



Display

Date: **April 20, 1998**

Subject: **FIRMWARE UPGRADE—VERSION 1.21
MANUAL SUPPLEMENT—EVERGREEN
MONITORS**

Model: **BVM-14E1U/14E5U/14F1U/14F5U
BVM-20E1U/20F1U**

Serial No: **SEE TEXT**

DESCRIPTION

Firmware version 1.21 is now available. The new firmware features a number of program changes and additions.

PROGRAM CHANGES

- The following probes are now available for automatic color temperature adjustment.
 Sony—BKM-14L
 Graseby—SLS 9400
 Minolta—CA-100
 Philips—PM 5639
 Thoma—TF6
- The BKM-14L is now able to display the readout values on the screen, making it possible to adjust color temperature even for a monitor that does not feature the automatic adjustment function.
- Video monitor control is now available using the control unit BKM-11R.
- New items have been added to the ALIGNMENT menu.
- Remote operation of the BVM-XX11/16 and PVM monitors is now available.
- The EXTEND menu has been added to the SETUP menu.
- The SAD horizontal position is now adjustable.

INSTALLATION

To install the new firmware, install a new IC memory card (SRAM memory card for PCMCIA, greater than 512kB and less than 2MB).

NOTE: After performing the upgrade, be sure to implement 790 ADJ SIGNAL in the 750 EXTENDED menu.

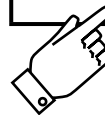
The following information should be used as a Manual Supplement to the operation manual if software V1.21 or higher is installed.

This information applies to

BVM-14E1U	1,000,001–2,000,165
BVM-14E5U	1,000,001–2,000,255
BVM-14F1U	1,000,001–2,000,470
BVM-14F5U	1,000,001–2,000,735
BVM-20E1U	1,000,001–2,000,415
BVM-20F1U	1,000,001–2,001,550

PARTS REQUIRED

Part No.	Description	Qty.
MBVMOS/01	SOFTWARE Memory Card V1.21	1





MENU CHANGES

The following information comprises menu changes for V1.21. Page numbers given are for affected menus.

Page 45 (BVM-14F5U/14E5U)

Page 42 (BVM-20F1U/20E1U/14F1U/14E1U)

- **Adjusting the Color Temperature—COLOR TEMP ADJ Menu**

220: PROBE (STD/ COL1/ COL2/ xxCH): Select the probe type.

SONY BKM-14L...: Use the **BKM-14L** for adjusting the color temperature.¹ → **230**
GRASEBY SLS 9400...: Use the **SLS 9400** for adjusting the color temperature. → **241**
MINOLTA CA-100...: Use the **CA-100** for adjusting the color temperature. → **241**
PHILIPS PM 5639...: Use the **PM 5639** for adjusting the color temperature. → **241**
THOMA TF6...: Use the **BKM-14L** for adjusting the color temperature.² → **241**

1. When the ADJUST or ANALYZE menu is not executed after the BKM-14L is selected, disconnect the **BKM-14L** from the OPTION socket on the front of the monitor and then reconnect it.
2. When TF6 is selected, the PRINTER menu of TF6 has to be set to OFF.

230: PROBE (STD/COL1/ COL2/ xxCH): Select mode of the **BKM-14L**, Adjust Mode, or Analyze Mode.

ADJUST...: Use the **BKM-14L** for adjusting the color temperature. → **241**
ANALYZE: Use the **BKM-14L** for measuring the color temperature. → **231**

231: ANALYZE (STD/ COL1/ COL2/ xxCH): Calibrate the **BKM-14L**.

SET PROBE ON THIS CRT
PRESS ENTER

Press the ENTER button after the **BKM-14L** is placed against the center of the screen. → **232**
 This process enables the probe to be pre-calibrated on the monitor that the probe is connected to.
 Once procedure **231** has been completed, the probe can be used to analyze the performance of other monitors.

232: ANALYZE (STD/COL1/COL2/ xxCH): The readout values from the **BKM-14L** are displayed at the bottom of the screen.

X: The x coordinate value is displayed.
Y: The y coordinate value is displayed.
L: The luminance value Y is displayed.

When the MENU button is pressed, the procedure is complete.

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Page 26 (BVM-20F1U/20E1U/14F1U/14E1U)

- **Setting the Input Configuration—INPUT CONFIGURATION Menu**

301: INPUT CONFIGURATION menu (2/2): Set the input signal data for each channel.

SAD H POSITION: Set the horizontal position of SAD (-127 to 128).

The working range for SAD horizontal position adjustment is less than the -127 to 128 limits.



Page 45 (BVM-14F5U/14E5U)

Page 42 (BVM-20F1U/20E1U/14F1U/14E1U)

• **Geometry Distortion and Convergence Adjustments—ALIGNMENT Menu**

700: ALIGNMENT menu (1/4): Adjust each item with the UP and DOWN buttons or by rotating the PHASE knob.

ROTATION:	Compensate for the screen rotation which occurs when the monitor is installed facing north or south.
H PHASE:	Adjust the horizontal picture position.
V CENTER:	Adjust the vertical picture position.
H SIZE:	Adjust the width of the picture.
V SIZE:	Adjust the height of the picture.
V LIN AMP:	Correct the vertical linearity of the picture.
V LIN BAL:	Correct the balance of the vertical linearity of the picture.
VITS BLK:	Adjust the vertical blanking of the screen.

700: ALIGNMENT menu (2/4): Adjust each item with the UP and DOWN buttons or by rotating the PHASE knob.

H PIN:	Correct the side pincushion distortion.
H PIN BAL:	Correct the balance of the side pincushion distortion.
H CORNER PIN:	Correct the pincushion distortion in the corners of the picture.
H CENTER BOW:	Correct the center bow distortion.
H MID PIN:	Correct the pincushion distortion in the middle of the picture.
H KEY:	Correct the trapezoid distortion.
H KEY BAL:	Correct the balance of the trapezoid distortion.
H LIN:	Correct the horizontal linearity.
H LIN BAL:	Correct the balance of the horizontal linearity.

700: ALIGNMENT menu (3/4): Adjust each item with the UP and DOWN buttons or by rotating the PHASE knob.

V STATIC CONV:	Adjust the vertical static convergence.
V CONV TOP:	Adjust the vertical convergence at the top of the screen.
V CONV BOT:	Adjust the vertical convergence at the bottom of the screen.
H STATIC CONV:	Adjust the horizontal static convergence.
H CONV C T:	Adjust the horizontal convergence at the top of the screen.
H CONV C B:	Adjust the horizontal convergence at the bottom of the screen.
H CV C M T:	Adjust the horizontal convergence between the top and the center of the screen.
H CV C M B:	Adjust the horizontal convergence between the bottom and the center of the screen.

Note: Items **H CONV C T**, **H CONV C B**, **H CV C M T** and **H CV C M B** cannot be adjusted for **BVM-14E1U/14E5U/14F1U/14F5U** monitors.

700: ALIGNMENT menu (4/4): Adjust each item with the UP and DOWN buttons or by rotating the PHASE knob.

H CV R C:	Adjust the horizontal convergence at the center right of the screen.
H CV R T:	Adjust the horizontal convergence at the top right of the screen.
H CV R B:	Adjust the horizontal convergence at the bottom right of the screen.
H CV R MT:	Adjust the horizontal convergence at the middle right between top and center of the screen.
H CV R MB:	Adjust the horizontal convergence at the middle right between bottom and center of the screen.
H CV L C:	Adjust the horizontal convergence at the center left of the screen.
H CV L T:	Adjust the horizontal convergence at the top left of the screen.
H CV L B:	Adjust the horizontal convergence at the bottom left of the screen.
H CV L MT:	Adjust the horizontal convergence at the middle left between top and center of the screen.
H CV L MB:	Adjust the horizontal convergence at the middle left between bottom and center of the screen.

NOTE: The above items cannot be adjusted for **BVM-14E1U/14E5U/14F1U/14F5U** monitors.



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Page 33 (BVM-20F1U/20E1U/14F1U/14E1U)

343: REMOTE1 CONFIG... : Set the monitor address, group address and remote mode of the monitor.

MONITOR ADDRESS: Enter a number.
GROUP ADDRESS: Enter a number.
REMOTE MODE: Select the remote mode. → **344**

344: REMOTE MODE: Select **REMOTE MODE** according to the type of monitor connected to REMOTE1 terminal. When only **BVM-xxE/F** series monitors are connected, set the **REMOTE MODE** to **0**. When **BVM-xx11/16** series or **PVM** monitors (**BKM-103** installed) are connected, set the **REMOTE MODE** to **1** and enter a number over **64** for the **MONITOR ADDRESS**.

Page 51 (BVM-14F5U/14E5U)

Page 48 (BVM-20F1U/20E1U/14F1U/14E1U)

- **Selecting the Monitor to Control—ADDRESS Menu**
- **Structure and Usage of the ADDRESS menu**

Press the ADDRESS button on the control panel. The ADDRESS menu is displayed on the screen.

ADDRESS	
SINGLE	xx
GROUP	xx
ALL	
ALL POWER ON	
ALL POWER OFF	
DISPLAY MONITOR ADDRESS	
DISPLAY GROUP ADDRESS	
SET UP PVM(BKM-103)	

ADDRESS menu

The setting of each of the items is as follows:

- SINGLE:** Control only a particular monitor. Enter the monitor address (32 of the numbers from 01 to 99 may be selected) by pressing the UP and DOWN button, rotating the PHASE knob, or pressing the 10 key
- GROUP:** Control only a particular monitor group. Enter the group address (32 of the numbers from 01 to 99 may be selected) by pressing the UP and DOWN button, rotating the PHASE knob, or pressing the 10 key.
- ALL:** Control all monitors.
- ALL POWER ON:** When this menu is selected, all the connected monitors will be turned on.
- ALL POWER OFF:** When this menu is selected, all the connected monitors will be turned off.
- DISPLAY MONITOR ADDRESS:** When this menu is selected, all the connected monitors will display their own **monitor address** on the screen.
- DISPLAY GROUP ADDRESS:** When this menu is selected, all the connected monitors will display their own **group address** on the screen.
- SET UP PVM (BKM-103):** When this menu is selected, some settings of the **BVM** monitor can be transferred to the **INPUT CONFIG** of the **PVM** monitor. The **BKM-103** has to be installed in the **PVM** monitor which is chosen on the **SINGLE** menu with its **monitor address**.



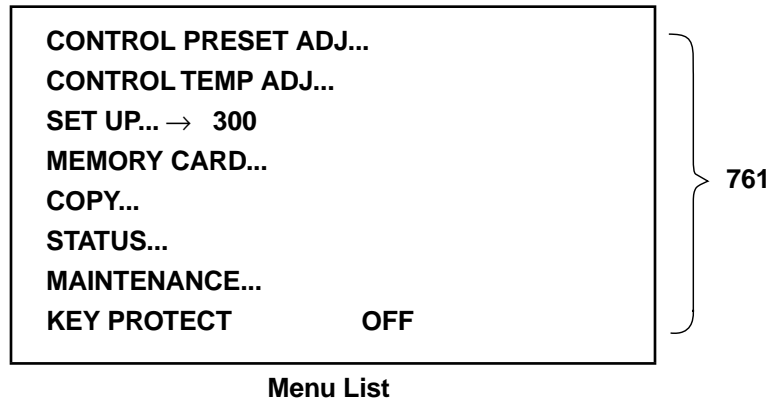
Select the function—EXTEND MENU

The following four functions can be performed from the **EXTEND MENU**.

1. Restore the factory data of the installed board.
2. Write the setting data and adjusted data of the monitor into the **BKM-12Y** monitor memory card and read the data from it.
3. Restart the monitor.
4. Automatically adjust the **SETUP** level and **100IRE** level of the internal white signal which is used in the **ADJUST COLOR TEMP** menu (200).

Structure and Usage of the EXTEND MENU

This section explains the menu configuration.
Select **SET UP** from the menu list.



300: SET UP menu list: Choose the desired item from the menu.

- INPUT CONFIGURATION menu**
- REMOTE menu**
- PASSWORD menu**
- SYSTEM CONFIGURATION menu**
- ON SCREEN SET menu**
- ALIGNMENT menu**

750: EXTEND MENU: Choose the desired item from the menu.

- | | |
|----------------------------------|---|
| RE-LOAD FACTORY DATA... : | Read the factory data of the board installed in the slot. → 760 |
| MEMORY CARD...: | Read and write all setting and adjustment data by using the monitor memory card. → 770 |
| RE-START MONITOR: | Restart the monitor. → 780 |
| ADJ INT SIGNAL SETUP: | Automatically adjust the SETUP level and 100IRE level of the internal signal. → 790 |

760: RE-LOAD FACTORY DATA: Select the slot on the board which is needed to re-load the factory data.

761: RE-LOAD FACTORY DATA: Confirm the re-load operation.

770: MEMORY CARD menu: Insert the monitor memory card into the MEMORY CARD slot and select the appropriate operation.

NOTE: Before using the monitor memory card, format it with the **FORMAT** menu (**805**). The monitor memory card **BKM-12Y** can be used to store up to **8** SYSTEM data files or **38** MEMORY CARD data files. The card cannot be used to store a mixture of SYSTEM data and MEMORY CARD data.



SLOT1 CONTROL
 SLOT2 EMPTY
 SLOT3 EMPTY
 SLOT4 EMPTY
 SLOT5 EMPTY
 SLOT6 VIDEO AMP
 SLOT7 DEFLECTION
 SLOT8 EMPTY
 SLOT9 POWER SUPPLY

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

OK: ENTER KEY
 CANCEL: MENU KEY

To continue, press the ENTER button. → Reset the data and then automatically turn off the monitor and back on again.

To cancel, press the MENU button. → Return to the **RE-LOAD FACTORY DATA** menu (760).

BACK UP SYSTEM DATA.... : Write the data to the monitor memory card. → 771
RE-STORE SYSTEM DATA.... : Read the data from the monitor memory card. → 772

771: BACKUP SYSTEM DATA menu: While writing the data, the '-' mark at the top right of the menu blinks (it takes quite a long time to save the data).

BACK UP SYSTEM DATA -
 IN PROGRESS...SYSTEM

772: RE-STORE SYSTEM DATA menu: Confirm the operation to re-store the data.

RE-STORE SYSTEM DATA

ALL DATA WILL BE
 RESTORED

ARE YOU SURE?

OK: ENTER KEY
 CANCEL: MENU KEY

To continue, press the ENTER button. → Read the data from the monitor memory card. → 773

To cancel, press the MENU button. → Return to the **MEMORY CARD** menu (770).



773: RE-STORE SYSTEM DATA menu: While reading the data, the '-' mark at the top right of the menu blinks (it takes quite a long time to load the data).

<p>RE-STORE SYSTEM DATA— IN PROGRESS...SYSTEM</p>
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780: RE-START MONITOR menu: When this menu is selected, the monitor will be turned off and on automatically.

790: ADJ INT SIGNAL menu: Adjust the **SETUP** level and **100IRE** level of the internal white signal which is used with the **COLOR TEMP ADJ** menu (**200**).

3 COLOR ANALYZER CONNECTION CABLES

The specifications for color analyzer connection cables **GRASEBY SLS 9400**, **PHILIPS PM 5639** and **THOMA TF6** color analyzers are shown in Figure 1.



COLOR ANALYZER CONNECTION CABLES

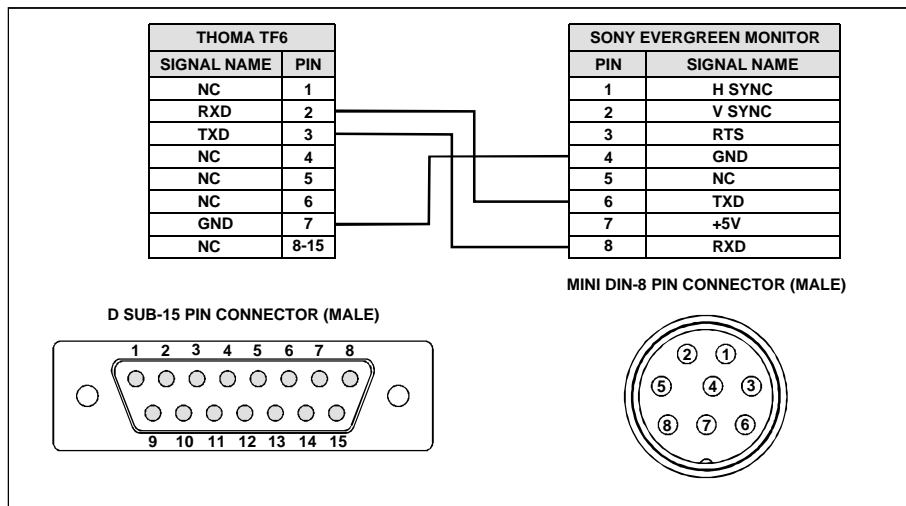
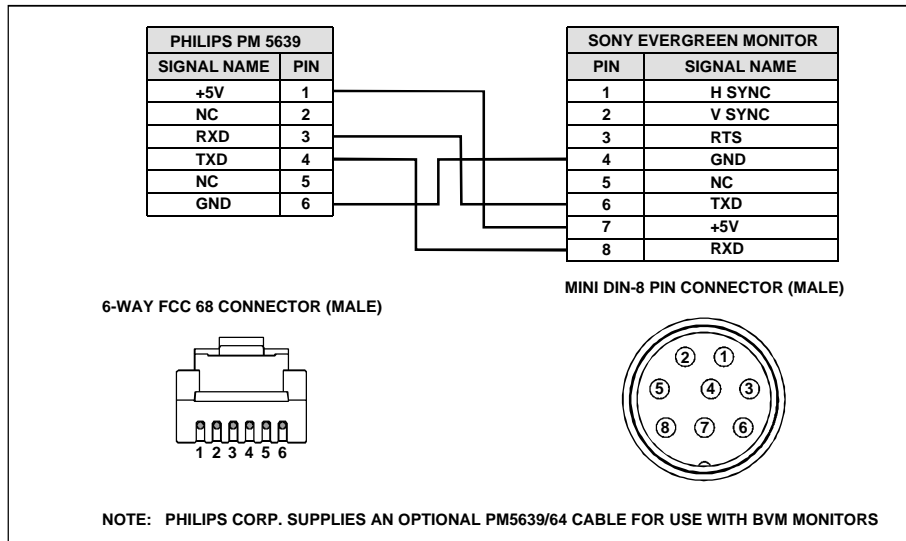
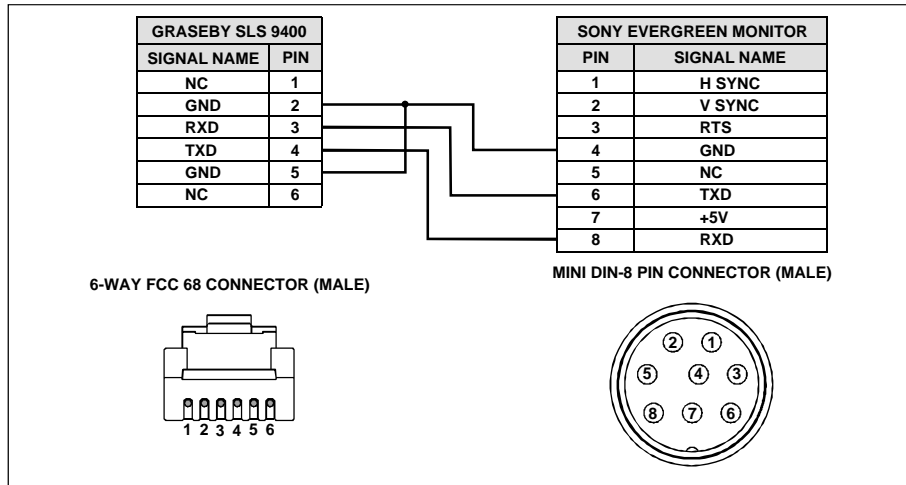


Figure 1