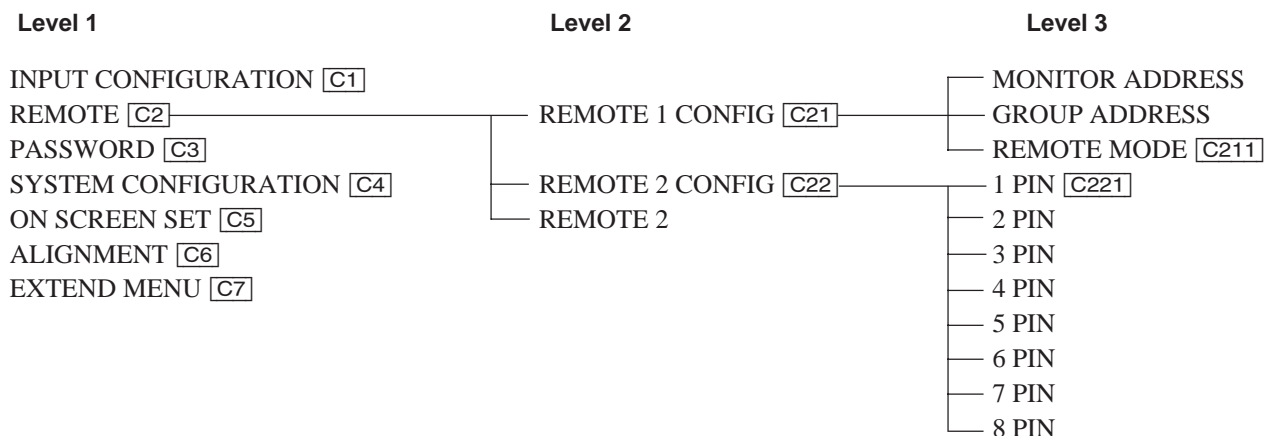
The BKM-10R/11R or HDM-14E5U, BVM-14E5U/14E5E/14F5U/14F5E/14G5U/14G5E/14G5A are able to control up to 32 monitors connected via serial remote connector (using the REMOTE 1 connector). By giving each monitor a monitor address and group number, it is possible to control just a specific monitor or monitor group.

With the REMOTE menu, each monitor can be set with a monitor address and group number, between 1 and 99.

The ADDRESS menu is used to select a particular monitor or group by entering a monitor number or group number.

For information about the ADDRESS menu, see “Selecting the Monitor to Control —ADDRESS Menu” on page 49. The address number must differ from one monitor to another. If two or more monitors have the same address number, an operation error occurs.

Structure of the REMOTE Menu [C2]



Setting Lists of the REMOTE Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.

For more information about the menu number, see “About menu numbers” on page 19.

- The arrow mark (\Rightarrow) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

Assigning the Remote Control Functions (SET UP 2) REMOTE Menu

C2 REMOTE menu

Select the type of remote control.

REMOTE 1 CONFIG: Set the address and group number of the monitor controlled via the REMOTE 1 (serial remote control) connector.

⇒ **C21**

REMOTE 2 CONFIG: Set the pin assignments for the REMOTE 2 (parallel remote control) connector. ⇒ **C22**

REMOTE 2: Select whether parallel remote control will be used or not (ON or OFF).

C21 REMOTE 1 CONFIG menu

Set the monitor address and group number.

MONITOR ADDRESS: Enter a number.

GROUP ADDRESS: Enter a number.

REMOTE MODE: Select the remote mode.

⇒ **C211**

C22 REMOTE 2 CONFIG

Select the REMOTE 2 connector pins for which you want to change the function. The factory settings for each pin are given below. ⇒ **C221**

1 PIN: CH01

2 PIN: CH02

3 PIN: EXT SYNC

4 PIN: MONO

5 PIN: SAFE AREA ON

6 PIN: unused

7 PIN: unused

8 PIN: TALLY

C211 REMOTE MODE menu

Select a remote mode according to the type of monitors connected through the REMOTE 1 connector.

When only Sony BVM-xxE/F/G or HDM-xxE series monitors are connected: set REMOTE MODE to 0.

When a Sony BVM-xx11/16 series monitor or a Sony PVM monitor (with BKM-103 Serial Remote Interface Kit installed) is connected: set REMOTE MODE to 1 and enter a number over 64 as the MONITOR ADDRESS for each connected Sony BVM-xxE/F/G and HDM-xxE series monitor.

C221 1-8 PIN (1/2) menu

Assign a function to the selected pin.

CH: Select a channel number. Enter the desired channel number with the numeric keypad.

----: Set to unused.

UNDER SCAN: Set underscan on or off.

16:9: Set a 16:9 aspect ratio on or off.

H DELAY: Set the horizontal sync display on or off.

V DELAY: Set the vertical sync display on or off.

EXT SYNC: Set the synchronization to external sync signals enabled or disabled.

APERTURE: Set the correction of frequency characteristics enabled or disabled.

MONO: Set monochrome display on or off.

1-8 PIN (2/2) menu

Assign a function to the selected pin.

BLUE ONLY: Set the blue signal pictures display (monochrome) on or off.

R OFF: Set cutting red beams enabled or disabled.

G OFF: Set cutting green beams enabled or disabled.

B OFF: Set cutting blue beams enabled or disabled.

SAFE AREA ON: Set the safe area display on or off.

CAPTION VISION: Set Caption Vision on or off.

TALLY: Set tally signals on or off.

DEGAUSS: Set degaussing on or off.

POWER OFF: Set the monitor power on or off.

Setting the Password (SET UP 3) — PASSWORD Menu

Overview

A four-digit password can be specified and applied to desired menu options to prohibit the menu settings from being changed without permission. The password is set with the PASSWORD menu.

A password is always assigned to the PASSWORD menu (factory setting: 9999).

A password for a service man can be created with the MAINTENANCE menu.

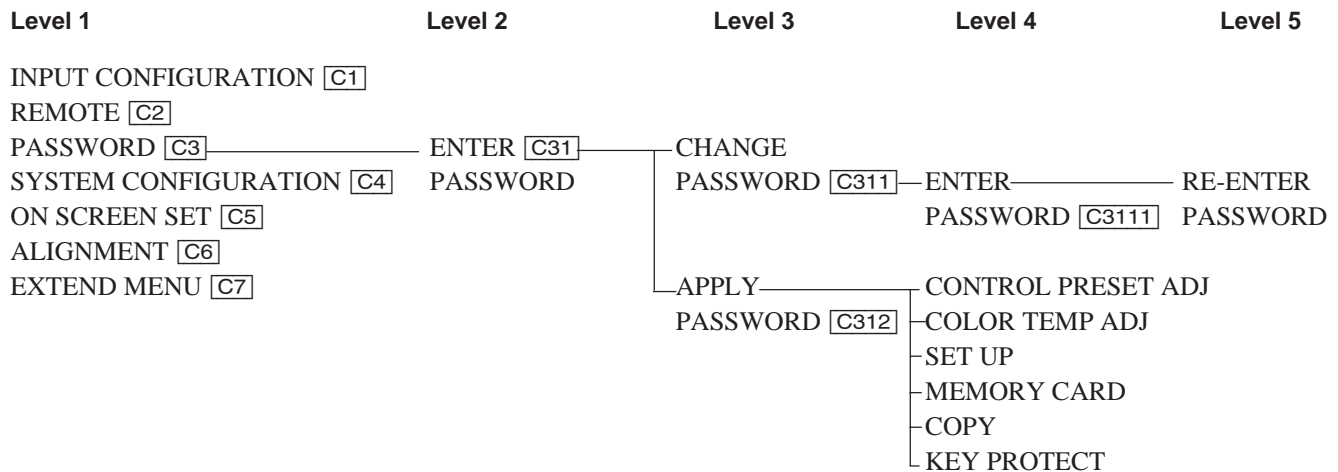
Use of the password

The message “ENTER PASSWORD” is displayed when an attempt is made to select a menu item for which the password has been applied. Then, enter the password using numeric keypad.

If the password is not entered correctly

If an incorrect password is entered, the display returns to the menu of the previous level.

Structure of the PASSWORD Menu [C3]



Setting Lists of the PASSWORD Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.

For more information about the menu number, see “About menu numbers” on page 19.

- The arrow mark (\Rightarrow) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

Setting the Password (SET UP 3) — PASSWORD Menu

C31 ENTER PASSWORD menu

Enter the password for the PASSWORD menu.

Choose what action to perform with the password.

CHANGE PASSWORD: Change the password.

⇒ **C311**

APPLY PASSWORD: Assign the password to a menu item. ⇒ **C312**

C311 CHANGE PASSWORD menu

Change the password.

ENTER PASSWORD: Enter a new password.

⇒ **C3111**

C312 APPLY PASSWORD menu

Choose whether or not to apply the password to each menu.

CONTROL PRESET ADJ: Select YES or NO.

CONTROL TEMP ADJ: Select YES or NO.

SET UP: Select YES or NO.

MEMORY CARD: Select YES or NO.

COPY: Select YES or NO.

KEY PROTECT: Select YES or NO.

C3111 ENTER PASSWORD menu

Create a new password.

RE-ENTER PASSWORD

Enter the new password again and press the ENTER button. ⇒ The password is required.

To change it, press the MENU button. ⇒ Return to the PASSWORD **C31**.

Setting Power-Up Conditions and Decoder (SET UP 4) — SYSTEM CONFIGURATION Menu

Overview

The SYSTEM CONFIGURATION menu is used for the following settings:

- **Power-up condition**

This menu sets the condition of the monitor when the MAIN POWER switch on the rear panel is switched on.

- **Power-up input channel**

This menu sets the power-up input channel.

- **Time from power-up until degauss**

If several monitors are turned on at the same time and all start degaussing at the same time, there will be a very large current draw on the power supply for a few moments. To prevent this, the delay time between power-up and degaussing can be set for each monitor independently.

- **Residual subcarrier detection** (when using the BKM-24N/25P)

It is possible to detect residual subcarrier signals from phase change by setting the decoder adaptor's residual subcarrier switch on.

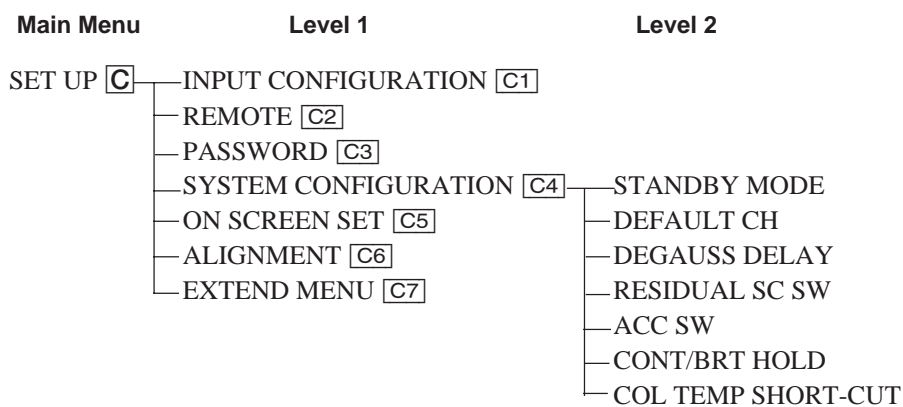
- **Auto chroma control (ACC)** (when using the BKM-27T)

- **Setting of the contrast and brightness after adjusting the white balance.**

- **Assigning shortcut to the menu to the [F2] key**

Assigns the shortcut to the MANUAL menu of the COLOR TEMP ADJ menu to the [F2] key. This allows you to jump directly to the MANUAL menu corresponding to the color temperature set to the currently displayed image (STD/COL 1/COL 2).

Structure of the SYSTEM CONFIGURATION Menu [C4]



Setting Lists of the SYSTEM CONFIGURATION Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
For more information about the menu number, see “About menu numbers” on page 19.
- The arrow mark (\Rightarrow) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

C4 SYSTEM CONFIGURATION menu

Set each of the various items.

STANDBY MODE: Select the power-up condition when the MAIN POWER switch is turned on (OFF or ON).

ON: Standby mode

OFF: Operation mode

DEFAULT CH: Select the power-up input channel (LAST or CH xx).

LAST: Set the channel to the channel that was selected at the time the power was last turned off.

CH xx: Set the channel to a specific channel number.

DEGAUSS DELAY: Set the time between power-up and the beginning of degaussing. Enter the desired time (in seconds).

RESIDUAL SC SW: Switch the residual switch (OFF or ON).

ACC SW: Switch the ACC switch (OFF or ON).

CONT/BRT HOLD: Select the contrast and brightness settings to the center or adjusted value after adjusting the white balance or auto adjustment of CONTROL PRESET (OFF or ON).

ON: The contrast and brightness are set to the value before adjusting.

OFF: The contrast and brightness are set to the center value (1000) after adjusting.

COL TEMP SHORT-CUT: Assign the shortcut function to the MANUAL menu of the COLOR TEMP ADJ menu to **F2** key (OFF or ON).

ON: Assigns the shortcut to the MANUAL menu of the COLOR TEMP ADJ menu.

OFF: Does not assign the shortcut to the MANUAL menu of the COLOR TEMP ADJ menu.

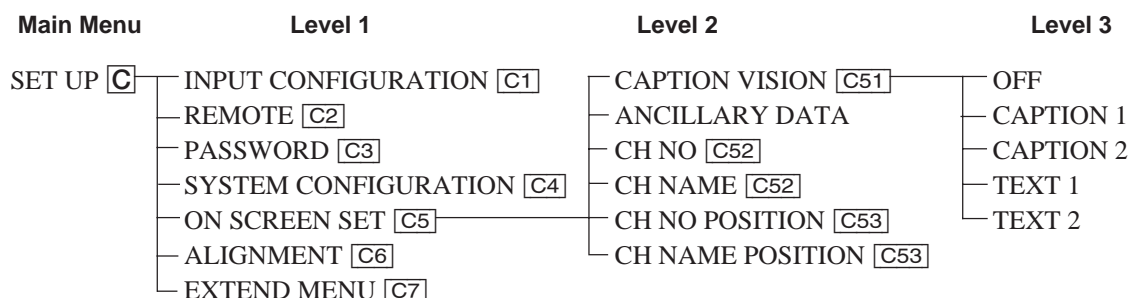
Setting the Screen Display (SET UP 5) — ON SCREEN SET Menu

Overview

The ON SCREEN SET menu is used to select the type of information that will be displayed on the screen and how that information will be displayed. The types of information that can be set are as follows.

- Caption vision
- SDI signal ancillary data blanking (when using the BKM-20D/21D)
- Channel number and name

Structure of the ON SCREEN SET Menu [C5]



Setting Lists of the ON SCREEN SET Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
For more information about the menu number, see “About menu numbers” on page 19.
- The arrow mark (⇒) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

[C5] ON SCREEN SET menu

Select items to be displayed on the screen.

CAPTION VISION: Select the caption display mode.

⇒ [C51]

ANCILLARY DATA: Select whether or not to display the ancillary data in the serial digital signal (OFF or ON).

CH NO: Select the display mode of the channel number. ⇒ [C52]

CH NAME: Select the display mode of the channel name. ⇒ [C52]

CH NO POSITION: Select the display position for the channel number. ⇒ [C53]

CH NAME POSITION: Select the display position for the channel name. ⇒ [C53]

[C51] CAPTION VISION menu

Select the caption display mode.

OFF: Not displayed

CAPTION 1: Displayed in Caption 1 mode.

CAPTION 2: Displayed in Caption 2 mode.

TEXT 1: Displayed in Text 1 mode.

TEXT 2: Displayed in Text 2 mode.

[C51] CH NO or CH NAME menu

Select the channel number and channel name display mode.

AUTO: Disappear after displayed for a while.

ON: Displayed.

OFF: Not displayed.

[C52] CH NO POSITION or CH NAME NAME POSITION menu

Select the display position.

TL: Top left

TC: Top center

TR: Top right

BL: Bottom left

BC: Bottom center

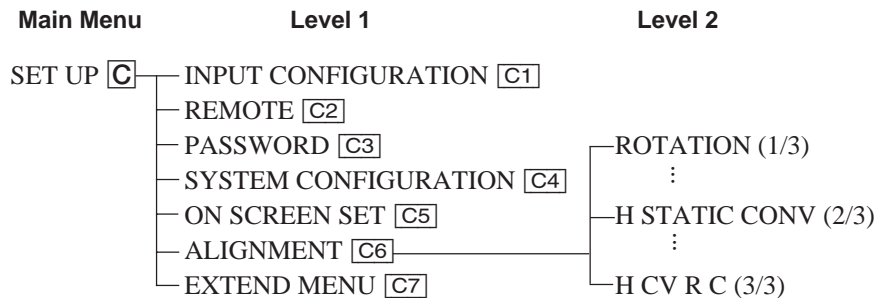
BR: Bottom right

Convergence Adjustments (SET UP 6) — ALIGNMENT Menu

Overview

The ALIGNMENT menu is used for adjusting convergence and geometry.

Structure of the ALIGNMENT Menu [C6]



Setting Lists of the ALIGNMENT Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
For more information about the menu number, see “About menu numbers” on page 19.
- The arrow mark (⇒) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

[C6] ALIGNMENT menu (1/3)

Adjust each item with the UP and DOWN buttons or PHASE knob.

ROTATION: Compensates for the screen rotation which occurs when the monitor is installed facing north or south.

V SIZE: Adjust the height of the picture.

V CENTER: Adjust the vertical picture position.

H SIZE: Adjust the width of the picture.

H PHASE: Adjust the horizontal picture position.

H PIN: Correct side pincushion distortion.

H KEY: Correct trapezoid distortion.

SUB CONTRAST: Adjust the center value of the contrast when the image size is changed.

This item can not be selected when 4:3-NORM is selected in the SCREEN MODE menu.

C6 ALIGNMENT menu (2/3)

Adjust each item with the UP and DOWN buttons or PHASE knob.

H STATIC CONV: Adjust horizontal static convergence.

V STATIC CONV: Adjust vertical static convergence.

V CONV TOP: Adjust vertical convergence at the top of the screen.

V CONV BOTTOM: Adjust vertical convergence at the bottom of the screen.

Note

Items from H CONV UPPER to HCV LB are only available for BVM-20G1U/20G1E/20G1A.

H CONV UPPER: Adjust horizontal convergence at the top of the screen.

H CONV LOWER: Adjust horizontal convergence at the bottom of the screen.

C6 ALIGNMENT menu (3/3)

Adjust each item with the UP and DOWN buttons or PHASE knob.

H CV R C: Adjust horizontal convergence at the center right of the screen.

H CV R T: Adjust horizontal convergence at the top right of the screen.

H CV R B: Adjust horizontal convergence at the bottom right of the screen.

H CV L C: Adjust horizontal convergence at the center left of the screen.

H CV L T: Adjust horizontal convergence at the top left of the screen.

H CV L B: Adjust horizontal convergence at the bottom left of the screen.

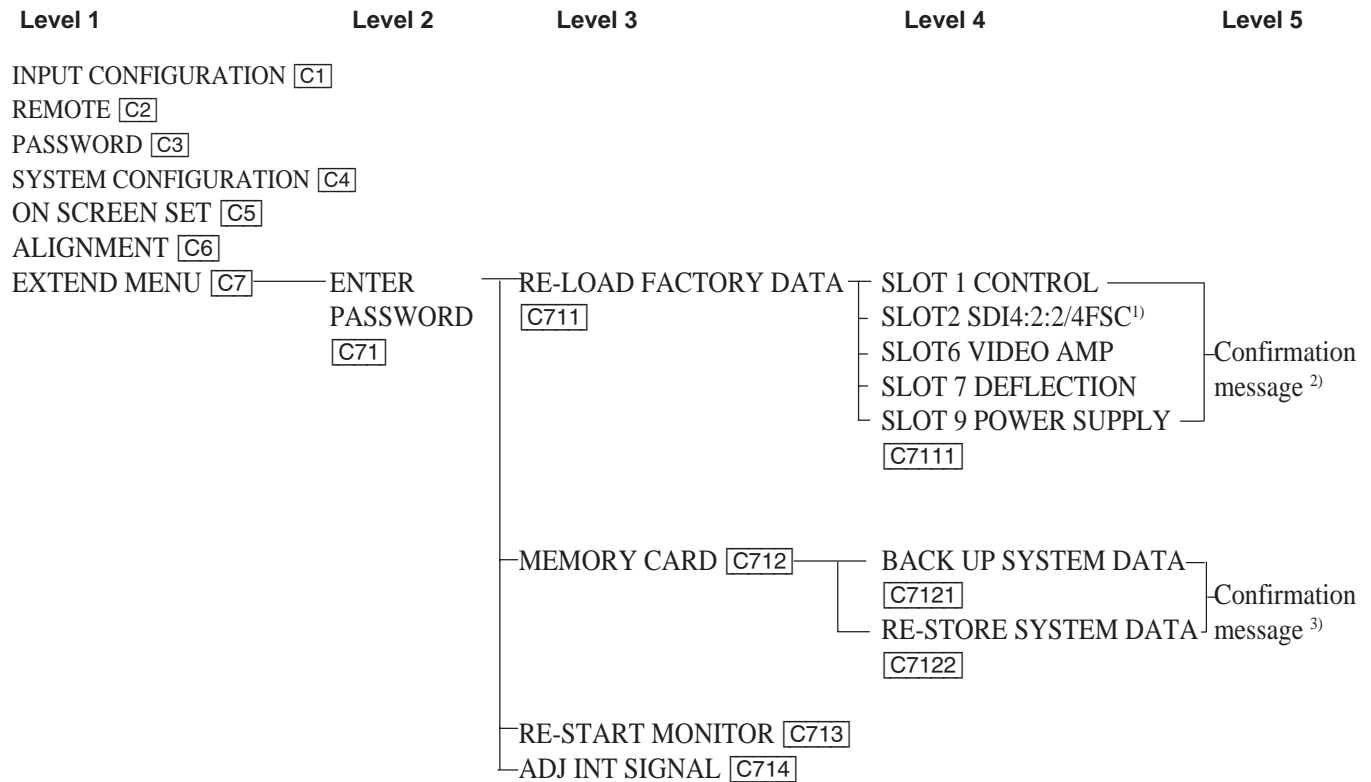
Using Extended Functions (SET UP 7) — EXTEND Menu

Overview

The following 4 functions can be executed with the EXTEND menu.

- Loading factory default data for installed boards into memory.
- Writing monitor setting and adjustment data to the monitor memory card or read setting and adjustment data from the monitor memory card.
- Restarting the monitor.
- Automatically adjusting the setup level and 100 IRE level of the internal white signal which is used in the COLOR TEMP ADJ menu (B).

Structure of the EXTEND Menu [C7]



- 1) This is displayed when the BKM-21D is installed in the SLOT 2.
- 2) The confirmation message appears. Selecting OK results in resetting the data and automatically turning the monitor off and on again. Selecting CANCEL results in returning to the RE-LOAD FACTORY DATA [C711] menu.
- 3) The confirmation message appears. Selecting OK results reading the data from the monitor memory card. Selecting CANCEL results in returning to the MEMORY CARD [C712] menu.

Setting Lists of the EXTEND Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
For more information about the menu number, see “About menu numbers” on page 19.
- The arrow mark (⇒) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

[C7] EXTEND menu

Enter the password (ENTER PASSWORD [C71])
When the correct password is entered, the following item appears.

Choose the function to execute.

RE-LOAD FACTORY DATA: Restore factory default data for the board installed in the selected slot. ⇒ [C711]

MEMORY CARD: Read and write setting and adjustment data by using the monitor memory card. ⇒ [C712]

RE-START MONITOR: Restart the monitor. ⇒ [C713]

ADJ INT SIGNAL SETUP: Automatically adjust the SETUP level and 100 IRE level of internal signals. ⇒ [C714]

[C711] RE-LOAD FACTORY DATA menu

Select a slot where a board is installed to reload factory default data to the board. ⇒ [C7111]

Note

Slots you can select are slot 6 and slot 7 only. When the optional board has been installed, you can also select slot 2.

[C712] MEMORY CARD menu

Insert the monitor memory card into the MEMORY CARD slot and select the operation to perform.

BACK UP SYSTEM DATA: Write the data to the monitor memory card. ⇒ [C7121]

RE-STORE SYSTEM DATA: Read the data from the monitor memory card. ⇒ [C7122]

Notes

- Before using a monitor memory card, it must be formatted it with the FORMAT menu ([D4]).

- System data and MEMORY CARD data ([D1]) cannot be stored on the same memory card. To store memory card data, use another memory card.
- The BKM-12Y monitor memory card has a capacity of 256 Kbytes. It can store either system data for up to 8 monitors or 38 files of memory card data.

[C713] RE-START MONITOR menu

Turn the monitor off and on again automatically.

[C714] ADJUST SIGNAL menu

Adjust the SETUP level and 100 IRE level of the internal white signal which is used with the COLOR TEMP ADJ menu ([B]).

[C7111] RE-LOAD FACTORY DATA menu

The following message appears to confirm the data reload operation.

**DATA RESET TO
ITS FACTORY SETTING
AND MONITOR WILL RESTART
ARE YOU SURE?**

**OK: ENTER KEY
CANCEL: MENU KEY**

OK: To continue, press the ENTER button. ⇒ Resets the data and automatically turn the monitor off and on again.

CANCEL: To cancel, press the MENU button. ⇒ Returns to the RE-LOAD FACTORY DATA menu. ([C711])

[C7121] BACK UP SYSTEM DATA menu

While the system is writing the data, a “-” mark blinks at the top right of the menu. (It takes some time to save the data.)

[C7122] RE-STORE SYSTEM DATA menu

The following message appears to confirm the data restore operation.

**ALL DATA WILL BE RESTORED
ARE YOU SURE?**

**OK: ENTER KEY
CANCEL: MENU KEY**

OK: To continue, press the ENTER button. ⇒ Read the data from the monitor memory card and automatically turn the monitor off and on again.

CANCEL: To cancel, press the MENU button. ⇒ Return to the MEMORY CARD menu ([C712]).

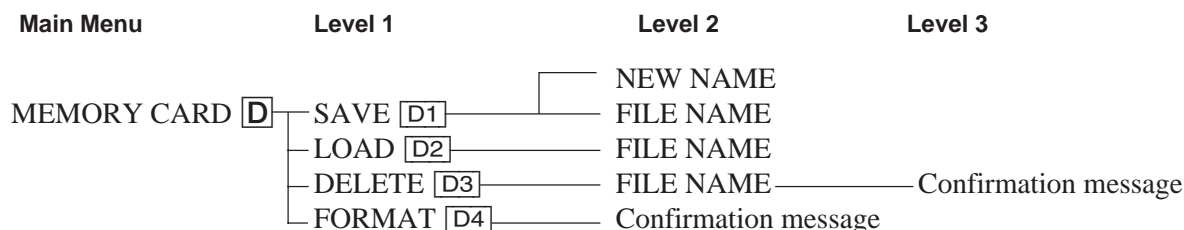
Monitor Memory Card Data Operations

— MEMORY CARD Menu

Overview

Operations on monitor memory card data are performed with the MEMORY CARD menu.

Structure of the MEMORY CARD Menu D



Setting Lists of the MENU CARD Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
For more information about the menu number, see “About menu numbers” on page 19.
- The arrow mark (⇒) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

D MEMORY CARD menu

Select MEMORY CARD from the menu list.

CONTROL PRESET ADJ

COLOR TEMP ADJ

SET UP

MEMORY CARD ⇒ D1 to D4

COPY

STATUS

MAINTENANCE

KEY PROTECT OFF

Select the operation to perform. (It takes some time to load and save the data.)

SAVE: Write data to a monitor memory card. ⇒ D1

LOAD: Read data from a monitor memory card.
⇒ D2

DELETE: Delete a file. ⇒ D3

FORMAT: Format a monitor memory card. ⇒ D4

D1 SAVE menu

Select the name of the file to which to write data, or create a new file name.

NEW NAME: Enter a new name (max. 20 characters).

D2 LOAD menu

Select the name of the file from which to read data.

D3 DELETE menu

Select the name of the file to delete.

The following confirmation message appears.

DELETE THIS FILE?

OK: ENTER KEY

CANCEL: MENU KEY

OK: To continue, press the ENTER button. ⇒ The file is deleted.

CANCEL: To cancel, press the MENU button. ⇒ Return to the level 2 of the DELETE menu D3 (File name list).

D4 FORMAT menu

Confirm the format operation. The following confirmation message appears. All files will be deleted at formatting.

ALL FILES WILL BE DELETED!

ARE YOU SURE?

OK: ENTER KEY

CANCEL: MENU KEY

OK: To continue, press the ENTER button. ⇒ The format is performed.

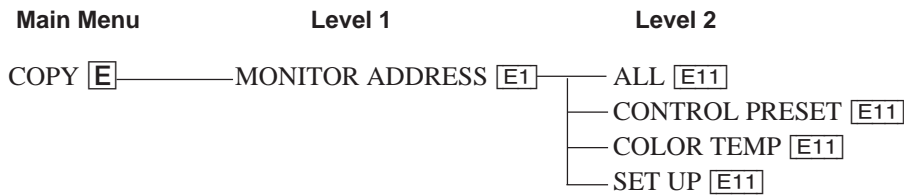
CANCEL: To cancel, press the MENU button. ⇒ Return to the MEMORY CARD menu (D).

Monitor-to-Monitor Data Copy — COPY Menu

Overview

When multiple monitors are connected via their serial remote ports, data can be shared between the monitors by data copy. The data copy from one monitor to another is accomplished with the COPY menu.

Structure of the COPY Menu E



Setting Lists of the COPY Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
For more information about the menu number, see “About menu numbers” on page 19.
- The arrow mark (⇒) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

E COPY menu

Select COPY from the menu list.

CONTROL PRESET ADJ

COLOR TEMP ADJ

SET UP

MEMORY CARD

COPY ⇒ E1

STATUS

MAINTENANCE

KEY PROTECT OFF

E1 MONITOR ADDRESS menu

Select the copy source monitor.

MONITOR ADDRESS: Enter the address number.

⇒ E11

E11 COPY menu

Select the data to be copied. ⇒ Copy is carried out.

ALL: Copy data for all menu settings.

CONTROL PRESET: Copy the data for the CONTROL PRESET ADJ menu settings.

COLOR TEMP: Copy the data for the COLOR TEMP ADJ menu settings.

SET UP: Copy the data for the SET UP menu settings.

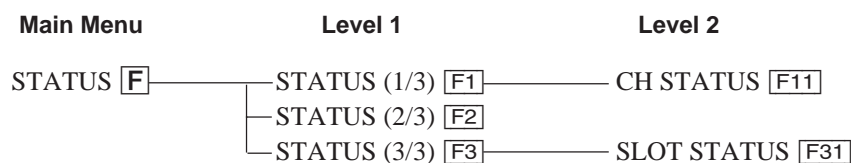
Displaying Information About the Monitor

— STATUS Menu

Overview

The STATUS menu is used to view general data about the monitor and information about signals assigned to the slots in the rear panel.

Structure of the STATUS Menu F



Setting Lists of the STATUS Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
For more information about the menu number, see “About menu numbers” on page 19.
- The arrow mark (⇒) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

F STATUS menu

Select STATUS from the menu list.

CONTROL PRESET ADJ

COLOR TEMP ADJ

SET UP

MEMORY CARD

COPY

STATUS ⇒ F1

MAINTENANCE

KEY PROTECT OFF

F1 STATUS menu (1/3)

Specify the channel block to be detected from channel 1 to channel 99.

F11 CH STATUS menu

Data about the current channel is displayed.

CH: channel number

SL: slot number

IN: input connector number

FORMAT: format of the input signal

NAME: channel name

F2 STATUS menu (2/3)

Data about the monitor is displayed.

MODEL NAME: model name

SERIAL NO: serial number

OPERATION TIME: operation time (in hours)

SOFTWARE VERSION: software version

F3 STATUS menu (3/3)

Data about circuit boards installed into the respective slots in the rear panel is displayed.

When the BKM-21D is installed in SLOT 2, the following is displayed. When it is not installed, EMPTY is displayed for SLOT 2.

SLOT1: CONTROL

SLOT2: SDI4:2:2/4FSC

SLOT6: VIDEO AMP

SLOT7: DEFLECTION

SLOT9: POWER SUPPLY

F31 SLOT STATUS menu

Select the desired slot. Data about the optional board installed in the selected slot is displayed.

MODEL NAME: Model name of that optional board

SERIAL NO: Serial number of that circuit board

Selecting the Monitor to Control — ADDRESS Menu

Overview

When multiple monitors are connected by a serial remote connection, the ADDRESS menu is used to choose whether one particular monitor or monitor group will be controlled, or whether operations are to be performed on all monitors together.

Displaying the ADDRESS Menu

Press the ADDRESS button.

The ADDRESS button lights, and the ADDRESS menu is displayed on the screen.

By pressing the ENTER button after selecting the item, serial remote operation becomes activated.

ADDRESS	
SINGLE	**
GROUP	**
ALL	
ALL POWER ON	
ALL POWER OFF	
DISPLAY MONITOR ADDRESS	
DISPLAY GROUP ADDRESS	
SETUP PVM (BKM-103)	

ADDRESS Menu

Settings made with the menu items are as follows:

Item	Function
SINGLE	Control only a specified monitor. Enter the monitor address number.
GROUP	Control only a specified monitor group. Enter the group address number.
ALL	Control all monitors.
ALL POWER ON	Turn all connected monitors on.
ALL POWER OFF	Turn all connected monitors off.
DISPLAY MONITOR ADDRESS	When this item is selected, each connected monitor displays its monitor address on its screen.
DISPLAY GROUP ADDRESS	When this item is selected, each connected monitor displays its group address on its screen.
SET UP PVM (BKM-103)	Transfer the INPUT CONFIG settings of a BVM monitor to a PVM monitor. The BKM-103 Serial Remote Interface Kit must be installed in the PVM monitor, and the monitor address of the PVM monitor must be selected using the SINGLE menu item.

Notes

- To remotely control monitors connected in serial, MONITOR ADDRESS or GROUP ADDRESS of monitors should be correctly set in the REMOTE menu.

For details of the REMOTE menu, see “Assigning the Remote Control Functions (SET UP 2) – REMOTE Menu” on page 35.

- In GROUP mode, when the KEY PROTECT function is set to ON, the LED on the pressed function button lights, but it is deactivated. (LED of other monitors in the same group will not light.)
- In GROUP or ALL mode, the LEDs of the function buttons will not light with controlled from the menu. (LEDs light only when you press the function button.)

- In GROUP or ALL mode, LEDs of controlled monitor will light as follows.
 - In case of SHIFT OFF before remote control operation:** LEDs light in green when the SHIFT button is remotely set to OFF.
 - In case of SHIFT ON before remote control operation:** LEDs light in orange when the SHIFT button is remotely set to ON.

For details, see “SHIFT button” on page 12.

- In SINGLE mode, when the data is saved or load in or from the memory card, the error message may appear due to data communication error. In such a case, clear the remote mode, then try again. It is recommended to save or load data to or from the memory card with the monitor which is free from the remote operation.
- When Sony BVM-xxE/F/G and HDM-xxE series monitors are connected together, select these monitors for each series in SINGLE mode or GROUP mode to remotely control them.

Cancelling the Remote Control Mode

To cancel the remote control mode, press the ADDRESS button.

Exiting the ADDRESS Menu

To exit the ADDRESS menu, press the ADDRESS button or the MENU button.

Short-cut Function in the ADDRESS Menu

When selecting the monitor, short-cut function will enable to select the target monitor without using the items in the ADDRESS menu. The operation procedure is as follows.

To select the monitor in the SINGLE mode

- 1 Press the ADDRESS button.
- 2 Press the address number of the target monitor.
Press one digit address number on the numeric keypad when it is from 1 to 9.
Press three digits address number (press 0 button and then press the address number) when it is from 10 to 99.

To select the monitors in the GROUP mode

- 1 Press the ADDRESS button.
- 2 Press the F1 button.
- 3 Press the group number of the target monitor.
Press one digit group address number when it is from 1 to 9.
Press three digits group address number (press 0 button and then press the group number) when it is from 10 to 99.

To select the all monitors in the ALL mode

- 1 Press the ADDRESS button.
- 2 Press the F2 button.

Specifications

General

System 525 lines, 60 fields per second interlaced
625 lines, 50 fields per second interlaced

CRT Super fine pitch Trinitron
BVM-20G1U/20G1E/20G1A
Aperture grille pitch: 0.3 mm
90 degree deflection, 30.6 mm diameter in-line gun.
Effective picture size:
387 × 291 mm (15 1/4 × 8 3/8 inches) (w/h)
483 mm (19 inches) (diagonal size)
CRT protection: EHT (extremely high tension) protection type
Warm-up time: approx. 30 minutes
Anode voltage: 23 kV with no beam current
Nominal chromaticity coordinates:

SMPTE C phosphor (BVM-20G1U)

	x	y
R	0.630	0.340
G	0.310	0.595
B	0.155	0.070

EBU phosphor (BVM-20G1E/20G1A)

	x	y
R	0.640	0.330
G	0.290	0.600
B	0.150	0.060

BVM-14G1U/14G1E/14G1A/ 14G5U/14G5E/14G5A

Aperture grille pitch: 0.25 mm
90-degree deflection, 29.4 mm diameter in-line gun.
Effective picture size:
267 × 200 mm (10 5/8 × 7 7/8 inches) (w/h)
331 mm (13 inches) (diagonal size)
CRT protection: EHT (extremely high tension) protection type

Warm-up time: approx. 30 minutes
Anode voltage: 21 kV with no beam current

Nominal chromaticity coordinates:

SMPTE C phosphor (BVM-14G1U/14G5U)

	x	y
R	0.630	0.340
G	0.310	0.595
B	0.155	0.070

EBU phosphor (BVM-14G1E/14G1A/14G5E/14G5A)

	x	y
R	0.640	0.330
G	0.290	0.600
B	0.150	0.060

Dimensions

BVM-20G1U/20G1E/20G1A:
444 × 414 × 570 mm
(17 1/2 × 16 3/8 × 22 1/2 inches)
(w/h/d)

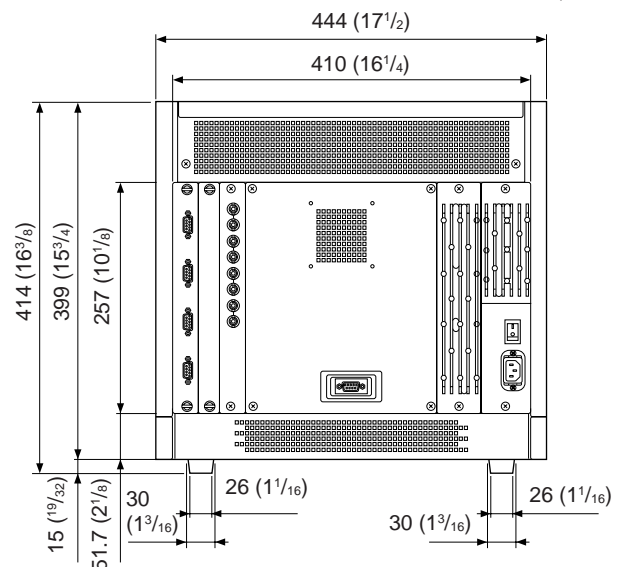
BVM-14G1U/14G1E/14G1A:
346 × 280 × 530 mm
(13 5/8 × 11 1/8 × 20 7/8 inches)
(w/h/d)

BVM-14G5U/14G5E/14G5A:
482 × 280 × 573 mm
(19 × 11 1/8 × 22 5/8 inches)
(w/h/d)

Dimensional drawing

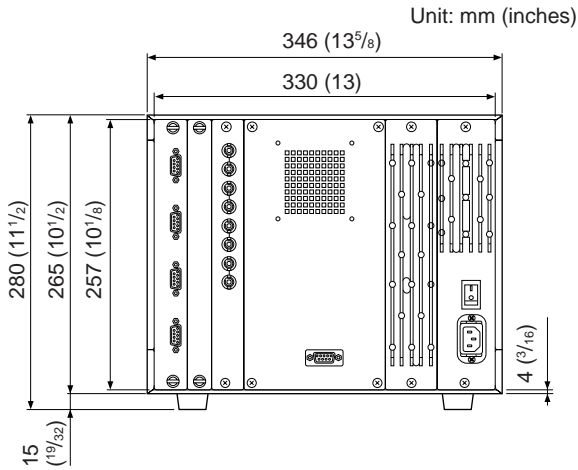
BVM-20G1U/20G1E/20G1A

Unit: mm (inches)

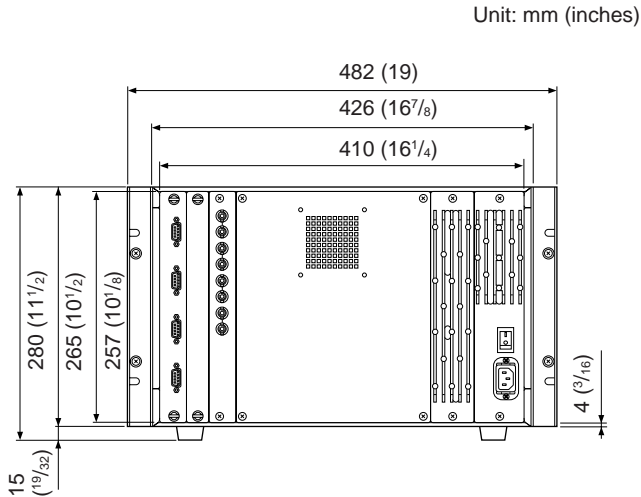


Specifications

BVM-14G1U/14G1E/14G1A



BVM-14G5U/14G5E/14G5A



Mass

- BVM-20G1U/20G1E/20G1A:
approx. 36 kg
(79 lb 6 oz)
- BVM-14G1U/14G1E/14G1A:
approx. 21 kg
(46 lb 5 oz)
- BVM-14G5U/14G5E/14G5A:
approx. 24kg
(52 lb 15 oz)

Power consumption

- BVM-20G1U/20G1E/20G1A:
125W
When an optional adaptor is installed: 140 W
- BVM-14G1U/14G1E/14G1A:
105W
When an optional adaptor is installed: 120 W
- BVM-14G5U/14G5E/14G5A:
105W
When an optional adaptor is installed: 120 W

Peak inrush current

- (1) Power ON, current probe method: 62A (240V)
- (2) Hot switching inrush current, measured in accordance with European standard EN55103-1: 40A (230V)

Power requirements

- BVM-20G1U: AC100 - 120 V, 1.6 A, 50/60 Hz
- BVM-20G1E/20G1A:
AC 100 - 120/220 - 240 V, 1.6/0.7 A, 50/60 Hz
- BVM-14G1U/G5U:
AC 100 - 120 V, 1.3 A, 50/60 Hz
- BVM-14G1E/14G1A/14G5E/14G5A: AC 100 - 120/220 - 240 V, 1.3/0.6 A, 50/60 Hz

Input/output connectors

- Video input: BNC type × 3 (with loop-through outputs)
R/G/B 1 Vp-p ±6 dB, positive, high impedance
Y: 1 Vp-p ±6 dB, positive, high impedance
R-Y/B-Y: 0.7 Vp-p ±6 dB, positive, high impedance
- Sync input: BNC type × 1 (with loop-through output)
Composite sync: 0.3 to 8 Vp-p, negative, high impedance
- Return loss: More than 46 dB (6 MHz, with 75-ohm termination)

Remote control	OPTION: Mini-DIN 8-pin × 1 CONTROL UNIT: D-sub 9-pin × 1 REMOTE 1: D-sub 9-pin × 1 (with loop-through output), RS-485 serial interface REMOTE 2: D-sub 9-pin × 1 ISR: D-sub 9-pin × 1
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Video signal

Differential gain	Less than 5% (for luminance from 0 to 100 cd/m ²)
Differential phase	Less than 5° (for luminance from 0 to 100 cd/m ²)
Frequency response	50 Hz to 7 MHz, +1 dB/−3 dB
DC restoration	Back porch type Black level fluctuation: less than 1% for 10% to 90% APL input signal variation.

Synchronization

AFC time constant	2 ms
Line pull range/line hold range	Greater than ±500 Hz
Vertical blanking time	Less than 1 ms
Horizontal blanking time	Less than 10 μs.

Picture performance

Normal scan	5% overscan of CRT effective screen area (adjustable range greater than ±15%)
Underscan	3% underscan of CRT effective screen area (adjustable range greater than ±15%)
Linearity	Within a central area bounded by a circle with a diameter equal to the picture height, less than 1% of the picture height, and outside the same area, about 2% of the picture height
Color temperature	D93, D65 (adjustable to other color temperatures)

Convergence error	Within a central area bounded by a circle with a diameter equal to the picture height. BVM-20G1U/20G1E/20G1A: Less than 0.5 mm with a central area bounded by a circle and less than 0.9 mm at any other point. BVM-14G1U/14G1E/14G1A/14G5U/14G5E/14G5A: Less than 0.4 mm with a central area bounded by a circle and less than 0.8 mm at any other point.
Standard luminescence	100 cd/m ² (at standard 1 V _{p-p} 100% white signal)
Raster size stability	Less than 1% of picture height (at 100 cd/m ² peak luminescence, 10 to 90% APL)
Scan delay	Horizontal: Approx. 1/4 line Vertical: Approx. 1/2 field
Resolution (at screen center, 100 cd/m ² luminescence)	800 TV lines

Operating conditions

Temperature	0°C to 35°C (32°F to 95°F)
Optimum temperature	20°C to 30°C (68°F to 86°F)
Humidity	0% to 90% (no condensation)
Pressure	700 hPa to 1060 hPa

Storage and transport conditions

Temperature	−10°C to 40°C (14°F to 104°F)
Humidity	0% to 90%
Pressure	700 hPa to 1060 hPa

Accessories supplied

AC power cord (1)
Cord stopper (1)
Tally plate (1)
Operation manual (1)

Design and specifications are subject to change without notice.

Specifications

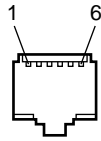
Connection Cable Specifications for Color Temperature Probes

Special cables are required to connect color temperature probes other than the Sony BKM-14L to the monitor.

The following diagrams show specifications and pin assignments for the required cables.

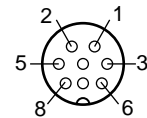
Connection cable for GRASEBY SLS 9400 probe

Modular connector

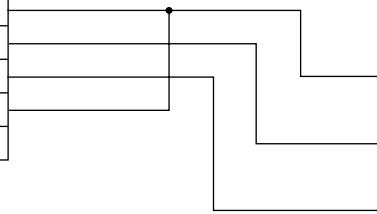


Signal	Pin Number
N.C.	1
GND	2
RXD	3
TXD	4
GND	5
N.C.	6

Mini DIN 8-pin connector (male)

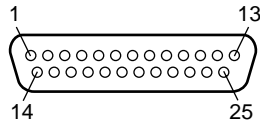


Signal	Pin Number
1	NC
2	NC
3	RTS
4	GND
5	N.C.
6	TXD
7	+5V
8	RXD



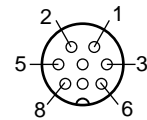
Connection cable for MINOLTA CA-100 probe

D-sub 25-pin connector (male)

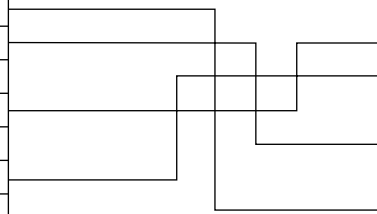


Signal	Pin Number
N.C.	1
TXD	2
RXD	3
RTS	4
CTS	5
N.C.	6
GND	7
N.C.	8 to 25

Mini DIN 8-pin connector (male)

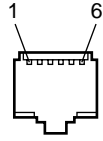


Signal	Pin Number
1	NC
2	NC
3	RTS
4	GND
5	N.C.
6	TXD
7	+5V
8	RXD



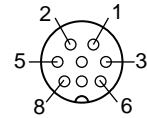
Connection cable for PHILIPS PM 5639 probe (corresponds to PHILIPS PM 5639/64 cable)

Modular connector

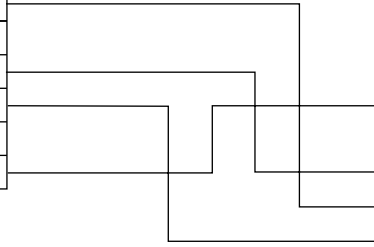


Signal	Pin Number
+5V	1
N.C.	2
RXD	3
TXD	4
N.C.	5
GND	6

Mini DIN 8-pin connector (male)

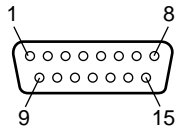


Signal	Pin Number
1	NC
2	NC
3	RTS
4	GND
5	N.C.
6	TXD
7	+5V
8	RXD



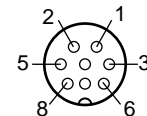
Connection cable for THOMA TF6 probe

D-sub 15-pin connector (female)

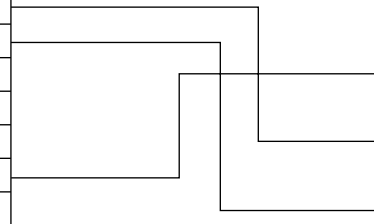


Signal	Pin Number
N.C.	1
RXD	2
TXD	3
N.C.	4
N.C.	5
N.C.	6
GND	7
N.C.	8 to 15

Mini DIN 8-pin connector (male)



Signal	Pin Number
1	NC
2	NC
3	RTS
4	GND
5	N.C.
6	TXD
7	+5V
8	RXD



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(UC/AEP/AUS)
3-862-434-15 (1)

Sony Corporation
B & P Company

<http://www.sony.net/>

Printed in Japan
2002.07.08
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